

# Lista de Artigos Cadastrados nos Arquivos BIBTEX e Seus Labels

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## Referências

- AAADK:02** [1] C. T. Abdallah, F. Amato, M. Ariola, P. Dorato, and V. Koltchinskii. Statistical learning methods in linear algebra and control problems: The example of finite-time control of uncertain linear systems. *Linear Algebra and Its Applications*, 351-352:11–26, August 2002.
- KFJ:94** [2] H. Abou-Kandil, G. Freiling, and G. Jank. Solution and asymptotic behavior of coupled Riccati equations in jump linear systems. *IEEE Transactions on Automatic Control*, 39(8):1631–1636, 1994.
- KFJ:95** [3] H. Abou-Kandil, G. Freiling, and G. Jank. On the solution of discrete-time Markovian jump linear quadratic control problems. *Automatica*, 31(5):765–768, 1995.
- Ack:85** [4] J. Ackermann. *Sampled Data Control Systems: Analysis and Synthesis, Robust System Design*. Springer-Verlag, New York, NY, USA, 1985.
- Ack:93** [5] J. Ackermann. *Robust Control: Systems with Uncertain Physical Parameters*. Springer Verlag, London, UK, 1993.
- AGTP:12** [6] C. M. Agulhari, G. Garcia, S. Tarbouriech, and P. L. D. Peres. A numerical procedure to compute stabilizing state feedback gains for linear time-varying periodic systems. In *Proceedings of the 7th IFAC Symposium on Robust Control Design (ROCOND 2012)*, pages 678–683, Aalborg, Denmark, June 2012.
- AGTP:18** [7] C. M. Agulhari, G. Garcia, S. Tarbouriech, and P. L. D. Peres. A new methodology to compute stabilizing control laws for continuous-time LTV systems. *International Journal of Robust and Nonlinear Control*, 2018. To appear. DOI: <http://dx.doi.org/10.1002/rnc.4120>.
- AOP:10a** [8] C. M. Agulhari, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  static output-feedback design for time-invariant discrete-time polytopic systems from parameter-dependent state-feedback gains. In *Proceedings of the 2010 American Control Conference*, pages 4677–4682, Baltimore, MD, USA, June-July 2010.
- AOP:10b** [9] C. M. Agulhari, R. C. L. F. Oliveira, and P. L. D. Peres. Static output feedback control of polytopic systems using polynomial Lyapunov functions. In *Proceedings of the 49th IEEE Conference on Decision and Control*, pages 6894–6901, Atlanta, GA, USA, December 2010.
- AOP:12** [10] C. M. Agulhari, R. C. L. F. Oliveira, and P. L. D. Peres. LMI relaxations for reduced-order robust  $\mathcal{H}_\infty$  control of continuous-time uncertain linear systems. *IEEE Transactions on Automatic Control*, 57(6):1532–1537, June 2012.
- AOP:12c** [11] C. M. Agulhari, R. C. L. F. Oliveira, and P. L. D. Peres. Robust LMI parser: A computational package to construct LMI conditions for uncertain systems. In *Anais do XIX Congresso Brasileiro de Automática*, pages 2298–2305, Campina Grande, PB, Brasil, Setembro 2012.
- AOPi:12c** [12] C. M. Agulhari, R. C. L. F. Oliveira, and P. L. D. Peres. Robust LMI parser: A computational package to construct LMI conditions for uncertain systems. In *Proceedings of the XIX Brazilian Conference on Automation*, pages 2298–2305, Campina Grande, PB, Brazil, September 2012.

- AOP:12b** [13] C. M. Agulhari, R. C. L. F. Oliveira, and P. L. D. Peres. Síntese de controladores escalonados  $\mathcal{H}_\infty$  dinâmicos de ordem reduzida para sistemas politópicos lineares contínuos e variantes no tempo. In *Anais do XIX Congresso Brasileiro de Automática*, pages 2290–2297, Campina Grande, PB, Brasil, Setembro 2012.
- ATOP:13a** [14] C. M. Agulhari, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_\infty$  dynamic output feedback for LPV systems subject to inexactly measured scheduling parameters. In *Proceedings of the 2013 American Control Conference*, pages 6075–6080, Washington, DC, USA, June 2013.
- AJPR:14** [15] A. A. Ahmadi, R. M. Jungers, P. A. Parrilo, and M. Roozbehani. Joint spectral radius and path-complete graph Lyapunov functions. *SIAM Journal on Control and Optimization*, 52(1):687–717, 2014.
- A-R:11** [16] M. Ait Rami. Solvability of static output-feedback stabilization for LTI positive systems. *Systems & Control Letters*, 60(9):704–708, September 2011.
- A-RBHP:14** [17] M. Ait-Rami, B. Boukroune, A. Hajjaji, and O. Pagès. Stabilization of LPV positive systems. In *Proceedings of the 53rd IEEE Conference on Decision and Control*, pages 4772–4776, Los Angeles, CA, USA, December 2014.
- AE:95** [18] M. Ait-Rami and L. El Ghaoui.  $\mathcal{H}_\infty$  state-feedback control of jump linear systems. In *Proceedings of the 34th IEEE Conference on Decision and Control*, pages 951–952, New Orleans, LA, USA, December 1995.
- A-RE:96** [19] M. Ait-Rami and L. El Ghaoui. LMI optimization for nonstandard Riccati equations arising in stochastic control. *IEEE Transactions on Automatic Control*, 41:1666–1671, 1996.
- AS:09** [20] M. Ait-Rami and J. Shamma. Hybrid positive systems subject to Markovian switching. In *Proceedings of the 3rd IFAC Conference on Analysis and Design of Hybrid Systems*, pages 138–143, Zaragoza, Spain, September 2009.
- Aiz:49** [21] M. A. Aizerman. About one problem concerning the stability “in large” of dynamic systems. *Uspekhi matematicheskikh nauk*, 4:186–188, 1949.
- Aiz:66** [22] M. A. Aizerman. Theory of automatic control. *Moscow, Nauka*, 1966.
- Aiz:64** [23] M. A. Aizerman and F. R. Gantmacher. *Absolute Stability of Regulation Systems*. Holden-Day, San Francisco, 1964.
- AO:00** [24] M. Akar and U. Ozguner. Decentralized techniques for the analysis and control of Takagi–Sugeno fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 8(6):691–704, December 2000.
- KK:04** [25] J. N. Al-Karaki and A. E. Kamal. Routing techniques in wireless sensor networks: A survey. *IEEE Wireless Communications*, 11(6):6–28, December 2004.
- ACLC:06** [26] T. Alamo, A. Cepeda, D. Limon, and E. F. Camacho. Estimation of the domain of attraction for saturated discrete-time systems. *International Journal of Systems Science*, 37(8):575–583, June 2006.
- A1b:69** [27] A. Albert. Conditions for positive and nonnegative definiteness in terms of pseudoinverses. *SIAM Journal on Applied Mathematics*, 17(2):434–440, 1969.
- AD:96** [28] F. Albertini and D. D’Alessandro. Asymptotic stability of continuous-time systems with saturation nonlinearities. *Systems & Control Letters*, 29(3):175–180, 1996.
- AM:14** [29] A. Y. Aleksandrov and O. Mason. Diagonal Lyapunov–Krasovskii functionals for discrete-time positive systems with delay. *Systems & Control Letters*, 63:63–67, January 2014.
- AC:01** [30] A. Alessandri and P. Coletta. Design of Luenberger observers for a class of hybrid linear systems. In M. D. Di Benedetto and A. Sangiovanni-Vincentelli, editors, *Hybrid Systems: Computation and Control*, volume 2034 of *Lecture Notes in Computer Science*, pages 7–18. Springer-Verlag, Berlin, 2001.

- [31] M. D. S. Aliyu and E. K. Boukas.  $\mathcal{H}_\infty$  control for Markovian jump nonlinear systems. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 766–771, Tampa, FL, December 1998.
- [32] L. I. Allerhand and U. Shaked. Robust state-dependent switching of linear systems with dwell time. *IEEE Transactions on Automatic Control*, 58(4):994–1001, April 2013.
- [33] H. L. S. Almeida, A. Bhaya, D. M. Falcão, and E. Kaszkurewicz. A team algorithm for robust stability analysis and control design of uncertain time-varying linear systems using piecewise quadratic Lyapunov functions. *International Journal of Robust and Nonlinear Control*, 11:357–371, 2001.
- [34] M. Althoff, O. Stursberg, and M. Buss. Reachability analysis of linear systems with uncertain parameters and inputs. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 726–732, New Orleans, LA, USA, December 2007.
- [35] J. Alvarezgallegos. Disturbance rejection of time-delay systems. *International Journal of Systems Science*, 25(6):1081–1091, 1994.
- [36] F. Amato. Robust control of linear systems subject to uncertain time-varying parameters. *Lecture Notes in Control and Information Sciences*, 325(1):1–194, 2006.
- [37] F. Amato, R. Ambrosino, M. Ariola, C. Cosentino, and A. Merola. State feedback control of nonlinear quadratic systems. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 1699–1703, New Orleans, LA, USA, December 2007.
- [38] F. Amato and M. Ariola. Finite-time control of discrete-time linear systems. *IEEE Transactions on Automatic Control*, 50(5):724–729, May 2005.
- [39] F. Amato, M. Ariola, C. Cosentino, and A. Merola. Output feedback control of nonlinear quadratic systems. In *Proceedings of the 49th IEEE Conference on Decision and Control*, pages 3349–3354, Atlanta, GA, USA, December 2010.
- [40] F. Amato, M. Ariola, C. Cosentino, C. T. Abdallah, and P. Dorato. Necessary and sufficient conditions for finite-time stability of linear systems. In *Proceedings of the 2003 American Control Conference*, pages 4452–4456, Denver, CO, June 2003.
- [41] F. Amato, M. Carbone, M. Ariola, and C. Cosentino. Finite-time stability of discrete-time systems. In *Proceedings of the 2004 American Control Conference*, pages 1440–1444, Boston, MA, June 2004.
- [42] F. Amato, G. Celentano, and F. Garofalo. New sufficient conditions for the stability of slowly varying linear systems. *IEEE Transactions on Automatic Control*, 38(9):1409–1411, September 1993.
- [43] F. Amato, M. Corless, M. Mattei, and R. Setola. A multivariable stability margin in the presence of time-varying bounded rated gains. *International Journal of Robust and Nonlinear Control*, 7:127–143, February 1997.
- [44] F. Amato, C. Cosentino, and A. Merola. On the region of attraction of nonlinear quadratic systems. *Automatica*, 43(12):2119–2123, December 2007.
- [45] F. Amato, C. Cosentino, and A. Merola. Stabilization of bilinear systems via linear state feedback control. In *Proceedings of the 15th Mediterranean Conference on Control and Automation (MED2007)*, Athens, Greece, 2007.
- [46] F. Amato and M. Mattei. Robust control of a plasma wind tunnel: an LPV discrete-time system depending on fast/slowly varying parameters. *European Journal of Control*, 7(5):494–510, 2001.
- [47] F. Amato, M. Mattei, and A. Pironti. A note on quadratic stability of uncertain linear discrete-time systems. *IEEE Transactions on Automatic Control*, 43(2):227–229, February 1998.
- [48] F. Amato, M. Mattei, and A. Pironti. A robust stability problem for discrete-time systems subject to an uncertain parameter. *Automatica*, 34(4):521–523, April 1998.

- [AMP:05] [49] F. Amato, M. Mattei, and A. Pironti. Gain scheduled control for discrete-time systems depending on bounded rate parameters. *International Journal of Robust and Nonlinear Control*, 15(11):473–494, July 2005.
- [AGS:16] [50] M. F. Amorim, A. P. C. Gonçalves, and M. Souza. Optimal  $\mathcal{H}_2$  output-feedback control of sampled systems. *IFAC-PapersOnLine*, 49(30):126–131, November 2016.
- [AMT:09] [51] D. M. Anand, J. R. Moyne, and D. M. Tilbury. Performance evaluation of wireless networks for factory automation applications. In *Proceedings of the 5th Annual IEEE Conference on Automation Science and Engineering (CASE 2009)*, pages 340–346, Bangalore, India, August 2009.
- [AA:00] [52] E. D. Andersen and K. D. Andersen. The MOSEK interior point optimizer for linear programming: An implementation of the homogeneous algorithm. In H. Frenk, K. Roos, T. Terlaky, and S. Zhang, editors, *High Performance Optimization*, volume 33 of *Applied Optimization*, pages 197–232. Springer US, 2000. <http://www.mosek.com>.
- [And:66] [53] B. D. O. Anderson. Algebraic description of bounded real lemma. *Electronics Letters*, 2:464–465, 1966.
- [ABJ:75] [54] B. D. O. Anderson, N. K. Bose, and E. I. Jury. Output feedback stabilization and related problems – solution via decision methods. *IEEE Transactions on Automatic Control*, 20(1):53–66, February 1975.
- [AC LH:99] [55] B. D. O. Anderson, K. Chongsrid, D. J. N. Limebeer, and S. Hara. Direct reduced order discretization of continuous-time controller. *International Journal of Robust and Nonlinear Control*, 9(3):143–155, March 1999.
- [AM:79] [56] B. D. O. Anderson and J. B. Moore. *Optimal Filtering*. Prentice-Hall, Englewood, NJ, 1979.
- [AM:89] [57] B. D. O. Anderson and J. B. Moore. *Optimal Control: Linear Quadratic Methods*. Prentice-Hall International, Inc., USA, 1989.
- [APATJ:08] [58] C. Q. Andrea, J. O. P. Pinto, E. Assunção, M. C. M. Teixeira, and L. G. Junior. Controle ótimo  $\mathcal{H}_\infty$  de sistemas não-lineares com modelos fuzzy Takagi–Sugeno. *SBA: Controle & Automação*, 19(3):256–269, Jul/Ago/Set 2008.
- [Ang:01] [59] D. Angeli. LMI conditions for the determination of polynomial Lyapunov functions. *Technical report, DSI - University of Florence, Italy*, 2001.
- [AAJP:17] [60] D. Angeli, N. Athanasopoulos, R. M. Jungers, and M. Philippe. Path-complete graphs and common Lyapunov functions. In *Proceedings of the 20th International Conference on Hybrid Systems: Computation and Control (HSCC’17)*, pages 81–90, Pittsburgh, Pennsylvania, USA, April 2017.
- [ABFS:08] [61] L. Angrisani, M. Bertocco, D. Fortin, and A. Sona. Experimental study of coexistence issues between IEEE 802.11b and IEEE 802.15.4 wireless networks. *IEEE Transactions on Instrumentation and Measurement*, 57(8):1514–1523, August 2008.
- [AK:03] [62] P. J. Antsaklis and X. D. Koutsoukos. Hybrid system control. In R. A. Meyers, editor, *Encyclopedia of Physical Science and Technology*, pages 445–458. Academic Press, New York, NY, 3 edition, 2003.
- [AM:97] [63] P. J. Antsaklis and A. N. Michel. *Linear Systems*. McGraw-Hill, New York, NY, 1997.
- [AM:06] [64] P. J. Antsaklis and A. N. Michel. *Linear Systems*. Birkhäuser, Boston, 2006.
- [AS GK:09] [65] N. Aouani, S. Salhi, G. Garcia, and M. Ksouri. Robust control analysis and synthesis for LPV systems under affine uncertainty structure. In *6th International Multi-Conference on Systems, Signals and Devices (SSD 2009)*, Djerba, Tunisia, March 2009. art. no. 4956720.
- [ABPB:02] [66] N. Aouf, D. G. Bates, I. Postlethwaite, and B. Boulet. Scheduling schemes for an integrated flight and propulsion control system. *Control Engineering Practice*, 10(1):685–696, 2002.

- [67] P. Apkarian. On the discretization of LMI-synthesized linear parameter-varying controllers. *Automatica*, 33(4):655–661, April 1997.
- [68] P. Apkarian and R. J. Adams. Advanced gain-scheduling techniques for uncertain systems. *IEEE Transactions on Control Systems Technology*, 6(1):21–32, 1998.
- [69] P. Apkarian, J. Chretien, P. Gahinet, and J. Biannic.  $\mu$  synthesis by  $D$ - $K$  iterations with constant scaling. In *Proceedings of the 1993 American Control Conference*, pages 3192–3196, San Francisco, CA, June 1993.
- [70] P. Apkarian and P. Gahinet. A convex characterization of gain-scheduled  $\mathcal{H}_\infty$  controllers. *IEEE Transactions on Automatic Control*, 40(5):853–864, May 1995.
- [71] P. Apkarian, P. Gahinet, and G. Becker. Self-scheduled  $\mathcal{H}_\infty$  control of linear parameter-varying systems: A design example. *Automatica*, 31(9):1251–1261, 1995.
- [72] P. Apkarian and D. Noll. Nonsmooth  $\mathcal{H}_\infty$  synthesis. *IEEE Transactions on Automatic Control*, 51(1):71–86, January 2006.
- [73] P. Apkarian, D. Noll, and R. Rondepierre. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control via nonsmooth optimization. *SIAM Journal on Control and Optimization*, 47(3):1516–1546, 2008.
- [74] P. Apkarian, P. C. Pellanda, and H. D. Tuan. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  multi-channel linear parameter-varying control in discrete time. *Systems & Control Letters*, 41(5):333–346, December 2000.
- [75] P. Apkarian and H. D. Tuan. Parametrized LMIs in control theory. *SIAM Journal on Control and Optimization*, 38(4):1241–1264, May 2000.
- [76] P. Apkarian, H. D. Tuan, and J. Bernussou. Continuous-time analysis, eigenstructure assignment, and  $\mathcal{H}_2$  synthesis with enhanced linear matrix inequalities (LMI) characterizations. *IEEE Transactions on Automatic Control*, 46(12):1941–1946, December 2001.
- [77] H. X. Araújo and D. Neumann. Controle robusto  $\mathcal{H}_2/\mathcal{H}_\infty$ : síntese via algoritmos genéticos. In *Anais do XV Congresso Brasileiro de Automática*, Gramado, RS, September 2004.
- [78] M. Arcak and P. Kokotovic. Feasibility conditions for circle criterion designs. *Systems & Control Letters*, 42(5):405–412, April 2001.
- [79] M. Arcak, M. Larsen, and P. Kokotovic. Circle and Popov criteria as tools for nonlinear feedback design. *Automatica*, 39(4):643–650, April 2003.
- [80] C. Ariño and A. Sala. Design of multiple-parameterisation PDC controllers via relaxed conditions for multi-dimensional fuzzy summations. In *Proceedings of the 2007 IEEE International Conference on Fuzzy Systems*, pages 1–6, London, UK, July 2007.
- [81] C. Ariño and A. Sala. Relaxed LMI conditions for closed-loop fuzzy systems with tensor-product structure. *Engineering Applications of Artificial Intelligence*, 20(8):1036–1046, December 2007.
- [82] H. Arneson and C. Langbort. A linear programming approach to routing control in networks of constrained linear positive systems. *Automatica*, 48(5):800–807, May 2012.
- [83] N. S. D. Arrifano, V. A. Oliveira, and L. V. Cossi. Synthesis of an LMI-based fuzzy control system with guaranteed cost performance: A piecewise Lyapunov approach. *SBA: Controle & Automação*, 17(2):213–225, Jul/Ago/Set 2006.
- [84] K. J. Arrow and M. McManus. A note on dynamic stability. *Econometrica*, 26:448–454, 1958.
- [85] S. Arunsawatwong. Stability of retarded delay differential systems. *International Journal of Control*, 65(2):347–364, 1996.



- ABP:02** [86] D. Arzelier, J. Bernussou, and D. Peaucelle. Fonctions de Lyapunov dépendent des paramètres pour l'analyse et la synthèse robustes. In J. Bernussou and A. Oustaloup, editors, *Conception de Commandes Robustes*, chapter 6, pages 189–227. Hermes, Paris, 2002.
- AGPP:09** [87] D. Arzelier, E. N. Gryazina, D. Peaucelle, and B. T. Polyak. Mixed LMI/Randomized methods for static output feedback control design: Stability and performance. Technical Report 09640, LAAS-CNRS, September 2009.
- AGPP:10** [88] D. Arzelier, E. N. Gryazina, D. Peaucelle, and B. T. Polyak. Mixed LMI/Randomized methods for static output feedback control design. In *Proceedings of the 2010 American Control Conference*, pages 4683–4688, Baltimore, MD, USA, June-July 2010.
- AHP:02** [89] D. Arzelier, D. Henrion, and D. Peaucelle. Robust  $\mathcal{D}$ -stabilization of a polytope of matrices. *International Journal of Control*, 75(10):744–752, July 2002.
- AP:02** [90] D. Arzelier and D. Peaucelle. An iterative method for mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  synthesis via static output-feedback. In *Proceedings of the 41st IEEE Conference on Decision and Control*, pages 3464–3469, Las Vegas, NV, USA, December 2002.
- APS:03** [91] D. Arzelier, D. Peaucelle, and S. Salhi. Robust static output feedback stabilization for polytopic uncertain systems: Improving the guaranteed performance bound. In *Proceedings of the 4th IFAC Symposium on Robust Control Design (ROCOND 2003)*, pages 425–430, Milan, Italy, June 2003.
- ABDMP:00** [92] E. Asarin, O. Bournez, T. Dang, O. Maler, and A. Pnueli. Effective synthesis of switching controllers for linear systems. *Proceedings of the IEEE*, 88(7):1011–1025, July 2000.
- AN:04b** [93] W. Assawinchaichote and S. K. Nguang.  $\mathcal{H}_\infty$  fuzzy control design for nonlinear singularly perturbed systems with pole placement constraints: An LMI approach. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 34(1):579–588, February 2004.
- AAT:07** [94] E. Assunção, C. Q. Andrea, and M. C. M. Teixeira. Alocação de zeros aplicada a sistemas de controle via lmi. *SBA: Controle & Automação*, 18(1):55–66, Fev/Mar 2007.
- AATP:08** [95] E. Assunção, C. Q. Andrea, M. C. M. Teixeira, and J. O. P. Pinto. Metodologia para rastreamento com modificação dos zeros e rejeição de distúrbio aplicada a sistemas incertos. *SBA: Controle & Automação*, 19(1):43–52, Jan/Fev/Mar 2007.
- AH:95** [96] K. J. Åström and T. Hägglund. *PID Controllers: Theory, Design, and Tuning*. Instrument Society of America, Research Triangle Park, NC, 1995.
- AW:84** [97] K. J. Åström and B. Wittenmark. *Computer Controlled Systems: Theory and Design*. Prentice Hall Inc., Englewood Cliffs, NJ, 1984.
- AW:95** [98] K. J. Åström and B. Wittenmark. *Adaptive Control*. Addison-Wesley, Reading, MA, 1995. Second edition.
- AL:14** [99] N. Athanasopoulos and M. Lazar. Alternative stability conditions for switched discrete time linear systems. In *Proceedings of the 19th IFAC World Congress*, pages 6007–6012, Cape Town, South Africa, August 2014.
- AF:66** [100] M. Athans and P. L. Falb. *Optimal Control*. McGraw Hill Inc., New York, USA, 1966.
- AMP:08** [101] G. S. C. Avellar, L. A. Mozelli, and R. M. Palhares. Condições LMIs alternativas para sistemas Takagi–Sugeno via função de Lyapunov fuzzy. In *Anais do XVII Congresso Brasileiro de Automática*, Juiz de Fora, MG, Brasil, September 2008.
- ANK:99** [102] S. Ayasun, C. O. Nwankpa, and H. G. Kwatny. Numerical issues in the location of singularity-induced bifurcations points. In *Proceedings of the 1999 Winter Meeting of the Power Engineering Society*, volume 1, pages 707–712, February 1999.

- AKU:98** [103] T. Azuma, T. Kondo, and K. Uchida. Memory state feedback control synthesis for linear systems with time delay via a finite number of linear matrix inequalities. In *Proceedings of the 1st IFAC International Workshop on Linear Time Delay Systems*, pages 183–187, Grenoble, France, July 1998.
- BCK:03** [104] M. Bacic, M. Cannon, and B. Kouvaritakis. Constrained control of SISO bilinear systems. *IEEE Transactions on Automatic Control*, 48(8):1443–1447, August 2003.
- BK:94** [105] E. Baeyens and P. P. Khargonekar. Some examples in mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control. In *Proceedings of the 1994 American Control Conference*, pages 1608–1612, Baltimore, MD, USA, June 1994.
- BP:97** [106] C. Baker and C. A. H. Paul. Pitfalls in parameter estimation for delay differential equations. *SIAM Journal on Science Computation*, 18(1):305–314, 1997.
- Bak:08** [107] L. Bakule. Decentralized control: An overview. *Annual Reviews in Control*, 32(1):87–98, 2008.
- BV:03** [108] V. Balakrishnan and L. Vandenberghe. Semidefinite programming duality and linear time-invariant systems. *IEEE Transactions on Automatic Control*, 48(1):30–41, January 2003.
- BW:98** [109] V. Balakrishnan and F. Wang. Efficient computation of a guaranteed lower bound on the robust stability margin for a class of uncertain systems. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 4406–4407, Tampa, FL, USA, December 1998.
- BW:99** [110] V. Balakrishnan and F. Wang. Efficient computation of a guaranteed lower bound on the robust stability margin for a class of uncertain systems. *IEEE Transactions on Automatic Control*, 44(11):436–442, 1999.
- BK:04** [111] D. V. Balandin and M. M. Kogan. An optimization algorithm for checking feasibility of robust  $H_\infty$ -control problem for linear time-varying uncertain systems. *International Journal of Control*, 77(5):498–503, March 2004.
- BSU:93** [112] R. Bambang, E. Shimemura, and K. Uchida. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control with pole placement: state feedback case. In *Proceedings of the 1993 American Control Conference*, volume 3, pages 2777–2779, San Francisco, CA, June 1993.
- BP:92** [113] B. A. Bamieh and J. B. Pearson, Jr. A general framework for linear periodic systems with applications to  $\mathcal{H}_\infty$  sampled-data control. *IEEE Transactions on Automatic Control*, 37(4):418–435, April 1992.
- BGHV:07** [114] X. Ban, X. Z. Gao, X. Huang, and A. V. Vasilakos. Stability analysis of the simplest Takagi–Sugeno fuzzy control system using circle criterion. *Information Sciences*, 177(20):4387–4409, October 2007.
- BB:04** [115] G. I. Bara and M. Boutayeb. Static output feedback stabilization for linear discrete-time systems. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 1264–1269, Paradise Island, Bahamas, December 2004.
- BD:01** [116] G. I. Bara and J. Daafouz. Parameter-dependent control with  $\gamma$ -performance for affine LPV systems. In *Proceedings of the 40th IEEE Conference on Decision and Control*, pages 2378–2379, Orlando, FL, USA, December 2001.
- BDK:01** [117] G. I. Bara, J. Daafouz, and F. Kratz. Advanced gain scheduling techniques for the design of parameter-dependent observers. In *Proceedings of the 40th IEEE Conference on Decision and Control*, pages 3892–3897, Orlando, FL, USA, December 2001.
- Bar:04** [118] P. Baranyi. TP model transformation as a way to LMI-based controller design. *IEEE Transactions on Industrial Electronics*, 51(2):387–400, April 2004.
- BB-TN:03** [119] F. D. Barb, A. Ben-Tal, and A. Nemirovski. Robust dissipativity of interval uncertain linear systems. *SIAM Journal on Control and Optimization*, 41(6):1661–1695, September 2003.
- BdST:02** [120] K. A. Barbosa, C. E. de Souza, and A. Trofino. Robust  $\mathcal{H}_2$  filtering for discrete-time uncertain linear systems using parameter-dependent Lyapunov functions. In *Proceedings of the 2002 American Control Conference*, pages 3224–3229, Anchorage, AK, USA, May 2002.

- BdST:05** [121] K. A. Barbosa, C. E. de Souza, and A. Trofino. Robust  $\mathcal{H}_2$  filtering for uncertain linear systems: LMI based methods with parametric Lyapunov functions. *Systems & Control Letters*, 54(3):251–262, March 2005.
- BT:03** [122] K. A. Barbosa and A. Trofino. Síntese  $\mathcal{H}_\infty$  para sistemas com restrições algébricas no estado. *SBA: Controle & Automação*, 14(3):254–261, Jul/Set 2003.
- BZ:83** [123] A. I. Barkin and A. L. Zelentsovsky. Method of power transformation for analysis of stability of nonlinear control systems. *Systems & Control Letters*, 3:303–310, 1983.
- Bar:83** [124] B. R. Barmish. Stabilization of uncertain systems via linear control. *IEEE Transactions on Automatic Control*, 28(8):848–850, August 1983.
- Bar:85** [125] B. R. Barmish. Necessary and sufficient conditions for quadratic stabilizability of an uncertain system. *Journal of Optimization Theory and Applications*, 46(4):399–408, August 1985.
- Bar:94** [126] B. R. Barmish. *New Tools for Robustness of Linear Systems*. Macmillan Publishing Company, New York, NY, USA, 1994.
- BDeM:86** [127] B. R. Barmish and C. L. DeMarco. A new method for improvement of robustness bounds for linear states equations. In *Proceedings of the 1986 Conference on Information Science and Systems*, pages 115–120, Princeton, NJ, 1986.
- BS:68** [128] S. Barnett and C. Storey. Some applications of the Lyapunov matrix equation. *Journal of the Institute of Mathematics and Its Applications*, 4:33–42, 1968.
- BHH:88** [129] A. C. Bartlett, C. V. Hollot, and H. Lin. Root locations of an entire polytope of polynomials: it suffices to check the edges. *Mathematics of Control Signals and Systems*, 1:61–71, 1988.
- BB:95** [130] T. Başar and P. Bernhard.  *$\mathcal{H}_\infty$  Optimal Control and Related Minimax Design Problems: A Dynamic Game Approach*. Birkhäuser, Boston, MA, USA, 1995.
- BSC:09** [131] M. V. Basin, P. Shi, and D. Calderon-Alvarez. Central suboptimal  $\mathcal{H}_\infty$  filter design for nonlinear polynomial systems. *International Journal of Adaptive Control and Signal Processing*, 23(10):926–939, October 2009.
- BSC:10** [132] M. V. Basin, P. Shi, and D. Calderon-Alvarez. Central suboptimal  $\mathcal{H}_\infty$  filter design for linear time-varying systems with state or measurement delay. *International Journal of Systems Science*, 41(4):411–421, April 2010.
- BSCW:09** [133] M. V. Basin, P. Shi, D. Calderon-Alvarez, and J. Wang. Central suboptimal  $\mathcal{H}_\infty$  filter design for linear time-varying systems with state or measurement delay. *Circuits Systems and Signal Processing*, 28(2):305–330, April 2009.
- BSS:10** [134] M. V. Basin, P. Shi, and P. Soto. Central suboptimal  $\mathcal{H}_\infty$  filtering for nonlinear polynomial systems with multiplicative noise. *Journal of The Franklin Institute*, 347(9):1740–1754, November 2010.
- Bau:63** [135] F. L. Bauer. Optimally scaled matrices. *Numerische Mathematik*, 5:73–87, 1963.
- BCTC:03** [136] S. P. Bean, D. F. Coutinho, A. Trofino, and J. E. R. Cury. Stability analysis and guaranteed domain of attraction for a class of hybrid systems: an lmi approach. *International Journal of Robust and Nonlinear Control*, 13(5):465–481, April 2003.
- BP:94** [137] G. Becker and A. Packard. Robust performance of linear parametrically varying systems using parametrically-dependent linear feedback. *Systems & Control Letters*, 23(3):205–215, September 1994.
- BE:02** [138] S. B. Bekiarov and A. Emadi. Uninterruptible power supplies: classification, operation, dynamics, and control. In *2002 IEEE Applied Power Electronics Conference and Exposition, APEC-2002*, volume 1, pages 597–604, Los Cabos, Mexico, October 2002.



- BGR:99** [139] A. Bellen, N. Guglielmi, and A. E. Ruehli. Methods for linear systems of circuit delay differential equations of neutral type. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 46(1):212–216, January 1999.
- Bel:70** [140] R. Bellman. *Introduction to Matrix Analysis*. McGraw-Hill, New York, second edition edition, 1970.
- Bel:97** [141] R. Bellman. *Introduction to Matrix Analysis*, volume 19 of *Classics in Applied Mathematics*. SIAM, 2<sup>nd</sup> edition edition, 1997.
- BBM:85** [142] R. Bellman, J. Bentsman, and S. Meerkov. Stability of fast periodic systems. *IEEE Transactions on Automatic Control*, 30(3):289–291, March 1985.
- B-TEN:00** [143] A. Ben-Tal, L. El Ghaoui, and A. Nemirovski. Robustness. In H. Wolkowics, R. Saigal, and L. Vandenberghe, editors, *Handbook of Semidefinite Programming: Theory, Algorithms and Applications*, International Series in Operations Research and Management Science, pages 139–162. Kluwer Academic Press, Boston, MA, 2000.
- B-TN:98** [144] A. Ben-Tal and A. Nemirovski. Robust convex optimization. *Mathematics of Operations Research*, 23(4):769–805, 1998.
- B-TN:08** [145] A. Ben-Tal and A. Nemirovski. Selected topics in robust convex optimization. *Mathematical Programming: Series B*, 112(1):125–158, March 2008.
- BMS:88** [146] A. Benallou, D. A. Mellichamp, and D. E. Seborg. Optimal stabilizing controllers for bilinear systems. *International Journal of Control*, 48(4):1487–1501, 1988.
- BB:99** [147] P. Bendotti and B. Bodenheimer. Linear parameter-varying versus linear time-invariant control design for a pressurized water reactor. *International Journal of Robust and Nonlinear Control*, 9:969–995, 1999.
- BB:98** [148] K. Benjelloun and E. K. Boukas. Mean square stochastic stability of linear time-delay system with Markovian jumping parameters. *IEEE Transactions on Automatic Control*, 43(10):1456–1460, 1998.
- BBC:99** [149] K. Benjelloun, E. K. Boukas, and O. L. V. Costa.  $\mathcal{H}_\infty$  control for linear time-delay systems with Markovian jumping parameters. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 1567–1572, Phoenix, AZ, December 1999.
- BY:01** [150] S. Benson and Y. Ye. DSDP: Dual-scaling algorithm for semidefinite programming. Technical Report ANL/MCS-P851-1000, Argonne National Laboratory, 2001.
- BAS:06** [151] A. Benzaouia, O. Akhrif, and L. Saydy. Stabilization of switched systems subject to actuator saturation by output feedback. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 777–782, San Diego, CA, December 2006.
- BSA:04** [152] A. Benzaouia, L. Saydy, and O. Akhrif. Stability and control synthesis of switched systems subject to actuator saturation. In *Proceedings of the 2004 American Control Conference*, pages 5818–5823, Boston, MA, USA, June/July 2004.
- BT:08** [153] A. Benzaouia and F. Tadeo. Output feedback stabilization of positive switching linear discrete-time systems. In *Proceedings of the 16th Mediterranean Conference on Control and Automation (MED2008)*, pages 119–124, Ajaccio, France, June 2008.
- BDS:00** [154] A. Berlioz, R. Dufour, and S. C. Sinha. Bifurcation in a nonlinear autoparametric system using experimental and numerical investigations. *Nonlinear Dynamics*, 23(2):175–187, October 2000.
- BH:83** [155] A. Berman and D. Hershkowitz. Matrix diagonal stability and its implications. *SIAM Journal on Algebraic and Discrete Methods*, 4(3):377–382, September 1983.
- BP:79** [156] A. Berman and R. J. Plemmons. *Nonnegative Matrices in The Mathematical Sciences*. Computer Science and Applied Mathematics. Academic Press, New York, 1979.

- BG:10** [157] M. Bernal and T. M. Guerra. Generalized nonquadratic stability of continuous-time Takagi–Sugeno models. *IEEE Transactions on Fuzzy Systems*, 18(4):815–822, August 2010.
- BSJG:11** [158] M. Bernal, A. Sala, A. Jaadari, and T. M. Guerra. Stability analysis of polynomial fuzzy models via polynomial fuzzy Lyapunov functions. *Fuzzy Sets and Systems*, 185(1):5–14, 2011.
- BM:95** [159] D. S. Bernstein and A. N. Michel (Eds.). Special issue: Saturating actuators. *International Journal of Robust and Nonlinear Control*, 5(5), 1995.
- BH:89** [160] D. S. Bernstein and W. M. Haddad. LQG control with an  $\mathcal{H}_\infty$  performance bound: a Riccati equation approach. *IEEE Transactions on Automatic Control*, 34(3):293–305, March 1989.
- BM:95b** [161] D. S. Bernstein and A. N. Michel. A chronological bibliography on saturating actuators. *International Journal of Robust and Nonlinear Control*, 5(5):375–380, August 1995.
- BGP:88** [162] J. Bernussou, J. C. Geromel, and P. L. D. Peres. Stabilisabilité de systèmes linéaires: Tests par programmation linéaire. *Comptes Rendus de l’Académie des Sciences CRAS - Paris*, 307:683–688, 1988.
- BPG:89** [163] J. Bernussou, P. L. D. Peres, and J. C. Geromel. A linear programming oriented procedure for quadratic stabilization of uncertain systems. *Systems & Control Letters*, 13(1):65–72, July 1989.
- B0dOP:18a** [164] A. L. J. Bertolin, R. C. L. F. Oliveira, M. C. de Oliveira, and P. L. D. Peres. LMI-based stability tests for lpv and switched discrete-time linear systems through redundant equations. In *Proceedings of the Joint 9th IFAC Symposium on Robust Control Design (ROCOND’18), and 2nd IFAC Workshop on Linear Parameter Varying Systems (LPVS’18)*, Florianopolis, Brazil, September 2018. To appear.
- Ber:03** [165] D. P. Bertsekas, A. Nedić, and A. E. Ozdaglar. *Convex Analysis and Optimization*. Athena Scientific, Belmont, MA, USA, 2003.
- BE:09** [166] A. H. Besheer and H. R. Emara. Relaxed LMI based designs for Takagi Sugeno fuzzy regulators and observers poly-quadratic Lyapunov function approach. In *Proceedings of the 2009 IEEE International Conference on Systems, Man, and Cybernetics*, pages 3041–3046, San Antonio, TX, USA, October 2009.
- BCZ:95** [167] A. Betser, N. Cohen, and E. Zeheb. On solving the Lyapunov and Stein equations for a companion matrix. *Systems & Control Letters*, 25(3):211–218, June 1995.
- BCK:95** [168] S. P. Bhattacharyya, H. Chapellat, and L. H. Keel. *Robust Control: The Parametric Approach*. Prentice-Hall Publishing Co., Upper Saddle River, NJ, USA, 1995.
- BK:91b** [169] A. Bhaya and E. Kaszkurewicz. Discrete-time diagonal and D-stability. Technical report, Dept. of Electrical Engineering, COPPE/UFRJ, 1991.
- BK:91** [170] A. Bhaya and E. Kaszkurewicz. Robust, diagonal and D-stability via QLF’s: the discrete-time case. In *Proceedings of the 30th IEEE Conference on Decision and Control*, volume 3, pages 2624–2629, Brighton, England, December 1991.
- BK:93** [171] A. Bhaya and E. Kaszkurewicz. On discrete-time diagonal and D-stability. *Linear Algebra and Its Applications*, 187:87–104, 1993.
- BRT:03** [172] Y. Bin, Z. Ruijun, and L. Tao. Delay-dependent stability criterion for a class of neutral time-delay systems. In *Proceedings of the 2003 American Control Conference*, pages 2694–2696, Denver, CO, June 2003.
- Bit:86** [173] S. Bittanti. Deterministic and stochastic linear periodic systems. In S. Bittanti, editor, *Time Series and Linear Systems*, volume 86 of *Lecture Notes in Control and Information Sciences*, pages 141–182. Springer Berlin Heidelberg, 1986.
- BC:00** [174] S Bittanti and P. Colaneri. Invariant representations of discrete-time periodic systems. *Automatica*, 36(12):1777–1793, December 2000.

- BWM:01 [175] P. Blackmore, D. Williamson, and I. Mareels. Open-loop discretization methods for control systems design. *International Journal of Control*, 74(15):1527–1542, 2001.
- BS:75 [176] W. P. Blair and D. D. Sworder. Feedback control of a class of linear discrete systems with jump parameters and quadratic cost criteria. *International Journal of Control*, 21(5):833–841, 1975.
- Bla:91 [177] F. Blanchini. Constrained control for uncertain linear systems. *Journal of Optimization Theory and Applications*, 71(3):465–484, December 1991.
- Bla:95 [178] F. Blanchini. Nonquadratic Lyapunov functions for robust control. *Automatica*, 31(3):451–461, March 1995.
- Bla:99 [179] F. Blanchini. Set invariance in control. *Automatica*, 35(11):1747–1767, November 1999.
- Bla:00 [180] F. Blanchini. The gain scheduling and the robust state feedback stabilization problems. *IEEE Transactions on Automatic Control*, 45(11):2061–2070, November 2000.
- BCT:98 [181] F. Blanchini, R. Lo Cigno, and R. Tempo. Control of ATM networks: fragility and robustness issues. In *Proceedings of the 1998 American Control Conference*, pages 2847–2851, Philadelphia, PA, June 1998.
- BM:99 [182] F. Blanchini and S. Miani. A new class of universal Lyapunov functions for the control of uncertain linear systems. *IEEE Transactions on Automatic Control*, 44(3):641–647, March 1999.
- BM:96 [183] F. Blanchini and S. Miani. On the transient estimate for linear systems with time-varying uncertain parameters. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 43(7):592–596, July 1996.
- BM:03 [184] F. Blanchini and S. Miani. Stabilization of LPV systems: State feedback, state estimation, and duality. *SIAM Journal on Control and Optimization*, 42(1):76–97, 2003.
- BMS:07 [185] F. Blanchini, S. Miani, and C. Savorgnan. Stability results for linear parameter varying and switching systems. *Automatica*, 43(10):1817–1823, October 2007.
- BPB:01a [186] Y. Blanco, W. Perruquetti, and P. Borne. Nonquadratic stability of nonlinear systems in the Takagi–Sugeno form. In *Proceedings of the 2001 European Control Conference*, pages 3917–3922, Porto, Portugal, September 2001.
- BPB:01b [187] Y. Blanco, W. Perruquetti, and P. Borne. Stability and stabilization of nonlinear systems and Tanaka–Sugeno’s fuzzy models. *Mathematical Problems in Engineering*, 7(3):221–240, 2001.
- BSW:01 [188] M. Blanke, M. Staroswiecki, and N. E. Wu. Concepts and methods in fault-tolerant control. In *Proceedings of the 2001 American Control Conference*, pages 2606–2620, Arlington, VA, USA, June 2001.
- Bli:01a [189] P.-A. Bliman. LMI characterization of the strong delay-independent stability of linear delay systems via quadratic Lyapunov-Krasovskii functionals. *Systems & Control Letters*, 43(4):263–274, July 2001.
- Bli:02b [190] P.-A. Bliman. Absolute stability criteria with prescribed decay rate for finite-dimensional and delay systems. *Automatica*, 38(11):2015–2019, November 2002.
- Bli:02a [191] P.-A. Bliman. Lyapunov equation for the stability of linear delay systems of retarded and neutral type. *IEEE Transactions on Automatic Control*, 47(2):327–335, February 2002.
- Bli:02c [192] P.-A. Bliman. Nonconservative LMI approach to robust stability for systems with uncertain scalar parameters. In *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, December 2002. 305–310.
- Bli:03 [193] P.-A. Bliman. Stabilization of LPV systems. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 6103–6108, Maui, HI, USA, December 2003.

- [194] P.-A. Bliman. A convex approach to robust stability for linear systems with uncertain scalar parameters. *SIAM Journal on Control and Optimization*, 42(6):2016–2042, 2004.
- [195] P.-A. Bliman. An existence result for polynomial solutions of parameter-dependent LMIs. *Systems & Control Letters*, 51(3-4):165–169, March 2004.
- [196] P.-A. Bliman. Stabilization of LPV systems. In D. Henrion and A. Garulli, editors, *Positive Polynomials in Control*, volume 312 of *Lecture Notes in Control and Information Sciences*, pages 103–117. Springer-Verlag, Berlin, 2005.
- [197] P.-A. Bliman and G. Ferrari-Trecate. Stability analysis of discrete-time switched systems through Lyapunov functions with nonminimal state. In *Proceedings of the IFAC Conference on Analysis and Design of Hybrid Systems (ADHS'03)*, pages 325–329, Saint-Malo, Brittany, France, June 2003.
- [198] P.-A. Bliman, R. C. L. F. Oliveira, V. F. Montagner, and P. L. D. Peres. Existence of homogeneous polynomial solutions for parameter-dependent linear matrix inequalities with parameters in the simplex. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 1486–1491, San Diego, CA, USA, December 2006.
- [199] H. A. P. Blom and Y. Bar-Shalom. The interacting multiple model algorithm for systems with Markovian switching coefficients. *IEEE Transactions on Automatic Control*, 33:780–783, 1988.
- [200] V. D. Blondel, Y. Nesterov, and J. Theys. Approximations of the rate of growth of switched linear systems. In R. Alur and G. J. Pappas, editors, *Hybrid Systems: Computation and Control*, volume 2993 of *Lecture Notes in Computer Science*, pages 173–186. Springer-Verlag, Berlin, 2004.
- [201] V. D. Blondel and J. N. Tsitsiklis. Complexity of stability and controllability of elementary hybrid systems. *Automatica*, 35(3):479–489, March 1999.
- [202] V. D. Blondel and J. N. Tsitsiklis. A survey of computational complexity results in systems and control. *Automatica*, 36(9):1249–1274, September 2000.
- [203] P. A. Blue and S. S. Banda.  $D$ - $K$  iteration with optimal scales for systems with time-varying and time-invariant uncertainties. In *Proceedings of the 1997 American Control Conference*, volume 6, pages 3967–3971, Albuquerque, NM, June 1997.
- [204] O. N. Bobyleva. Piecewise-linear Lyapunov functions for linear stationary systems. *Automation and Remote Control*, 63(4):540–549, April 2002.
- [205] B. Borchers. CSDP, A C library for demidefinite programming. *Optimization Methods and Software*, 11:613–623, 1999.
- [206] R. A. Borges, V. F. Montagner, R. C. L. F. Oliveira, P. L. D. Peres, and P.-A. Bliman. Parameter-dependent  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filter design for linear systems with arbitrarily time-varying parameters in polytopic domains. *Signal Processing*, 88(7):1801–1816, July 2008.
- [207] R. A. Borges, R. C. L. F. Oliveira, C. T. Abdallah, and P. L. D. Peres.  $\mathcal{H}_\infty$  gain scheduling for discrete-time systems with control delays and time-varying parameters: A BMI approach. In *Proceedings of the 2008 American Control Conference*, pages 3088–3093, Seattle, WA, USA, June 2008.
- [208] R. A. Borges, R. C. L. F. Oliveira, C. T. Abdallah, and P. L. D. Peres.  $\mathcal{H}_\infty$  robust memory controllers for networked control systems: uncertain sampling rates and time-delays in polytopic domains. In *Proceedings of the 2008 American Control Conference*, pages 3614–3619, Seattle, WA, USA, June 2008.
- [209] R. A. Borges, R. C. L. F. Oliveira, C. T. Abdallah, and P. L. D. Peres.  $\mathcal{H}_\infty$  filtering of time-varying systems with bounded rates of variation. In *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 1678–1683, Cancun, Mexico, December 2008.

- BOAP:09** [210] R. A. Borges, R. C. L. F. Oliveira, C. T. Abdallah, and P. L. D. Peres.  $\mathcal{H}_\infty$  filtering of networked systems with time-varying sampling rates. In *Proceedings of the 2009 American Control Conference*, pages 3372–3377, St. Louis, MO, USA, June 2009.
- BOAP:10c** [211] R. A. Borges, R. C. L. F. Oliveira, C. T. Abdallah, and P. L. D. Peres. A BMI approach for  $\mathcal{H}_\infty$  gain scheduling of discrete time-varying systems. *International Journal of Robust and Nonlinear Control*, 11(20):1255–1268, 2010.
- BOAP:10a** [212] R. A. Borges, R. C. L. F. Oliveira, C. T. Abdallah, and P. L. D. Peres.  $\mathcal{H}_\infty$  filtering for discrete-time linear systems with bounded time-varying parameters. *Signal Processing*, 90(1):282–291, January 2010.
- BOAP:10b** [213] R. A. Borges, R. C. L. F. Oliveira, C. T. Abdallah, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  networked control for systems with uncertain sampling rates. *IET Control Theory & Applications*, 4(1):50–60, January 2010.
- BP:06** [214] R. A. Borges and P. L. D. Peres.  $\mathcal{H}_\infty$  LPV filtering for linear systems with arbitrarily time-varying parameters in polytopic domains. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 1692–1697, San Diego, CA, USA, December 2006.
- BGM:09** [215] T. Bouarar, K. Guelton, and N. Manamanni. Static output feedback controller design for Takagi–Sugeno systems — A fuzzy Lyapunov LMI approach. In *Proceedings of the 48th IEEE Conference on Decision and Control — 28th Chinese Control Conference*, pages 4150–4155, Shanghai, P. R. China, December 2009.
- BCR:08** [216] F. Boudaud, F. Caruso, and M.-F. Roy. Certificates of positivity in the Bernstein basis. *Discrete & Computational Geometry*, 39(4):639–655, June 2008.
- BCYB:90** [217] H. Bouguerra, B. C. Chang, H. H. Yeh, and S. S. Banda. Fast stability checking for convex combination of stable polynomials. *IEEE Transactions on Automatic Control*, 35(5):586–588, May 1990.
- Bou:93** [218] E. K. Boukas. Control of systems with controlled jump Markov disturbance. *Control Theory and Advanced Technology*, 9(2):577–595, 1993.
- Bou:95** [219] E. K. Boukas. Robust stability of linear piecewise deterministic systems under matching conditions. *Control Theory and Advanced Technology*, 10(4):1541–1549, 1993.
- Bou:05** [220] E. K. Boukas. *Stochastic Switching Systems: Analysis and Design*. Birkhäuser, Berlin, Germany, 2005.
- Bou:09** [221] E. K. Boukas. Guaranteed cost for stochastic systems with unknown transition jump rate. In *Proceedings of the 2009 American Control Conference*, pages 4422–4427, St. Louis, MO, USA, June 2009.
- Bou:09a** [222] E. K. Boukas.  $\mathcal{H}_\infty$  control of discrete-time Markov jump systems with bounded transition probabilities. *Optimal Control Applications and Methods*, 30(5):477–494, 2009.
- BL:02** [223] E. K. Boukas and Z. K. Liu. *Deterministic and Stochastic time-delay systems*. Control Engineering. Birkhäuser, Boston, 2002.
- BS:98** [224] E. K. Boukas and P. Shi. Stochastic stability and guaranteed cost control of discrete-time uncertain systems with Markovian jumping parameters. *International Journal of Robust and Nonlinear Control*, 8(13):1155–1167, 1998.
- BSB:99a** [225] E. K. Boukas, P. Shi, and K. Benjelloun. On stabilization of uncertain linear systems with jump parameters. *International Journal of Control*, 72(9):842–850, 1999.
- BSB:99b** [226] E. K. Boukas, P. Shi, and K. Benjelloun. Robust stochastic stabilization of discrete-time linear systems with Markovian jumping parameters. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 121(2):331–334, 1999.



- BSNA:99** [227] E. K. Boukas, P. Shi, S. K. Nguang, and R. K. Agarwal. On designing  $\mathcal{H}_\infty$  controller for a class of nonlinear Markovian jump systems with parametric uncertainties. In *Proceedings of the 1999 American Control Conference*, pages 970–974, San Diego, CA, June 1995.
- BY:99** [228] E. K. Boukas and H. Yang. Exponential stabilizability of stochastic systems with Markovian jumping parameters. *Automatica*, 35(8):1437–1441, 1999.
- BD:15** [229] A. Boukerche and A. Darehshoorzadeh. Opportunistic routing in wireless networks: Models, algorithms, and classifications. *ACM Computing Surveys*, 47(2):22:1–22:36, January 2015.
- Bou:96** [230] H. Bourles. On delay-independent stability of large-scale systems with time delays — Comment. *IEEE Transactions on Automatic Control*, 41(12):1847–1848, 1996.
- BEFB:94** [231] S. Boyd, L. El Ghaoui, E. Feron, and V. Balakrishnan. *Linear Matrix Inequalities in System and Control Theory*. SIAM Studies in Applied Mathematics, Philadelphia, PA, 1994.
- BV:04** [232] S. Boyd and L. Vandenberghe. *Convex Optimization*. Cambridge University Press, Cambridge, UK, 2004.
- BY:89** [233] S. Boyd and Q. Yang. Structured and simultaneous Lyapunov functions for system stability problems. *International Journal of Control*, 49(6):2215–2240, June 1989.
- BBBKLMN:88** [234] S. P. Boyd, V. Balakrishnam, C. H. Barratt, N. M. Khraishi, X. Li, D. G. Meyer, and S. Norman. A new CAD method and associated architectures for linear controllers. *IEEE Transactions on Automatic Control*, 33(3):268–283, March 1988.
- BB:91** [235] S. P. Boyd and C. H. Barratt. *Linear Control Design: Limits of Performance*. Prentice Hall, Englewood Cliffs, NJ, USA, 1991.
- BM:97** [236] R. D. Braatz and M. Morari. On the stability of systems with mixed time-varying parameters. *International Journal of Robust and Nonlinear Control*, 7:105–112, 1997.
- BYDM:94** [237] R. P. Braatz, P. Young, J. C. Doyle, and M. Morari. Computational complexity of  $\mu$  calculations. *IEEE Transactions on Automatic Control*, 39(5):1000–1002, May 1994.
- BMOP:12** [238] M. F. Braga, C. F. Morais, R. C. L. F. Oliveira, and P. L. D. Peres. Realimentação de estados robusta  $\mathcal{H}_2$  e  $\mathcal{H}_\infty$  para sistemas lineares discretos no tempo por meio de LMIs com parâmetros escalares. In *Anais do XIX Congresso Brasileiro de Automática*, pages 1672–1679, Campina Grande, PB, Brasil, Setembro 2012.
- BMOP:13a** [239] M. F. Braga, C. F. Morais, R. C. L. F. Oliveira, and P. L. D. Peres. Robust stability and stabilization of discrete-time Markov jump linear systems with partly unknown transition probability matrix. In *Proceedings of the 2013 American Control Conference*, pages 6800–6805, Washington, DC, USA, June 2013.
- BMTOP:13a** [240] M. F. Braga, C. F. Morais, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Discretização e controle por realimentação de estados de sistemas lineares incertos. In *Anais do XI Congresso Brasileiro de Automação Inteligente*, pages 1–6, Fortaleza, CE, Brasil, Outubro 2013.
- BMTOP:13b** [241] M. F. Braga, C. F. Morais, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. A new procedure for discretization and state feedback control of uncertain linear systems. In *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 6397–6402, Florence, Italy, December 2013.
- BMTOP:14c** [242] M. F. Braga, C. F. Morais, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Discretisation and control of polytopic systems with uncertain sampling rates and network-induced delays. *International Journal of Control*, 87(11):2398–2411, November 2014.
- BMTOP:14a** [243] M. F. Braga, C. F. Morais, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_2$  guaranteed cost computation of discretized uncertain continuous-time systems. In *Proceedings of the 2014 American Control Conference*, pages 5073–5078, Portland, OR, USA, June 2014.

- BMTOP:14d** [244] M. F. Braga, C. F. Morais, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Discretization and discrete-time output feedback control of linear parameter varying continuous-time systems. In *Proceedings of the 53rd IEEE Conference on Decision and Control*, pages 4765–4771, Los Angeles, CA, USA, December 2015.
- BMTOP:16** [245] M. F. Braga, C. F. Morais, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Linear quadratic networked control of uncertain polytopic systems. *International Journal of Robust and Nonlinear Control*, 26(11):2299–2313, July 2016.
- Bra:98** [246] M. S. Branicky. Multiple Lyapunov functions and other analysis tools for switched and hybrid systems. *IEEE Transactions on Automatic Control*, 43(4):475–482, April 1998.
- Bre:78** [247] J. W. Brewer. Kronecker products and matrix calculus in system theory. *IEEE Transactions on Circuits and Systems*, Cas-25(9):772–781, September 1978.
- Bri:13** [248] C. Briat. Convex conditions for robust stability analysis and stabilization of linear aperiodic impulsive and sampled-data systems under dwell-time constraints. *Automatica*, 49(11):3449–3457, November 2013.
- Bri:13b** [249] C. Briat. Robust stability and stabilization of uncertain linear positive systems via integral linear constraints:  $l_1$ -gain and  $l_\infty$ -gain characterization. *International Journal of Robust and Nonlinear Control*, 23(16):1932–1954, November 2013.
- Bri:14** [250] C. Briat. Convex lifted conditions for robust  $\ell_2$ -stability analysis and  $\ell_2$ -stabilization of linear discrete-time switched systems with minimum dwell-time constraint. *Automatica*, 50(3):976–983, March 2014.
- Bri:15** [251] C. Briat. *Linear Parameter-Varying and Time-Delay Systems — Analysis, Observation, Filtering and Control*, volume 3 of *Advances in Delays and Dynamics*. Springer-Verlag, Berlin Heidelberg, 2015.
- Bri:15b** [252] C. Briat. Stability analysis and control of a class of LPV systems with piecewise constant parameters. *Systems & Control Letters*, 82:10–17, August 2015.
- BS:12a** [253] C. Briat and A. Seuret. Convex dwell-time characterizations for uncertain linear impulsive systems. *IEEE Transactions on Automatic Control*, 57(12):3241–3246, December 2012.
- BS:12** [254] C. Briat and A. Seuret. A looped-functional approach for robust stability analysis of linear impulsive systems. *Systems & Control Letters*, 61(10):980–988, October 2012.
- Bul:42** [255] B. V. Bulgakov. Auto oscillations of controlled systems. *Dokladi Akademii Nauk SSSR*, 37:283–287, 1942.
- Bul:46** [256] B. V. Bulgakov. Some problems of the control theory with nonlinear characteristics. *Prikladnaya Matematika I Mekhanika*, 10:313–332, 1946.
- BM:03b** [257] S. Burer and R. D. C. Monteiro. A nonlinear programming algorithm for solving semidefinite programs via low-rank factorization. *Mathematical Programming: Series B*, 95(2):329–357, February 2003.
- BHLO:06** [258] J. V. Burke, D. Henrion, A. S. Lewis, and M. L. Overton. HIFOO – a MATLAB package for fixed-order controller design and  $\mathcal{H}_\infty$  optimization. In *Proceedings of the 5th IFAC Symposium on Robust Control Design (ROCOND 2006)*, pages 339–344, Toulouse, France, July 2006.
- Bur:98** [259] J. B. Burl. *Linear Optimal Control: H2 and H-Infinity Methods*. Prentice Hall, New York, 1998.
- Bus:99** [260] S. Buso. Design of a robust voltage controller for a buck-boost converter using  $\mu$ -synthesis. *IEEE Transactions on Control Systems Technology*, 7(2):222–229, 1999.
- BFM:01** [261] S. Buso, S. Fasolo, and P. Mattavelli. Uninterruptible power supply multiloop control employing digital predictive voltage and current regulators. *IEEE Transactions on Industry Applications*, 37(6):1846–1854, November/December 2001.

- [262] E. A. Butcher and S. C. Sinha. Symbolic computation of local stability and bifurcation surfaces for nonlinear time-periodic systems. *Nonlinear Dynamics*, 17(7):1–21, September 1998.
- [263] E. A. Butcher and S. C. Sinha. Symbolic computation of secondary bifurcations in a parametrically excited simple pendulum. *International Journal of Bifurcation and Chaos*, 8(3):627–637, March 1998.
- [264] L. Caccetta and V. G. Rumchev. A survey of reachability and controllability for positive linear systems. *Annals of Operations Research*, 98(1):101–122, December 2000.
- [265] B. Cain, L. M. DeAlba, L. Hogben, and C. R. Johnson. Multiplicative perturbations of stable and convergent operators. *Linear Algebra and Its Applications*, 268:151–169, 1998.
- [266] B. E. Cain. Inside the  $D$ -stable matrices. *Linear Algebra and Its Applications*, 56:237–243, 1984.
- [267] F. Calderon, C. R. Fuerte-Esquivel, J. J. Flores, and J. C. Silva. A constraint-handling genetic algorithm to power economic dispatch. In A. Gelbukh and E. Morales, editors, *MICAI 2008: Advances in Artificial Intelligence*, volume 5317 of *Lecture Notes in Computer Science*, pages 371–381. Springer Berlin – Heidelberg, 2008.
- [268] J. F. Camino, M. C. de Oliveira, and R. E. Skelton. “Convexifying” linear matrix inequality methods for integrating structure and control design. *Journal of Structural Engineering — ASCE*, 129(7):978–988, July 2003.
- [269] D. Q. Cao and P. He. Stability criteria of linear neutral systems with a single delay. *Applied Mathematics and Computation*, 148(1):135–143, January 2004.
- [270] S. G. Cao, N. W. Rees, and G. Feng. Stability analysis and design for a class of continuous-time fuzzy control systems. *International Journal of Control*, 64(6):1069–1087, 1996.
- [271] S. G. Cao, N. W. Rees, and G. Feng. Further results about quadratic stability of continuous-time fuzzy control systems. *International Journal of Systems Science*, 28(4):397–404, 1997.
- [272] X. Cao, P. Cheng, J. Chen, and Y. Sun. An online optimization approach for control and communication codesign in networked cyber-physical systems. *IEEE Transaction on Industrial Informatics*, 9(1):439–450, February 2013.
- [273] Y. Cao and P. M. Frank. Analysis and synthesis of nonlinear time-delay systems via fuzzy control approach. *IEEE Transactions on Fuzzy Systems*, 8(2):200–211, April 2000.
- [274] Y. Cao, Z. Lin, and Y. Shamash. Set invariance analysis and gain-scheduling control for LPV systems subject to actuator saturation. *Systems & Control Letters*, 46(2):137–151, June 2002.
- [275] Y. Cao, Z. Lin, and D. G. Ward. An antiwindup approach to enlarging domain of attraction for linear systems subject to actuator saturation. *IEEE Transactions on Automatic Control*, 47(1):140–145, January 2002.
- [276] Y. Y. Cao and J. Lam. Stochastic stabilizability and  $\mathcal{H}_\infty$  control for discrete-time jump linear systems with time-delay. *Journal of The Franklin Institute*, 336(8):1263–1281, November 1999.
- [277] Y.-Y. Cao, J. Lam, and Y.-X. Sun. Static output feedback stabilization: An ILMI approach. *Automatica*, 34(12):1641–1645, December 1998.
- [278] Y.-Y. Cao and Z. Lin. Robust stability analysis and fuzzy-scheduling control for nonlinear systems subject to actuator saturation. *IEEE Transactions on Fuzzy Systems*, 11(1):57–67, February 2003.
- [279] Y.-Y. Cao and Z. Lin. A descriptor system approach to robust stability analysis and controller synthesis. *IEEE Transactions on Automatic Control*, 49(11):2081–2084, November 2004.
- [280] Y.-Y. Cao and Z. Lin. Stability analysis of discrete-time systems with actuator saturation by a saturation-dependent Lyapunov function. *Automatica*, 39(7):1235–1241, July 2005.

- CL:06 [281] Y.-Y. Cao and Z. Lin. An anti-windup design for polytopic systems by a parameter-dependent Lyapunov function approach. *International Journal of Systems Science*, 37(2):129–139, February 2006.
- CLH:02 [282] Y. Y. Cao, Z. Lin, and T. S. Hu. Stability analysis of linear time-delay systems subject to input saturation. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 49(2):233–240, February 2002.
- CSC:98 [283] Y. Y. Cao, Y. X. Sun, and C. Cheng. Delay-dependent robust stabilization of uncertain systems with multiple state delays. *IEEE Transactions on Automatic Control*, 43(11):1608–1612, 1998.
- CSL:98 [284] Y. Y. Cao, Y. X. Sun, and J. Lam. Delay-dependent robust  $\mathcal{H}_\infty$  control for uncertain systems with time-varying delays. *IEE Proceedings — Control Theory and Applications*, 145(3):338–344, 1998.
- CFG:14 [285] C. B. Cardeliquio, A. R. Fioravanti, and A. P. C. Gonçalves.  $\mathcal{H}_2$  output-feedback control of continuous-time MJLS with uncertain transition rates. In *Proceedings of the 53rd IEEE Conference on Decision and Control*, pages 1097–1102, Los Angeles, CA, USA, December 2014.
- Carl:86 [286] D. Carlson. What are Schur complements, anyway? *Linear Algebra and Its Applications*, 74:257–275, 1986.
- CFPT:02 [287] V. Carmona, E. Freire, E. Ponce, and F. Torres. On simplifying and classifying piecewise-linear systems. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 49(5):609–620, May 2002.
- CPG:16 [288] L. P. Carvalho, J. M. Palma, and A. P. C. Gonçalves. Output feedback control applied to car pursuit problem with lossy network. In *Proceedings of the 2016 IEEE Biennial Congress of Argentina (ARGENCON)*, pages 1–6, Buenos Aires, Argentina, June 2016.
- CFF:02 [289] A. Casavola, D. Famularo, and G. Franzè. A feedback min-max MPC algorithm for LPV systems subject to bounded rates of change of parameters. *IEEE Transactions on Automatic Control*, 47(7):1147–1153, July 2002.
- CFF:03 [290] A. Casavola, D. Famularo, and G. Franzè. Predictive control of constrained nonlinear systems via LPV linear embeddings. *International Journal of Robust and Nonlinear Control*, 13(3-4):281–294, March-April 2003.
- CFFG:06 [291] A. Casavola, D. Famularo, G. Franzè, and E. Garone. An improved predictive control strategy for polytopic LPV linear systems. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 5820–5825, San Diego, CA, December 2006.
- Cas:05 [292] E. B. Castelan. Estabilização de sistemas descritores por realimentação de saídas via subespaços invariantes. *SBA: Controle & Automação*, 16(4):467–477, Out/Dez 2005.
- CQT:03 [293] E. B. Castelan, I. Queinnec, and S. Tarbouriech. Delay-independent robust stability conditions of neutral linear time-delay systems. In *Proceedings of the 4th IFAC International Workshop on Linear Time Delay Systems*, Rocquencourt, France, September 2003. in CD-rom.
- CL:10 [294] A. Chamaken and L. Litz. Joint design of control and communication in wireless networked control systems: A case study. In *Proceedings of the 2010 American Control Conference*, pages 1835–1840, Baltimore, MD, USA, June 2010.
- CdA:06 [295] R. S. Chandra and R. D’Andrea. A scaled small gain theorem with applications to spatially interconnected systems. *IEEE Transactions on Automatic Control*, 51(3):465–469, March 2006.
- CLYB:90 [296] B. C. Chang, X. P. Li, H. H. Yeh, and S. S. Banda. Computation of the  $\mathcal{H}_\infty$  norm of a transfer function. In *Proceedings of the 1990 American Control Conference*, pages 2578–2582, San Diego, CA, USA, 1990.
- CP:72 [297] S. S. L. Chang and T. K. C. Peng. Adaptive guaranteed cost control of systems with uncertain parameters. *IEEE Transactions on Automatic Control*, 17(4):474–483, 1972.

- [CPLJ:02] [298] W. Chang, J.-B. Park, H. J. Lee, and Y.-H. Joo. LMI approach to digital redesign of linear time-invariant systems. *IEE Proceedings — Control Theory and Applications*, 149(4):297–302, July 2002.
- [CKC:08] [299] W.-J. Chang, C. C. Ku, and W. Chang. Analysis and synthesis of discrete nonlinear passive systems via affine T-S fuzzy models. *International Journal of Systems Science*, 39(8):809–821, August 2008.
- [CPZ:15] [300] X.-H. Chang, J. H. Park, and J. Zhou. Robust static output feedback  $\mathcal{H}_\infty$  control design for linear systems with polytopic uncertainties. *Systems & Control Letters*, 85:23–32, August 2015.
- [CY:10] [301] X.-H. Chang and G.-H. Yang. Relaxed stabilization conditions for continuous-time Takagi–Sugeno fuzzy control systems. *Information Sciences*, 180(17):3273–3287, September 2010.
- [CYW:11] [302] X.-H. Chang, G.-H. Yang, and H. Wang. Observer-based  $\mathcal{H}_\infty$ -control for discrete-time T–S fuzzy systems. *International Journal of Systems Science*, 42(10):1801–1809, October 2011.
- [CW:10] [303] W.-W. Che and J.-L. Wang. Static output feedback  $\mathcal{H}_\infty$  control for discrete-time Markov jump linear systems. In *Proceedings of the 8th IEEE International Conference on Control and Automation (ICCA'10)*, pages 2278–2283, Xiamen, China, June 2010.
- [CTU:99] [304] B. Chen, C. Tseng, and H. Uang. Robustness design of nonlinear dynamic systems via fuzzy linear control. *IEEE Transactions on Fuzzy Systems*, 7(5):571–585, October 1999.
- [CTU:00] [305] B. Chen, C. Tseng, and H. Uang. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  fuzzy output feedback control design for nonlinear dynamic systems: An LMI approach. *IEEE Transactions on Fuzzy Systems*, 8(3):249–265, June 2000.
- [CC:98a] [306] B. S. Chen and Y. M. Cheng. A structure-specified  $\mathcal{H}_\infty$  optimal control design for practical applications: A genetic approach. *IEEE Transactions on Control Systems Technology*, 6(6):707–718, November 1998.
- [CCL:95] [307] B. S. Chen, Y. M. Cheng, and C. H. Lee. A genetic approach to mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  optimal PID control. *IEEE Control Systems*, 15(5):51–60, 1995.
- [CLC:95] [308] B. S. Chen, C. W. Lin, and Y. L. Chen. Optimal signal reconstruction in noisy filter bank systems — multirate Kalman synthesis filtering approach. *IEEE Transactions on Signal Processing*, 43(11):181–189, November 1995.
- [CWL:88] [309] B. S. Chen, S. S. Wang, and H. C. Lu. Stabilization of time-delay systems containing saturating actuators. *International Journal of Control*, 47(3):867–881, March 1988.
- [CLG:09] [310] C. Chen, H. Liu, and X. Guan.  $\mathcal{H}_\infty$  filtering of time-delay T–S fuzzy systems based on piecewise Lyapunov-Krasovskii functional. *Signal Processing*, 89(10):1998–2005, October 2009.
- [CLH:07] [311] C. H. Chen, C. L. Lin, and T. S. Hwang. Stability of networked control systems with time-varying delays. *IEEE Communications Letters*, 11(3):270–272, March 2007.
- [CC:98] [312] C.-S. Chen and W.-L. Chen. Analysis and design of a stable fuzzy control system. *Fuzzy Sets and Systems*, 96(1):21–35, 1998.
- [CC:96] [313] C.-S. Chen and W.-L. Chen. Analysis and design of a stable fuzzy control system. *Fuzzy Sets and Systems*, 96(1):21–35, 1998.
- [Che:84] [314] C. T. Chen. *Linear System Theory and Design*. Holt, Rinehart and Winston, New York, NY, 1984.
- [Che:99] [315] C. T. Chen. *Linear System Theory and Design*. Oxford University Press, New York, NY, USA, 3rd edition, 1999.
- [Chen:95] [316] J. Chen. On computing the maximal delay intervals for stability of linear delay systems. *IEEE Transactions on Automatic Control*, 40(6):1087–1093, 1995.
- [CFY:95] [317] J. Chen, M. K. H. Fan, and C. C. Yu. On D-stability and structured singular values. *Systems & Control Letters*, 24(1):19–24, 1995.



- [CFM-BNZ:17] [318] J. Chen, P. Fu, C.-F. Mendez-Barrios, S.-I. Niculescu, and H. Zhang. Stability analysis of polynomially dependent systems by eigenvalue perturbation. *IEEE Transactions on Automatic Control*, 2017. To appear, <http://dx.doi.org/10.1109/TAC.2016.2645758>.
- [CGN:95] [319] J. Chen, G. X. Gu, and C. N. Nett. A new method for computing delay margins for stability of linear delay systems. *Systems & Control Letters*, 26(2):107–117, 1995.
- [CL:95] [320] J. Chen and H. A. Latchman. Frequency sweeping tests for stability independent of delay. *IEEE Transactions on Automatic Control*, 40(9):1640–1645, 1995.
- [CSMSZ:13] [321] J. Chen, Y. Sun, H. Min, F. Sun, and Y. Zhang. New results on static output feedback  $\mathcal{H}_\infty$  control for fuzzy singularly perturbed systems: A linear matrix inequality approach. *International Journal of Robust and Nonlinear Control*, 23(6):681–694, April 2013.
- [CXS:95] [322] J. Chen, D. M. Xu, and B. Shafai. On sufficient conditions for stability independent of delay. *IEEE Transactions on Automatic Control*, 40(9):1675–1680, 1995.
- [Chen:04a] [323] J.-D. Chen. New stability criteria for a class of neutral systems with discrete and distributed time-delays: an LMI approach. *Applied Mathematics and Computation*, 150(3):719–736, March 2003.
- [Chen:04b] [324] J.-D. Chen. Robust control for uncertain neutral systems with time-delays in state and control input via LMI and GAs. *Applied Mathematics and Computation*, 157(2):535–548, September 2004.
- [CLFC:00] [325] J. D. Chen, C. H. Lien, K. K. Fan, and J. S. Cheng. Delay-dependent stability criterion for neutral time-delay systems. *Electronic Letters*, 36(22):1897–1898, October 2000.
- [CYM:91] [326] L. K. Chen, X. Yang, and R. R. Mohler. Stability analysis of bilinear systems. *IEEE Transactions on Automatic Control*, 36(11):1310–1315, November 1991.
- [Che:98] [327] M. S. Chen. Exponential stabilization of constrained bilinear systems. *Automatica*, 34(8):989–992, August 1998.
- [CT:00] [328] M. S. Chen and S. T. Tsao. Exponential stabilization of a class of unstable bilinear systems. *IEEE Transactions on Automatic Control*, 45(5):989–992, May 2000.
- [CC:03] [329] S.-H. Chen and J.-H. Chou. Stability robustness of linear discrete singular time-delay systems with structured parameter uncertainties. *IEE Proceedings — Control Theory and Applications*, 150(3):295–302, May 2003.
- [CF:95] [330] T. Chen and B. A. Francis. *Optimal Sampled-Data Control Systems*. Springer-Verlag, London, UK, 1995.
- [CGL:03] [331] W.-H. Chen, Z.-H. Guan, and X. Lu. Delay-dependent guaranteed cost control for uncertain discrete-time systems with delay. *IEE Proceedings — Control Theory and Applications*, 150(4):412–416, 2003.
- [CG:91] [332] W. L. Chen and J. S. Gibson. A Lyapunov robustness bound for linear systems with periodic uncertainties. *Automatica*, 27:545–547, 1991.
- [CXZ:09] [333] Y. Chen, A. Xue, and S. Zhou. New delay-dependent  $\mathcal{L}_2$ - $\mathcal{L}_\infty$  filter design for stochastic time-delay systems. *Signal Processing*, 89(6):974–980, July 2009.
- [Chen:96] [334] Y. H. Chen. Decentralized robust control design for uncertain delay systems. *Journal of Optimization Theory and Applications*, 89(2):311–323, 1996.
- [CWM:96] [335] Y. H. Chen, W. J. Wang, and L. G. Mau. Robust stabilization of large-scale time-delay systems with estimated state feedback. *Journal of Optimization Theory and Applications*, 89(3):543–559, 1996.
- [CTCS:98] [336] C. Cheng, B. Tang, Y. Cao, and Y. Sun. Decentralized robust  $\mathcal{H}_\infty$  control of uncertain large-scale systems with state-delays — LMIs approach. In *Proceedings of the 1998 American Control Conference*, pages 3111–3115, Philadelphia, PA, USA, June 1998.

- CZZZH:13** [337] J. Cheng, H. Zhu, S. Zhong, Y. Zeng, and L. Hou. Finite-time  $\mathcal{H}_\infty$  filtering for a class of discrete-time Markovian jump systems with partly unknown transition probabilities. *International Journal of Adaptive Control and Signal Processing*, 28(10):1024–1042, October 2014.
- Che:03** [338] G. Chesi. Robust analysis of linear systems affected by time-invariant hypercubic parametric uncertainty. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 5019–5024, Maui, HI, USA, December 2003.
- Che:04b** [339] G. Chesi. Computing output feedback controllers to enlarge the domain of attraction in polynomial systems. *IEEE Transactions on Automatic Control*, 49(10):1846–1850, October 2004.
- Che:04a** [340] G. Chesi. Estimating the domain of attraction for uncertain polynomial systems. *Automatica*, 40(11):1981–1986, November 2004.
- Che:05b** [341] G. Chesi. Characterizing the positive polynomials which are not SOS. In *Proceedings of the 44th IEEE Conference on Decision and Control — European Control Conference ECC 2005*, pages 1642–1647, Seville, Spain, December 2005.
- Che:05** [342] G. Chesi. Establishing stability and instability of matrix hypercubes. *Systems & Control Letters*, 54(4):381–388, April 2005.
- Che:07** [343] G. Chesi. Establishing tightness in robust  $\mathcal{H}_\infty$  analysis via homogeneous parameter-dependent Lyapunov functions. *Automatica*, 43(11):1992–1995, November 2007.
- Che:08** [344] G. Chesi. On the non-conservatism of a novel LMI relaxation for robust analysis of polytopic systems. *Automatica*, 44(11):2973–2976, 2008.
- Che:10** [345] G. Chesi. LMI techniques for optimization over polynomials in control: A survey. *IEEE Transactions on Automatic Control*, 55(11):2500–2510, November 2010.
- Che:10a** [346] G. Chesi. Robust stability of time-varying uncertain systems with rational dependence on the uncertainty. *IEEE Transactions on Automatic Control*, 55(10):2353–2357, 2010.
- Che:11** [347] G. Chesi. *Domain of Attraction: Analysis and Control via SOS Programming*, volume 415 of *Lecture Notes in Control and Information Sciences*. Springer, London, UK, 2011.
- Che:13a** [348] G. Chesi. Sufficient and necessary LMI conditions for robust stability of rationally time-varying uncertain systems. *IEEE Transactions on Automatic Control*, 58(6):1546–1551, 2013.
- Che:14b** [349] G. Chesi. Establishing robust stability of discrete-time systems with time-varying uncertainty: The Gram-SOS approach. *Automatica*, 50(11):2813–2821, November 2014.
- Che:14** [350] G. Chesi. Robust static output feedback controllers via robust stabilizability functions. *IEEE Transactions on Automatic Control*, 59(6):1618–1623, June 2014.
- CGTV:02** [351] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. LMI-based construction of homogeneous Lyapunov functions for systems with structured uncertainties. In *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, December 2002. 281–286.
- CGTV:03a** [352] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Homogeneous Lyapunov functions for systems with structured uncertainties. *Automatica*, 39(6):1027–1035, June 2003.
- CGTV:03c** [353] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Robust stability of polytopic systems via polynomially parameter-dependent Lyapunov functions. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 4670–4675, Maui, HI, USA, December 2003.
- CGTV:03b** [354] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Solving quadratic distance problems: An LMI-based approach. *IEEE Transactions on Automatic Control*, 48(2):200–212, February 2003.

- CGTV:04b** [355] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Parameter-dependent homogeneous Lyapunov functions for robust stability of linear time-varying systems. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 4095–4100, Paradise Island, Bahamas, December 2004.
- CGTV:04** [356] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Robust analysis of LFR systems through homogeneous polynomial Lyapunov functions. *IEEE Transactions on Automatic Control*, 49(7):1211–1216, July 2004.
- CGTV:05c** [357] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Polynomially parameter-dependent Lyapunov functions for robust  $\mathcal{H}_\infty$  performance analysis. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005.
- CGTV:05b** [358] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Polynomially parameter-dependent Lyapunov functions for robust stability of polytopic systems: An LMI approach. *IEEE Transactions on Automatic Control*, 50(3):365–370, March 2005.
- CGTV:07** [359] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. Robust stability of time-varying polytopic systems via parameter-dependent homogeneous Lyapunov functions. *Automatica*, 43(2):309–316, February 2007.
- CGTV:09** [360] G. Chesi, A. Garulli, A. Tesi, and A. Vicino. *Homogeneous Polynomial Forms for Robustness Analysis of Uncertain Systems*, volume 390 of *Lecture Notes in Control and Information Sciences*. Springer-Verlag, Berlin, Germany, 2009.
- CH:08** [361] G. Chesi and Y. S. Hung. Stability analysis of uncertain genetic SUM regulatory networks. *Automatica*, 44(9):2298–2305, September 2008.
- CTVG:99** [362] G. Chesi, A. Tesi, A. Vicino, and R. Genesio. On convexification of some minimum distance problems. In *Proceedings of the 5th European Control Conference*, Karlsruhe, Germany, August 1999.
- CTVG:01** [363] G. Chesi, A. Tesi, A. Vicino, and R. Genesio. An LMI approach to constrained optimization with homogeneous forms. *Systems & Control Letters*, 42(1):11–19, January 2001.
- CHW:88** [364] H.-D. Chiang, M. W. Hirsch, and F. F. Wu. Stability regions of nonlinear autonomous dynamical systems. *IEEE Transactions on Automatic Control*, 33(1):16–27, January 1988.
- CT:89** [365] H.-D. Chiang and J. S. Thorp. Stability regions of nonlinear dynamical systems: a constructive methodology. *IEEE Transactions on Automatic Control*, 34(12):1229–1241, December 1989.
- CG:96** [366] M. Chilali and P. Gahinet.  $\mathcal{H}_\infty$  design with pole placement constraints: an LMI approach. *IEEE Transactions on Automatic Control*, 41(3):358–367, March 1996.
- CGA:99** [367] M. Chilali, P. Gahinet, and P. Apkarian. Robust pole placement in LMI regions. *IEEE Transactions on Automatic Control*, 44(12):2257–2270, December 1999.
- CWC:86** [368] H. J. Chizeck, A. S. Willsky, and D. Castanon. Discrete-time Markovian jump linear quadratic optimal control. *International Journal of Control*, 43:213–231, 1986.
- CP:03** [369] D. J. Choi and P. Park.  $\mathcal{H}_\infty$  state-feedback controller design for discrete-time fuzzy systems using fuzzy weighting-dependent Lyapunov functions. *IEEE Transactions on Fuzzy Systems*, 11(2):271–278, April 2003.
- CC:97c** [370] H. H. Choi and M. J. Chung. An LMI approach to  $\mathcal{H}_\infty$  controller design for linear time-delay systems. *Automatica*, 33(4):737–739, 1997.
- CC:97a** [371] H. H. Choi and M. J. Chung. Quadratic stabilization of continuous time systems with state-delay and norm-bounded time-varying. *IEEE Transactions on Automatic Control*, 42(12):1740–1742, 1997.
- CC:97b** [372] H. H. Choi and M. J. Chung. Robust observer-based  $\mathcal{H}_\infty$  controller design for linear uncertain time-delay systems. *Automatica*, 33(9):1749–1752, 1997.

- [CLR:95] [373] M. Choi, T. Y. Lam, and B. Reznick. Sum of squares of real polynomials. In *Proceedings of Symposia in Pure Mathematics*, volume 58.2, pages 103–126, Providence, RI, 1995.
- [Chu:95] [374] J. Chu. Application of a discrete optimal tracking controller to an industrial electric heater with pure delays. *Journal of Process Control*, 5(1):3–8, 1995.
- [CSH:93] [375] J. Chu, H. Su, and X. Hu. A time-delay control algorithm for an industrial electric heater. *Journal of Process Control*, 3(4):219–224, 1993.
- [Chu:97] [376] T. G. Chu. Analysis of practical stability and Lyapunov stability of linear time-varying neutral delay systems. *International Journal of Systems Science*, 28(9):919–924, 1997.
- [CG:99] [377] Y-C. Chu and K. Glover. Bounds of the induced norm and model reduction errors for systems with repeated scalar nonlinearities. *IEEE Transactions on Automatic Control*, 44(3):471–483, 1999.
- [CM:04] [378] S. S. Chughtai and N. Munro. Robust stability condition for continuous-time systems. *Electronic Letters*, 40(16):978–979, August 2004.
- [CD:97] [379] T. Clarke and R. Davies. Robust eigenstructure assignment using the genetic algorithm and constrained state feedback. *Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering*, 211(1):53–61, 1997.
- [Cob:84] [380] D. Cobb. Controllability, observability, and duality in singular systems. *IEEE Transactions on Automatic Control*, 29(12):1076–1082, December 1984.
- [CS:16] [381] M. Colombino and R. S. Smith. A convex characterization of robust stability for positive and positively dominated linear systems. *IEEE Transactions on Automatic Control*, 61(7):1965–1971, July 2016.
- [Cor:94] [382] M. Corless. Robust stability analysis and controller design with quadratic Lyapunov functions. In A. S. I. Zinober, editor, *Variable Structure and Lyapunov Control*. Springer-Verlag, London, UK, 1994.
- [CG:12] [383] D. G. Costa and L. A. Guedes. A discrete wavelet transform (DWT)-based energy-efficient selective retransmission mechanism for wireless image sensor networks. *Journal of Sensor and Actuator Networks*, 1(1):3–35, February 2012.
- [CdVF:05] [384] E. F. Costa, J. B. R. do Val, and M. D. Fragoso. A new approach to detectability of discrete-time infinite Markov jump linear systems. *SIAM Journal on Control and Optimization*, 43(6):2132–2156, 2005.
- [Cos:94] [385] O. L. V. Costa. Linear minimum mean squares error estimation for discrete-time Markovian jump linear systems. *IEEE Transactions on Automatic Control*, 39(8):1685–1688, 1994.
- [Cos:96] [386] O. L. V. Costa. Mean-square stabilizing solutions for discrete-time coupled algebraic Riccati equations. *IEEE Transactions on Automatic Control*, 41(4):593–598, 1996.
- [CA-FBM:99] [387] O. L. V. Costa, E. O. Assumpção Filho, E. K. Boukas, and R. P. Marques. Constrained quadratic state feedback control of discrete-time Markovian jump linear systems. *Automatica*, 35(4):617–626, April 1999.
- [CB:98] [388] O. L. V. Costa and E. K. Boukas. Necessary and sufficient condition for robust stability and stabilizability of continuous-time linear systems with Markovian jumps. *Journal of Optimization Theory and Applications*, 99(2):359–379, 1998.
- [CdP:07] [389] O. L. V. Costa and W. L. de Paulo. Indefinite quadratic with linear costs optimal control of Markov jump with multiplicative noise systems. *Automatica*, 43(4):587–597, April 2007.
- [CdV:96] [390] O. L. V. Costa and J. B. R. do Val. Full information  $\mathcal{H}_\infty$ -control for discrete-time infinite Markov jump parameter systems. *Journal of Mathematical Analysis and Applications*, 202(2):578–603, September 1996.

- CdVG:97** [391] O. L. V. Costa, J. B. R. do Val, and J. C. Geromel. A convex programming approach to  $\mathcal{H}_2$ -control of discrete-time Markovian jump linear systems. *International Journal of Control*, 66(4):557–579, 1997.
- CF:93** [392] O. L. V. Costa and M. D. Fragoso. Stability results for discrete-time linear systems with Markovian jumping parameters. *Journal of Mathematical Analysis and Applications*, 179:154–178, 1993.
- CF:95a** [393] O. L. V. Costa and M. D. Fragoso. Discrete-time LQ-optimal control problems for infinite Markov jump parameter systems. *IEEE Transactions on Automatic Control*, 40(12):2076–2088, December 1995.
- CFM:05** [394] O. L. V. Costa, M. D. Fragoso, and R. P. Marques. *Discrete-Time Markovian Jump Linear Systems*. Springer-Verlag, New York, NY, USA, 2005.
- CFT:13** [395] O. L. V. Costa, M. D. Fragoso, and M. G. Todorov. *Continuous-Time Markov Jump Linear Systems*. Springer-Verlag, Berlin, Germany, 2013.
- CFT:15** [396] O. L. V. Costa, M. D. Fragoso, and M. G. Todorov. A detector-based approach for the  $\mathcal{H}_2$  control of Markov jump linear systems with partial information. *IEEE Transactions on Automatic Control*, 60(5):1219–1234, May 2015.
- CG:02b** [397] O. L. V. Costa and S. Guerra. Robust linear filtering for discrete-time hybrid Markov linear systems. *International Journal of Control*, 75(10):712–727, November 2002.
- CG:02a** [398] O. L. V. Costa and S. Guerra. Stationary filter for linear minimum mean square error estimator of discrete-time Markovian jump systems. *IEEE Transactions on Automatic Control*, 47(8):1351–1356, August 2002.
- CK:96** [399] O. L. V. Costa and C. S. Kubrusly. State feedback  $\mathcal{H}_\infty$ -control for discrete-time infinite-dimensional stochastic bilinear systems. *Journal of Mathematical Systems, Estimation, and Control*, 6:1–32, 1996.
- CM:98** [400] O. L. V. Costa and R. P. Marques. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$ -control of discrete-time Markovian jump linear systems. *IEEE Transactions on Automatic Control*, 43(1):95–100, 1998.
- CT:04** [401] O. L. V. Costa and E. F. Tuesta.  $\mathcal{H}_2$ -control and the separation principle for discrete-time Markovian jump linear systems. *Mathematics of Control Signals and Systems*, 16(4):320–350, March 2004.
- CBG:99** [402] C. Courties, J. Bernussou, and G. Garcia. LPV control by dynamic output feedback. In *Proceedings of the 1999 American Control Conference*, volume 4, pages 2267–2271, San Diego, CA, USA, June 1999.
- CdS:12** [403] D. Coutinho and C. E. de Souza. Nonlinear state feedback design with a guaranteed stability domain for locally stabilizable unstable quadratic systems. *IEEE Transactions on Circuits and Systems I: Regular Papers*, 59(2):360–370, February 2012.
- CBTS:04** [404] D. F. Coutinho, A. S. Bazanella, A. Trofino, and A. S. E. Silva. Stability analysis and control of a class of differential-algebraic nonlinear systems. *International Journal of Robust and Nonlinear Control*, 14(16):1301–1326, November 2004.
- CdS:08** [405] D. F. Coutinho and C. E. de Souza. Delay-dependent robust stability and  $\mathcal{L}_2$ -gain analysis of a class of nonlinear time-delay systems. *Automatica*, 44(8):2006–2018, August 2008.
- CdSB:09** [406] D. F. Coutinho, C. E. de Souza, and K. A. Barbosa. Robust  $\mathcal{H}_\infty$  filter design for a class of discrete-time parameter varying systems. *Automatica*, 45(12):2946–2945, December 2009.
- CdSBT:09** [407] D. F. Coutinho, C. E. de Souza, K. A. Barbosa, and A. Trofino. Robust linear  $\mathcal{H}_\infty$  filter design for a class of uncertain nonlinear systems: An LMI approach. *SIAM Journal on Control and Optimization*, 48(3):1452–1472, 2009.
- CFT:04** [408] D. F. Coutinho, M. Fu, and A. Trofino. Robust analysis and control for a class of uncertain nonlinear discrete-time systems. *Systems & Control Letters*, 53(5):377–393, December 2004.



- [CT:02] [409] D. F. Coutinho and A. Trofino. Análise de sistemas não lineares incertos: Uma abordagem LMI. *SBA: Controle & Automação*, 13(2):94–104, May/August 2002.
- [Cro:78] [410] G. W. Cross. Three types of matrix stability. *Linear Algebra and Its Applications*, 20:253–263, 1978.
- [CT:99] [411] C. A. R. Crusius and A. Trofino. Sufficient LMI conditions for output feedback control problems. *IEEE Transactions on Automatic Control*, 44(5):1053–1057, May 1999.
- [CRZ:00] [412] J. Cullum, A. Ruehli, and T. Zhang. A method for reduced-order modeling and simulation of large interconnect circuits and its application to PEED models with retardation. *IEEE Transactions on Circuits and Systems Part II: Analog and Digital Signal Processing*, 47(4):261–273, April 2000.
- [CJ:08] [413] A. Czornik and P. Jurgas. Set of possible values of maximal Lyapunov exponents of discrete time-varying linear system. *Automatica*, 44(2):580–583, February 2008.
- [DB:01] [414] J. Daafouz and J. Bernussou. Parameter dependent Lyapunov functions for discrete time systems with time varying parameter uncertainties. *Systems & Control Letters*, 43(5):355–359, August 2001.
- [DB:01b] [415] J. Daafouz and J. Bernussou. Poly-quadratic stability and  $\mathcal{H}_\infty$  performance for discrete systems with time varying uncertainties. In *Proceedings of the 40th IEEE Conference on Decision and Control*, pages 267–272, Orlando, FL, USA, December 2001.
- [DBG:08] [416] J. Daafouz, J. Bernussou, and J. C. Geromel. On inexact LPV control design of continuous-time polytopic systems. *Automatica*, 53(7):1674–1678, August 2008.
- [DMI:02] [417] J. Daafouz, G. Millerioux, and C. Iung. A poly-quadratic stability based approach for linear switched systems. *International Journal of Control*, 75(16-17):1302–1310, November 2002.
- [DRI:01] [418] J. Daafouz, P. Riedinger, and C. Iung. Static output feedback control for switched systems. In *Proceedings of the 40th IEEE Conference on Decision and Control*, volume 3, pages 2093–2094, Orlando, FL, USA, December 2001.
- [DRI:02] [419] J. Daafouz, P. Riedinger, and C. Iung. Stability analysis and control synthesis for switched systems: A switched Lyapunov function approach. *IEEE Transactions on Automatic Control*, 47(11):1883–1887, November 2002.
- [DRI:03] [420] J. Daafouz, P. Riedinger, and C. Iung. Stabilizing switched control design and pole placement. In *IFAC Conference on Analysis and Design of Hybrid Systems (ADHS03)*, Saint Malo, France, June 2003.
- [DD:91] [421] M. Dahleh and M. A. Dahleh. On slowly time-varying systems. *Automatica*, 27(1):201–205, January 1991.
- [dAD:03] [422] R. D’Andrea and G. E. Dullerud. Distributed control design for spatially interconnected systems. *IEEE Transactions on Automatic Control*, 48(9):1478–1495, September 2003.
- [D-A:70] [423] H. D’Angelo. *Linear Time-varying Systems: Analysis and Synthesis*. Allyn and Bacon, Boston, MA, 1970.
- [DCAF:94] [424] S. Dasgupta, G. Chockalingam, B. D. O. Anderson, and M. Fu. Lyapunov functions for uncertain systems with applications to the stability of time varying systems. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 41(2):93–106, February 1994.
- [Dat:78] [425] B. N. Datta. Stability and  $D$ -stability. *Linear Algebra and Its Applications*, 21:135–141, 1978.
- [Dav:84] [426] M. H. A. Davis. Piecewise deterministic Markov processes: a general class of non-diffusion stochastic models. *Journal of Royal Statistical Society; Serie B*, 46:353–388, 1984.
- [DM:99] [427] W. P. Dayawansa and C. F. Martin. A converse Lyapunov theorem for a class of dynamical systems which undergo switching. *IEEE Transactions on Automatic Control*, 44(4):751–760, April 1999.

- dCCOPS:09b** [428] J. De Caigny, J. F. Camino, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. Gain-scheduled  $\mathcal{H}_\infty$ -control for discrete-time polytopic LPV systems using homogeneous polynomially parameter-dependent Lyapunov functions. In *Proceedings of the 6th IFAC Symposium on Robust Control Design (ROCOND 2009)*, pages 19–24, Haifa, Israel, June 2009.
- dCCOPS:10** [429] J. De Caigny, J. F. Camino, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. Gain-scheduled  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  control of discrete-time polytopic time-varying systems. *IET Control Theory & Applications*, 4(3):362–380, March 2010.
- dCCOPS:12** [430] J. De Caigny, J. F. Camino, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. Gain-scheduled dynamic output feedback control for discrete-time LPV systems. *International Journal of Robust and Nonlinear Control*, 22(5):535–558, March 2012.
- dCCOPS:12a** [431] J. De Caigny, J. F. Camino, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. Modeling and control of LPV systems: A vibroacoustic application. In J. Mohammadpour and C. W. Scherer, editors, *Control of Linear Parameter Varying Systems with Applications*, pages 357–379. Springer, New York, 2012.
- dCCPS:07** [432] J. De Caigny, J. F. Camino, B. Paijmans, and J. Swevers. An application of interpolating gain-scheduling control. In *Proceedings of the 3rd IFAC Symposium on System, Structure and Control (SSSC07)*, Foz do Iguaçu, Brazil, October 2007.
- dCCS:08a** [433] J. de Caigny, J. F. Camino, and J. Swevers. Identification of MIMO LPV models based on interpolation. In *Proceedings of the International Conference on Noise and Vibration Engineering*, Leuven, Belgium, October 2008.
- dCCS:09a** [434] J. De Caigny, J. F. Camino, and J. Swevers. Interpolating model identification for SISO linear parameter-varying systems. *Mechanical Systems and Signal Processing*, 23(8):2395–2417, November 2009.
- dFGdVC:00** [435] D. P. de Farias, J. C. Geromel, J. B. R. do Val, and O. L. V. Costa. Output feedback control of Markov jump linear systems in continuous-time. *IEEE Transactions on Automatic Control*, 45(5):944–949, May 2000.
- dKle:08** [436] E. de Klerk. The complexity of optimizing over a simplex, hypercube or sphere: A short survey. *Central European Journal of Operations Research*, 16(2):111–125, June 2008.
- dKLP:05** [437] E. de Klerk, M. Laurent, and P. A. Parrilo. On the equivalence of algebraic approaches to the minimization of forms on the simplex. In D. Henrion and A. Garulli, editors, *Positive Polynomials in Control*, volume 312 of *Lecture Notes in Control and Information Sciences*, pages 121–132. Springer-Verlag, Berlin, 2005.
- dKLP:06** [438] E. de Klerk, M. Laurent, and P. A. Parrilo. A PTAS for the minimization of polynomials of fixed degree over the simplex. *Theoretical Computer Science*, 361(2–3):210–225, 2006.
- dKP:02** [439] E. de Klerk and D. V. Pasechnik. Approximation of the stability number of a graph via copositive programming. *SIAM Journal on Optimization*, 12(4):875–892, 2002.
- DeLA:01** [440] P. De Leenheer and D. Aeyels. Stabilization of positive linear systems. *Systems & Control Letters*, 44(4):259–271, November 2001.
- dLS:96** [441] J. A. de Loera and F. Santos. An effective version of Pólya’s Theorem on positive definite forms. *Journal of Pure and Applied Algebra*, 108:231–240, 1996.
- LS:96** [442] J. A. de Loera and F. Santos. An effective version of Pólya’s theorem on positive definite forms. *Journal of Pure and Applied Algebra*, 108(3):231–240, May 1996.
- dOTaS:00** [443] J. de Oliveira, A. Trofino, and C. E. de Souza. Análise e síntese  $\mathcal{H}_\infty$  para sistemas LPV. In *Anais do XIII Congresso Brasileiro de Automática*, pages 622–627, Florianópolis, SC, September 2000.

- [444] J. de Oliveira, A. Trofino, and C. E. de Souza. Análise e síntese  $\mathcal{H}_\infty$  para sistemas LPV. *SBA: Controle & Automação*, 13(1):18–24, 2002.
- [445] M. C. de Oliveira. *Controle de Sistemas Lineares baseado nas Desigualdades Matriciais Lineares*. PhD Thesis, University of Campinas, Campinas, SP, Brazil, May 1999.
- [446] M. C. de Oliveira. Investigating duality on stability conditions. *Systems & Control Letters*, 52(1):1–6, May 2004.
- [447] M. C. de Oliveira. Symbolic computer algebra algorithms for factorizations of Sylvester mappings with applications to the production of linear matrix inequalities in systems and controls. In *Proceedings of the 2011 IEEE International Symposium on Computer Aided Control Systems Design*, pages 432–437, Denver, CO, USA, September 2011.
- [448] M. C. de Oliveira, J. Bernussou, and J. C. Geromel. A new discrete-time robust stability condition. *Systems & Control Letters*, 37(4):261–265, July 1999.
- [449] M. C. de Oliveira, J. F. Camino, and R. E. Skelton. A convexifying algorithm for the design of structured linear controllers. In *Proceedings of the 39th IEEE Conference on Decision and Control*, volume 3, pages 2781–2786, Sydney, Australia, December 2000.
- [450] M. C. de Oliveira and J. C. Geromel.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  robust nonrational filtering for linear delay systems. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, volume 6, pages 6038–6043, Maui, HI, USA, December 2003.
- [451] M. C. de Oliveira and J. C. Geromel. Synthesis of non-rational controllers for linear delay systems. *Automatica*, 40(2):171–188, February 2004.
- [452] M. C. de Oliveira and J. C. Geromel. A class of robust stability conditions where linear parameter dependence of the Lyapunov function is a necessary condition for arbitrary parameter dependence. *Systems & Control Letters*, 54:1131–1134, November 2005.
- [453] M. C. de Oliveira and J. C. Geromel.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filtering design subject to implementation uncertainty. *SIAM Journal on Control and Optimization*, 44(2):515–530, 2005.
- [454] M. C. de Oliveira, J. C. Geromel, and J. Bernussou. Design of dynamic output feedback decentralized controllers via a separation procedure. *International Journal of Control*, 73(5):371–381, March 2000.
- [455] M. C. de Oliveira, J. C. Geromel, and J. Bernussou. Extended  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  characterization and controller parametrizations for discrete-time systems. *International Journal of Control*, 75(9):666–679, June 2002.
- [456] M. C. de Oliveira, J. C. Geromel, and L. Hsu. LMI characterization of structural and robust stability: The discrete-time case. *Linear Algebra and Its Applications*, 296(1–3):27–38, June 1999.
- [457] M. C. de Oliveira, J. C. Geromel, and L. Hsu. A new absolute stability test for systems with state-dependent perturbations. *International Journal of Robust and Nonlinear Control*, 12(14):1209–1226, December 2002.
- [458] M. C. de Oliveira, L. Hsu, and J. C. Geromel. Uma formulação LMI para a análise de estabilidade com funções de Lyapunov do tipo Lur’e-Persidskii. *SBA: Controle & Automação*, 13(1):25–33, Janeiro–Abril 2002.
- [459] M. C. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. Schur stability of polytopic systems through positivity analysis of matrix-valued polynomials. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 6322–6327, New Orleans, LA, December 2007.
- [460] M. C. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  performance using lifted polynomial parameter-dependent Lyapunov functions. *International Journal of Control*, 81(7):1089–1101, July 2008.

- d00P:10** [461] M. C. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. A new method for robust Schur stability analysis. *International Journal of Control*, 83(10):2181–2192, October 2010.
- d0S:01** [462] M. C. de Oliveira and R. E. Skelton. Stability tests for constrained linear systems. In S. O. Reza Moheimani, editor, *Perspectives in Robust Control*, volume 268 of *Lecture Notes in Control and Information Science*, pages 241–257. Springer-Verlag, New York, NY, 2001.
- d0LMP:04** [463] P. J. de Oliveira, V. J. S. Leite, R. C. L. F. Oliveira, V. F. Montagner, and P. L. D. Peres. Determinação do custo garantido  $\mathcal{H}_2$  por meio de funções de Lyapunov dependentes de parâmetros. In *Anais do XV Congresso Brasileiro de Automática*, Gramado, RS, Setembro 2004.
- d00LMP:02a** [464] P. J. de Oliveira, R. C. L. F. Oliveira, V. J. S. Leite, V. F. Montagner, and P. L. D. Peres. Estabilidade robusta de sistemas discretos no tempo através de desigualdades matriciais lineares. In *Anais do XIV Congresso Brasileiro de Automática*, pages 2884–2889, Natal, RN, Setembro 2002.
- d00LMP:02b** [465] P. J. de Oliveira, R. C. L. F. Oliveira, V. J. S. Leite, V. F. Montagner, and P. L. D. Peres. LMI based robust stability conditions for linear uncertain systems: A numerical comparison. In *Proceedings of the 41st IEEE Conference on Decision and Control*, pages 644–649, Las Vegas, NV, USA, December 2002.
- d00LMP:03** [466] P. J. de Oliveira, R. C. L. F. Oliveira, V. J. S. Leite, V. F. Montagner, and P. L. D. Peres.  $\mathcal{H}_\infty$  guaranteed cost computation by means of parameter dependent Lyapunov functions. In *Proceedings of the 4th IFAC Symposium on Robust Control Design (ROCOND 2003)*, volume 1, pages 19–24, Milan, Italy, 2003.
- d00LMP:04b** [467] P. J. de Oliveira, R. C. L. F. Oliveira, V. J. S. Leite, V. F. Montagner, and P. L. D. Peres.  $\mathcal{H}_2$  guaranteed cost computation by means of parameter dependent Lyapunov functions. *International Journal of Systems Science*, 35(5):305–315, April 2004.
- d00LMP:04a** [468] P. J. de Oliveira, R. C. L. F. Oliveira, V. J. S. Leite, V. F. Montagner, and P. L. D. Peres.  $\mathcal{H}_\infty$  guaranteed cost computation by means of parameter dependent Lyapunov functions. *Automatica*, 40(6):1053–1061, June 2004.
- d00LP:04** [469] P. J. de Oliveira, R. C. L. F. Oliveira, V. J. S. Leite, and P. L. D. Peres. Condições LMI para estabilidade robusta de politopos de matrizes polinomiais. *SBA: Controle & Automação*, 14(4):388–400, Outubro/Dezembro 2004.
- d00P:02a** [470] P. J. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. A new LMI condition for robust stability of polynomial matrix polytopes. *IEEE Transactions on Automatic Control*, 47(10):1775–1779, October 2002.
- d00P:02c** [471] P. J. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. A new LMI condition for robust stability of polynomial matrix polytopes. In *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, December 2002. 670–675.
- d00P:02b** [472] P. J. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. Uma nova condição LMI para estabilidade robusta de politopos de matrizes polinomiais. In *Anais do XIV Congresso Brasileiro de Automática*, pages 2872–2877, Natal, RN, Setembro 2002.
- d0RB:05** [473] R. V. de Oliveira, R. A. Ramos, and N. G. Bretas. Controlador robusto multiobjetivo para o amortecimento de oscilações eletromecânicas em sistemas elétricos de potência. *SBA: Controle & Automação*, 16(3):290–302, Jul/Set 2005.
- d0RB:07** [474] R. V. de Oliveira, R. A. Ramos, and N. G. Bretas. Using the output energy as performance index in the design of damping controllers for power systems. *IET Control Theory & Applications*, 1(5):1191–1199, September 2007.
- d0RB:10** [475] R. V. de Oliveira, R. A. Ramos, and N. G. Bretas. An algorithm for computerized automatic tuning of power system stabilizers. *Control Engineering Practice*, 18(1), January 2010.

- dSo:03** [476] C. E. de Souza. A mode-independent  $\mathcal{H}_\infty$  filter design for discrete-time Markovian jump linear systems. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, volume 3, pages 2811–2816, Maui, HI, USA, December 2003.
- dSo:06** [477] C. E. de Souza. Robust stability and stabilization of uncertain discrete-time Markovian jump linear systems. *IEEE Transactions on Automatic Control*, 51(5):836–841, May 2006.
- dSBT:06** [478] C. E. de Souza, K. A. Barbosa, and A. Trofino. Robust  $\mathcal{H}_\infty$  filtering for discrete-time linear systems with uncertain time-varying parameters. *IEEE Transactions on Signal Processing*, 54(6):2110–2118, June 2006.
- dSBT:07** [479] C. E. de Souza, K. A. Barbosa, and A. Trofino. Robust filtering for linear systems with convex-bounded uncertain time-varying parameters. *IEEE Transactions on Automatic Control*, 52(6):1132–1138, June 2007.
- dSC:06** [480] C. E. de Souza and D. F. Coutinho. Robust stability of a class of uncertain Markov jump nonlinear systems. *IEEE Transactions on Automatic Control*, 51(11):1825–1831, November 2006.
- dSF:93** [481] C. E. de Souza and M. D. Fragoso.  $\mathcal{H}_\infty$  control for linear systems with Markovian jumping parameters. *Control Theory and Advanced Technology*, 10:457–466, 1993.
- dSF:96a** [482] C. E. de Souza and M. D. Fragoso.  $\mathcal{H}_\infty$  filtering for Markovian jump linear systems. In *Proceedings of the 35th IEEE Conference on Decision and Control*, pages 4814–4818, Kobe, Japan, December 1996.
- dSF:96b** [483] C. E. de Souza and M. D. Fragoso. Robust  $\mathcal{H}_\infty$  filtering for uncertain Markovian jump linear systems. In *Proceedings of the 35th IEEE Conference on Decision and Control*, pages 4808–4813, Kobe, Japan, December 1996.
- dSF:97** [484] C. E. de Souza and M. D. Fragoso.  $\mathcal{H}_\infty$  filtering for discrete-time linear systems with Markovian jumping parameters. In *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 2181–2186, San Diego, CA, December 1997.
- dSF:03** [485] C. E. de Souza and M. D. Fragoso.  $\mathcal{H}_\infty$  filtering for discrete-time linear systems with Markovian jumping parameters. *International Journal of Robust and Nonlinear Control*, 13(14):1299–1316, December 2003.
- dSFT:00** [486] C. E. de Souza, M. Fu, and A. Trofino. Robust  $\mathcal{H}_\infty$  filter design using parameter dependent Lyapunov functions. In *Proceedings of the 3rd IFAC Symposium on Robust Control Design (ROCOND 2000)*, pages 1–6, Prague, Czech Republic, June 2000.
- SFX:93** [487] C. E. de Souza, M. Fu, and L. Xie.  $\mathcal{H}_\infty$  analysis and synthesis of discrete-time systems with time-varying uncertainty. *IEEE Transactions on Automatic Control*, 38(3):459–462, March 1993.
- dSFX:93** [488] C. E. de Souza, M. Fu, and L. Xie.  $\mathcal{H}_\infty$  analysis and synthesis of discrete-time systems with time-varying uncertainty. *IEEE Transactions on Automatic Control*, 38(3):459–462, March 1993.
- dSL:99** [489] C. E. de Souza and X. Li. Delay-dependent robust  $\mathcal{H}_\infty$  control of uncertain linear state-delayed systems. *Automatica*, 35(7):1313–1321, 1999.
- dSPP:99** [490] C. E. de Souza, R. M. Palhares, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filtering for uncertain linear systems with multiple time-varying state delays: an LMI approach. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 2023–2029, Phoenix, AZ, December 1999.
- dSPP:01** [491] C. E. de Souza, R. M. Palhares, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filter design for uncertain linear systems with multiple time-varying state delays. *IEEE Transactions on Signal Processing*, 49(3):569–576, March 2001.
- dSS:99** [492] C. E. de Souza and U. Shaked. Robust  $\mathcal{H}_2$  filtering for uncertain systems with measurable inputs. *IEEE Transactions on Signal Processing*, 47(8):2286–2292, 1999.



- dSSF:95** [493] C. E. de Souza, U. Shaked, and M. Fu. Robust  $\mathcal{H}_\infty$  filtering for continuous time varying uncertain systems with deterministic input signals. *IEEE Transactions on Signal Processing*, 43(3):709–719, 1995.
- dST:00** [494] C. E. de Souza and A. Trofino. A linear matrix inequality approach to the design of robust  $\mathcal{H}_2$  filters. In L. El Ghaoui and S. I. Niculescu, editors, *Advances in Linear Matrix Inequality Methods in Control*, Advances in Design and Control, pages 175–185. SIAM, Philadelphia, PA, 2000.
- dST:04** [495] C. E. de Souza and A. Trofino. Gain-scheduled  $\mathcal{H}_2$  control of linear parameter varying systems using a parametric Lyapunov function. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 2936–2941, Paradise Island, Bahamas, December 2004.
- dST:06** [496] C. E. de Souza and A. Trofino. Gain-scheduled  $\mathcal{H}_2$  controller synthesis for linear parameter varying systems via parameter-dependent Lyapunov functions. *International Journal of Robust and Nonlinear Control*, 16(5):243–257, March 2006.
- dSTB:06** [497] C. E. de Souza, A. Trofino, and K. A. Barbosa. Mode-independent  $\mathcal{H}_\infty$  filters for Markovian jump linear systems. *IEEE Transactions on Automatic Control*, 51(11):1837–1841, November 2006.
- dSTd0:00** [498] C. E. de Souza, A. Trofino, and J. de Oliveira. Robust  $\mathcal{H}_\infty$  control of uncertain linear systems via parameter-dependent Lyapunov functions. In *Proceedings of the 39th IEEE Conference on Decision and Control*, pages 3194–3199, Sydney, Australia, December 2000.
- dSTd0:03** [499] C. E. de Souza, A. Trofino, and J. de Oliveira. Parametric Lyapunov function approach to  $\mathcal{H}_2$  analysis and control of linear parameter-dependent systems. *IEE Proceedings — Control Theory and Applications*, 150(5):501–508, September 2003.
- SX:92** [500] C. E. de Souza and L. Xie. On the discrete-time bounded real lemma with application in the characterization of static state feedback  $\mathcal{H}_\infty$  controllers. *Systems & Control Letters*, 18(1):61–71, January 1992.
- dSX:92** [501] C. E. de Souza and L. Xie. On the discrete-time bounded real lemma with application in the characterization of static state feedback  $\mathcal{H}_\infty$  controllers. *Systems & Control Letters*, 18:61–71, 1992.
- dSou:13** [502] W. A. de Souza. *Projeto de Controladores Robustos Chaveados para Sistemas No-Lineares Descritos por Modelos Fuzzy Takagi-Sugeno*. PhD thesis, UNESP – Universidade Estadual Paulista, Ilha Solteira, SP, 2013.
- dSTSCA:13** [503] W. A. de Souza, M. C. M. Teixeira, M. P. A. Santim, R. Cardim, and E. Assunção. On switched control design of linear time-invariant systems with polytopic uncertainties. *Mathematical Problems in Engineering*, 2013:1–10, 2013.
- DG:17b** [504] G. S. Deaecto and J. C. Geromel.  $\mathcal{H}_2$  state feedback control design of positive switched linear systems. In *Proceedings of the 20th IFAC World Congress*, pages 3136–3141, Toulouse, France, July 2017.
- DGD:11** [505] G. S. Deaecto, J. C. Geromel, and J. Daafouz. Switched state-feedback control for continuous time-varying polytopic systems. *International Journal of Control*, 84(9):1500–1508, September 2011.
- DSG:15** [506] G. S. Deaecto, M. Souza, and J. C. Geromel. Discrete-time switched linear systems state feedback design with application to networked control. *IEEE Transactions on Automatic Control*, 60(3):877–881, March 2015.
- DFG:13** [507] Grace S. Deaecto, Andr R. Fioravanti, and Jos C. Geromel. Suboptimal switching control consistency analysis for discrete-time switched linear systems. *European Journal of Control*, 19(3):214–219, May 2013.
- DBPL:00** [508] R. A. DeCarlo, M. S. Branicky, S. Pettersson, and B. Lennartson. Perspectives and results on the stability and stabilizability of hybrid systems. *Proceedings of the IEEE*, 88(7):1069–1082, July 2000.

- [509] M. Dehghani and S. K. Y. Nikraves. Nonlinear state space model identification of synchronous generators. *Electric Power Systems Research*, 78(5):926–940, May 2008.
- [510] F. Delmotte, T. M. Guerra, and A. Kruszewski. Discrete Takagi–Sugeno’s fuzzy models: Reduction of the number of LMI in fuzzy control techniques. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 38(5):1423–1427, October 2008.
- [511] F. Delmotte, T. M. Guerra, and M. Ksantini. Continuous Takagi–Sugeno’s models: Reduction of the number of LMI conditions in various fuzzy control design techniques. *IEEE Transactions on Fuzzy Systems*, 15(3):426–438, June 2007.
- [512] I. Derese and E. Noldus. Design of linear feedback laws for bilinear systems. *International Journal of Control*, 31(2):219–237, 1980.
- [513] I. Derese and E. Noldus. Optimization of bilinear control systems. *International Journal of Systems Science*, 13(3):237–246, 1982.
- [514] C. Desoer. Slowly varying system  $\dot{x} = A(t)x$ . *IEEE Transactions on Automatic Control*, 14(6):780–781, December 1969.
- [515] M. Dettori and C. W. Scherer. Robust stability analysis for parameter-dependent systems using full block S-procedure. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 2798–2799, Tampa, FL, USA, December 1998.
- [516] M. Dettori and C. W. Scherer. New robust stability and performance conditions based on parameter dependent multipliers. In *Proceedings of the 39th IEEE Conference on Decision and Control*, pages 4187–4192, Sydney, Australia, December 2000.
- [517] R. Devanathan. A lower-bound for limiting time-delay for closed-loop stability of an arbitrary SISO plant. *IEEE Transactions on Automatic Control*, 40(4):717–721, 1995.
- [518] S. G. Dietz and C. W. Scherer. Verifying exactness of relaxations for robust semi-definite programs by solving polynomial systems. *Linear Algebra and Its Applications*, 429(7):1758–1778, October 2008.
- [519] B. Ding. Homogeneous polynomially nonquadratic stabilization of discrete-time Takagi–Sugeno systems via nonparallel distributed compensation law. *IEEE Transactions on Fuzzy Systems*, 18(5):994–1000, October 2010.
- [520] B. Ding. Stabilization of Takagi–Sugeno model via non-parallel distributed compensation law. *IEEE Transactions on Fuzzy Systems*, 18(1):188–194, February 2010.
- [521] B. Ding and B. Huang. Reformulation of LMI-based stabilisation conditions for non-linear systems in Takagi–Sugeno’s form. *International Journal of Systems Science*, 39(5):487–496, May 2008.
- [522] B. Ding, H. Sun, and P. Yang. Further studies on LMI-based relaxed stabilization conditions for nonlinear systems in Takagi–Sugeno’s form. *Automatica*, 42(3):503–508, March 2006.
- [523] D.-W. Ding and G.-H. Yang. Fuzzy filter design for nonlinear systems in finite-frequency domain. *IEEE Transactions on Fuzzy Systems*, 18(5):935–945, October 2010.
- [524] Q. T. Dinh, S. Gumusoy, W. Michiels, and M. Diehl. Combining convex-concave decompositions and linearization approaches for solving BMIs, with application to static output feedback. *IEEE Transactions on Automatic Control*, 57(6):1377–1390, June 2012.
- [525] P. S. R. Diniz. *Adaptive Filtering: Algorithms and Practical Implementation*. Springer US, New York, NY, 4th edition, 2013.
- [526] A. M. Diwekar and R. K. Yedavalli. Stability of matrix second-order systems: new conditions and perspectives. *IEEE Transactions on Automatic Control*, 44(9):1773–1777, September 1999.

- dVG0:08** [527] J. B. R. do Val, J. C. Geromel, and O. L. V. Costa. Uncoupled Riccati iterations for the linear quadratic control problem of discrete-time Markov jump linear systems. *IEEE Transactions on Automatic Control*, 43(12):1727–1733, December 1998.
- dVGG:02** [528] J. B. R. do Val, J. C. Geromel, and A. P. C. Gonçalves. The  $\mathcal{H}_2$ -control for jump linear systems: Cluster observations of the Markov state. *Automatica*, 38(2):343–349, February 2002.
- DWG:09** [529] H. Dong, Z. Wang, and H. Gao.  $\mathcal{H}_\infty$  filtering for systems with repeated scalar nonlinearities under unreliable communication links. *Signal Processing*, 89(8):1567–1575, August 2009.
- DWLG:12** [530] H. Dong, Z. Wang, J. Lam, and H. Gao. Fuzzy-model-based robust fault detection with stochastic mixed time delays and successive packet dropouts. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 42(2):365–376, April 2012.
- DWY:09** [531] J. Dong, Y. Wang, and G.-H. Yang. Control synthesis of continuous-time T-S fuzzy systems with local nonlinear models. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 39(5):1245–1258, October 2009.
- DWY:11** [532] J. Dong, Y. Wang, and G.-H. Yang.  $\mathcal{H}_\infty$  and mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control of discrete-time T-S fuzzy systems with local nonlinear models. *Fuzzy Sets and Systems*, 164(1):1–24, February 2011.
- DY:07a** [533] J. Dong and G.-H. Yang. Static output feedback control synthesis for linear systems with time-invariant parametric uncertainties. *IEEE Transactions on Automatic Control*, 52(10):1930–1936, October 2007.
- DY:08** [534] J. Dong and G.-H. Yang. Dynamic output feedback control synthesis for continuous-time T-S fuzzy systems via a switched fuzzy control scheme. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 38(4):1166–1175, August 2008.
- DY:08c** [535] J. Dong and G.-H. Yang. Robust  $\mathcal{H}_2$  control of continuous-time Markov jump linear systems. *Automatica*, 44(5):1431–1436, May 2008.
- DY:08a** [536] J. Dong and G.-H. Yang. Robust static output feedback control for linear discrete-time systems with time-varying uncertainties. *Systems & Control Letters*, 57(2):123–131, February 2008.
- DY:09** [537] J. Dong and G.-H. Yang.  $\mathcal{H}_\infty$  controller synthesis via switched PDC scheme for discrete-time T-S fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 17(3):544–555, June 2009.
- DY:11** [538] J. Dong and G.-H. Yang. Control synthesis of T-S fuzzy systems based on a new control scheme. *IEEE Transactions on Fuzzy Systems*, 19(2):323–338, April 2011.
- DY:13** [539] J. Dong and G.-H. Yang. Robust static output feedback control synthesis for linear continuous systems with polytopic uncertainties. *Automatica*, 49(6):1821–1829, June 2013.
- DW:07** [540] K. Dong and F. Wu. Robust and gain-scheduling control of LFT systems through duality and conjugate Lyapunov functions. *International Journal of Control*, 80(4):555–568, 2007.
- Dor:98** [541] P. Dorato. Non-fragile controller design: an overview. In *Proceedings of the 1998 American Control Conference*, pages 2829–2831, Philadelphia, PA, June 1998.
- DAC:00** [542] P. Dorato, C. T. Abdallah, and V. Cerone. *Linear Quadratic Control: An Introduction*. Krieger Publishing Company, Malabar, FL, 2000.
- DM:03** [543] C. E. T. Dórea and B. E. A. Milani. Rejeição de perturbações por realimentação estática de saída em sistemas lineares. *SBA: Controle & Automação*, 14(1):1–8, Fev/Mar 2003.
- Doy:82** [544] J. C. Doyle. Analysis of feedback systems with structured uncertainty. *IEE Proceedings*, 129(6):242–250, November 1982.
- DFT:92** [545] J. C. Doyle, B. A. Francis, and A. R. Tannenbaum. *Feedback Control Theory*. Macmillan Publishing Company, New York, NY, USA, 1992.

- [546] J. C. Doyle, K. Glover, P. P. Khargonekar, and B. Francis. State space solutions to the standard  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  control problems. *IEEE Transactions on Automatic Control*, 34(8):831–847, August 1989. DGKF:89
- [547] V. Dragan, P. Shi, and E. K. Boukas. Control of singularly perturbed systems with Markovian jump parameters: an  $\mathcal{H}_\infty$  approach. *Automatica*, 35(8):1369–1378, 1999. DSB:99
- [548] C. L. Du, L. H. Xie, and Y. C. Soh.  $\mathcal{H}_\infty$  filtering of 2-D discrete systems. *IEEE Transactions on Signal Processing*, 48(6):1760–1768, June 2000. DXY:00
- [549] D. Du.  $\mathcal{H}_\infty$  filter for discrete-time switched systems with time-varying delays. *Nonlinear Analysis Hybrid Systems*, 4(4):782–790, November 2010. Du:10
- [550] D. Du, B. Jiang, P. Shi, and S. Zhou.  $\mathcal{H}_\infty$  filtering of discrete-time switched systems with state delays via switched Lyapunov function approach. *IEEE Transactions on Automatic Control*, 52(8):1520–1525, August 2007. DJSZ:07
- [551] H. Du, L. Zhang, Z. Lu, and X. Shi. LPV technique for the rejection of sinusoidal disturbance with time-varying frequency. *IEE Proceedings — Control Theory and Applications*, 150(2):132–138, March 2003. DZLS:03
- [552] X. Du and G.-H. Yang. LMI conditions for  $\mathcal{H}_\infty$  static output feedback control of discrete-time systems. In *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 5450–5455, Cancun, Mexico, December 2008. DY:08b
- [553] G. Duan, F. Xiao, and L. Wang. Asynchronous periodic edge-event triggered control for double-integrator networks with communication time delays. *IEEE Transactions on Cybernetics*, pages 1–14, 2017. To appear. DOI: <http://dx.doi.org/10.1109/TCYB.2017.2651026>. DXW:17
- [554] Z. Duan, J. Wang, and L. Huang. Parameter-dependent Lyapunov function method for a class of uncertain nonlinear systems with multiple equilibria. *Circuits Systems and Signal Processing*, 26(2):147–164, July 2007. DWH:07
- [555] Z. Duan, J. Zhang, C. Zhang, and E. Mosca. A simple design method of reduced-order filters and its applications to multirate filter bank design. *Signal Processing*, 86(5):1061–1075, May 2006. DZZM:06a
- [556] Z. S. Duan, J. X. Zhang, C. S. Zhang, and E. Mosca. Robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filtering for uncertain linear systems. *Automatica*, 42(11):1919–1926, November 2006. DZZM:06b
- [557] F. Dufour and P. Bertrand. The filtering problem for continuous-time linear systems with Markovian switching coefficients. *Systems & Control Letters*, 23:453–461, 1994. DB:94
- [558] F. Dufour, R. J. Elliott, and A. Tsoi. Asymptotic study of estimation in filtering for linear systems with jumps parameters. In *Proceedings of the 34th IEEE Conference on Decision and Control*, pages 3855–3856, New Orleans, LA, December 1995. DET:95
- [559] L. Dugard and E. I. Verriest. *Stability and Control of Time-delay Systems*. Springer-Verlag, Berlin, Germany, 1997. DV:97
- [560] G. Dullerud and F. Paganini. *A Course in Robust Control Theory*. Springer-Verlag, New York, NY, 2000. DP:00
- [561] S. Dussy. Robust stabilization of discrete-time parameter-dependent systems: the finite precision problem. *Proceedings of the 35th IEEE Conference on Decision and Control*, 1:3976–3981, December 1996. Dus:96
- [562] S. Dussy. *An LMI approach for multiobjective robust control*. PhD thesis, University of Paris IX-Dauphine, France, March 1998. Dus:98
- [563] S. Dussy. Robust diagonal stabilization: an LMI approach. *IEEE Transactions on Automatic Control*, 45(1):125–128, January 2000. Dus:00

- [DGS:95] [564] H. Dym, T. T. Georgiou, and M. C. Smith. Explicit formulas for optimally robust controllers for delay systems. *IEEE Transactions on Automatic Control*, 40(4):656–669, 1995.
- [DH:17] [565] N. T. Dzung and L. V. Hien. Stochastic stabilization of discrete-time Markov jump systems with generalized delay and deficient transition rates. *Circuits Systems and Signal Processing*, 36(6):2521–2541, June 2017.
- [Ebi:13] [566] Y. Ebihara. Periodically time-varying memory state-feedback for robust  $\mathcal{H}_2$  control of uncertain discrete-time linear systems. *Asian Journal of Control*, 15(2):409–419, March 2013.
- [EH:04] [567] Y. Ebihara and T. Hagiwara. New dilated LMI characterizations for continuous-time multiobjective controller synthesis. *Automatica*, 40(11):2003–2009, November 2004.
- [EH:05] [568] Y. Ebihara and T. Hagiwara. A dilated LMI approach to robust performance analysis of linear time-invariant uncertain systems. *Automatica*, 41(11):1933–1941, 2005.
- [EH:06] [569] Y. Ebihara and T. Hagiwara. On the degree of polynomial parameter-dependent Lyapunov functions for robust stability of single parameter-dependent LTI systems: A counter-example to Barmish’s conjecture. *Automatica*, 42(9):1599–1603, September 2006.
- [EKHPA:09] [570] Y. Ebihara, Y. Kuboyama, T. Hagiwara, D. Peaucelle, and D. Arzelier. Further results on periodically time-varying memory state-feedback controller synthesis for discrete-time linear systems. In *Proceedings of the 48th IEEE Conference on Decision and Control — 28th Chinese Control Conference*, pages 702–707, Shanghai, P. R. China, December 2009.
- [EMH:05] [571] Y. Ebihara, K. Maeda, and T. Hagiwara. Robust  $\mathcal{D}$ -stability analysis of uncertain polynomial matrices via polynomial-type multipliers. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005.
- [EPA:08] [572] Y. Ebihara, D. Peaucelle, and D. Arzelier. Periodically time-varying dynamical controller synthesis for polytopic-type uncertain discrete-time linear systems. In *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 5438–5443, Cancun, Mexico, December 2008.
- [EPA:11] [573] Y. Ebihara, D. Peaucelle, and D. Arzelier. Periodically time-varying memory state-feedback controller synthesis for discrete-time linear systems. *Automatica*, 47:14–25, January 2011.
- [EPA:14] [574] Y. Ebihara, D. Peaucelle, and D. Arzelier. LMI approach to linear positive system analysis and synthesis. *Systems & Control Letters*, 63:50–56, January 2014.
- [EPA:15] [575] Y. Ebihara, D. Peaucelle, and D. Arzelier. *S-Variable Approach to LMI-Based Robust Control*. Springer-Verlag, London, UK, 2015.
- [EPAH:05] [576] Y. Ebihara, D. Peaucelle, D. Arzelier, and T. Hagiwara. Robust performance analysis of linear time-invariant uncertain systems by taking higher-order time-derivatives of the state. In *Proceedings of the 44th IEEE Conference on Decision and Control — European Control Conference ECC 2005*, pages 5030–5035, Seville, Spain, December 2005.
- [EPAH:06] [577] Y. Ebihara, D. Peaucelle, D. Arzelier, and T. Hagiwara. Robust  $\mathcal{H}_2$  performance analysis of uncertain LTI systems via polynomially parameter-dependent Lyapunov functions. In *Proceedings of the 5th IFAC Symposium on Robust Control Design (ROCOND 2006)*, Toulouse, France, July 2006.
- [BH:03] [578] A. El Bouhtouri and K. El Hadri. Robust stabilization of jump linear systems with multiplicative noise. *IMA Journal of Mathematical Control and Information*, 20(1):1–19, 2003.
- [EA:96] [579] L. El Ghaoui and M. Ait-Rami. Robust state-feedback stabilization of jump linear systems via LMIs. *International Journal of Robust and Nonlinear Control*, 6(9–10):1015–1022, November–December 1996.
- [EC:99] [580] L. El Ghaoui and G. Calafiore. Worst-case state prediction under structured uncertainty. In *Proceedings of the 1999 American Control Conference*, volume 3, pages 3402–3406, San Diego, CA, June 1999.



- [EC:01] [581] L. El Ghaoui and G. Calafiore. Robust filtering for discrete-time systems with bounded noise and parametric uncertainty. *IEEE Transactions on Automatic Control*, 46(7):1084–1089, July 2001.
- [EN:00] [582] L. El Ghaoui and S. I. Niculescu, editors. *Advances in Linear Matrix Inequality Methods in Control*. Advances in Design and Control. SIAM, Philadelphia, PA, 2000.
- [E-GOA-R:97] [583] L. El Ghaoui, F. Oustry, and M. Ait-Rami. A cone complementarity linearization algorithm for static output feedback and related problems. *IEEE Transactions on Automatic Control*, 42(8):1171–1176, August 1997.
- [EOL:98] [584] L. El Ghaoui, F. Oustry, and H. Lebret. Robust solutions to uncertain semidefinite programs. *SIAM Journal on Optimization*, 9(1):33–52, November 1998.
- [Kha:98] [585] R. El-Khazali. Variable structure robust control of uncertain time-delay systems. *Automatica*, 34(3):327–332, 1998.
- [EG:89] [586] A. El Sayed and M. J. Grimble. A new approach to the  $\mathcal{H}_\infty$  design of optimal digital linear filters. *IMA Journal of Mathematical Control and Information*, 6(2):233–251, June 1989.
- [Els:66] [587] L. E. El'sgol'ts. *Introduction to the theory of differential equations with deviating arguments*. Holden-Day, Inc., San Francisco, USA, 1966.
- [EFS:02] [588] S. Engell, G. Frehse, and E. Schiender, editors. *Modelling, Analysis and Design of Hybrid Systems*, volume 279 of *Lecture Notes in Control and Information Science*. Springer-Verlag, Berlin, Germany, 2002.
- [EA:56] [589] A. C. Enthoven and K. J. Arrow. A theorem on expectations and the stability of equilibrium. *Econometrica*, 24:288–293, 1956.
- [EP:98] [590] S. H. Esfahani and I. R. Petersen. An LMI approach to the output-feedback guaranteed cost control for uncertain time-delay systems. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 1358–1363, Tampa, FL, USA, December 1998.
- [FAJDH:98] [591] D. Famularo, C. T. Abdallah, A. Jadbabaie, P. Dorato, and W. H. Haddad. Robust non-fragile LQ controllers: the static state feedback case. In *Proceedings of the 1998 American Control Conference*, pages 1109–1113, Philadelphia, PA, June 1998.
- [FDAHJ:00] [592] D. Famularo, P. Dorato, C. T. Abdallah, W. M. Haddad, and A. Jadbabaie. Robust non-fragile LQ controllers: the static state feedback case. *International Journal of Control*, 73(2):159–165, 2000.
- [FLKHL:06] [593] C.-H. Fang, Y.-S. Liu, S.-W. Kau, L. Hong, and C.-H. Lee. A new LMI-based approach to relaxed quadratic stabilization of T-S fuzzy control systems. *IEEE Transactions on Fuzzy Systems*, 14(3):386–397, June 2006.
- [FL:96] [594] C. H. Fang and C. L. Lu. Robustness of pole-clustering in a ring for structured perturbation systems. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 43(6):496–500, June 1996.
- [FPAD:07] [595] C. Farges, D. Peaucelle, D. Arzelier, and J. Daafouz. Robust  $\mathcal{H}_2$  performance analysis and synthesis of linear polytopic discrete-time periodic systems via LMIs. *Systems & Control Letters*, 56(2):159–166, February 2007.
- [FB:95] [596] L. Farina and L. Benvenuti. Positive realizations of linear systems. *Systems & Control Letters*, 26(1):1–9, September 1995.
- [FR:00] [597] L. Farina and S. Rinaldi. *Positive Linear Systems: Theory and Applications*. John Wiley & Sons, New York, NY, USA, 2000.
- [FSD:98] [598] A. Fattouh, O. Sename, and J. M. Dion.  $\mathcal{H}_\infty$  observer design for time-delay systems. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 4545–4546, Tampa, FL, USA, December 1998.

- [FOP:16] [599] A. Felipe, R. C. L. F. Oliveira, and P. L. D. Peres. An iterative LMI based procedure for robust stabilization of continuous-time polytopic systems. In *Proceedings of the 2016 American Control Conference*, pages 3826–3831, Boston, MA, USA, July 2016.
- [Fen:02a] [600] G. Feng. Controller design and analysis of uncertain piecewise-linear systems. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 49(2):224–232, February 2002.
- [Fen:02b] [601] G. Feng. Stability analysis of piecewise discrete-time linear systems. *IEEE Transactions on Automatic Control*, 47(7):1108–1112, July 2002.
- [Fen:02] [602] G. Feng. Stability analysis of piecewise discrete-time linear systems. *IEEE Transactions on Automatic Control*, 47(07):1108–1112, July 2002.
- [Fen:03] [603] G. Feng. Controller synthesis of fuzzy dynamic systems based on piecewise Lyapunov functions. *IEEE Transactions on Fuzzy Systems*, 11(5):605–612, October 2003.
- [Fen:06] [604] G. Feng. A survey on analysis and design of model-based fuzzy control systems. *IEEE Transactions on Fuzzy Systems*, 14(5):676–697, October 2006.
- [FCSZ:05] [605] G. Feng, C. L. Chen, D. Sun, and Y. Zhu.  $\mathcal{H}_\infty$  controller synthesis of fuzzy dynamic systems based on piecewise Lyapunov functions and bilinear matrix inequalities. *IEEE Transactions on Fuzzy Systems*, 13(1):94–103, February 2005.
- [FH:01] [606] G. Feng and C. J. Harris. Piecewise Lyapunov stability conditions of fuzzy systems. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 31(2):259–262, April 2001.
- [FS:02d] [607] G. Feng and D. Sun. Generalized  $\mathcal{H}_2$  controller synthesis of fuzzy dynamic systems based on piecewise Lyapunov functions. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 49(12):1843–1850, December 2002.
- [FH:15] [608] J. Feng and K. Han. Robust full- and reduced-order energy-to-peak filtering for discrete-time uncertain linear systems. *Signal Processing*, 108:183–194, March 2015.
- [FWP:07] [609] L. Feng, J. L. Wang, and E. K. Poh. Improved robust model predictive control with structured uncertainty. *Journal of Process Control*, 8:683–688, September 2007.
- [FH:06] [610] M. Feng and J. Harris. Piecewise Lyapunov stability conditions of fuzzy systems. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 31(2):259–262, April 2001.
- [FLJC:92] [611] X. Feng, K. A. Loparo, Y. Ji, and H. J. Chizeck. Stochastic stability properties of jump linear systems. *IEEE Transactions on Automatic Control*, 37(1):38–53, January 1992.
- [FAG:96] [612] E. Feron, P. Apkarian, and P. Gahinet. Analysis and synthesis of robust control systems via parameter-dependent Lyapunov functions. *IEEE Transactions on Automatic Control*, 41(7):1041–1046, July 1996.
- [FBB:92] [613] E. Feron, V. Balakrishnan, and S. Boyd. Design of stabilizing state feedback for delay systems via convex optimization. In *Proceedings of the 31st IEEE Conference on Decision and Control*, pages 147–148, Tucson, AZ, December 1992.
- [F-TCMM:01] [614] G. Ferrari-Trecate, F. A. Cuzzola, D. Mignone, and M. Morari. Analysis and control with performance of piecewise affine and hybrid systems. In *Proceedings of the 2001 American Control Conference*, pages 200–205, Arlington, VA, 2001.
- [F-TCMM:02] [615] G. Ferrari-Trecate, F. A. Cuzzola, D. Mignone, and M. Morari. Analysis of discrete-time piecewise affine and hybrid systems. *Automatica*, 38(12):2139–2146, December 2002.
- [FSc:98] [616] G. Ferreres and G. Scorletti. Robustness analysis in the presence of time delays. In *Proceedings of the 1st IFAC International Workshop on Linear Time Delay Systems*, pages 195–200, Grenoble, France, July 1998.

- Fey:17** [617] Philippe Feyel. *Robust Control Optimization with Metaheuristics*. Wiley-ISTE, London, United Kingdom, 2017.
- FT:17** [618] M. Fiacchini and S. Tarbouriech. Control co-design for discrete-time switched linear systems. *Automatica*, 82:181–186, August 2017.
- FL:94** [619] J. Fiala and R. Lumia. The effect of time-delay and discrete control on the contact stability of simple position controllers. *IEEE Transactions on Automatic Control*, 39(4):870–873, 1994.
- FP:62** [620] M. Fiedler and V. Ptk. On matrices with non-positive off-diagonal elements and positive principal minors. *Czechoslovak Mathematical Journal*, 12:382–400, 1962.
- Fin:37** [621] P. Finsler. Über das vorkommen definiter und semidefiniter formen in scharen quadratischer formen. *Commentarii Mathematici Helvetica*, 9:188–192, 1937.
- Fio:07** [622] A. R. Fioravanti. Filtragem de sistemas discretos com parâmetros sujeitos a saltos markovianos. M.Sc. Thesis, FEEC – Universidade Estadual de Campinas, Campinas, SP, Outubro 2007.
- FGG:08** [623] A. R. Fioravanti, A. P. C. Gonçalves, and J. C. Geromel.  $\mathcal{H}_2$  filtering of discrete-time Markov jump linear systems through linear matrix inequalities. *International Journal of Control*, 81(8):1221–1231, 2008.
- FGG:11** [624] A. R. Fioravanti, A. P. C. Gonçalves, and J. C. Geromel. Filter inputs with Markovian lossy links: Zero or hold? In *Proceedings of the 9th IEEE International Conference on Control and Automation (ICCA)*, pages 656–661, Santiago, Chile, December 2011.
- FGG:13** [625] A. R. Fioravanti, A. P. C. Gonçalves, and J. C. Geromel. Discrete-time  $\mathcal{H}_\infty$  output feedback for Markov jump systems with uncertain transition probabilities. *International Journal of Robust and Nonlinear Control*, 23(8):894–902, March 2013.
- FGG:14** [626] A. R. Fioravanti, A. P. C. Gonçalves, and J. C. Geromel. Optimal  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  mode-independent control for generalized Bernoulli jump systems. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 136(1):011004–011004–6, January 2014.
- FGG:15** [627] A. R. Fioravanti, A. P. C. Gonçalves, and J. C. Geromel. Optimal  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  mode-independent filters for generalised Bernoulli jump systems. *International Journal of Systems Science*, 46(3):405–417, June 2015.
- FKG:06** [628] A. R. Fioravanti, R. H. Korogui, and J. C. Geromel. *SDPLab 1.0 Tutorial*. DSCE/FEEC/UNICAMP, Campinas, SP, 2006. <http://www.dsce.fee.unicamp.br/~fioravan/software/software.htm>.
- FGLNO:98** [629] R. Fleming, G. Grosman, T. Lenker, S. Narayan, and S.-C. Ong. On schur  $D$ -stable matrices. *Linear Algebra and Its Applications*, 279:39–50, 1998.
- FGLNO:00** [630] R. Fleming, G. Grosman, T. Lenker, S. Narayan, and S.-C. Ong. Classes of Schur  $D$ -stable matrices. *Linear Algebra and Its Applications*, 306:15–24, 2000.
- FP:89** [631] W. H. Fleming and E. Pardoux. Piecewise monotone filtering with small observation noise. *SIAM Journal on Control and Optimization*, 27(5):1156–1181, 1989.
- FV:10** [632] E. Fornasini and M. E. Valcher. Linear copositive Lyapunov functions for continuous-time positive switched systems. *IEEE Transactions on Automatic Control*, 55(8):1933–1937, August 2010.
- FV:12** [633] E. Fornasini and M. E. Valcher. Stability and stabilizability criteria for discrete-time positive switched systems. *IEEE Transactions on Automatic Control*, 57(5):1208–1221, May 2012.
- FJS:17** [634] F. Forni, R.M. Jungers, and R. Sepulchre. Path-complete positivity of switching systems. *IFAC-PapersOnLine*, 50(1):4558–4563, 2017. 20th IFAC World Congress.
- Fra:88** [635] M. D. Fragoso. On a partially observable LQG problem for systems with Markovian jumping parameters. *Systems & Control Letters*, 10:349–356, 1988.

- FdVP:95** [636] M. D. Fragoso, J. B. R. do Val, and D. L. Pinto Jr. Jump linear  $\mathcal{H}_\infty$  control: the discrete-time case. *Control Theory and Advanced Technology*, 10:1459–1474, 1995.
- Fra:87** [637] B. A. Francis. *A Course in  $\mathcal{H}_\infty$  Control Theory*, volume 88 of *Lectures Notes in Control and Information Sciences*. Springer-Verlag, New York, NY, USA, 1987.
- FD:87** [638] B. A. Francis and J. C. Doyle. Linear control theory with an  $H_\infty$  optimality criterion. *SIAM Journal on Control and Optimization*, 25(4):815–844, July 1987.
- FF:12** [639] G. Franzè and D. Famularo. A robust fault detection filter for polynomial nonlinear systems via sum-of-squares decompositions. *Systems & Control Letters*, 61(8):839–848, August 2012.
- Fra:75** [640] M. Frayman. On the relationship between bilinear and quadratic systems. *IEEE Transactions on Automatic Control*, 20(4):567–568, August 1975.
- FdOOP:16b** [641] L. Frezzatto, M. C. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $H_\infty$  filter design with past output measurements for uncertain discrete-time systems. *Automatica*, 71:151–158, September 2016.
- FdOOP:16a** [642] L. Frezzatto, M. C. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $H_\infty$  filtering with past output measurements. In *Proceedings of the 2016 American Control Conference*, pages 1900–1905, Boston, MA, USA, July 2016.
- FdOOP:17** [643] L. Frezzatto, M. C. de Oliveira, R. C. L. F. Oliveira, and P. L. D. Peres. Robust non-minimal order filter and smoother design for discrete-time uncertain system. *International Journal of Robust and Nonlinear Control*, 27(4):661–678, March 2017.
- FLOP:15b** [644] L. Frezzatto, M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  memory filter design for linear uncertain discrete-time delay systems. *Signal Processing*, 117:322–332, December 2015.
- FLOP:15a** [645] L. Frezzatto, M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  memory filters for uncertain discrete-time linear systems. In *Proceedings of the 2015 American Control Conference*, pages 4004–4009, Chicago, IL, USA, July 2015.
- Fri:01** [646] E. Fridman. New Lyapunov-Krasovskii functionals for stability of linear retarded and neutral type systems. *Systems & Control Letters*, 43(4):309–319, July 2001.
- Fri:10** [647] E. Fridman. A refined input delay approach to sampled-data control. *Automatica*, 46(2):421–427, February 2010.
- FSR:04** [648] E. Fridman, A. Seuret, and J.-P. Richard. Robust sampled-data stabilization of linear systems: An input delay approach. *Automatica*, 40(8):1441–1446, August 2004.
- FS:17** [649] E. Fridman and L. Shaikhet. Stabilization by using artificial delays: An LMI approach. *Automatica*, 81:429–437, 2017.
- FS:98** [650] E. Fridman and U. Shaked.  $\mathcal{H}_\infty$ -state-feedback control of linear systems with small state delay. *Systems & Control Letters*, 33(3):141–150, 1998.
- FS:01** [651] E. Fridman and U. Shaked. A new  $\mathcal{H}_\infty$  filter design for linear time delay systems. *IEEE Transactions on Signal Processing*, 49(11):2839–2843, November 2001.
- FS:02c** [652] E. Fridman and U. Shaked. An improved stabilization method for linear time-delay systems. *IEEE Transactions on Automatic Control*, 47(11):1931–1937, November 2002.
- FS:02b** [653] E. Fridman and U. Shaked.  $\mathcal{H}_\infty$ -control of linear state-delay descriptor systems: an LMI approach. *Linear Algebra and Its Applications*, 351-352:271–302, August 2002.
- FS:02a** [654] E. Fridman and U. Shaked. On delay-dependent passivity. *IEEE Transactions on Automatic Control*, 47(4):664–669, April 2002.

- [FS:03b] [655] E. Fridman and U. Shaked. Delay-dependent stability and h-infinity control: constant and time-varying. *International Journal of Control*, 76(1):48–60, January 2003.
- [FS:03c] [656] E. Fridman and U. Shaked. An LMI approach to stability of discrete delay systems. In *Proceedings of the 2003 European Control Conference*, Cambridge, UK, September 2003.
- [FS:03a] [657] E. Fridman and U. Shaked. Parameter dependent stability and stabilization of uncertain time-delay systems. *IEEE Transactions on Automatic Control*, 48(5):861–866, May 2003.
- [FS:05b] [658] E. Fridman and U. Shaked. Delay dependent  $\mathcal{H}_\infty$  control of uncertain discrete delay system. *European Journal of Control*, 11(1):29–37, 2005.
- [FS:05a] [659] E. Fridman and U. Shaked. Stability and guaranteed cost control of uncertain discrete delay system. *International Journal of Control*, 78(4):235–246, March 2005.
- [FSX:03] [660] E. Fridman, U. Shaked, and L. Xie. Robust  $\mathcal{H}_\infty$  filtering of linear systems with time-varying delay. *IEEE Transactions on Automatic Control*, 48(1):159–165, January 2003.
- [FO:98] [661] S. Fröhler and U. Oberst. Continuous time-varying linear systems. *Systems & Control Letters*, 35(2):97–110, September 1998.
- [FD:00] [662] M. Fu and S. Dasgupta. Parametric Lyapunov functions for uncertain systems: The multiplier approach. In L. El Ghaoui and S. I. Niculescu, editors, *Advances in Linear Matrix Inequality Methods in Control*, Advances in Design and Control, pages 95–108. SIAM, Philadelphia, PA, 2000.
- [FdSX:92] [663] M. Fu, C. E. de Souza, and L. Xie.  $\mathcal{H}_\infty$  estimation for uncertain systems. *International Journal of Robust and Nonlinear Control*, 2:87–105, 1992.
- [FL:97] [664] M. Fu and Z. Luo. Computational complexity of a problem arising in fixed order output feedback design. *Systems & Control Letters*, 30(5):209–215, June 1997.
- [FX:05] [665] M. Fu and L. Xie. The sector bound approach to quantized feedback control. *IEEE Transactions on Automatic Control*, 50(11):1698–1711, November 2005.
- [Fu:04] [666] X. Fu. Controllability of abstract neutral functional differential systems with unbounded delay. *Applied Mathematics and Computation*, 151(2):299–314, April 2004.
- [FS:06] [667] Y. Fujisaki and R. Sakuwa. Estimation of asymptotic stability regions via homogeneous polynomial Lyapunov functions. *International Journal of Control*, 79(6):617–623, June 2006.
- [FK:01] [668] M. Fukuda and M. Kojima. Branch-and-cut algorithms for the bilinear matrix inequality eigenvalue problem. *Computational Optimization and Applications*, 19(1):79–105, 2001.
- [FP:90] [669] K. Furuta and S. Phoojaruenchanachai. An algebraic approach to discrete-time  $\mathcal{H}_\infty$  control problems. In *Proceedings of the 1990 American Control Conference*, pages 3067–3072, San Diego, USA, 1990.
- [Gah:92] [670] P. Gahinet. A convex parametrization of  $\mathcal{H}_\infty$  suboptimal controllers. In *Proceedings of the 1992 American Control Conference*, volume 1, pages 937–942, Chicago, IL, USA, 1992.
- [Gah:96] [671] P. Gahinet. Explicit controller formulas for LMI-based  $\mathcal{H}_\infty$  synthesis. *Automatica*, 32(7):1007–1014, 1996.
- [GA:94] [672] P. Gahinet and P. Apkarian. A linear matrix inequality approach to  $\mathcal{H}_\infty$  control. *International Journal of Robust and Nonlinear Control*, 4(4):421–448, July-August 1994.
- [GAC:94] [673] P. Gahinet, P. Apkarian, and M. Chilali. Affine parameter-dependent Lypunov functions for real parametric uncertainty. In *Proceedings of the 33rd IEEE Conference on Decision and Control*, pages 2026–2031, Lake Buena Vista, FL, USA, December 1994.
- [GAC:96] [674] P. Gahinet, P. Apkarian, and M. Chilali. Affine parameter-dependent Lyapunov functions and real parametric uncertainty. *IEEE Transactions on Automatic Control*, 41(3):436–442, March 1996.



- GN:93b** [675] P. Gahinet and A. Nemirovskii. General-purpose LMI solvers with benchmarks. In *Proceedings of the 32nd IEEE Conference on Decision and Control*, volume 3, pages 3162–3165, San Antonio, TX, USA, 1994.
- GN:97** [676] P. Gahinet and A. Nemirovskii. The projective method for solving linear matrix inequalities. *Mathematical Programming: Series B*, 77(2):163–190, 1997.
- GNLC:95** [677] P. Gahinet, A. Nemirovskii, A. J. Laub, and M. Chilali. *LMI Control Toolbox User's Guide*. The Math Works, Natick, MA, 1995.
- GP:17** [678] C. E. Galarza and J. M. Palma. *Opportunistic: Routing distribution, broadcasts, transmissions and receptions in an opportunistic network*. <https://cran.r-project.org/web/packages/Opportunistic/index.html>, 2 edition, June 2017.
- GB:86** [679] A. R. Galimidi and B. R. Barmish. The constrained Lyapunov problem and its application to robust output feedback stabilization. *IEEE Transactions on Automatic Control*, 31(5):410–419, 1986.
- Gan:59** [680] F. R. Gantmacher. *The Theory of Matrices*. Chelsea Publishing Company, New York, NY, 1959.
- GC:07** [681] H. Gao and T. Chen.  $\mathcal{H}_\infty$  estimation for uncertain systems with limited communication capacity. *IEEE Transactions on Automatic Control*, 52(11):2070–2084, November 2007.
- GLSW:05** [682] H. Gao, J. Lam, P. Shi, and C. Wang. Parameter-dependent filter design with guaranteed  $\mathcal{H}_\infty$  performance. *IEE Proceedings — Control Theory and Applications*, 152(5):531–537, September 2005.
- GLW:05** [683] H. Gao, J. Lam, and C. Wang. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering for continuous-time polytopic systems: A parameter-dependent approach. *Circuits Systems and Signal Processing*, 24(6):689–702, November–December 2005.
- GLWL:04** [684] H. Gao, J. Lam, C. Wang, and Q. Wang. Hankel norm approximation of linear systems with time-varying delay: continuous and discrete cases. *International Journal of Control*, 77(17):1503–1520, 2004.
- GLWW:04** [685] H. Gao, J. Lam, C. Wang, and Y. Wang. Delay-dependent robust output feedback stabilisation of discrete-time systems with time-varying state delay. *IEE Proceedings — Control Theory and Applications*, 151(6):691–698, November 2004.
- GLWX:04** [686] H. Gao, J. Lam, C. Wang, and S. Xu.  $\mathcal{H}_\infty$  model reduction for discrete time-delay systems: delay-independent and dependent approaches. *International Journal of Control*, 77(4):321–335, March 2004.
- GLXW:05** [687] H. Gao, J. Lam, L. Xie, and C. Wang. New approach to mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering for polytopic discrete-time systems. *IEEE Transactions on Signal Processing*, 53(8):3183–3192, August 2005.
- GL:11** [688] H. Gao and X. Li.  $\mathcal{H}_\infty$  filtering for discrete-time state-delayed systems with finite frequency specifications. *IEEE Transactions on Automatic Control*, 56(12):2935–2941, December 2011.
- GL:14** [689] H. Gao and X. Li. *Robust Filtering for Uncertain Systems: A Parameter-Dependent Approach*. Communications and Control Engineering. Springer International Publishing, Heidelberg, Germany, 1st edition, 2014.
- GLL:09** [690] H. Gao, X. Liu, and J. Lam. Stability analysis and stabilization for discrete-time fuzzy systems with time-varying delay. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 39(2):306–317, April 2009.
- GMC:08** [691] H. Gao, X. Meng, and T. Chen. A new design of robust  $H_2$  filters for uncertain systems. *Systems & Control Letters*, 57(7):585–593, July 2008.
- GMC:08b** [692] H. Gao, X. Meng, and T. Chen. A parameter-dependent approach to robust  $\mathcal{H}_\infty$  filtering for time-delay systems. *IEEE Transactions on Automatic Control*, 53(10):2420–2425, November 2008.

- [693] H. Gao, X. Meng, and T. Chen.  $\mathcal{H}_\infty$  filter design for discrete delay systems: a new parameter-dependent approach. *International Journal of Control*, 82(6):993–1005, June 2009.
- [694] H. Gao and C. Wang. Delay-dependent robust  $\mathcal{H}_\infty$  filtering for a class of uncertain nonlinear time-delay systems. *IEEE Transactions on Automatic Control*, 48(9):1661–1666, September 2003.
- [695] H. Gao and C. Wang. A delay-dependent approach to robust  $\mathcal{H}_\infty$  filtering for uncertain discrete-time state-delayed systems. *IEEE Transactions on Signal Processing*, 52(6):1631–1640, June 2004.
- [696] H. Gao, L. Zhang, P. Shi, S. Mou, and C. Wang. Stability and stabilization of switched linear discrete-time systems with polytopic uncertainties. In *Proceedings of the 2006 American Control Conference*, pages 5953–5958, Minneapolis, MN, USA, June 2006.
- [697] H. Gao, Y. Zhao, and T. Chen.  $\mathcal{H}_\infty$  fuzzy control of nonlinear systems under unreliable communication links. *IEEE Transactions on Fuzzy Systems*, 17(2):265–278, April 2009.
- [698] H. Gao, Y. Zhao, J. Lam, and K. Chen.  $\mathcal{H}_\infty$  fuzzy filtering of nonlinear systems with intermittent measurements. *IEEE Transactions on Fuzzy Systems*, 17(2):291–300, April 2009.
- [699] Z. Gao and P. J. Antsaklis. Explicit asymmetric bounds for robust stability of continuous and discrete-time systems. *IEEE Transactions on Automatic Control*, 38(2):332–335, February 1993.
- [700] C. E. García, D. M. Prett, and M. Morari. Model predictive control: Theory and practice — A survey. *Automatica*, 25(3):335–348, May 1989.
- [701] E. Garcia and P. J. Antsaklis. Output feedback networked control with persistent disturbance attenuation. *Systems & Control Letters*, 62(10):943–948, October 2013.
- [702] G. Garcia and J. Bernussou. Pole assignment for uncertain systems in a specified disk by state-feedback. *IEEE Transactions on Automatic Control*, 40(1):184–190, January 1995.
- [703] G. Garcia and J. Bernussou. Pole assignment for uncertain systems in a specified disk by output feedback. *Mathematics of Control Signals and Systems*, 9(2):152–161, 1996.
- [704] G. Garcia, P. L. D. Peres, and S. Tarbouriech. Necessary and sufficient numerical conditions for asymptotic stability of linear time-varying systems. In *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 5146–5151, Cancun, Mexico, December 2008.
- [705] G. Garcia, P. L. D. Peres, and S. Tarbouriech. Assessing asymptotic stability of linear continuous time-varying systems by computing the envelope of all trajectories. *IEEE Transactions on Automatic Control*, 55(4):998–1003, April 2010.
- [706] G. Garcia, B. Pradin, S. Tarbouriech, and F. Zeng. Robust stabilization and guaranteed cost control for discrete-time linear systems by static output feedback. *Automatica*, 39(9):1635–1641, September 2003.
- [707] G. Garcia, B. Pradin, and F. Zeng. Stabilization of discrete time linear systems by static output feedback. *IEEE Transactions on Automatic Control*, 46(12):1954–1958, December 2001.
- [708] G. Garcia and S. Salhi.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  robust control for continuous-time linear systems. Technical Report 08146, LAAS-CNRS, March 2008.
- [709] G. Garcia, S. Tarbouriech, and P. L. D. Peres. Robust Kalman filtering for uncertain discrete time linear systems. *International Journal of Robust and Nonlinear Control*, 13(13):1225–1238, June 2003.
- [710] G. Garcia, S. Tarbouriech, R. Suarez, and J. Alvarez-Ramirez. Nonlinear bounded control for norm-bounded uncertain systems. *IEEE Transactions on Automatic Control*, 44(6):1254–1258, June 1999.
- [711] A. Garulli, A. Masi, G. Valmórbida, and L. Zaccarian. Global stability and finite  $\mathcal{L}_{2m}$ -gain of saturated uncertain systems via piecewise polynomial Lyapunov functions. *IEEE Transactions on Automatic Control*, 58(1):1196–1202, January 2013.

- [GM:13] [712] D. L. Gaudette and D. E. Miller. Stabilizing a first order system with an arbitrarily large time varying delay and an uncertain gain. *Systems & Control Letters*, 62(10):915–923, October 2013.
- [Gaw:86] [713] P. Gawthrop. Self-tuning PID controllers: Algorithms and implementation. *IEEE Transactions on Automatic Control*, 31(3):201–209, 1986.
- [GFL:96] [714] J. H. Ge, P. M. Frank, and C. F. Lin. Robust  $\mathcal{H}_\infty$  state feedback control for linear systems with state delay and parameter uncertainty. *Automatica*, 32(8):1183–1185, 1996.
- [GCW:02] [715] M. Ge, M. Chiu, and Q. Wang. Robust PID controller design via LMI approach. *Journal of Process Control*, 21:3–13, 2002.
- [GT:88] [716] R. Genesio and A. Tesi. The output stabilization of SISO bilinear systems. *IEEE Transactions on Automatic Control*, 33(10):950–952, October 1988.
- [GT:06] [717] D. Georgiev and D. M. Tilbury. Packet-based control: the  $\mathcal{H}_2$ -optimal solution. *Automatica*, 42(1):137–144, January 2006.
- [Ger:99] [718] J. C. Geromel. Optimal linear filtering under parameter uncertainty. *IEEE Transactions on Signal Processing*, 47(1):168–175, January 1999.
- [GBdO:99] [719] J. C. Geromel, J. Bernussou, and M. C. de Oliveira.  $\mathcal{H}_2$ -norm optimization with constrained dynamic output feedback controllers: Decentralized and reliable control. *IEEE Transactions on Automatic Control*, 44(7):1449–1454, July 1999.
- [GBGdO:98] [720] J. C. Geromel, J. Bernussou, G. Garcia, and M. C. de Oliveira.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  robust filtering for discrete-time linear systems. In *Proceedings of the 37th IEEE Conference on Decision and Control*, volume 1, pages 632–637, Tampa, FL, December 1998.
- [GBGdO:00] [721] J. C. Geromel, J. Bernussou, G. Garcia, and M. C. de Oliveira.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  robust filtering for discrete-time linear systems. *SIAM Journal on Control and Optimization*, 38(5):1353–1368, May 2000.
- [GBP:94] [722] J. C. Geromel, J. Bernussou, and P. L. D. Peres. Decentralized control through parameter space optimization. *Automatica*, 30(10):1565–1578, October 1994.
- [GB:06] [723] J. C. Geromel and R. A. Borges. Joint optimal design of digital filters and state-space realizations. *IEEE Transactions on Circuits and Systems II: Express Briefs*, 53(12):1353–1357, December 2006.
- [GC:06a] [724] J. C. Geromel and P. Colaneri. Robust stability of time varying polytopic systems. *Systems & Control Letters*, 55(1):81–85, January 2006.
- [GC:06c] [725] J. C. Geromel and P. Colaneri. Stability and stabilization of continuous-time switched systems. *SIAM Journal on Control and Optimization*, 45(5):1915–1930, 2006.
- [GC:06b] [726] J. C. Geromel and P. Colaneri. Stability and stabilization of discrete time switched systems. *International Journal of Control*, 79(7):719–728, July 2006.
- [GdO:98] [727] J. C. Geromel and M. C. de Oliveira.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  robust filtering for convex bounded uncertain systems. In *Proceedings of the 37th IEEE Conference on Decision and Control*, volume 1, pages 146–151, Tampa, FL, December 1998.
- [GdO:01] [728] J. C. Geromel and M. C. de Oliveira.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  robust filtering for convex bounded uncertain systems. *IEEE Transactions on Automatic Control*, 46(1):100–107, January 2001.
- [GdOB:02] [729] J. C. Geromel, M. C. de Oliveira, and J. Bernussou. Robust filtering of discrete-time linear systems with parameter dependent Lyapunov functions. *SIAM Journal on Control and Optimization*, 41(3):700–711, 2002.
- [GdOH:98] [730] J. C. Geromel, M. C. de Oliveira, and L. Hsu. LMI characterization of structural and robust stability. *Linear Algebra and Its Applications*, 285(1–3):69–80, December 1998.

- GdSS:98** [731] J. C. Geromel, C. C. de Souza, and R. E. Skelton. Static output feedback controllers: Stability and convexity. *IEEE Transactions on Automatic Control*, 43(1):120–125, January 1998.
- GD:09** [732] J. C. Geromel and G. S. Deaecto. Switched state feedback control for continuous-time uncertain systems. *Automatica*, 45(2):593–597, February 2009.
- GDC:16** [733] J. C. Geromel, G. S. Deaecto, and P. Colaneri. Minimax control of Markov jump linear systems. *International Journal of Adaptive Control and Signal Processing*, 30(8-10):1152–1162, August-October 2016.
- GGF:09** [734] J. C. Geromel, A. P. C. Gonçalves, and A. R. Fioravanti. Dynamic output feedback control of discrete-time Markov jump linear systems through linear matrix inequalities. *SIAM Journal on Control and Optimization*, 48(2):573–593, 2009.
- GK:06b** [735] J. C. Geromel and R. H. Korogui. Analysis and synthesis of robust control systems using linear parameter dependent Lyapunov functions. *IEEE Transactions on Automatic Control*, 51(12):1984–1989, December 2006.
- GK:06a** [736] J. C. Geromel and R. H. Korogui. Matrix quadratic polynomials with application to robust stability analysis. In *Proceedings of the 5th IFAC Symposium on Robust Control Design (ROCOND 2006)*, Toulouse, France, July 2006.
- GK:08** [737] J. C. Geromel and R. H. Korogui.  $\mathcal{H}_2$  robust filter design with performance certificate via convex programming. *Automatica*, 44(4):937–948, April 2008.
- GKB:07** [738] J. C. Geromel, R. H. Korogui, and J. Bernussou.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  robust output feedback control for continuous time polytopic systems. *IET Control Theory & Applications*, 1(5):1541–1549, September 2007.
- GPB:88** [739] J. C. Geromel, P. L. D. Peres, and J. Bernussou. Stabilizability of uncertain linear systems via linear programming. In *Proceedings of the 27th IEEE Conference on Decision and Control*, volume 3, pages 1771–1775, Austin, USA, 1988.
- GPB:90** [740] J. C. Geromel, P. L. D. Peres, and J. Bernussou. Stabilizability of uncertain dynamical systems: the continuous and discrete case. In *Proceedings of the 11st IFAC World Congress on Automatic Control*, volume 1, pages 135–140, Tallinn, USSR, 1990.
- GPB:91** [741] J. C. Geromel, P. L. D. Peres, and J. Bernussou. On a convex parameter space method for linear control design of uncertain systems. *SIAM Journal on Control and Optimization*, 29(2):381–402, March 1991.
- GPS:91** [742] J. C. Geromel, P. L. D. Peres, and S. R. Souza. Quadratic stabilizability of linear uncertain systems with prescribed  $\mathcal{H}_\infty$  norm bounds. In *Proceedings of the 1st IFAC Symposium on Design Methods of Control Systems*, volume 1, pages 302–307, Zurich, Switzerland, 1991.
- GPS:92** [743] J. C. Geromel, P. L. D. Peres, and S. R. Souza.  $\mathcal{H}_2$  guaranteed cost control for uncertain continuous-time linear systems. *Systems & Control Letters*, 19(1):23–27, July 1992.
- GPS:92b** [744] J. C. Geromel, P. L. D. Peres, and S. R. Souza. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control for continuous-time linear systems. In *Proceedings of the 31st IEEE Conference on Decision and Control*, volume 4, pages 3717–3722, Tucson, USA, 1992.
- GPS:93b** [745] J. C. Geromel, P. L. D. Peres, and S. R. Souza. Convex analysis of the output feedback structural constraint. In *Proceedings of the 32nd IEEE Conference on Decision and Control*, volume 2, pages 1363–1364, San Antonio, TX, USA, 1993.
- GPS:93** [746] J. C. Geromel, P. L. D. Peres, and S. R. Souza.  $\mathcal{H}_2$  guaranteed cost control for uncertain discrete-time linear systems. *International Journal of Control*, 57(4):853–864, April 1993.

- GPS:93c** [747] J. C. Geromel, P. L. D. Peres, and S. R. Souza. Output feedback stabilization of uncertain systems throughout a Min/Max problem. In *Proceedings of the 12th IFAC World Congress*, volume 6, pages 35–38, Sidney, Australia, 1993.
- GPS:94** [748] J. C. Geromel, P. L. D. Peres, and S. R. Souza.  $\mathcal{H}_\infty$  guaranteed cost control for uncertain discrete-time linear systems. *IEEE Transactions on Automatic Control*, 39(5):1072–1075, May 1994.
- GPS:95** [749] J. C. Geromel, P. L. D. Peres, and S. R. Souza. A convex approach to the mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control problem for discrete-time uncertain systems. *SIAM Journal on Control and Optimization*, 33(6):1816–1833, November 1995.
- GPS:96** [750] J. C. Geromel, P. L. D. Peres, and S. R. Souza. Convex analysis of output feedback control problems: Robust stability and performance. *IEEE Transactions on Automatic Control*, 41(7):997–1003, July 1996.
- GS:15b** [751] J. C. Geromel and M. Souza. On an LMI approach to optimal sampled-data state feedback control design. *International Journal of Control*, 88(11):2369–2379, June 2015.
- GS:15** [752] E. Gershon and U. Shaked. Vertex-dependent approach to robust  $\mathcal{H}_\infty$  control and estimation of stochastic discrete-time systems. *IFAC-PapersOnLine*, 48(11):949–953, 2015.
- GSI:15** [753] E. Gershon, U. Shaked, and L. Itzhaki. Stochastic linear systems: Robust  $\mathcal{H}_\infty$  control via vertex-dependent approach. In *Proceedings of the 23rd Mediterranean Conference on Control and Automation (MED2015)*, pages 638–643, Torremolinos, Spain, June 2015.
- GSY:99** [754] E. Gershon, U. Shaked, and I. Yaesh.  $\mathcal{H}_\infty$  control and estimation of discrete-time linear systems with stochastic parameter uncertainties. In *Proceedings of the 5th European Control Conference*, pages 1310–1315, Karlsruhe, Germany, August 1999.
- GSY:01** [755] E. Gershon, U. Shaked, and I. Yaesh.  $\mathcal{H}_\infty$  control and filtering of discrete-time stochastic systems with multiplicative noise. *Automatica*, 37(3):409–417, March 2001.
- GSY:05** [756] E. Gershon, U. Shaked, and I. Yaesh.  $\mathcal{H}_\infty$  Control and Estimation of State-multiplicative Linear Systems, volume 318 of *Lecture Notes in Control and Information Sciences*. Springer-Verlag, London, UK, 2005.
- Gil:94** [757] M. I. Gil. On absolute stability of differential-delay systems. *IEEE Transactions on Automatic Control*, 39(12):2481–2484, 1994.
- GHBB:10** [758] W. Gilbert, D. Henrion, J. Bernussou, and D. Boyer. Polynomial LPV synthesis applied to turbofan engines. *Control Engineering Practice*, 18(9):1077–1083, September 2010.
- Glo:84** [759] K. Glover. All optimal Hankel-norm approximations of linear multivariable systems and their  $\mathbf{L}_\infty$ -error bounds. *International Journal of Control*, 39(6):1115–1193, 1984.
- Glu:97** [760] H. GlusingLuerssen. A behavioral approach to delay-differential systems. *SIAM Journal on Control and Optimization*, 35(2):480–499, 1997.
- GST:09** [761] R. Goebel, R. G. Sanfelice, and A. R. Teel. Hybrid dynamical systems. *IEEE Control Systems*, 29(2):28–93, April 2009.
- GTHL:06** [762] R. Goebel, A. R. Teel, T. Hu, and Z. Lin. Conjugate convex Lyapunov functions for dual linear differential inclusions. *IEEE Transactions on Automatic Control*, 51(4):661–666, April 2006.
- Goh:76** [763] B. S. Goh. Nonvulnerability of ecosystems in unpredictable environments. *Theoretical Population Biology*, 10:83–95, 1976.
- Goh:77** [764] B. S. Goh. Global stability in many-species systems. *American Naturalist*, 111:135–143, 1977.
- GLR:82** [765] I. Gohberg, P. Lancaster, and L. Rodman. *Matrix Polynomials*. Academic Press, New York, NY, USA, 1982.



- GKH:87** [766] K. P. Gokhale, A. Kawamura, and R. G. Hoft. Dead beat microprocessor control of PWM inverter for sinusoidal output waveform synthesis. *IEEE Transactions on Industry Applications*, 23(5):901–910, September/October 1987.
- Gol:89** [767] D. E. Goldberg. *Genetic Algorithms in Search, Optimization and Machine Learning*. Addison-Wesley, Reading, MA, USA, 1989.
- GvL:96** [768] G. H. Golub and C. F. Van Loan. *Matrix Computations*. The John Hopkins University Press, Baltimore, MD, USA, third edition, 1996.
- GdSFSR:05** [769] J. M. Gomes da Silva Jr., E. Fridman, A. Seuret, and J. P. Richard. tabilization of neutral systems with saturating inputs. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005. in CD-rom.
- GdSL:05** [770] J. M. Gomes da Silva Jr. and F. Lescher. Time-varying dynamic controllers for discrete-time linear systems with input saturation. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005. in CD-rom.
- GdST:99** [771] J. M. Gomes da Silva Jr. and S. Tarbouriech. Stability regions for linear systems with saturating controls. In *Proceedings of the 5th European Control Conference*, Karlsruhe, Germany, September 1999.
- GdST:01** [772] J. M. Gomes da Silva Jr. and S. Tarbouriech. Local stabilization of discrete-time linear systems with saturating controls: An LMI-based approach. *IEEE Transactions on Automatic Control*, 46(1):119–125, January 2001.
- GdST:05** [773] J. M. Gomes da Silva Jr. and S. Tarbouriech. Antiwindup design with guaranteed regions of stability: An LMI-based approach. *IEEE Transactions on Automatic Control*, 50(1):106–111, January 2005.
- GdST:06** [774] J. M. Gomes da Silva Jr. and S. Tarbouriech. Antiwindup design with guaranteed regions of stability for discrete-time linear systems. *Systems & Control Letters*, 55(03):184–192, March 2006.
- GG:98** [775] G. I. Gomez and G. C. Goodwin. Generalization of integral constraints on sensitivity to time-delay systems. *IEEE Transactions on Automatic Control*, 43(7):1008–1012, 1998.
- GQS:04** [776] C.-S. Gómez Quintero, I. Queinnec, and M. Spérandio. A reduced linear model of an activated sludge process. In *9th IFAC International Symposium on Computer Applications in Biotechnology*, Nancy, France, March 2004. In CD-rom.
- GADTH:14** [777] T. Gommans, D. Antunes, T. Donkers, P. Tabuada, and M. Heemels. Self-triggered linear quadratic control. *Automatica*, 50(4):1279–1287, April 2014.
- GFA-RG:11** [778] A. P. C. Gonçalves, A. R. Fioravanti, M. A. Al-Radhawi, and J. C. Geromel.  $\mathcal{H}_\infty$  state feedback control of discrete-time Markov jump linear systems through linear matrix inequalities. In *Proceedings of the 18th IFAC World Congress*, pages 12620–12625, Milano, Italy, August 2011.
- GFG:09** [779] A. P. C. Gonçalves, A. R. Fioravanti, and J. C. Geromel.  $\mathcal{H}_\infty$  filtering of discrete-time Markov jump linear systems through linear matrix inequalities. *IEEE Transactions on Automatic Control*, 54(6):1347–1351, June 2009.
- GFG:10** [780] A. P. C. Gonçalves, A. R. Fioravanti, and J. C. Geromel. Markov jump linear systems and filtering through network transmitted measurements. *Signal Processing*, 90(10):2842–2850, October 2010.
- GFG:11** [781] A. P. C. Gonçalves, A. R. Fioravanti, and J. C. Geromel. Filtering of discrete-time Markov jump linear systems with uncertain transition probabilities. *International Journal of Robust and Nonlinear Control*, 21(6):613–624, April 2011.
- GPT:04** [782] E. N. Gonçalves, R. M. Palhares, and R. H. C. Takahashi. Multiobjective optimization applied to robust  $\mathcal{H}_2/\mathcal{H}_\infty$  state-feedback control synthesis. In *Proceedings of the 2004 American Control Conference*, pages 4619–4624, Boston, MA, USA, June 2004.

- GPT:05a** [783] E. N. Gonçalves, R. M. Palhares, and R. H. C. Takahashi. Improved optimisation approach to the robust  $\mathcal{H}_2/\mathcal{H}_\infty$  control problem for linear systems. *IEE Proceedings — Control Theory and Applications*, 152(2):171–176, March 2005.
- GPT:06** [784] E. N. Gonçalves, R. M. Palhares, and R. H. C. Takahashi.  $\mathcal{H}_2/\mathcal{H}_\infty$  filter design for systems with polytope-bounded uncertainty. *IEEE Transactions on Signal Processing*, 54(9):3620–3626, September 2006.
- GPTM:06** [785] E. N. Gonçalves, R. M. Palhares, R. H. C. Takahashi, and R. C. Mesquita. New approach to robust  $\mathcal{D}$ -stability analysis of linear time-invariant systems with polytope-bounded uncertainty. *IEEE Transactions on Automatic Control*, 51(10):1709–1714, October 2006.
- GPTM:07a** [786] E. N. Gonçalves, R. M. Palhares, R. H. C. Takahashi, and R. C. Mesquita.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$   $\epsilon$ -guaranteed cost computation of uncertain linear systems. *IET Control Theory & Applications*, 1(1):201–209, January 2007.
- GFG:12** [787] A. P. C. Gonçalves, A. R. Fioravanti, and J. C. Geromel.  $\mathcal{H}_\infty$  robust and networked control of discrete-time MJLS through LMIs. *Journal of The Franklin Institute*, 349(6):2171–2181, August 2012.
- GPT:05b** [788] E. N. Gonçalves, R. M. Palhares, and R. H. C. Takahashi. Robust  $\mathcal{H}_2/\mathcal{H}_\infty$  output-feedback control synthesis for systems with polytope-bounded uncertainty. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005. in CD-rom.
- GIL:07** [789] D. Görges, M. Izák, and S. Liu. Optimal control of systems with resource constraints. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 1070–1075, New Orleans, LA, USA, December 2007.
- GIL:09** [790] D. Görges, M. Izák, and S. Liu. Optimal control and scheduling of networked control systems. In *Proceedings of the 48th IEEE Conference on Decision and Control — 28th Chinese Control Conference*, pages 5839–5844, Shanghai, China, December 2009.
- Gov:00** [791] W. J. F. Govaerts. *Numerical Methods for Bifurcations of Dynamical Equilibria*. SIAM, Philadelphia, PA, USA, 2000.
- GdOC:09** [792] M. R. Graham, M. C. de Oliveira, and R. A. de Callafon. An alternative Kalman-Yakubovich-Popov lemma and some extensions. *Automatica*, 45(6):1489–1496, March 2009.
- Gra:72** [793] R. M. Gray. On the asymptotic eigenvalue distribution of Toeplitz matrices. *IEEE Transactions on Information Theory*, 18(6):725–730, November 1972.
- GL:95** [794] M. Green and D. J. N. Limebeer. *Linear Robust Control*. Prentice-Hall, Englewood Cliffs, NJ, 1995.
- GW:97** [795] K. M. Grigoriadis and J. T. Watson. Reduced-order  $\mathcal{H}_\infty$  and  $\mathcal{L}_2$ - $\mathcal{L}_\infty$  filtering via linear matrix inequalities. *IEEE Transactions on Aerospace and Electronic Systems*, 33(4):1326–1338, 1997.
- Gri:88** [796] M. J. Grimble.  $\mathcal{H}_\infty$  design of optimal linear filters. In C. I. Byrnes, C. F. Martin, and R. E. Saeks, editors, *Linear Circuits, Systems and Signal Processing: Theory and Applications*, pages 533–540. North-Holland, Amsterdam, The Netherlands, 1988.
- Gri:93** [797] M. J. Grimble. Polynomial matrix solution of the  $\mathcal{H}_\infty$  filtering problem and the relationship to Riccati equation state-space results. *IEEE Transactions on Signal Processing*, 41(1):67–81, January 1993.
- Gri:98** [798] M. J. Grimble. LQG controllers for discrete-time multivariable systems with different transport delays in signal channels. *IEE Proceedings — Control Theory and Applications*, 145(5):449–462, 1998.
- Gri:98b** [799] M. J. Grimble. Polynomial systems approach to continuous-time weighted optimal linear filtering and prediction. *IEEE Transactions on Signal Processing*, 46(11):3123–3127, November 1998.
- GH:98b** [800] M. J. Grimble and G. Hearn. LQG controllers for state-space systems with pure transport delays: application to hot strip mills. *Automatica*, 34(10):1169–1184, 1998.

- [GH:98] [801] M. J. Grimble and G. Hearn. LQG controllers for unstable systems with transport delays: thickness control in rolling mills. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 3150–3155, Tampa, FL, USA, December 1998.
- [GS:90] [802] M. J. Grimble and A. El Sayed. Solution of the  $\mathcal{H}_\infty$  optimal linear filtering problem for discrete-time systems. *IEEE Transactions on Acoustics, Speech, and Signal Processing*, 38(7):1092–1104, 1990.
- [GCP:97] [803] H. A. Gründling, E. G. Carati, and J. R. Pinheiro. A robust model reference adaptive controller for UPS applications. In *1997 IEEE Industry Applications Society Conference, IAS-1997*, volume 2, pages 901–905, 1997.
- [GTOP:89] [804] D. W. Gu, M. C. Tsai, S. D. O’Young, and I. Postlethwaites. State-space formulae for discrete-time  $\mathcal{H}_\infty$  optimization. *International Journal of Control*, 49(5):1683–1723, 1989.
- [Gu:90] [805] G. Gu. Stabilizability conditions of multivariable uncertain systems via output feedback control. *IEEE Transactions on Automatic Control*, 35(8):926–927, 1990.
- [Gu:98] [806] K. Gu. Stability of linear time-delay systems with block-diagonal uncertainty. In *Proceedings of the 1998 American Control Conference*, pages 1943–1947, Philadelphia, PA, USA, June 1998.
- [Gu:00] [807] K. Gu. An integral inequality in the stability problem of time-delay systems. In *Proceedings of the 39th IEEE Conference on Decision and Control*, volume 3, pages 2805–2810, Sydney, Australia, December 2000.
- [GKC:03] [808] K. Gu, V. L. Kharitonov, and J. Chen. *Stability of Time-delay Systems*. Control Engineering. Birkhäuser, Boston, MA, 2003.
- [GN:03] [809] K. Gu and S. Niculescu. Survey on recent results in the stability and control of time-delay systems. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 125:125–165, 2003.
- [GN:99] [810] K. Gu and S.-I. Niculescu. Additional dynamics in transformed time-delay systems. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 4673–4677, Phoenix, AZ, December 1999.
- [GN:01] [811] K. Gu and S.-I. Niculescu. Further remarks on additional dynamics in various model transformations of linear delay systems. *IEEE Transactions on Automatic Control*, 46(3):497–500, March 2001.
- [GZL:90] [812] K. Gu, M. A. Zohdy, and N. K. Loh. Necessary and sufficient conditions of quadratic stability of uncertain linear systems. *IEEE Transactions on Automatic Control*, 35(5):601–604, May 1990.
- [Gu:97] [813] K. Q. Gu. Discretized LMI set in the stability problem of linear uncertain time-delay systems. *International Journal of Control*, 68(4):923–934, 1997.
- [GGQW:98b] [814] Y. Gu, C. Geng, J. Qian, and L. Wang. Robust  $\mathcal{H}_\infty$  control for linear time-delay systems subject to norm-bounded nonlinear uncertainty. In *Proceedings of the 1998 American Control Conference*, pages 2417–2420, Philadelphia, PA, USA, June 1998.
- [GGQW:98a] [815] Y. Gu, C. Geng, J. Qian, and L. Wang. Robust reliable  $\mathcal{H}_\infty$  control for uncertain time-delay systems. In *Proceedings of the 1998 American Control Conference*, pages 2415–2416, Philadelphia, PA, USA, June 1998.
- [GLCQ:99] [816] Y. Gu, Q. Li, Z. Cheng, and J. Qian. Reliable  $\mathcal{H}_\infty$  control for uncertain time-delay systems using LMI. In *Proceedings of the 14th IFAC World Congress*, volume G, pages 181–184, Beijing, P. R. China, July 1999.
- [GWL:98] [817] Y. R. Gu, S. C. Wang, Q. Q. Li, Z. Q. Cheng, and J. X. Qian. On delay-dependent stability and decay estimate for uncertain systems with time-varying delay. *Automatica*, 34(8):1035–1039, 1998.
- [GH:86] [818] J. Guckenheimer and P. Holmes. *Nonlinear Oscillations, Dynamical Systems and Bifurcations of Vector Fields*. Springer Verlag, New York, NY, 2nd edition, 1986.

- [819] J. Guckenheimer, M. Myers, and B. Sturmfels. Computing Hopf bifurcations I. *SIAM Journal on Numerical Analysis*, 34(1):1–21, February 1997.
- [820] K. Guelton, T. Bouarar, and N. Manamanni. Fuzzy Lyapunov LMI based output feedback stabilization of Takagi–Sugeno systems using descriptor redundancy. In *Proceedings of the 2008 IEEE International Conference on Fuzzy Systems*, pages 1212–1218, Hong Kong, P. R. China, June 2008.
- [821] K. Guelton, T. Bouarar, and N. Manamanni. Robust dynamic output feedback fuzzy Lyapunov stabilization of Takagi–Sugeno systems — A descriptor redundancy approach. *Fuzzy Sets and Systems*, 160(19):2796–2811, October 2009.
- [822] K. Guelton, T. M. Guerra, M. Bernal, T. Bouarar, and N. Manamanni. Comments on fuzzy control systems design via fuzzy Lyapunov functions. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 40(3):970–972, June 2010.
- [823] T. M. Guerra and M. Bernal. A way to escape from the quadratic framework. In *Proceedings of the 2009 IEEE International Conference on Fuzzy Systems*, pages 784–789, Jeju Island, Korea, August 2009.
- [824] T. M. Guerra, M. Bernal, K. Guelton, and S. Labiod. Non-quadratic local stabilization for continuous-time Takagi–Sugeno models. *Fuzzy Sets and Systems*, 201:40–54, August 2012.
- [825] T. M. Guerra, M. Bernal, and A. Jaadari. Non-quadratic stabilization of Takagi–Sugeno models: A local point of view. In *Proceedings of the 2010 IEEE International Conference on Fuzzy Systems*, pages 2375–2380, Barcelona, Spain, July 2010.
- [826] T. M. Guerra, A. Kruszewski, and M. Bernal. Control law proposition for the stabilization of discrete Takagi–Sugeno models. *IEEE Transactions on Fuzzy Systems*, 17(3):724–731, June 2009.
- [827] T. M. Guerra, A. Kruszewski, L. Vermeiren, and H. Tirmant. Conditions of output stabilization for nonlinear models in the Takagi–Sugeno’s form. *Fuzzy Sets and Systems*, 157(17):1248–1259, May 2006.
- [828] T. M. Guerra and L. Vermeiren. LMI-based relaxed nonquadratic stabilization conditions for nonlinear systems in the Takagi–Sugeno’s form. *Automatica*, 40(5):823–829, May 2004.
- [829] M. Guinaldo, J. Sánchez, and S. Dormido. Co-design strategy of networked control systems for treacherous network conditions. *IET Control Theory & Applications*, 5(16):1906–1915, November 2011.
- [830] S. Gumussoy, D. Henrion, M. Millstone, and M. L. Overton. Multiobjective robust control with HIFOO 2.0. In *Proceedings of the 6th IFAC Symposium on Robust Control Design (ROCOND 2009)*, pages 144–149, Haifa, Israel, June 2009. [www.cs.nyu.edu/overton/software/hifoo](http://www.cs.nyu.edu/overton/software/hifoo).
- [831] D. Guo and W. J. Rugh. A stability result for linear parameter-varying systems. *Systems & Control Letters*, 24(1):1–5, January 1995.
- [832] S. M. Guo, W. Wang, and L. S. Shieh. Discretisation of two degree-of-freedom controller and system with state, input and output delays. *IEE Proceedings — Control Theory and Applications*, 147(1):87–96, January 2000.
- [833] L. Gurvits, R. Shorten, and O. Mason. On the stability of switched positive linear systems. *IEEE Transactions on Automatic Control*, 52(6):1099–1103, June 2007.
- [834] P. O. Gutman. Stabilizing controllers for bilinear systems. *IEEE Transactions on Automatic Control*, 26(4):917–922, April 1981.
- [835] L. C. G. J. M. Habets. On the genericity of stabilizability for time-delay systems. *SIAM Journal on Control and Optimization*, 34(3):833–854, 1996.

- [836] W. H. Haddad and J. R. Corrado. Robust resilient dynamic controllers for systems with parametric uncertainty and controller gain variations. In *Proceedings of the 1998 American Control Conference*, pages 2837–2841, Philadelphia, PA, June 1998.
- [837] W. M. Haddad and D. S. Bernstein. Controller design with regional pole constraints. *IEEE Transactions on Automatic Control*, 37(1):54–69, January 1992.
- [838] W. M. Haddad and D. S. Bernstein. Parameter-dependent Lyapunov functions and the discrete-time Popov Criterion for robust analysis. *Automatica*, 30(6):1015–1021, 1994.
- [839] W. M. Haddad and D. S. Bernstein. Parameter-dependent Lyapunov functions and the Popov Criterion in robust analysis and synthesis. *IEEE Transactions on Automatic Control*, 40(3):536–543, 1995.
- [840] W. M. Haddad, D. S. Bernstein, and D. Mustafa. Mixed-norm  $\mathcal{H}_2/\mathcal{H}_\infty$  regulation and estimation: the discrete-time case. *Systems & Control Letters*, 16(4):235–247, April 1991.
- [841] W. M. Haddad and V. S. Chellaboina. Robust nonlinear-nonquadratic feedback control via parameter-dependent Lyapunov functions. *International Journal of Control*, 66(6):843–861, 1997.
- [842] W. M. Haddad and V. Kapila. Robust stabilization for discrete-time systems with slowly time-varying uncertainty. *Journal of The Franklin Institute*, 333B(1):71–84, January 1996.
- [843] W. M. Haddad, V. Kapila, and D. S. Bernstein. Robust  $\mathcal{H}_\infty$  stabilization via parametrized Lyapunov bounds. In *Proceedings of the 1995 American Control Conference*, pages 2374–2378, Seattle, WA, USA, June 1995.
- [844] W. M. Haddad, V. Kapila, and D. S. Bernstein. Robust  $\mathcal{H}_\infty$  stabilization via parameterized Lyapunov bounds. *IEEE Transactions on Automatic Control*, 42(2):243–248, February 1997.
- [845] W. M. Haddad, V. Kapila, and D. S. Bernstein. Robust, reduced-order modeling for state-space systems via parameter-dependent bounding functions. *IEEE Transactions on Automatic Control*, 42(2):248–253, February 1997.
- [846] W. Hahn. *Stability of motion*. Springer-Verlag, Berlin, Germany, 1967.
- [847] A. Halanay and V. Ionescu. Generalized discrete-time Popov-Yakubovich theory. *Systems & Control Letters*, 20(1):1–6, January 1996.
- [848] B. Halder, B. Hassibi, and T. Kailath. Design of optimal mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  static state feedback controllers. In *Proceedings of the 1998 American Control Conference*, pages 3239–3243, Philadelphia, PA, USA, June 1998.
- [849] J. Hale. *Theory of Functional Differential Equations*. Springer-Verlag, New York, 1977.
- [850] J. Hale and S. M. V. Lunel. *Introduction to Functional Differential Equations*. Springer-Verlag, New York, 1993.
- [851] J. K. Hale. *Theory of functional differential equations*. Springer-Verlag, New York, 1977.
- [852] J. K. Hale, E. F. Infante, and F. S. P. Tseng. Stability in linear delay equation. *Journal of Mathematical Analysis and Applications*, 105:533–555, 1985.
- [853] J. K. Hale and S. M. Verduyn Lunel. *Introduction to Functional Differential Equations*. Springer-Verlag, New York, 1991.
- [854] Y. Halevi. Reduced-order models with delay. *International Journal of Control*, 64(4):733–744, 1996.
- [855] Q.-L. Han. Robust stability of uncertain delay-differential systems of neutral type. *Automatica*, 38(4):719–723, April 2002.
- [856] Q.-L. Han. A descriptor system approach to robust stability of uncertain neutral system with discrete and distributed delays. *Automatica*, 40(10):1791–1796, October 2004.



- [HM:98] [857] Q. L. Han and D. Mehdi. Comments on “Robust control for parameter uncertain delay systems in state and control input”. *Automatica*, 34(12):1665–1666, 1998.
- [HM:99] [858] Q. L. Han and D. Mehdi. Robust  $\mathcal{H}_\infty$  controller synthesis for uncertain systems with multiple time-varying delays: an LMI approach. In *Proceedings of the 14th IFAC World Congress*, volume C, pages 271–276, Beijing, P. R. China, July 1999.
- [HKH:88] [859] T. Haneyoshi, A. Kawamura, and R. G. Hoft. Waveform compensation of PWM inverter with cyclic fluctuating loads. *IEEE Transactions on Industry Applications*, 24(4):582–589, July/August 1988.
- [HN:14] [860] M. Hanifzadegan and R. Nagamune. Smooth switching LPV controller design for LPV systems. *Automatica*, 50(5):1481–1488, May 2014.
- [HYF:96] [861] S. Hara, Y. Yamamoto, and H. Fujioka. Modern and classical analysis/synthesis methods in sampled-data control — A brief overview with numerical examples. In *Proceedings of the 35th IEEE Conference on Decision and Control*, pages 1251–1256, Kobe, Japan, December 1996.
- [HLP:52] [862] G. H. Hardy, J. E. Littlewood, and G. Pólya. *Inequalities*. Cambridge University Press, Cambridge, UK, 2 edition, 1952.
- [Har:80] [863] D. J. Hartfiel. Concerning the interior of the  $D$ -stable matrices. *Linear Algebra and Its Applications*, 30:201–207, 1980.
- [HBH:99] [864] A. Hassibi, S. Boyd, and J. How. Control of asynchronous dynamical system with rate constraints on events. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 1345–1351, Phoenix, AZ, USA, December 1999.
- [HHB:99] [865] A. Hassibi, J. How, and S. Boyd. A path-following method for solving BMI problems in control. In *Proceedings of the 1999 American Control Conference*, pages 1385–1389, San Diego, CA, USA, June 1999.
- [HD:06] [866] L. He and G. R. Duan. Robust  $\mathcal{H}_\infty$  control with pole placement constraints for T–S fuzzy systems. In *Advances in Machine Learning and Cybernetics*, volume 3930 of *Lecture Notes in Artificial Intelligence*, pages 338–346. Springer-Verlag, Berlin, 2006.
- [HL:10] [867] S. He and F. Liu. Robust peak-to-peak filtering for Markov jump systems. *Signal Processing*, 90(2):513–522, February 2010.
- [He:98] [868] X. Z. He. The Lyapunov functionals for delay Lotka-Volterra-type models. *SIAM Journal on Applied Mathematics*, 58(4):1222–1236, 1998.
- [HLRW:09] [869] Y. He, G.-P. Liu, D. Rees, and M. Wu.  $\mathcal{H}_\infty$  filtering for discrete-time systems with time-varying delay. *Signal Processing*, 89(3):275–282, March 2009.
- [HWS:05] [870] Y. He, M. Wu, and J. She. Improved Bounded-Real-Lemma representation and  $\mathcal{H}_\infty$  control of systems with polytopic uncertainties. *IEEE Transactions on Circuits and Systems II: Express Briefs*, 52(7):380–383, July 2005.
- [HCS:02] [871] W. P. M. H. Heemels, M. K. Çamlibel, and J. M. H. Schumacher. On the dynamic analysis of piecewise-linear networks. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 49(3):315–327, March 2002.
- [HTWN:10] [872] W. P. M. H. Heemels, A. R. Teel, N. van de Wouw, and D. Nešić. Networked control systems with communication constraints: Tradeoffs between transmission intervals, delays and performance. *IEEE Transactions on Automatic Control*, 55(8):1781–1796, August 2010.
- [HKLM:07] [873] S. Heimlicher, M. Karaliopoulos, H. Levy, and M. May. End-to-end vs. Hop-by-hop transport under intermittent connectivity. In *Proceedings of the 1st International Conference on Autonomic Computing and Communication Systems*, pages 1–20, Rome, Italy, 2007.

- Hel:99** [874] A. Helmerson. Parameter-dependent Lyapunov functions based on linear fractional transformations. In *Proceedings of the 14th IFAC World Congress*, pages 537–542, Beijing, P. R. China, July 1999.
- HMS:02** [875] J. W. Helton, R. L. Miller, and M. Stankus. *NCALGEGRA: A Mathematica package for doing non commuting algebra*, 2002. Version 3.7 – <http://www.math.ucsd.edu/~ncalg>.
- HAPL:04** [876] D. Henrion, D. Arzelier, D. Peaucelle, and J. B. Lasserre. On parameter-dependent Lyapunov functions for robust stability of linear systems. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 887–892, Paradise Island, Bahamas, December 2004.
- HAPS:01** [877] D. Henrion, D. Arzelier, D. Peaucelle, and M. Šebek. An LMI condition for robust stability of polynomial matrix polytopes. *Automatica*, 37(3):461–468, March 2001.
- HBS:01** [878] D. Henrion, O. Bachelier, and M. Šebek.  $\mathcal{D}$ -stability of polynomial matrices. *International Journal of Control*, 74(8):845–846, May 2001.
- HG:05** [879] D. Henrion and A. Garulli, editors. *Positive Polynomials in Control*, volume 312 of *Lecture Notes on Control and Information Sciences*. Springer-Verlag, Berlin, January 2005.
- HH:03** [880] D. Henrion and P. Hippe. Hyperbolic QR factorization for J-spectral factorization of polynomial matrices. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 3479–3484, Maui, HI, USA, December 2003.
- HK:14** [881] D. Henrion and M. Korda. Convex computation of the region of attraction of polynomial control systems. *IEEE Transactions on Automatic Control*, 59(2):297–312, February 2014.
- HL:03c** [882] D. Henrion and J. B. Lasserre. GloptiPoly: global optimization over polynomials with Matlab and SeDuMi. *ACM Transactions on Mathematical Software*, 29(2):165–194, June 2003.
- HL:03b** [883] D. Henrion and J. B. Lasserre. Solving global optimization problems over polynomials with GloptiPoly 2.1. In C. Blik, C. Jermann, and A. Neumaier, editors, *Global Optimization and Constraint Satisfaction*, volume 2861 of *Lecture Notes in Computer Science*, pages 43–58. Springer-Verlag, New York, 2003.
- HL:04** [884] D. Henrion and J. B. Lasserre. Solving nonconvex optimization problems. *IEEE Control Systems Magazine*, 24(3):72–83, June 2004.
- HL:06** [885] D. Henrion and J. B. Lasserre. Convergent relaxations of polynomial matrix inequalities and static output feedback. *IEEE Transactions on Automatic Control*, 51(2):192–202, February 2006.
- HPAS:03** [886] D. Henrion, D. Peaucelle, D. Arzelier, and M. Šebek. Ellipsoidal approximation of the stability domain of a polynomial. *IEEE Transactions on Automatic Control*, 48(12):2255–2259, December 2003.
- HSS:02** [887] D. Henrion, K. Sugimoto, and M. Šebek. Rank-one lmi approach to robust stability of polynomial matrices. *Kybernetika*, 38(5):643–656, 2002.
- HT:99** [888] D. Henrion and S. Tarbouriech. LMI relaxations for robust stability of linear systems with saturating inputs. *Automatica*, 35(9):1599–1604, 1999.
- HTK:01** [889] D. Henrion, S. Tarbouriech, and V. Kučera. Control of linear systems subject to input constraints: a polynomial approach. *Automatica*, 37(4):597–604, April 2001.
- HSK:03** [890] D. Henrion, M. Šebek, and V. Kučera. Positive polynomials and robust stabilization with fixed-order controllers. *IEEE Transactions on Automatic Control*, 48(7):1178–1186, July 2003.
- HK:90** [891] A. Hermeto and E. Kaszkurewicz. Equivalence of  $\mathcal{D}$ -stability and diagonal stability for  $2 \times 2$  matrices. Technical Report RT/1/90/hk, COPPE/UFRJ, 1990.
- H-VCMB:11** [892] E. Hernandez-Vargas, P. Colaneri, R. Middleton, and F. Blanchini. Discrete-time control for switched positive systems with application to mitigating viral escape. *International Journal of Robust and Nonlinear Control*, 21(10):1093–1111, May 2011.

- Her:92** [893] D. Hershkowitz. Recent directions in matrix stability. *Linear Algebra and Its Applications*, 171:161–186, 1992.
- HLM:03** [894] J. P. Hespanha, D. Liberzon, and A. S. Morse. Overcoming the limitations of adaptive control by means of logic-based switching. *Systems & Control Letters*, 49(1):49–65, May 2003.
- HM:99a** [895] J. P. Hespanha and A. S. Morse. Stability of switched systems with average dwell-time. In *Proceedings of the 38th IEEE Conference on Decision and Control*, volume 3, pages 2655–2660, Phoenix, AZ, USA, December 1999.
- HNX:07** [896] J. P. Hespanha, P. Naghshtabrizi, and Y. Xu. A survey of recent results in networked control systems. *Proceedings of the IEEE*, 95(1):138–162, January 2007.
- HDI:07** [897] L. Hetel, J. Daafouz, and C. Iung. LMI control design for a class of exponential uncertain systems with application to network controlled switched systems. In *Proceedings of the 2007 American Control Conference*, pages 1401–1406, New York, NY, USA, July 2007.
- HDI:08** [898] L. Hetel, J. Daafouz, and C. Iung. Analysis and control of LTI and switched systems in digital loops via an event-based modelling. *International Journal of Control*, 81(7):1125–1138, July 2008.
- HLMR:02** [899] M. Heymann, F. Lin, G. Meyer, and S. Resmerita. Analysis of Zeno behaviors in hybrid systems. In *Proceedings of the 41st IEEE Conference on Decision and Control*, volume 3, pages 2379–2384, Las Vegas, NV, USA, December 2002.
- HLP:16** [900] G. Hilhorst, E. Lambrechts, and G. Pipeleers. Control of linear parameter-varying systems using B-splines. In *Proceedings of the 55th IEEE Conference on Decision and Control*, pages 3246–3251, Las Vegas, NV, USA, December 2016.
- HPMOPS:15b** [901] G. Hilhorst, G. Pipeleers, W. Michiels, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. An iterative convex approach for fixed-order robust  $\mathcal{H}_2/\mathcal{H}_\infty$  control of discrete-time linear systems with parametric uncertainty. In *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 6880–6885, Osaka, Japan, December 2015.
- HPMOPS:15a** [902] G. Hilhorst, G. Pipeleers, W. Michiels, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. Reduced-order  $\mathcal{H}_2/\mathcal{H}_\infty$  control of discrete-time LPV systems with experimental validation on an overhead crane test setup. In *Proceedings of the 2015 American Control Conference*, pages 125–130, Chicago, IL, USA, July 2015.
- HPMOPS:16** [903] G. Hilhorst, G. Pipeleers, W. Michiels, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. Fixed-order linear parameter-varying feedback control of a lab-scale overhead crane. *IEEE Transactions on Control Systems Technology*, 24(5):1899–1907, September 2016.
- HPMS:15** [904] G. Hilhorst, G. Pipeleers, W. Michiels, and J. Swevers. Sufficient LMI conditions for reduced-order multi-objective control of LTI systems. *European Journal of Control*, 23:17–25, May 2015.
- HPOPS:14** [905] G. Hilhorst, G. Pipeleers, R. C. L. F. Oliveira, P. L. D. Peres, and J. Swevers. On extended LMI conditions for  $\mathcal{H}_2/\mathcal{H}_\infty$  control of discrete-time linear systems. In *Proceedings of the 19th IFAC World Congress*, Cape Town, South Africa, August 2014. Accepted.
- HPS:13a** [906] G. Hilhorst, G. Pipeleers, and J. Swevers. An LMI approach for reduced-order  $\mathcal{H}_2$  LTI controller synthesis. In *Proceedings of the 2013 American Control Conference*, pages 2392–2396, Washington, DC, USA, June 2013.
- HPS:13** [907] G. Hilhorst, G. Pipeleers, and J. Swevers. An LMI approach for reduced-order  $\mathcal{H}_2$  LTI controller synthesis. In *Proceedings of the 2013 American Control Conference*, pages 2392–2396, Washington, DC, USA, June 2013.
- HPS:13b** [908] G. Hilhorst, G. Pipeleers, and J. Swevers. Reduced-order multi-objective  $\mathcal{H}_\infty$  control of an overhead crane test setup. In *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 770–775, Florence, Italy, December 2013.

- [HB:98] [909] H. Hindi and S. Boyd. Analysis of linear systems with saturation using convex optimization. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 903–908, Tampa, FL, December 1998.
- [HP:98] [910] D. Hinrichsen and A. J. Pritchard. Stochastic  $\mathcal{H}_\infty$ . *SIAM Journal on Control and Optimization*, 36(5):1504–1538, 1998.
- [Hip:06] [911] P. Hippe, editor. *Windup in Control — Its Effects and Their Prevention*, volume 18 of *Advances in Industrial Control*. Springer-Verlag, Berlin, Germany, 2006.
- [Hma:96] [912] A. Hmamed. Componentwise stability of continuous-time delay linear systems. *Automatica*, 32(4):651–653, 1996.
- [HKTAT:13] [913] A. Hmamed, C. E. Kasri, E. H. Tissir, T. Alvarez, and F. Tadeo. Robust  $\mathcal{H}_\infty$  filtering for uncertain 2-D continuous systems with delays. *International Journal of Innovative Computing, Information and Control*, 9(5):2167–2183, May 2013.
- [HT:96] [914] A. Hmamed and E. Tissir. Delay independent robust stability of uncertain linear systems — Comment. *Systems & Control Letters*, 29(2):119–120, 1996.
- [HHC:95] [915] W. Ho, C. Hang, and L. Cao. Tuning of PID controllers based on gain and phase margin specifications. *Automatica*, 31(3):497–502, 1995.
- [HTAH:04] [916] N. T. Hoang, H. D. Tuan, P. Apkarian, and S. Hosoe. Gain-scheduled filtering for time-varying discrete systems. *IEEE Transactions on Signal Processing*, 52(9):2464–2476, September 2004.
- [HW:15] [917] C. Hoffmann and H. Werner. A survey of linear parameter-varying control applications validated by experiments or high-fidelity simulations. *IEEE Transactions on Control Systems Technology*, 23(2):416–433, March 2015.
- [HS:04] [918] C. W. J. Hol and C. W. Scherer. Sum of squares relaxations for polynomial semi-definite programming. In *Proceedings of the 16th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2004)*, Leuven, Belgium, July 2004.
- [HS:05] [919] C. W. J. Hol and C. W. Scherer. Sum of squares relaxations for robust polynomial semi-definite programs. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005.
- [HJF:10] [920] Y. Hong, Z. Jiang, and G. Feng. Finite-time input-to-state stability and applications to finite-time control design. *SIAM Journal on Control and Optimization*, 48(7):4395–4418, 2010.
- [HB:76] [921] H. P. Horisberger and P. R. Belanger. Regulators for linear, time invariant plants with uncertain parameters. *IEEE Transactions on Automatic Control*, 21:705–708, 1976.
- [HJ:85] [922] R. A. Horn and C. R. Johnson. *Matrix Analysis*. Cambridge University Press, Cambridge, MA, USA, 1985.
- [HJ:91] [923] R. A. Horn and C. R. Johnson. *Topics in Matrix Analysis*. Cambridge University Press, Cambridge, MA, USA, 1991.
- [HQ:99] [924] C. H. Hou and J. X. Qian. Remarks on quantitative analysis for a family of scalar delay differential inequalities. *IEEE Transactions on Automatic Control*, 44(2):334–336, 1999.
- [HSJ:02] [925] M. Hromčík, M. Šebek, and J. Ježek. Complex polynomials in communications: motivation, algorithms, software. In *Proceedings of the 2002 IEEE International Symposium on Computer Aided Control System Design*, Glasgow, Scotland, September 2002. 291–296.
- [HP:96] [926] F. H. Hsiao and S. T. Pan. Robust Kalman filter synthesis for uncertain multiple time-delay stochastic systems. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 118(4):803–808, 1996.

- HXMA:99** [927] B. Hu, X. Xu, A. N. Michel, and P. J. Antsaklis. Robust stabilizing control laws for a class of second-order switched systems. In *Proceedings of the 1999 American Control Conference*, volume 4, pages 2960–2964, San Diego, CA, June 1999.
- HD:03** [928] G. Hu and E. J. Davison. Real stability radii of linear time-invariant time-delay systems. *Systems & Control Letters*, 50:209–219, 2003.
- HLC:02** [929] H. Hu, Z. Lin, and B. M. Chen. An analysis and design method for linear systems subject to actuator saturation and disturbance. *Automatica*, 38(2):351–359, February 2002.
- HBSW:07** [930] L. S. Hu, T. Bai, P. Shi, and Z. Wu. Sampled-data control of networked linear control systems. *Automatica*, 43(5):903–911, May 2007.
- HSC:07** [931] L. S. Hu, P. Shi, and Y. Y. Cao. Delay-dependent filtering design for time-delay systems with Markovian jumping parameters. *International Journal of Adaptive Control and Signal Processing*, 21(5):434–448, 2007.
- HGTL:05** [932] T. Hu, R. Goebel, A. R. Teel, and Z. Lin. Conjugate Lyapunov functions for saturated linear systems. *Automatica*, 41(11):1949–1956, November 2005.
- HL:99** [933] T. Hu and J. Lam. Improvement of parametric stability margin under pole assignment. *IEEE Transactions on Automatic Control*, 44(10):1938–1942, 1999.
- HL:01** [934] T. Hu and Z. Lin. *Control Systems with Actuator Saturation: Analysis and Design*. Birkhäuser, Boston, MA, 2001.
- HL:02** [935] T. Hu and Z. Lin. Exact characterization of invariant ellipsoid for single input linear systems subject to actuator saturation. *IEEE Transactions on Automatic Control*, 47(1):164–169, January 2002.
- HL:03a** [936] T. Hu and Z. Lin. Composite quadratic Lyapunov functions for constrained control systems. *IEEE Transactions on Automatic Control*, 48(3):440–450, March 2003.
- HL:04b** [937] T. Hu and Z. Lin. Properties of the composite quadratic Lyapunov functions. *IEEE Transactions on Automatic Control*, 48(7):1162–1167, July 2004.
- HL:05** [938] T. Hu and Z. Lin. Absolute stability analysis of discrete-time systems with composite quadratic Lyapunov functions. *IEEE Transactions on Automatic Control*, 50(6):781–797, June 2005.
- HL:05b** [939] T. Hu and Z. Lin. Convex analysis of invariant sets for a class of nonlinear systems. *Systems & Control Letters*, 54(8):729–737, August 2005.
- HTZ:06** [940] T. Hu, A. R. Teel, and L. Zaccarian. Stability and performance for saturated systems via quadratic and nonquadratic Lyapunov functions. *IEEE Transactions on Automatic Control*, 51(11):1770–1786, November 2006.
- HN:07** [941] D. Huang and S. K. Nguang. Static output feedback controller design for fuzzy systems: An ILMI approach. *Information Sciences*, 177(14):3005–3015, July 2007.
- HN:09** [942] D. Huang and S. K. Nguang. *Robust Control for Uncertain Networked Control Systems with Random Delays*. Springer London, 2009.
- HF:10** [943] H. Huang and G. Feng. Improved approach to delay-dependent stability analysis of discrete-time systems with time-varying delay. *IET Control Theory & Applications*, 4(10):2152–2159, October 2010.
- HZ:99** [944] Y. Huang and K. Zhou. Robust control of uncertain time delay systems. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 1130–1135, Phoenix, AZ, USA, December 1999.
- HHZCZY:12** [945] Y.-S. Huang, Z.-X. Huang, D.-Q. Zhou, X.-X. Chen, Q.-X. Zhu, and H. Yang. Decentralised indirect adaptive output feedback fuzzy  $\mathcal{H}_\infty$  tracking design for a class of large-scale nonlinear systems. *International Journal of Systems Science*, 43(1):180–191, January 2012.



- [HG:93] [946] R. A. Hyde and K. Glover. The application of scheduled  $\mathcal{H}_\infty$  controllers to a VSTOL aircraft. *IEEE Transactions on Automatic Control*, 38(7):1021–1039, July 1993.
- [HPK:10] [947] C.-H. Hyun, C.-W. Park, and S. Kim. Takagi–Sugeno fuzzy model based indirect adaptive fuzzy observer and controller design. *Information Sciences*, 180(11):2314–2327, June 2010.
- [IEEE446:95] [948] IEEE, USA. *IEEE Recommended Practice for Emergency and Standby Power Systems for Industrial and Commercial Applications*: IEEE-446, 1995.
- [IG:91] [949] P. A. Iglesias and K. Glover. State space approach to discrete-time  $\mathcal{H}_\infty$  control. *International Journal of Control*, 54(5):1031–1073, November 1991.
- [IOP-W:87] [950] A. Ilchmann, D. H. Owens, and D. Prätzel-Wolters. Sufficient conditions for stability of linear time-varying systems. *Systems & Control Letters*, 9(2):157–163, February 1987.
- [IOP:87] [951] A. Ilchmann, D. H. Owens, and D. Prätzel-Wolters. Sufficient conditions for stability of linear time-varying systems. *Systems & Control Letters*, pages 157–163, 1987.
- [Sci:03] [952] INRIA. *Scilab User Guide*, 2003. <http://scilabsoft.inria.fr/>.
- [ITC:15] [953] J. Y. Ishihara, M. H. Terra, and J. P. Cerri. Optimal robust filtering for systems subject to uncertainties. *Automatica*, 52:111–117, February 2015.
- [IF:01] [954] H. Ishii and B. A. Francis. Stabilizing a linear system by switching control with dwell time. In *Proceedings of the 2001 American Control Conference*, volume 3, pages 1876–1881, Arlington, VA, USA, June 2001.
- [IA:92] [955] A. Isidori and A. Astolfi. Disturbance attenuation and H-infinity-control via measurement feedback in nonlinear-systems. *IEEE Transactions on Automatic Control*, 37(9):1283–1293, September 1992.
- [IPJ:10] [956] H. Ito, P. Pepe, and Z. Jiang. A small-gain condition for iiss of interconnected retarded systems based on lyapunov-krasovskii functionals. *Automatica*, 46(10):1646–1656, October 2010.
- [INDDV:03] [957] D. Ivănescu, S.-I. Niculescu, L. Dugard, J.-M. Dion, and E. I. Verriest. On delay-dependent stability for linear neutral systems. *Automatica*, 39(2):255–261, February 2003.
- [Iwa:96] [958] T. Iwasaki. Robust performance analysis for systems with structured uncertainty. *International Journal of Robust and Nonlinear Control*, 6:85–99, March 1996.
- [Iwa:97] [959] T. Iwasaki. Robust stability analysis with quadratic separator: Parametric time-varying uncertainty case. In *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 4880–4885, San Diego, CA, USA, December 1997.
- [IH:98] [960] T. Iwasaki and S. Hara. Well-posedness of feedback systems: Insights into exact robustness analysis and approximative computations. *IEEE Transactions on Automatic Control*, 43(5):619–630, May 1998.
- [IH:05] [961] T. Iwasaki and S. Hara. Generalized KYP lemma: Unified frequency domain inequalities with design applications. *IEEE Transactions on Automatic Control*, 50(1):41–59, January 2005.
- [IH:07] [962] T. Iwasaki and S. Hara. Feedback control synthesis of multiple frequency domain specifications via generalized KYP lemma. *International Journal of Robust and Nonlinear Control*, 17(5-6):415–434, March/April 2007.
- [IMF:00] [963] T. Iwasaki, G. Meinsma, and M. Fu. Generalized  $S$ -procedure and finite frequency KYP lemma. *Mathematical Problems in Engineering*, 6(2–3):305–320, 2000.
- [IS:01] [964] T. Iwasaki and G. Shibata. LPV system analysis with quadratic separator for uncertain implicit systems. *IEEE Transactions on Automatic Control*, 46(8):1195–1208, August 2001.

- [IS:93] [965] T. Iwasaki and R. E. Skelton. A complete solution to the general  $\mathcal{H}_\infty$  control problem: LMI existence conditions and state space formulas. In *Proceedings of the 1993 American Control Conference*, volume 1, pages 605–609, San Francisco, CA, USA, 1993.
- [IS:94] [966] T. Iwasaki and R. E. Skelton. All controllers for the general  $\mathcal{H}_\infty$  control problem: LMI existence conditions and state-space formulas. *Automatica*, 30(8):1307–1317, August 1994.
- [JAFD:98] [967] A. Jadbabaie, C. T. Abdallah, D. Famularo, and P. Dorato. Robust, non-fragile and optimal controller design via linear matrix inequalities. In *Proceedings of the 1998 American Control Conference*, pages 2842–2846, Philadelphia, PA, June 1998.
- [JJT:98] [968] A. Jadbabaie, M. Jamshidi, and A. Titli. Guaranteed-cost design of continuous-time Takagi-Sugeno fuzzy controllers via linear matrix inequalities. In *Proceedings of the 1998 IEEE International Conference on Fuzzy Systems*, volume 1, pages 268–273, Anchorage, AK, USA, 1998.
- [JK:97a] [969] S. Jain and F. Khorrami. Decentralized adaptive control of a class of large-scale interconnected nonlinear systems. *IEEE Transactions on Automatic Control*, 42(2):136–154, February 1997.
- [JK:97b] [970] S. Jain and F. Khorrami. Decentralized adaptive output feedback design for large-scale nonlinear systems. *IEEE Transactions on Automatic Control*, 42(5):729–735, May 1997.
- [JK:97c] [971] S. Jain and F. Khorrami. Robust decentralized control of power systems utilizing only swing angle measurements. *International Journal of Control*, 66(4):581–601, March 1997.
- [JKF:94] [972] S. Jain, F. Khorrami, and B. Fardanesh. Adaptive nonlinear excitation control of power systems with unknown interconnections. *IEEE Transactions on Control Systems Technology*, 2(4):436–446, December 1994.
- [JKF:96] [973] S. Jain, F. Khorrami, and B. Fardanesh. Decentralized control of large-scale power systems with unknown interconnections. *International Journal of Control*, 63(3):591–608, March 1996.
- [JP:98] [974] M. R. James and I. R. Petersen. Nonlinear state estimation for uncertain systems with an integral constraint. *IEEE Transactions on Signal Processing*, 46(11):2926–2937, November 1998.
- [JLSC:01] [975] J. Jang, K. Lee, J. Song, and I. Choy. Disturbance observer-based digital control for single-phase UPS inverters. In *2001 IEEE International Symposium on Industrial Electronics, ISIE-2001*, pages 1095–1099, Pusan, Korea, June 2001.
- [JKD:77] [976] C. Jeffries, V. Klee, and P. Van den Driessche. When is a matrix sign-stable? *Canadian Journal of Mathematics*, 29(2):315–326, 1977.
- [JO:07] [977] L. Jetto and V. Orsini. Relaxed sufficient conditions for the stability of continuous and discrete-time linear time-varying systems. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 6383–6387, New Orleans, LA, December 2007.
- [JKP:98] [978] E. T. Jeung, J. H. Kim, and H. B. Park.  $\langle_\infty$ -output feedback controller design for linear systems with time-varying delayed state. *IEEE Transactions on Automatic Control*, 43(7):971–974, 1998.
- [JKKP:98] [979] E. T. Jeung, S. H. Kwon, J. H. Kim, and H. B. Park. An LMI approach to  $\mathcal{H}_\infty$  control for linear delay systems. In *Proceedings of the 1998 American Control Conference*, pages 2398–2402, Philadelphia, PA, USA, June 1998.
- [JV:96] [980] W. Ji and V. Venkatasubramanian. Hard-limit induced chaos in a fundamental power system model. *Electrical Power & Energy Systems*, 18(5):279–295, 1996.
- [JC:88] [981] Y. Ji and H. J. Chizeck. Controlability, observability and discrete-time Markovian jump linear quadratic control. *International Journal of Control*, 48:481–498, 1988.
- [JC:90a] [982] Y. Ji and H. J. Chizeck. Controllability, stabilizability and continuous-time Markovian jump linear-quadratic control. *IEEE Transactions on Automatic Control*, 35(7):777–788, July 1990.

- JC:90b** [1983] Y. Ji and H. J. Chizeck. Jump linear quadratic Gaussian control: steady-state and testable conditions. *Control Theory and Advanced Technology*, 6:289–319, 1990.
- JC:92** [1984] Y. Ji and H. J. Chizeck. Jump linear quadratic Gaussian control in continuous time. *IEEE Transactions on Automatic Control*, 37(12):1884–1892, 1992.
- JCFL:91** [1985] Y. Ji, H. J. Chizeck, X. Feng, and K. A. Loparo. Stability and control of discrete-time jump linear systems. *Control Theory and Advanced Technology*, 7:247–270, 1991.
- JWXH:04** [1986] Z. Ji, L. Wang, G. Xie, and F. Hao. Linear matrix inequality approach to quadratic stabilisation of switched systems. *IEE Proceedings — Control Theory and Applications*, 151(3):289–294, May 2004.
- Jia:03** [1987] Y. Jia. Alternative proofs for improved LMI representations for the analysis and the design of continuous-time systems with polytopic type uncertainty: A predictive approach. *IEEE Transactions on Automatic Control*, 48(8):1413–1416, August 2003.
- JP:01** [1988] S. H. Jin and J. B. Park. Robust  $\mathcal{H}_\infty$  filtering for polytopic uncertain systems via convex optimisation. *IEE Proceedings — Control Theory and Applications*, 148(1):55–59, January 2001.
- JdMN:02** [1989] T. A. Johansen, R. van de Molengraft, and H. Nijmeijer. Guest editorial: Switched, piecewise and polytopic linear systems. *International Journal of Control*, 75(16/17):1241–1242, November 2002.
- Joh:99** [1990] M. Johansson. *Piecewise Linear Control Systems*. PhD thesis, Lund Institute of Technology, Lund, Sweden, 1999.
- Joh:03** [1991] M. Johansson. *Piecewise Linear Control Systems — A Computational Approach*, volume 284 of *Lecture Notes in Control and Information Science*. Springer-Verlag, Heidelberg, Germany, 2003.
- JRA:99** [1992] M. Johansson, A. Rantzer, and K. E. Arzen. Piecewise quadratic stability of fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 7(6):713–722, December 1999.
- Joh:74b** [1993] C. R. Johnson. Hadamard products of matrices. *Linear and Multilinear Algebra*, 1:295–307, 1974.
- Joh:74** [1994] C. R. Johnson. Sufficient conditions for D-stability. *Journal of Economic Theory*, 9:53–62, 1974.
- JR:96** [1995] U. Jönsson and A. Rantzer. Systems with uncertain parameters — Time-variations with bounded derivatives. *International Journal of Robust and Nonlinear Control*, 6(9-10):969–982, 1996.
- JGD:99** [1996] P. Julián, J. Guivant, and A. Desages. A parametrization of piecewise linear Lyapunov functions via linear programming. *International Journal of Control*, 72(7/8):702–715, May 1999.
- JOP:11** [1997] M. Jungers, R. C. L. F. Oliveira, and P. L. D. Peres. MPC for LPV systems with bounded parameter variations. *International Journal of Control*, 84:24–36, January 2011.
- Jun:09** [1998] R. Jungers, editor. *The Joint Spectral Radius: Theory and Applications*, volume 385 of *Lecture Notes in Control and Information Sciences*. Springer-Verlag, Berlin, Germany, 2009.
- JAPR:17** [1999] R. M. Jungers, A. A. Ahmadi, P. A. Parrilo, and M. Roozbehani. A characterization of Lyapunov inequalities for stability of switched systems. *IEEE Transactions on Automatic Control*, 62(6):3062–3067, June 2017.
- Jur:74** [1000] E. I. Jury. *Inners and Stability of Dynamic Systems*. Wiley, New York, 1st edition, 1974.
- KA:98** [1001] D. Kaesbauer and J. Ackermann. How to escape from the fragility trap. In *Proceedings of the 1998 American Control Conference*, pages 2832–2836, Philadelphia, PA, June 1998.
- Kaf:02** [1002] W. S. Kafri. Robust D-stability. *Applied Mathematics Letters*, 15:7–10, 2002.
- Kai:74** [1003] T. Kailath. A view of three decades of linear filtering theory. *IEEE Transaction on Information Theory*, 20(2):146–181, March 1974.
- Kai:80** [1004] T. Kailath. *Linear Systems*. Prentice-Hall, Englewood Cliffs, NJ, USA, 1980.

- KSH:00 [1005] T. Kailath, A. H. Sayed, and B. Hassibi. *Linear Estimation*. Information and System Sciences. Prentice Hall, Upper Saddle River, NJ, USA, 2000.
- KAG:99 [1006] H. Kajiwar, P. Apkarian, and P. Gahinet. LPV techniques for control of an inverted pendulum. *IEEE Control Systems*, 19(1):44–54, February 1999.
- KHA:00 [1007] Y. Kakutani, T. Hagiwara, and M. Araki. LMI representation of the shifted Popov criterion. *Automatica*, 36(5):765–770, May 2000.
- Kal:60 [1008] R. E. Kalman. A new approach to linear filtering and prediction problems. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 82:35–45, 1960.
- Kal:63a [1009] R. E. Kalman. Lyapunov functions for problem of Lur’e in automatic control. *Proceedings of the National Academy of Sciences of the USA*, 49(2):201–205, 1963.
- Kal:63b [1010] R. E. Kalman. On a new characterization of linear passive systems. In *Proceedings of the First Annual Allerton Conference on Communication, Control and Computing*, pages 456–470, 1963.
- Kam:83 [1011] V. A. Kamenetskii. Absolute stability and absolute instability of control systems with several nonlinear nonstationary elements. *Automation and Remote Control*, 12:1543–1552, 1983.
- KKR:93 [1012] I. Kaminer, P. P. Khargonekar, and M. A. Rotea. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control for discrete-time systems via convex optimization. *Automatica*, 29(1):57–70, January 1993.
- KP:12 [1013] R. Kamyar and M. M. Peet. Decentralized computation for robust stability analysis of large state-space systems using Polya’s theorem. In *Proceedings of the 2012 American Control Conference*, pages 5948–5954, Montreal, Canada, June 2012.
- KP:15 [1014] R. Kamyar and M. M. Peet. Polynomial optimization with applications to stability analysis and control — Alternatives to sum of squares. *Discrete and Continuous Dynamical Systems — Series B*, 20(8):2383–2417, October 2015.
- KSVS:04 [1015] S. Kanev, C. Scherer, M. Verhaegen, and B. D. Schutter. Robust output-feedback controller design via local BMI optimization. *Automatica*, 40(7):1115–1127, July 2004.
- KL:98 [1016] G. V. Kanovei and D. O. Logofet. D-stability of 4-by-4 matrices. *Computational Mathematics and Mathematical Physics*, 38(9):1369–1374, 1998.
- KL:04 [1017] C. Y. Kao and B. Lincoln. Simple stability criteria for systems with time-varying delays. *Automatica*, 40(8):1429–1434, August 2004.
- KR:03 [1018] C.-Y. Kao and A. Rantzer. Stability criteria for systems with bounded uncertain time-varying delay. In *Proceedings of the 2003 European Control Conference*, Cambridge, UK, September 2003.
- KG:02 [1019] V. Kapila and K. M. Grigoriadis, editors. *Actuator Saturation Control*. Control Engineering Series. Marcel Dekker, Inc., New York, NY, 2002.
- KH:98 [1020] V. Kapila and W. M. Haddad. Memoryless  $\mathcal{H}_\infty$  controllers for discrete-time systems with time delay. *Automatica*, 34(9):1141–1144, 1998.
- KSK:06 [1021] M. Karan, P. Shi, and C. Y. Kaya. Transition probability bounds for the stochastic stability robustness of continuous- and discrete-time Markovian jump linear systems. *Automatica*, 42(12):2159–2168, December 2006.
- KMLM:05 [1022] H. R. Karimi, P. Jafarabadi-Maralani, B. Lohmann, and B. Moshiri.  $\mathcal{H}_\infty$  control of parameter-dependent state-delayed systems using polynomial parameter-dependent quadratic functions. *International Journal of Control*, 78(4):254–263, 2005.
- KV:93 [1023] W. C. Karl and G. C. Verghese. A sufficient condition for the stability of interval matrix polynomials. *IEEE Transactions on Automatic Control*, 38(7):1139–1143, July 1993.

- [1024] J. G. Kassakian, M. F. Schlecht, and G. C. Verghese. *Principles of Power Electronics*. Addison-Wesley, Boston, MA, 1991. KSV:91
- [1025] E. Kaszkurewicz and A. Bhaya. Qualitative stability of discrete-time systems. *Linear Algebra and Its Applications*, 117:65–71, 1989. KB:89
- [1026] E. Kaszkurewicz and A. Bhaya. Comments on “overflow oscillations in state-space digital filters”. *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing*, 39:675–676, September 1992. KB:92
- [1027] E. Kaszkurewicz and A. Bhaya. Robust stability and diagonal Liapunov functions. *SIAM Journal on Matrix Analysis and Applications*, 14:508–520, 1993. KB:93
- [1028] E. Kaszkurewicz and A. Bhaya. Diagonal stability in the large-scale systems approach. *Nonlinear Analysis*, 35:143–152, 1999. KB:99b
- [1029] E. Kaszkurewicz and A. Bhaya. *Matrix Diagonal Stability in Systems and Computation*. Birkhäuser, Boston, MA, 1999. KB:99
- [1030] E. Kaszkurewicz, A. Bhaya, and D. D. Šiljak. On the convergence of parallel asynchronous block-iterative computations. *Linear Algebra and Its Applications*, 131:139–160, 1990. KBS:90
- [1031] E. Kaszkurewicz and L. Hsu. Stability of nonlinear systems: a structural approach. *Automatica*, 15:609–614, 1979. KH:79
- [1032] E. Kaszkurewicz and L. Hsu. A note on the absolute stability of nonlinear discrete time systems. *International Journal of Control*, 40:867–869, 1984. KH:84
- [1033] H. Katayama and A. Ichikawa.  $\mathcal{H}_\infty$  control for discrete-time Takagi–Sugeno fuzzy systems. *International Journal of Systems Science*, 33(14):1099–1107, 2002. KI:02
- [1034] S.-W. Kau, H.-J. Lee, C.-M. Yang, C.-H. Lee, L. Hong, and C.-H. Fang. Robust  $\mathcal{H}_\infty$  fuzzy static output feedback control of T–S fuzzy systems with parametric uncertainties. *Fuzzy Sets and Systems*, 158(2):135–146, January 2007. KLYLHF:07
- [1035] S.-W. Kau, Y.-S. Liu, L. Hong, C.-H. Lee, C.-H. Fang, and L. Lee. A new LMI condition for robust stability of discrete-time uncertain systems. *Systems & Control Letters*, 54(12):1195–1203, December 2005. KLHLFL:05
- [1036] A. Kawamura, R. Chuarayapratip, and T. Haneyoshi. Deadbeat control of PWM inverter with modified pulse patterns for uninterruptible power supply. *IEEE Transactions on Industrial Electronics*, 35(2):295–300, May 1988. KCH:88
- [1037] A. Kawamura, T. Haneyoshi, and R. G. Hoft. Deadbeat controlled PWM inverter with parameter estimation using only voltage sensor. In *1986 IEEE Power Electronics Specialist Conference, PESC-1986*, pages 576–583, 1986. KHH:86
- [1038] M. Kchaou, M. Souissi, and A. Toumi. A new approach to non-fragile  $\mathcal{H}_\infty$  observer-based control for discrete-time fuzzy systems. *International Journal of Systems Science*, 43(1):9–20, January 2012. KST:12
- [1039] L. Keel, S. P. Bhattacharyya, and J. W. Howze. Robust control with structured perturbations. *IEEE Transactions on Automatic Control*, 33(1):68–78, 1988. KBH:88
- [1040] L. H. Keel and S. P. Bhattacharyya. Robust, fragile, or optimal? *IEEE Transactions on Automatic Control*, 42(8):1098–1105, 1997. KB:97
- [1041] L. H. Keel and S. P. Bhattacharyya. Comments on “Robust, fragile, or optimal?” — Authors’ reply. *IEEE Transactions on Automatic Control*, 43(9):1268–1268, 1998. KB:98b
- [1042] L. H. Keel and S. P. Bhattacharyya. Stability margins and digital implementation of controllers. In *Proceedings of the 1998 American Control Conference*, pages 2852–2856, Philadelphia, PA, June 1998. KB:98



- [KA:91] [1043] J. P. Keller and B. D. O. Anderson.  $\mathcal{H}_\infty$ -optimal controller discretization. *International Journal of Robust and Nonlinear Control*, 1(2):125–137, April/June 1991.
- [Kha:79] [1044] A. Khadr. Comments on 'The stability of linear time-varying systems'. *International Journal of Control*, 30(5):895–897, November 1979.
- [Kha:92] [1045] H. J. Khalil. *Nonlinear Systems*. Macmillan Publishing Company, Singapore, 1992.
- [Kha:96] [1046] H. K. Khalil. *Nonlinear Systems*. Prentice Hall, Upper Saddle River, NJ, second edition, 1996.
- [Kha:02] [1047] H. K. Khalil. *Nonlinear Systems*. Prentice Hall, Upper Saddle River, NJ, 3rd edition, 2002.
- [KK:79] [1048] H. K. Khalil and P. K. Kokotovic. D-stability and multiparameter singular perturbation. *SIAM Journal on Control and Optimization*, 17(9):56–65, 1979.
- [KMP:02] [1049] M. Khanbaghi, R. P. Malhame, and M. Perrier. Optimal white water and broke recirculation policies in paper mills via jump linear quadratic control. *IEEE Transactions on Automatic Control*, 10(4):578–588, 2002.
- [KPR:88] [1050] P. P. Khargonekar, I. R. Petersen, and M. A. Rotea.  $H_\infty$ -optimal control with state-feedback. *IEEE Transactions on Automatic Control*, 33(8):786–788, 1988.
- [KPZ:90] [1051] P. P. Khargonekar, I. R. Petersen, and K. Zhou. Robust stabilization of uncertain linear systems: quadratic stabilizability and  $\mathcal{H}_\infty$  control theory. *IEEE Transactions on Automatic Control*, 35(3):356–361, March 1990.
- [KR:91] [1052] P. P. Khargonekar and M. A. Rotea. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control: a convex optimization approach. *IEEE Transactions on Automatic Control*, 36(7):824–837, July 1991.
- [KRB:96] [1053] P. P. Khargonekar, M. A. Rotea, and E. Baeyens. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering. *International Journal of Robust and Nonlinear Control*, 6(4):313–330, 1996.
- [Kha:78] [1054] V. L. Kharitonov. Asymptotic stability of an equilibrium position of a family of systems of linear differential equations. *Differentsial'nye Uravneniya*, 14:2086–2088, 1978.
- [KT-MR-S:99] [1055] V. L. Kharitonov, J. A. Torres-Munoz, and M. I. Ramirez-Sosa. Robust stability of multivariate polynomials, Part 2: Polytopic coefficient variations. *Multidimensional Systems and Signal Processing*, 10(1):21–32, January 1999.
- [KZ:95] [1056] V. L. Kharitonov and A. P. Zhabko. Robust stability of time-delay systems. *IEEE Transactions on Automatic Control*, 39(12):2388–2397, 1994.
- [KJT:95] [1057] F. Khorrami, S. Jain, and A. Tzes. Experimental results on adaptive nonlinear control and input preshaping for multi-link flexible manipulators. *Automatica*, 31(1):83–97, January 1995.
- [KK:09b] [1058] F. Khorrami and P. Krishnamurthy. A hierarchical path planning and obstacle avoidance system for an autonomous underwater vehicle. In *Proceedings of the 2009 American Control Conference*, pages 3579–3584, St. Louis, MO, USA, June 2009.
- [KL:10] [1059] D. W. Kim and H. J. Lee. Controlling linear systems with nonlinear perturbations under sampled-data output feedback: Digital redesign approach. *International Journal of Control*, 83(8):1718–1726, August 2010.
- [KPJ:10] [1060] D. W. Kim, J. B. Park, and Y. H. Joo. Asymptotic stability of digitally redesigned control systems. *International Journal of Control*, 83(12):2463–2470, December 2010.
- [KK:01] [1061] E. Kim and D. Kim. Stability analysis and synthesis for an affine fuzzy system via LMI and ILMI: Discrete case. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 31(1):132–140, February 2001.

- [KL:00] [1062] E. Kim and H. Lee. New approaches to relaxed quadratic stability condition of fuzzy control systems. *IEEE Transactions on Fuzzy Systems*, 8(5):523–534, October 2000.
- [KB:94] [1063] J. Kim and Z. Bien. Robust stability of uncertain linear systems with saturating actuators. *IEEE Transactions on Automatic Control*, 39(1):202–207, January 1994.
- [Kim:11a] [1064] J. H. Kim. Reduced-order delay-dependent  $\mathcal{H}_\infty$  filtering for uncertain discrete-time singular systems with time-varying delay. *Automatica*, 47(12):2801–2804, December 2011.
- [KJP:96] [1065] J. H. Kim, B. T. Jeung, and H. B. Park. Robust control for parameter uncertain delay systems in state and control input. *Automatica*, 32(9):1337–1339, 1996.
- [KJLP:98] [1066] J. H. Kim, E. T. Jeung, S. K. Lee, and H. B. Park. Robust  $\mathcal{H}_\infty$  state feedback control for generalized parameter uncertain system with time delays in discrete time case. In *Proceedings of the 1998 American Control Conference*, pages 2723–2724, Philadelphia, PA, USA, June 1998.
- [KJP:98] [1067] J. H. Kim, E. T. Jeung, and H. B. Park. Comments on “Robust control for parameter uncertain delay systems in state and control input” — Author’s reply. *Automatica*, 34(12):1666–1666, 1998.
- [KP:99] [1068] J. H. Kim and H. B. Park.  $\mathcal{H}_\infty$  state feedback control for generalized continuous/discrete time-delay system. *Automatica*, 35(8):1443–1451, August 1999.
- [KC:00] [1069] S. Kim and J. Chun. Satellite orbit determination using a magnetometer-based bootstrap filter. In *Proceedings of the 2000 American Control Conference*, volume 1, pages 792–793, Chicago, IL, USA, June 2000.
- [KP:08] [1070] S. H. Kim and P. Park.  $\mathcal{H}_\infty$  state-feedback control design for fuzzy systems using Lyapunov functions with quadratic dependence on fuzzy weighting functions. *IEEE Transactions on Fuzzy Systems*, 16(6):1655–1663, December 2008.
- [KP:90a] [1071] M. Kinnaert and Y. Peng. Discrete-time LQG/LTR technique for systems with time delays. *Systems & Control Letters*, 15(4):303–311, November 1990.
- [KGT:98] [1072] K. Kiriakidis, A. Grivas, and A. Tzes. Quadratic stability analysis of the Takagi–Sugeno fuzzy model. *Fuzzy Sets and Systems*, 98(1):1–14, 1998.
- [KI:00] [1073] T. Kiyama and T. Iwasaki. On the use of multi-loop circle criterion for saturating control synthesis. *Automatica*, 41(2):105–114, October 2000.
- [KK:95] [1074] W. Kleczka and E. Kreuzer. On the systematic analytic-numeric bifurcation analysis. *Nonlinear Dynamics*, 7(2):149–163, March 1995.
- [KC:11] [1075] M. Klug and E. B. Castelan. Redução de regras e compensação robusta para sistemas Takagi–Sugeno com utilização de modelos não lineares locais. In *Anais do X Congresso Brasileiro de Automação Inteligente*, pages 909–914, São João del-Rei, MG, Brasil, September 2011.
- [KCL:11] [1076] M. Klug, E. B. Castelan, and V. J. S. Leite. A dynamic compensator for parameter varying systems subject to actuator limitations applied to a T–S fuzzy system. In *Proceedings of the 18th IFAC World Congress*, pages 14495–14500, Milano, Italy, September 2011.
- [KN:82] [1077] D. E. Koditschek and K. S. Narendra. The stability of second order quadratic differential equations. *IEEE Transactions on Automatic Control*, 27(4):783–798, August 1982.
- [KN:83] [1078] D. E. Koditschek and K. S. Narendra. Stabilizability of second-order bilinear systems. *IEEE Transactions on Automatic Control*, 28(10):987–989, October 1983.
- [KL:95] [1079] J. Kogan and A. Leizarowitz. Frequency-domain criterion for robust stability of interval time-delay systems. *Automatica*, 31(3):463–469, 1995.
- [KI:95] [1080] A. Kojima and S. Ishijima. Robust controller-design for delay systems in the gap-metric. *IEEE Transactions on Automatic Control*, 40(2):370–374, 1995.

- [1081] M. Kojima. Sums of squares relaxations of polynomial semidefinite programs. Research report b-397, Department of Mathematical and Computing Sciences, Tokyo Institute of Technology, Tokyo, Japan, November 2003.
- [1082] M. Kojima and M. Muramatsu. An extension of sums of squares relaxations to polynomial optimization problems over symmetric cones. *Mathematical Programming: Series B*, 110(2):315–336, July 2007.
- [1083] H. Kokame, H. Kobayashi, and T. Mori. Robust  $\mathcal{H}_\infty$  performance for linear delay-differential systems with time-varying uncertainties. *IEEE Transactions on Automatic Control*, 43(2):223–226, 1998.
- [1084] S. R. Kolla and J. B. Farison. Improved stability robustness bounds using state transformation for linear discrete systems. *Automatica*, 26(5):933–935, 1990.
- [1085] V. Kolmanovskii and A. Myshkis. *Applied Theory of Functional Differential Equations*. Kluwer Academic Publishers, Dordrecht, 1992.
- [1086] V. Kolmanovskii and A. Myshkis. *Introduction to the Theory and Applications of Functional Differential Equations*. Kluwer Academic Publishers, Dordrecht, 1998.
- [1087] V. B. Kolmanovskii, J.-F. Lafay, and J.-P. Richard. Riccati equations in stability theory of difference equations with memory. In *Proceedings of the 5th European Control Conference*, Karlsruhe, Germany, September 1999.
- [1088] V. B. Kolmanovskii, S. I. Niculescu, and J. P. Richard. Some remarks on the stability of linear systems with delayed state. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 299–304, Tampa, FL, USA, December 1998.
- [1089] V. B. Kolmanovskii, S. I. Niculescu, and J. P. Richard. On the Liapunov-Krasovskii functionals for stability analysis of linear delay systems. *International Journal of Control*, 72(4):374–384, 1999.
- [1090] V. B. Kolmanovskii and J. P. Richard. Stability of some linear systems with delays. *IEEE Transactions on Automatic Control*, 44(5):984–989, 1999.
- [1091] G. B. Koo, J.-B. Park, and Y.-H. Joo. Intelligent digital redesign for nonlinear systems using a guaranteed cost control method. *International Journal of Control, Automation, and Systems*, 11(6):1075–1083, November 2013.
- [1092] G. B. Koo, J.-B. Park, and Y.-H. Joo. Intelligent digital redesign of fuzzy controller for non-linear systems with packet losses. *IET Control Theory & Applications*, 10(3):292–299, February 2016.
- [1093] G. B. Koo, J.-B. Park, Y.-H. Joo, and H. S. Jeon. Digital controller design for fuzzy systems with packet loss: Intelligent digital redesign approach. In *Proceedings of the 2011 IEEE International Conference on Fuzzy Systems*, pages 1989–1993, Taipei, Taiwan, June 2011.
- [1094] H. Koroğlu and C. W. Scherer. Robust stability analysis against perturbations of smoothly time-varying parameters. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 2895–2899, San Diego, CA, USA, December 2006.
- [1095] H. Koroğlu and C. W. Scherer. Robust performance analysis for structured linear time-varying perturbations with bounded rates-of-variation. *IEEE Transactions on Automatic Control*, 52(2):197–211, February 2007.
- [1096] I. E. Köse, F. Jabbari, and W. E. Schmitendorf. A direct characterization of L-2-gain controllers for LPV systems. *IEEE Transactions on Automatic Control*, 43(9):1302–1307, September 1998.
- [1097] M. V. Kothare, V. Balakrishnan, and M. Morari. Robust constrained model predictive control using linear matrix inequalities. *Automatica*, 32(10):1361–1379, October 1996.
- [1098] M. Kočvara and M. Stingl. PENNON: A code for convex nonlinear and semidefinite programming. *Optimization Methods and Software*, 18(3):317–333, June 2003.

- Koz:69 [1099] F. Kozin. A survey of stability of stochastic systems. *Automatica*, 5(1):95–112, January 1969.
- Kra:91 [1100] J. F. B. M. Kraaijevanger. A characterization of Lyapunov diagonal stability using hadamard products. *Linear Algebra and Its Applications*, 151:245–254, 1991.
- Kra:63 [1101] N. N. Krasovskii. *Stability of Motion*. Stanford University Press, Stanford, CA, 1963.
- KK:86 [1102] J. M. Krause and K. S. P. Kumar. An alternate stability analysis framework for adaptive control. *Systems & Control Letters*, 7(1):19–24, February 1986.
- Kre:85 [1103] G. Kreisselmeier. An approach to stable indirect adaptive control. *Automatica*, 21(4):425–431, July 1985.
- KK:03b [1104] P. Krishnamurthy and F. Khorrami. Decentralized control and disturbance attenuation for large-scale nonlinear systems in generalized output-feedback canonical form. *Automatica*, 39(11):1923–1933, November 2003.
- KK:03c [1105] P. Krishnamurthy and F. Khorrami. Robust adaptive control for non-linear systems in generalized output-feedback canonical form. *International Journal of Adaptive Control and Signal Processing*, 17(4):285–311, May 2003.
- KK:03a [1106] P. Krishnamurthy and F. Khorrami. Robust adaptive voltage-fed permanent magnet step motor control without current measurements. *IEEE Transactions on Control Systems Technology*, 11(3):415–425, May 2003.
- KK:04b [1107] P. Krishnamurthy and F. Khorrami. Dynamic high-gain scaling: State and output feedback with application to systems with ISS appended dynamics driven by all states. *IEEE Transactions on Automatic Control*, 49(12):2219–2239, December 2004.
- KK:04a [1108] P. Krishnamurthy and F. Khorrami. A high-gain scaling technique for adaptive output feedback control of feedforward systems. *IEEE Transactions on Automatic Control*, 49(12):2286–2292, December 2004.
- KK:06 [1109] P. Krishnamurthy and F. Khorrami. On uniform solvability of parameter-dependent Lyapunov inequalities and applications to various problems. *SIAM Journal on Control and Optimization*, 45(4):1147–1164, 2006.
- KK:07 [1110] P. Krishnamurthy and F. Khorrami. Generalized state scaling and applications to feedback, feedforward, and nontriangular nonlinear systems. *IEEE Transactions on Automatic Control*, 52(1):102–108, January 2007.
- KK:07b [1111] P. Krishnamurthy and F. Khorrami. High-gain output-feedback control for nonlinear systems based on multiple time scaling. *Systems & Control Letters*, 56(1):7–15, May 2007.
- KK:08c [1112] P. Krishnamurthy and F. Khorrami. An analysis of the effects of closed-loop commutation delay on stepper motor control and application to parameter estimation. *IEEE Transactions on Control Systems Technology*, 16(1):70–77, January 2008.
- KK:08b [1113] P. Krishnamurthy and F. Khorrami. Dual high-gain based adaptive output-feedback control for a class of nonlinear systems. *International Journal of Adaptive Control and Signal Processing*, 22(1):23–42, February 2008.
- KK:08 [1114] P. Krishnamurthy and F. Khorrami. Feedforward systems with ISS appended dynamics: Adaptive output-feedback stabilization and disturbance attenuation. *IEEE Transactions on Automatic Control*, 53(1):405–412, February 2008.
- KK:09 [1115] P. Krishnamurthy and F. Khorrami. Application of a dynamic high-gain scaling methodology to servocompensator design. *International Journal of Robust and Nonlinear Control*, 19(8):937–964, May 2009.

- KK:10a [1116] P. Krishnamurthy and F. Khorrami. Decentralized output-feedback control of large-scale interconnected systems via dynamic high-gain scaling. In J. Mohammadpour and K. M. Grigoriadis, editors, *Efficient Modeling and Control of Large-Scale Systems*, pages 135–165. Springer-Verlag, Berlin, 2010.
- KK:10b [1117] P. Krishnamurthy and F. Khorrami. Output-feedback control of nonlinear delayed systems: A dynamic high-gain scaling approach. *Dynamics of Continuous, Discrete and Impulsive Systems*, 17(6):909–934, 2010.
- KK:11 [1118] P. Krishnamurthy and F. Khorrami. Adaptive output-feedback control of a general class of uncertain feedforward systems via a dynamic scaling approach. *IET Control Theory & Applications*, 5(5):681–692, March 2011.
- KK:11b [1119] P. Krishnamurthy and F. Khorrami. A generalized scaling based control design for nonlinear non-triangular systems with input and state time delays. In *Proceedings of the 2011 American Control Conference*, pages 4361–4366, San Francisco, CA, USA, June 2011.
- KK:11c [1120] P. Krishnamurthy and F. Khorrami. A hierarchical control and obstacle avoidance system for unmanned sea surface vehicles. In *Proceedings of the 50th IEEE Conference on Decision and Control — European Control Conference ECC 2011*, pages 2070–2075, Orlando, FL, USA, December 2011.
- KKC:03 [1121] P. Krishnamurthy, F. Khorrami, and R. S. Chandra. Global high-gain-based observer and backstepping controller for generalized output-feedback canonical form. *IEEE Transactions on Automatic Control*, 48(12):2277–2284, December 2003.
- KKJ:02 [1122] P. Krishnamurthy, F. Khorrami, and Z. P. Jiang. Global output feedback tracking for nonlinear systems in generalized output-feedback canonical form. *IEEE Transactions on Automatic Control*, 47(5):814–819, May 2002.
- KWKK:09 [1123] P. Krishnamurthy, W. Lu, F. Khorrami, and A. Keyhani. Robust force control of an SRM-based electromechanical brake and experimental results. *IEEE Transactions on Control Systems Technology*, 17(6):1306–1317, December 2009.
- Kri:90 [1124] K. R. Krishnan. Markov decision algorithms for dynamic routing (telephone networks). *IEEE Communications Magazine*, 28(10):66–69, October 1990.
- KG:05 [1125] A. Kruszewski and T. M. Guerra. New approaches for the stabilization of discrete Takagi–Sugeno fuzzy models. In *Proceedings of the 44th IEEE Conference on Decision and Control — European Control Conference ECC 2005*, pages 3255–3260, Seville, Spain, December 2005.
- KSGA:07 [1126] A. Kruszewski, A. Sala, T. M. Guerra, and C. Ariño. Sufficient and asymptotic necessary conditions for the stabilization of Takagi–Sugeno model. In *Proceedings of the 3rd IFAC Workshop on Advanced Fuzzy and Neural Control*, Valenciennes, France, October 2007.
- KWG:08 [1127] A. Kruszewski, R. Wang, and T. M. Guerra. Nonquadratic stabilization conditions for a class of uncertain nonlinear discrete time TS fuzzy models: A new approach. *IEEE Transactions on Automatic Control*, 53(2):606–611, March 2008.
- Kuc:79 [1128] V. Kučera. *Discrete Linear Control: The Polynomial Equation Approach*. Wiley, Chichester, England, 1979.
- KM:06 [1129] K. D. Kuhn and S. M. Madanat. A new approach to detectability of discrete-time infinite Markov jump linear systems. *Computer-Aided Civil and Infrastructure Engineering*, 21(3):171–178, 2006. Postprint available free at: <http://repositories.cdlib.org/postprints/1260>.
- KRB:09 [1130] R. Kuiava, R. A. Ramos, and N. G. Bretas. Robust control methodology for the design of supplementary damping controllers for FACTS devices. *SBA: Controle & Automação*, 20(2):192–205, Abr/Jun 2009.



- KBS:99 [1131] V. V. Kulkarni, S. K. Bohacek, and M. G. Safonov. Robustness of interconnected systems with controller saturation and bounded delays. In *Proceedings of the 1999 American Control Conference*, pages 3206–3210, San Diego, CA, USA, June 1999.
- KKB:06 [1132] P. P. Kumar, I. Kar, and L. Behera. Variable-gain controllers for nonlinear systems using the T–S fuzzy model. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 36(6):1442–1449, December 2006.
- KV:86 [1133] P. R. Kumar and P. Varaiya. *Stochastic Systems: Estimation, Identification, and Adaptive Control*. Prentice Hall, Englewood Cliffs, NJ, USA, 1986.
- KC:17 [1134] A. Kundu and D. Chatterjee. On stability of discrete-time switched systems. *Nonlinear Analysis Hybrid Systems*, 23:191–210, February 2017.
- Kuz:98 [1135] Y. A. Kuznetsov. *Elements of Applied Bifurcation Theory*, volume 112 of *Applied Mathematical Series*. Springer Verlag, New York, NY, 1998.
- KAL:09 [1136] P. N. Kvieska, M. Ait-Ahmed, and G. Lebrete. LPV systems: Theoretical results for gain scheduling. In *Proceedings of the 2009 European Control Conference*, pages 3166–3171, Budapest, Hungary, August 2009.
- KS:72 [1137] H. Kwakernaak and R. Sivan. *Linear Optimal Control Systems*. John Wiley & Sons, Inc., 1972.
- KBY:90 [1138] H. G. Kwatny, L. Y. Bahar, and X. M. Yu. Computer analysis of static bifurcation in power networks. In *Proceedings of the 29th IEEE Conference on Decision and Control*, volume 6, pages 3063–3064, Honolulu, HI, USA, December 1990.
- KC:98 [1139] H. G. Kwatny and B. C. Changy. Generating parameter-dependent linear families from nonlinear dynamics. In *Proceedings of the 1998 American Control Conference*, volume 5, pages 2662–2666, Philadelphia, PA, June 1998.
- KBN:95b [1140] H. G. Kwatny, R. F. Fischi, and C. O. Nwankpa. Local bifurcation in power systems: theory, computation and application. *Proceedings of IEEE, special issue on Nonlinear Phenomena in Power Systems: Theory and Practical Applications*, 83(11):1456–1483, November 1995.
- KP:90b [1141] H. G. Kwatny and G. E. Piper. Frequency domain analysis of Hopf bifurcations in electric power networks. *IEEE Transactions on Circuits and Systems*, 37(10):1317–1321, October 1990.
- KBN:95a [1142] H. G. Kwatny, X. M. Yu, and C. O. Nwankpa. Local bifurcation analysis of power systems using MATLAB. In *Proceedings of the 4th IEEE Conference on Control Applications*, volume 1, pages 57–62, Albany, NY, September 1995.
- LPH:02 [1143] Y. Labit, D. Peaucelle, and D. Henrion. SEDUMI INTERFACE 1.02 : A tool for solving LMI problems with SEDUMI. In *Proceedings of the 12th IEEE International Symposium on Computer Aided Control System Design*, pages 272–277, Glasgow, Scotland, UK, September 2002.
- LLOP:11 [1144] M. J. Lacerda, V. J. S. Leite, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filter design for polytopic discrete-time delay systems via LMIs and polynomial matrices. In *Proceedings of the 50th IEEE Conference on Decision and Control — European Control Conference ECC 2011*, pages 8225–8230, Orlando, FL, USA, December 2011.
- LLOP:12 [1145] M. J. Lacerda, V. J. S. Leite, R. C. L. F. Oliveira, and P. L. D. Peres. Filtragem  $\mathcal{H}_\infty$  dependente de parâmetros para sistemas LPV discretos com atraso nos estados. In *Anais do XIX Congresso Brasileiro de Automática*, pages 2425–2431, Campina Grande, PB, Brasil, Setembro 2012.
- LLOP:13 [1146] M. J. Lacerda, V. J. S. Leite, R. C. L. F. Oliveira, and P. L. D. Peres. Delay-dependent robust  $\mathcal{H}_\infty$  filter design for state-delayed discrete-time linear systems via homogeneous polynomial matrices. *IET Control Theory & Applications*, 7(1):125–135, January 2013.

- LOP:10** [1147] M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_2$  filter design for polytopic linear systems via LMIs and polynomial matrices. In *Proceedings of the 49th IEEE Conference on Decision and Control*, pages 1466–1471, Atlanta, GA, USA, December 2010.
- LOP:11b** [1148] M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_\infty$  parameter-dependent filter design for arbitrarily time-varying LPV systems. In *Proceedings of the 18th IFAC World Congress*, pages 7927–7932, Milano, Italy, September 2011.
- LOP:11a** [1149] M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filter design for uncertain linear systems via LMIs and polynomial matrices. *Signal Processing*, 91(5):1115–1122, May 2011.
- LTGP:13** [1150] M. J. Lacerda, S. Tarbouriech, G. Garcia, and P. L. D. Peres.  $\mathcal{H}_\infty$  filter design for nonlinear quadratic systems. In *Proceedings of the 9th IFAC Symposium on Nonlinear Control Systems (NOLCOS 2013)*, pages 634–639, Toulouse, France, September 2013.
- LTGP:14** [1151] M. J. Lacerda, S. Tarbouriech, G. Garcia, and P. L. D. Peres.  $\mathcal{H}_\infty$  filter design for nonlinear polynomial systems. *Systems & Control Letters*, 70:77–84, August 2014.
- LTOP:12** [1152] M. J. Lacerda, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Filtragem seletiva  $\mathcal{H}_\infty$  para sistemas lineares com parâmetros variantes contínuos no tempo. In *Anais do XIX Congresso Brasileiro de Automática*, pages 4666–4673, Campina Grande, PB, Brasil, Setembro 2012.
- LTOP:13** [1153] M. J. Lacerda, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_\infty$  LPV filtering for discrete-time linear systems subject to additive and multiplicative uncertainties in the measurement. In *Proceedings of the 2013 European Control Conference*, pages 1823–1828, Zurich, Switzerland, July 2013.
- LTOP:16** [1154] M. J. Lacerda, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. A new approach to handle additive and multiplicative uncertainties in the measurement for  $\mathcal{H}_\infty$  LPV filtering. *International Journal of Systems Science*, 47(5):1042–1053, 2016.
- LVP:15** [1155] M. J. Lacerda, G. Valmórbida, and P. L. D. Peres. Linear filter design for continuous-time polynomial systems with  $\mathcal{L}_2$ -gain guaranteed bound. In *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 5026–5030, Osaka, Japan, December 2015.
- SAW:08** [1156] N. Lachhab, H. Abbas, and H. Werner. A neural-network based technique for modelling and LPV control of an arm-driven inverted pendulum. In *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 3860–3865, Cancun, Mexico, December 2008.
- Lam:09** [1157] H. K. Lam. Stability analysis of T–S fuzzy control systems using parameter-dependent Lyapunov function. *IET Control Theory & Applications*, 3(6):750–762, 2009.
- LL:07** [1158] H. K. Lam and F. H. F. Leung. LMI-based stability and performance conditions for continuous-time nonlinear systems in Takagi–Sugeno’s form. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 37(5):1396–1406, October 2007.
- Lam:94** [1159] J. Lam. Analysis on the laguerre formula for approximating delay systems. *IEEE Transactions on Automatic Control*, 39(7):1517–1521, 1994.
- LZ:07** [1160] J. Lam and S. Zhou. Dynamic output feedback  $\mathcal{H}_\infty$  control of discrete-time fuzzy systems: A fuzzy-basis-dependent Lyapunov function approach. *International Journal of Systems Science*, 38(1):25–37, January 2007.
- LT:85** [1161] P. Lancaster and M. Tismenetsky. *The Theory of Matrices, with Applications*. Academic Press, New York, NY, second edition, 1985.
- LFC:09** [1162] C. Lara, J. J. Flores, and F. Calderon. On the hyperbox — Hyperplane intersection problem. *INFO-COMP Journal of Computer Science*, 8(4):21–27, December 2009.

- LARP:98** [1163] T. D. Larsen, N. A. Andersen, O. Ravn, and N. K. Poulsen. Incorporation of time delayed measurements in a discrete-time Kalman filter. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 3972–3977, Tampa, FL, USA, December 1998.
- Las:01** [1164] J. B. Lasserre. Global optimization with polynomials and the problem of moments. *SIAM Journal on Control and Optimization*, 11(3):796–817, February 2001.
- Las:07** [1165] J. B. Lasserre. A sum of squares approximation of nonnegative polynomials. *SIAM Review*, 49(4):651–669, March 2007.
- LA:06** [1166] J. Lavaei and A. G. Aghdam. A necessary and sufficient condition for robust stability of LTI discrete-time systems using Sum-Of-Squares matrix polynomials. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 2924–2930, San Diego, CA, December 2006.
- LA:08** [1167] J. Lavaei and A. G. Aghdam. Robust stability of LTI systems over semialgebraic sets using sum-of-squares matrix polynomials. *IEEE Transactions on Automatic Control*, 53(1):417–423, February 2008.
- LG:90** [1168] M. A. Leal and J. S. Gibson. A first-order Lyapunov robustness method for linear systems with uncertain parameters. *IEEE Transactions on Automatic Control*, 35:1068–1070, 1990.
- LDHKMD:06** [1169] V. Lecuire, C. Duran-Faundez, T. Holl, N. Krommenacker, M. Maimour, and M. David. Energy consumption analysis of a simple image transmission protocol in wireless sensor networks. In *Proceedings of the 2006 IEEE International Workshop on Factory Communication Systems*, pages 215–218, Torino, Italy, June 2006.
- Lee:95** [1170] C. H. Lee. D-stability of continuous time-delay systems subjected to a class of highly structured perturbations. *IEEE Transactions on Automatic Control*, 40(10):1803–1807, 1995.
- LLK:95a** [1171] C. H. Lee, T. H. S. Li, and F. C. Kung. New results for the stability of uncertain time-delay systems. *International Journal of Systems Science*, 26(4):999–1004, 1995.
- LLK:95b** [1172] C. H. Lee, T. H. S. Li, and F. C. Kung. On the robustness of stability for uncertain time-delay systems. *International Journal of Systems Science*, 26(2):457–465, 1995.
- LHLK:92** [1173] C.-H. Lee, T.-Hseng, S. Li, and F.-C. Kung. D-stability analysis for discrete systems with a time delay. *Systems & Control Letters*, 19(3):213–219, September 1992.
- LY:96** [1174] C. H. Lee and S. P. Yung. Sufficient conditions for optimal control problems with time delay. *Journal of Optimization Theory and Applications*, 88(1):157–176, 1996.
- Lee:12** [1175] D. H. Lee. An improved finite frequency approach to robust  $\mathcal{H}_\infty$  filter design for LTI systems with polytopic uncertainties. *International Journal of Adaptive Control and Signal Processing*, 27(11):944–956, 2013.
- LJ:14** [1176] D. H. Lee and Y. H. Joo. Extended robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filter design for discrete time-invariant linear systems with polytopic uncertainty. *Circuits Systems and Signal Processing*, 33(2):393–419, February 2014.
- LJK:15b** [1177] D. H. Lee, Y. H. Joo, and S. K. Kim. FIR-type robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  control of discrete linear time-invariant polytopic systems via memory state-feedback control laws. *International Journal of Control, Automation, and Systems*, 13(5):1047–1056, 2015.
- LJK:15** [1178] D. H. Lee, Y.-H. Joo, and S. K. Kim.  $\mathcal{H}_\infty$  digital redesign for LTI systems. *International Journal of Control, Automation, and Systems*, 13(3):603–610, June 2015.
- LJT:14** [1179] D. H. Lee, Y. H. Joo, and M. H. Tak. Periodically time-varying  $\mathcal{H}_\infty$  memory filter design for discrete-time LTI systems with polytopic uncertainty. *IEEE Transactions on Automatic Control*, 59(5):1380–1385, May 2014.

- [LJT:15] [1180] D. H. Lee, Y. H. Joo, and M. H. Tak. Periodically time-varying memory static output feedback control design for discrete-time LTI systems. *Automatica*, 52:47–54, February 2015.
- [LPJ:10] [1181] D. H. Lee, J. B. Park, and Y. H. Joo. Improvement on nonquadratic stabilization of discrete-time Takagi–Sugeno fuzzy systems: Multiple-parameterization approach. *IEEE Transactions on Fuzzy Systems*, 18(2):425–429, April 2010.
- [LPJ:11a] [1182] D. H. Lee, J. B. Park, and Y. H. Joo. Approaches to extended non-quadratic stability and stabilization conditions for discrete-time Takagi–Sugeno fuzzy systems. *Automatica*, 47(3):534–538, March 2011.
- [LPJ:11c] [1183] D. H. Lee, J. B. Park, and Y. H. Joo. Further improvement of periodic control approach for relaxed stabilization condition of discrete-time Takagi–Sugeno fuzzy systems. *Fuzzy Sets and Systems*, 174(1):50–65, July 2011.
- [LPJ:11b] [1184] D. H. Lee, J. B. Park, and Y. H. Joo. Further theoretical justification of the  $k$ -samples variation approach for discrete-time Takagi–Sugeno fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 19(3):594–597, June 2011.
- [LPJJ:10] [1185] D. H. Lee, J. B. Park, Y. H. Joo, and H. S. Jeong. A less conservative LMI condition for stability analysis of continuous-time Takagi–Sugeno fuzzy systems via a new fuzzy Lyapunov function. In *Proceedings of the 2010 IEEE International Conference on Fuzzy Systems*, pages 248–253, Barcelona, Spain, July 2010.
- [LPJK:16] [1186] D. H. Lee, J. B. Park, Y. H. Joo, and S. K. Kim. FIR-type state-feedback control law for discrete-time LTI systems with polytopic uncertainties. *International Journal of Control, Automation, and Systems*, 14(4):906–914, 2016.
- [LK:09b] [1187] H. J. Lee and D. W. Kim. Fuzzy static output feedback may be possible in LMI framework. *IEEE Transactions on Fuzzy Systems*, 17(5):1229–1230, October 2009.
- [LK:09a] [1188] H. J. Lee and D. W. Kim. Robust stabilization of T–S fuzzy systems: Fuzzy static output feedback under parametric uncertainty. *International Journal of Control, Automation, and Systems*, 7(5):731–736, October 2009.
- [LKJCP:04] [1189] H. J. Lee, H. Kim, Y.-H. Joo, W. Chang, and J.-B. Park. A new intelligent digital redesign for T–S fuzzy systems: Global approach. *IEEE Transactions on Fuzzy Systems*, 12(2):274–284, April 2004.
- [LPC:01] [1190] H. J. Lee, J. B. Park, and G. Chen. Robust fuzzy control of nonlinear systems with parametric uncertainties. *IEEE Transactions on Fuzzy Systems*, 9(2):369–379, 2001.
- [LPJ:05] [1191] H. J. Lee, J.-B. Park, and Y.-H. Joo. Digitalizing a fuzzy observer-based output-feedback control: Intelligent digital redesign approach. *IEEE Transactions on Fuzzy Systems*, 13(5):701–716, October 2005.
- [LPJ:06] [1192] H. J. Lee, J.-B. Park, and Y.-H. Joo. Further refinement on LMI-based digital redesign: Delta-operator approach. *IEEE Transactions on Circuits and Systems II: Express Briefs*, 53(6):473–477, June 2006.
- [LE:01] [1193] J. Lee and T. F. Edgar. Real structured singular value conditions for the strong  $D$ -stability. *Systems & Control Letters*, 44:273–277, 2001.
- [LKK:94] [1194] J. H. Lee, S. W. Kim, and W. H. Kwon. Memoryless  $\mathcal{H}_\infty$  controllers for state delayed systems. *IEEE Transactions on Automatic Control*, 39(1):159–162, 1994.
- [Lee:06] [1195] J.-W. Lee. On uniform stabilization of discrete-time linear parameter-varying control systems. *IEEE Transactions on Automatic Control*, 51(10):1714–1721, October 2006.
- [LD:06] [1196] J.-W. Lee and G. E. Dullerud. Uniform stabilization of discrete-time switched and Markovian jump linear systems. *Automatica*, 42(2):205–218, February 2006.
- [LD:07a] [1197] J.-W. Lee and G. E. Dullerud. A stability and contractiveness analysis of discrete-time Markovian jump linear systems. *Automatica*, 43(1):168–173, January 2007.

- LD:07b [1198] J.-W. Lee and G. E. Dullerud. Uniformly stabilizing sets of switching sequences for switched linear systems. *IEEE Transactions on Automatic Control*, 52(5):868–874, May 2007.
- LK:08 [1199] J.-W. Lee and P. P. Khargonekar. Optimal output regulation for discrete-time switched and Markovian jump linear systems. *SIAM Journal on Control and Optimization*, 47(1):40–72, 2008.
- LW:06 [1200] S. Lee and S. Won. Model Predictive Control for linear parameter varying systems using a new parameter dependent terminal weighting matrix. *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, E89-A(8):2166–2172, 2006.
- LCC:01 [1201] T. Lee, S. Chiang, and J. Chang.  $\mathcal{H}_\infty$  loop-shaping controller designs for the single-phase UPS inverters. *IEEE Transactions on Power Electronics*, 16(4):1397–1402, 2001.
- LS:94 [1202] B. Lehman and K. Shujate. Delay independent stability conditions and decay-estimates for time-varying functional-differential equations. *IEEE Transactions on Automatic Control*, 39(8):1673–1676, 1994.
- LL:03 [1203] F. Leibfritz and W. Lipinski. Description of the benchmark examples in Compleib 1.0. Technical report, University of Trier, 2003. <http://www.complib.de/>.
- LmdOORP:04 [1204] V. J. S. Leite, V. F. Montagner, P. J. de Oliveira, R. C. L. F. Oliveira, D. C. W. Ramos, and P. L. D. Peres. Estabilidade robusta de sistemas lineares através de desigualdades matriciais lineares. *SBA: Controle & Automação*, 15(1):24–40, Janeiro/Março 2004.
- LMOP:04 [1205] V. J. S. Leite, V. F. Montagner, R. C. L. F. Oliveira, and P. L. D. Peres. Estabilidade robusta de sistemas lineares através de desigualdades matriciais lineares. *SBA: Controle & Automação*, 15(1):24–40, Jan/Fev/Mar 2004.
- LMP:02a [1206] V. J. S. Leite, V. F. Montagner, and P. L. D. Peres. Alocação robusta de pólos através de realimentação de estados dependente de parâmetros. In *Anais do XIV Congresso Brasileiro de Automação*, pages 2450–2455, Natal, RN, Setembro 2002.
- LMP:02b [1207] V. J. S. Leite, V. F. Montagner, and P. L. D. Peres. Robust pole location by parameter dependent state feedback control. In *Proceedings of the 41st IEEE Conference on Decision and Control*, pages 1864–1869, Las Vegas, NV, USA, December 2002.
- LMP:04 [1208] V. J. S. Leite, V. F. Montagner, and P. L. D. Peres. Alocação robusta de pólos através de realimentação de estados dependente de parâmetros. *SBA: Controle & Automação*, 15(2):127–134, Abr/Mai/Jun 2004.
- LMRP:02 [1209] V. J. S. Leite, V. F. Montagner, D. C. W. Ramos, and P. L. D. Peres. Estabilidade robusta de sistemas contínuos no tempo através de desigualdades matriciais lineares. In *Anais do XIV Congresso Brasileiro de Automação*, pages 2878–2883, Natal, RN, Setembro 2002.
- LOdOP:04 [1210] V. J. S. Leite, R. C. L. F. Oliveira, P. J. de Oliveira, and P. L. D. Peres.  $\mathcal{D}$ -stability of polytopes of polynomial matrices: characterization through LMIs. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 863–868, Paradise Island, Bahamas, December 2004.
- LP:03 [1211] V. J. S. Leite and P. L. D. Peres. An improved LMI condition for robust  $\mathcal{D}$ -stability of uncertain polytopic systems. *IEEE Transactions on Automatic Control*, 48(3):500–504, March 2003.
- LP:04a [1212] V. J. S. Leite and P. L. D. Peres. Robust control through piecewise Lyapunov functions for discrete time-varying uncertain systems. *International Journal of Control*, 77(3):230–238, February 2004.
- LP:05 [1213] V. J. S. Leite and P. L. D. Peres. Pole location control design of an active suspension system with uncertain parameters. *Vehicle System Dynamics*, 43(8):561–579, August 2005.
- LPCT:05 [1214] V. J. S. Leite, P. L. D. Peres, E. B. Castelan, and S. Tarbouriech. On the robust stability of neutral systems with time-varying delays. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005. in CD-rom.



- LPCT:07** [1215] V. J. S. Leite, P. L. D. Peres, E. B. Castelan, and S. Tarbouriech. Estabilidade robusta de sistemas neutrais com atrasos variantes no tempo. *SBA: Controle & Automação*, 18(4):434–446, Outubro/Novembro/Dezembro 2007.
- LPT:03** [1216] V. J. S. Leite, P. L. D. Peres, and S. Tarbouriech. Less conservative time-delay independent LMI conditions for continuous-time polytopic systems. In *Proceedings of the 4th IFAC International Workshop on Linear Time Delay Systems*, Rocquencourt, France, September 2003. in CD-rom.
- LTP:04b** [1217] V. J. S. Leite, S. Tarbouriech, and P. L. D. Peres. Controle robusto  $\mathcal{H}_\infty$  de sistemas discretos com atraso nos estados: Condições LMI independentes do atraso. In *Anais do XV Congresso Brasileiro de Automática*, Gramado, RS, September 2004.
- LTP:04a** [1218] V. J. S. Leite, S. Tarbouriech, and P. L. D. Peres. A convex approach for robust state feedback control of discrete-time systems with state delay. In *Proceedings of the 2004 American Control Conference*, pages 2870–2875, Boston, MA, USA, June/July 2004.
- LTP:09** [1219] V. J. S. Leite, S. Tarbouriech, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  state feedback control of discrete-time systems with state delay: an LMI approach. *IMA Journal of Mathematical Control and Information*, 26(3):357–373, September 2009.
- LL:00** [1220] D. J. Leith and W. E. Leithead. Survey of gain-scheduling analysis and design. *International Journal of Control*, 73(11):1001–1025, July 2000.
- LSLMC:03** [1221] D. J. Leith, R. N. Shorten, W. E. Leithead, O. Mason, and P. Curran. Issues in the design of switched linear control systems: A benchmark study. *International Journal of Adaptive Control and Signal Processing*, 17(2):103–118, March 2003.
- Leo:08** [1222] A. Leon-Garcia. *Probability, Statistics, and Random Processes for Electrical Engineering*. Pearson-Addison-Wesley, Upper Saddle River, NJ, 3rd edition, 2008.
- LSW:16** [1223] T. Leth, C. Sloth, and R. Wisniewski. Lyapunov function synthesis — algorithm and software. In *Proceedings of the 2016 IEEE International Symposium on Computer Aided Control Systems Design*, pages 641–647, Buenos Aires, Argentina, September 2016.
- LM:90** [1224] J. Levine and R. Marino. On fault-tolerant observers. *IEEE Transactions on Automatic Control*, 35(5):623–627, May 1990.
- LA:70** [1225] W. S. Levine and M. Athans. On the determination of the optimal constant output feedback gains for linear multivariable systems. *IEEE Transactions on Automatic Control*, 15(1):44–48, 1970.
- LSBMGG:01** [1226] R. Leyva, L. Martínez-Salamero, H. Valderrama-Blavi, J. Maixé, R. Giral, and F. Guinjoan. Linear state-feedback control of a Boost converter for large-signal stability. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 48(4):418–424, April 2001.
- LF:97** [1227] H. Li and M. Fu. A linear matrix inequality approach to robust  $\mathcal{H}_\infty$  filtering. *IEEE Transactions on Signal Processing*, 45(9):2338–2350, 1997.
- LS:12** [1228] H. Li and Y. Shi. Robust  $\mathcal{H}_\infty$  filtering for nonlinear stochastic systems with uncertainties and Markov delays. *Automatica*, 48(1):159–166, January 2012.
- LWNT:00** [1229] J. Li, H. O. Wang, D. Niemann, and K. Tanaka. Dynamic parallel distributed compensation for Takagi–Sugeno fuzzy systems: An LMI approach. *Information Sciences*, 123(3–4):201–221, April 2000.
- LW:98** [1230] J. Li and R. Wu. An efficient algorithm for time delay estimation. *IEEE Transactions on Signal Processing*, 46(8):2231–2235, 1998.
- LLZX:13** [1231] L. Li, F. Li, Z. Zhang, and J. Xu. On mode-dependent filtering for network-based discrete-time systems. *Signal Processing*, 93(4):634–640, April 2013.

- LLX:04** [1232] N. Li, S.-Y. Li, and Y.-G. Xi. Multi-model predictive control based on the Takagi–Sugeno fuzzy models: A case study. *Information Sciences*, 165(3–4):247–263, October 2004.
- LLC:12** [1233] P. Li, J. Lam, and G. Chesi. On the synthesis of linear  $\mathcal{H}_\infty$  filters for polynomial systems. *Systems & Control Letters*, 61(1):31–36, January 2012.
- LLW:10** [1234] P. Li, J. Lam, and Z. Wang.  $H_\infty$  model reduction for positive systems. In *Proceedings of the 2010 American Control Conference*, pages 6244–6249, Baltimore, MD, USA, June 2010.
- LWS:04** [1235] S. Li, Z. Wang, and Y. Sun. Guaranteed cost control and its application to networked control systems. In *IEEE International Symposium on Industrial Electronics*, volume 1, pages 591–596, Ajaccio, France, May 2004.
- LWD:08** [1236] W. Li, Z.-G. Wang, and Y.-Q. Deng.  $\mathcal{H}_\infty$  filtering for linear discrete-time systems with time-varying parameters via LPV filters. In *Proc. 2008 Chinese Control Decision Conf.*, Yantai, China, July 2008.
- LXL:13** [1237] W. Li, Y. Xu, and H. Li. Robust  $\ell_2 - \ell_\infty$  filtering for Takagi-Sugeno fuzzy systems with norm-bounded uncertainties. *Discrete Dynamics in Nature and Society*, 2013:1–8, 2013.
- LdS:95** [1238] X. Li and C. E. de Souza. LMI approach to delay-dependent robust stability and stabilization of uncertain linear delay systems. In *Proceedings of the 34th IEEE Conference on Decision and Control*, pages 3614–3619, New Orleans, LA, USA, December 1995.
- LdS:96** [1239] X. Li and C. E. de Souza. Robust stabilization and  $\mathcal{H}_\infty$  of uncertain linear time-delay systems. In *Proceedings of the 13th IFAC World Congress*, volume H, pages 113–118, San Francisco, CA, 1996.
- LdS:97b** [1240] X. Li and C. E. de Souza. Criteria for robust stability and stabilization of uncertain linear systems with state delay. *Automatica*, 33(9):1657–1662, 1997.
- LdS:97a** [1241] X. Li and C. E. de Souza. Delay-dependent robust stability and stabilization of uncertain linear delay systems: A linear matrix inequality approach. *IEEE Transactions on Automatic Control*, 42(8):1144–1148, 1997.
- LLGX:16** [1242] X. Li, J. Lam, H. Gao, and J. Xiong.  $\mathcal{H}_\infty$  and  $\mathcal{H}_2$  filtering for linear systems with uncertain Markov transitions. *Automatica*, 67:252–266, May 2016.
- LLG:11** [1243] X. Li, Z. Li, and H. Gao. Further results on  $\mathcal{H}_\infty$  filtering for discrete-time systems with state delay. *International Journal of Robust and Nonlinear Control*, 21(3):248–270, February 2011.
- LYG:15** [1244] X. Li, C. Yu, and H. Gao. Frequency-limited  $H_\infty$  model reduction for positive systems. *IEEE Transactions on Automatic Control*, 60(4):1093–1098, April 2015.
- LLH:14** [1245] Y. Li, J. Li, and M. Hua. New results of  $\mathcal{H}_\infty$  filtering for neural network with time-varying delay. *International Journal of Innovative Computing, Information and Control*, 10(6):2309–2323, December 2014.
- LMT:01** [1246] F.-L. Lian, J. R. Moyne, and D. M. Tilbury. Performance evaluation of control networks: Ethernet, ControlNet and DeviceNet. *IEEE Control Systems Magazine*, 21(1):66–83, February 2001.
- LFS:13** [1247] J. Lian, Z. Feng, and P. Shi. Robust  $\mathcal{H}_\infty$  filtering for a class of uncertain stochastic hybrid neutral systems with time-varying delay. *International Journal of Adaptive Control and Signal Processing*, 27(6):462–477, 2013.
- LCCL:01** [1248] K. Lian, T. Chiang, C. Chiu, and P. Liu. Synthesis of fuzzy model-based designs to synchronization and secure communications for chaotic systems. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 31(1):66–83, February 2001.
- LWY:02** [1249] F. Liao, J. L. Wang, and G. H. Yang. Reliable aircraft tracking control via quadratic parameter-dependent Lyapunov functions: State feedback case. In *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, NV, USA, December 2002. 4474–4479.

- Lib:03** [1250] D. Liberzon. *Switching in Systems and Control*. Systems and Control: Foundations and Applications. Birkhäuser, Boston, MA, 2003.
- LM:99** [1251] D. Liberzon and A. S. Morse. Basic problems in stability and design of switched systems. *IEEE Control Systems Magazine*, 19(5):59–70, October 1999.
- Lib:01** [1252] M. R. Liberzon. Lur’e problem of absolute stability – a historical essay. In *Proceedings of the 5th IFAC Symposium “Nonlinear Control Systems NOLCOS’01”*, volume 1, pages 22–25, Saint-Petersburg, Russia, 2001.
- Lib:02** [1253] M. R. Liberzon. Absolute stability of dynamical systems (survey). In *15th IFAC Triennial World Congress*, volume 1, pages 2928–2933, Barcelona, Spain, 2002.
- LXYS:99** [1254] L. Lie, L. Xie, W.-Y. Yan, and Y. C. Soh.  $\mathcal{H}_2$  optimal reduced-order filtering with frequency weighting. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 46(6):763–767, June 1999.
- Lie:99** [1255] C.-H. Lien. Asymptotic criterion for neutral systems with multiple time delays. *Electronic Letters*, 35(10):850–852, May 1999.
- LI:95** [1256] G. Lightbody and G. W. Irwin. Direct neural model reference adaptive control. *IEE Proceedings — Control Theory and Applications*, 142(1):31–43, January 1995.
- LGW:89** [1257] D. J. N. Limebeer, M. Green, and D. Walker. Discrete time  $\mathcal{H}_\infty$  control. In *Proceedings of the 28th IEEE Conference on Decision and Control*, pages 392–396, Tampa, USA, 1989.
- LWL:06** [1258] C. Lin, Q.-G. Wang, and T. H. Lee. Less conservative  $\mathcal{D}$ -stability test for polytopic systems using linearly parameter-dependent Lyapunov functions. *IEE Proceedings — Control Theory and Applications*, 153(6):665–670, November 2006.
- LA:05** [1259] H. Lin and P. J. Antsaklis. Stability and persistent disturbance attenuation properties for a class of networked control systems: Switched system approach. *International Journal of Control*, 78(18):1447–1458, 2005.
- LA:09** [1260] H. Lin and P. J. Antsaklis. Stability and stabilizability of switched linear systems: A survey of recent results. *IEEE Transactions on Automatic Control*, 54(2):308–322, February 2009.
- LFS:11** [1261] J. Lin, S. Fei, and J. Shen. Delay-dependent  $\mathcal{H}_\infty$  filtering for discrete-time singular Markovian jump systems with time-varying delay and partially unknown transition probabilities. *Signal Processing*, 91(2):277–289, February 2011.
- LCM:84** [1262] S. Lin, D. J. Costello, and M. J. Miller. Automatic-repeat-request error-control schemes. *IEEE Communications Magazine*, 22(12):5–17, December 1984.
- LWY:07** [1263] W.-W. Lin, W.-J. Wang, and S.-H. Yang. A novel stabilization criterion for large-scale T–S fuzzy systems. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 37(4):1074–1079, August 2007.
- LL:05** [1264] Y.-C. Lin and J.-C. Lo. Robust mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering for discrete-time delay fuzzy systems. *International Journal of Systems Science*, 36(15):993–1006, December 2005.
- Liu:03** [1265] F. Liu. Fuzzy pole placement design with  $\mathcal{H}_\infty$  disturbance attenuation for uncertain nonlinear systems. In *Proceedings of the 2003 IEEE Conference on Control Applications*, pages 392–396, Istanbul, Turkey, June 2003.
- LDC:17** [1266] H. Liu, Y. Ding, and J. Cheng. New results on  $\mathcal{H}_\infty$  filtering for Markov jump systems with uncertain transition rates. *ISA Transactions*, 69:43–50, July 2017.
- LHS:08** [1267] H. Liu, D. W. C. Ho, and F. Sun. Design of  $\mathcal{H}_\infty$  filter for Markov jumping linear systems with non-accessible mode information. *Automatica*, 44(10):2655–2660, October 2008.

- [LSH:05] [1268] H. Liu, F. Sun, and Y. Hu.  $\mathcal{H}_\infty$  control for fuzzy singularly perturbed systems. *Fuzzy Sets and Systems*, 155(2):272–291, October 2005.
- [LGTY:12] [1269] J. Liu, Z. Gu, E. Tian, and R. Yan. New results on  $\mathcal{H}_\infty$  filter design for nonlinear systems with time-delay through a T–S fuzzy model approach. *International Journal of Systems Science*, 43(3):426–442, March 2012.
- [LWY:03] [1270] J. Liu, J. L. Wang, and G. H. Yang. Reliable guaranteed variance filtering against sensor failures. *IEEE Transactions on Signal Processing*, 51(5):1403–1411, May 2003.
- [LZW:16] [1271] J. Liu, K. Zhang, and H. Wei. Robust stability of positive switched systems with dwell time. *International Journal of Systems Science*, 47(11):2553–2562, 2016.
- [LSG:92] [1272] K. Liu, R. E. Skelton, and K. Grigoriadis. Optimal controllers for finite wordlength implementation. *IEEE Transactions on Automatic Control*, 37(9):1294–1304, 1992.
- [Liu:95] [1273] P. L. Liu. Stabilization of input delay constrained systems with delay dependence. *International Journal of Systems Science*, 26(2):245–255, 1995.
- [LS:98] [1274] P. L. Liu and T. J. Su. Robust stability of interval time-delay systems with delay-dependence. *Systems & Control Letters*, 33(4):231–239, 1998.
- [LWWL:17] [1275] T. Liu, Baowei. Wu, Y. Wang, and L. Liu. New stabilization results for discrete-time positive switched systems with forward mode-dependent average dwell time. *Transactions of the Institute of Measurement and Control*, 39(2):224–229, February 2017.
- [LZ:03] [1276] X. Liu and Q. Zhang. New approaches to  $\mathcal{H}_\infty$  controller designs based on fuzzy observers for T–S fuzzy systems via LMI. *Automatica*, 39(5):1571–1582, October 2003.
- [LMWT:06] [1277] X. G. Liu, R. R. Martin, M. Wu, and M. L. Tang. Delay-dependent robust stabilisation of discrete-time systems with time-varying delay. *IEE Proceedings — Control Theory and Applications*, 153(6):689–702, November 2006.
- [LWW:11] [1278] Y. Liu, Z. Wang, and W. Wang. Reliable  $\mathcal{H}_\infty$  filtering for discrete time-delay Markovian jump systems with partly unknown transition probabilities. *International Journal of Adaptive Control and Signal Processing*, 25(6):554–570, 2011.
- [LY:03] [1279] Y. Liu and H. Yu. Stability of networked control systems based on switched technique. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 1110–1113, Maui, HI, USA, December 2003.
- [Lju:97] [1280] L. Ljung. *System Identification: Theory for the User*. Prentice-Hall, New York, 1997.
- [LL:06] [1281] J.-C. Lo and M.-L. Lin. Robust  $\mathcal{H}_\infty$  control for fuzzy systems with Frobenius norm-bounded uncertainties. *IEEE Transactions on Fuzzy Systems*, 14(1):1–15, February 2006.
- [Lof:04] [1282] J. Löfberg. YALMIP: A toolbox for modeling and optimization in MATLAB. In *Proceedings of the 2004 IEEE International Symposium on Computer Aided Control Systems Design*, pages 284–289, Taipei, Taiwan, September 2004.
- [LZL:12] [1283] S. Long, S. Zhong, and Z. Liu.  $\mathcal{H}_\infty$  filtering for a class of singular Markovian jump systems with time-varying delay. *Signal Processing*, 92(11):2759–2768, November 2012.
- [Lon:80] [1284] R. Longchamp. Controller design for bilinear systems. *IEEE Transactions on Automatic Control*, 25(3):547–548, June 1980.
- [LRE:86] [1285] K. A. Loparo, Z. Roth, and S. J. Eckert. Nonlinear filtering for systems with random structure. *IEEE Transactions on Automatic Control*, 31(11):1064–1068, November 1986.
- [LW:04] [1286] B. Lu and F. Wu. Switching LPV control designs using multiple parameter-dependent Lyapunov functions. *Automatica*, 40(11):1973–1980, November 2004.

- LXX:10** [1287] R. Lu, Y. Xu, and A. Xue.  $\mathcal{H}_\infty$  filtering for singular systems with communication delays. *Signal Processing*, 90(4):1240–1248, April 2010.
- LLS:10** [1288] X. Luan, F. Liu, and P. Shi. Finite-time filtering for non-linear stochastic systems with partially known transition jump rates. *IET Control Theory & Applications*, 4(5):735–745, May 2010.
- LZSL:14** [1289] X. Luan, S. Zhao, P. Shi, and F. Liu.  $\mathcal{H}_\infty$  filtering for discrete-time Markov jump systems with unknown transition probabilities. *International Journal of Adaptive Control and Signal Processing*, 28(2):138–148, 2014.
- Lue:79** [1290] D. G. Luenberger. *Introduction to Dynamic Systems. Theory, Models & Applications*. John Wiley & Sons, Inc., New York, NY, USA, 1979.
- Lue:84** [1291] D. G. Luenberger. *Linear and Nonlinear Programming*. Addison-Wesley, 1984.
- LN:89** [1292] R. Luesink and H. Nijmeijer. On the stabilization of bilinear systems via constant feedback. *Linear Algebra and Its Applications*, 122–124:457–474, September–November 1989.
- LHWL:15** [1293] J. Luo, J. Hu, D. Wu, and R. Li. Opportunistic routing algorithm for relay node selection in wireless sensor networks. *IEEE Transaction on Industrial Informatics*, 11(1):112–121, February 2015.
- LJB:93b** [1294] J. S. Luo, A. Johnson, and P. P. J. van den Bosch. Minimax guaranteed cost control for linear systems with large parameter uncertainty. In *12th IFAC World Congress*, volume 8, pages 51–54, Sidney, Australia, 1993.
- LJV:95** [1295] J. S. Luo, A. Johnson, and P. P. J. Van den Bosch. Delay-independent robust stability of uncertain linear-systems. *Systems & Control Letters*, 24(1):33–39, 1995.
- LJB:95** [1296] J. S. Luo, A. Johnson, and P. P. J. Van Den Bosch. Lyapunov stability robust analysis and robustness design for linear continuous-time systems. *International Journal of Control*, 61(6):1233–1251, 1995.
- LJB:93a** [1297] J. S. Luo, A. Johnson, and P. P. J. van den Bosch. On Lyapunov stability robustness bounds for linear continuous-time systems. In *Proceedings of the European Control Conference*, pages 374–379, Groningen, The Netherlands, 1995.
- LvdB:97** [1298] J. S. Luo and P. P. J. van den Bosch. Independent of delay stability criteria for uncertain linear state space models. *Automatica*, 33(2):171–179, 1997.
- LvBWG:98** [1299] J. S. Luo, P. P. J. van den Bosch, S. Weiland, and A. Goldenberge. Design of performance robustness for uncertain linear systems with state and control delays. *IEEE Transactions on Automatic Control*, 43(11):1593–1596, 1998.
- Lur:51** [1300] A. I. Lur’e. *Certain Nonlinear Problems in the Automatic Regulating Theory*. Gostehizdat (in Russian, English Translation: London, HMSO, 1975), 1951.
- LP:44** [1301] A. I. Lur’e and V. M. Postnikov. On the theory of stability of controlled systems. *Prikladnaya Matematika I Mekhanika*, 8:283–286, 1944.
- Lya:92** [1302] A. M. Lyapunov. The general problem of the stability of motion. *International Journal of Control*, 55(3):531–534, 1992.
- LTS:99** [1303] J. Lygeros, C. Tomlin, and S. Sastry. Controllers for reachability specifications for hybrid systems. *Automatica*, 35(3):349–370, March 1999.
- MBC:10** [1304] S. Ma, E. K. Boukas, and Y. Chinniah. Stability and stabilization of discrete-time singular Markov jump systems with time-varying delay. *International Journal of Robust and Nonlinear Control*, 20(5):531–543, March 2010.
- MZZ:11** [1305] S. Ma, C. Zhang, and S. Zhu. Robust stability for discrete-time uncertain singular Markov jump systems with actuator saturation. *IET Control Theory & Applications*, 5(2):255–262, January 2011.



- MB:09 [1306] S. P. Ma and E. K. Boukas. Robust quadratic control of discrete-time singular Markov jump systmes with bounded transition probabilities. In *Proceedings of the 2009 American Control Conference*, pages 4044–4049, St. Louis, MO, USA, June 2009.
- MSH:98 [1307] X.J. Ma, Z.Q. Sun, and Y.Y. He. Analysis and design of fuzzy controller and fuzzy observer. *IEEE Transactions on Fuzzy Systems*, 6(1):41–50, February 1998.
- MYG:09 [1308] Y. Ma, G. Yang, and W. Guan. Robust stabilization of switched discrete-time systems with actuator saturation. *Journal of Control Theory and Applications*, 7(4):454–448, November 2009.
- MMO:13 [1309] L. A. Maccari Jr., V. F. Montagner, and R. C. L. F. Oliveira. Digital redesign LMI conditions for state feedback controllers with an application for power electronics. In *Proceedings of the 2013 Brazilian Power Electronics Conference (COBEP)*, pages 350–355, Gramado, RS, Brazil, October 2013.
- Mah:00 [1310] M. S. Mahmoud. *Robust Control and Filtering for Time-Delay Systems*. Control Engineering Series. Marcel Dekker, Inc., New York, 2000.
- Mah:09 [1311] M. S. Mahmoud. Switched discrete-time systems with time-varying delays: A generalized  $\mathcal{H}_2$  approach. *Computers and Mathematics with Applications*, 57(1):79–95, January 2009.
- MA:94b [1312] M. S. Mahmoud and N. F. Almuthairi. Design of robust controllers for time-delay systems. *IEEE Transactions on Automatic Control*, 39(5):995–999, 1994.
- MA:94a [1313] M. S. Mahmoud and N. F. Almuthairi. Quadratic stabilization of continuous-time systems with state-delay and norm-bounded time-varying uncertainties. *IEEE Transactions on Automatic Control*, 39(10):2135–2139, 1994.
- MB:98 [1314] M. S. Mahmoud and S. Bingulac. Robust design of stability controllers for interconnected time-delay systems. *Automatica*, 34(6):795–800, 1998.
- MI:03 [1315] M. S. Mahmoud and A. Ismail. Role of delays in networked control systems. In *Proceedings of the 10th IEEE International Conference on Electronics, Circuits and Systems*, pages 40–43, Shadah, United Arab Emirates, December 2003.
- MX:00 [1316] M. S. Mahmoud and L. Xie. Guaranteed cost control of uncertain discrete systems with delays. *International Journal of Control*, 73(2):105–114, January 2000.
- MXS:00 [1317] M. S. Mahmoud, L. Xie, and Y. C. Soh. Robust Kalman filtering for discrete state-delay systems. *IEE Proceedings — Control Theory and Applications*, 147(6):613–618, November 2000.
- MZ:98 [1318] M. S. Mahmoud and M. Zribi. Robust and  $\mathcal{H}_\infty$  stabilisation of interconnected systems with delays. *IEE Proceedings — Control Theory and Applications*, 145(6):559–567, November 1998.
- MTG:02 [1319] V. Mahout, S. Tarbouriech, and G. Garcia. Controller design for unstable uncertain bilinear systems. In *Proceedings of the 10th Mediterranean Conference on Control and Automation (MED2002)*, Lisbon, Portugal, July 2002. CD-rom.
- Mak:98 [1320] P. M. Mäkilä. Comments on “Robust, fragile, or optimal?”. *IEEE Transactions on Automatic Control*, 43(9):1265–1267, 1998.
- MT:87 [1321] P. M. Mäkilä and H. T. Toivonen. Computacional methods for parametric LQ problems — a survey. *IEEE Transactions on Automatic Control*, 32(8):658–671, 1987.
- M-Z:78 [1322] M. Malek-Zavarei. The stability of linear time-varying systems. *International Journal of Control*, 27(5):809–815, May 1978.
- ZJ:87 [1323] M. Malek-Zavarei and M. Jamshidi. *Time-Delay Systems: Analysis, Optimization and Applications*. North-Holland, Amsterdam, The Netherlands, 1987.
- MP:03 [1324] O. Maler and A. Pnueli, editors. *Hybrid Systems: Computation and Control*, volume 2623 of *Lecture Notes in Computer Science*. Springer-Verlag, 2003.

- MMB:99** [1325] L. Malesani, P. Matavelli, and S. Buso. Robust dead-beat current control for PWM rectifiers and filters. *IEEE Transactions on Industry Applications*, 35(3):613–620, May/June 1999.
- MMGKG:09** [1326] B. Mansouri, N. Manamanni, K. Guelton, A. Kruszewski, and T. M. Guerra. Output feedback LMI tracking control conditions with  $\mathcal{H}_\infty$  criterion for uncertain and disturbed T-S models. *Information Sciences*, 179(4):446–457, February 2009.
- Mao:03** [1327] W. J. Mao. Robust stabilization of uncertain time-varying discrete systems and comments on “an improved approach for constrained robust model predictive control”. *Automatica*, 39(6):1109–1112, June 2003.
- Mar:05** [1328] G. A. B. Marcondes. Modelos discretos para análise de ocorrências de erros em redes sem fio. M.Sc. Thesis, Instituto Nacional de Telecomunicações (Inatel), Santa Rita do Sapucaí, MG, Junho 2005.
- MMY:06** [1329] R. A. Maronna, D. R. Martin, and V. J. Yohai. *Robust Statistics: Theory and Methods*. John Wiley & Sons, Inc., New York, NY, 2006.
- MS:97** [1330] C. I. Marrison and R. F. Stengel. Robust control system design using random search and genetic algorithms. *IEEE Transactions on Automatic Control*, 42(6):835–839, June 1997.
- Mar:85** [1331] B. Mårtensson. The order of any stabilizing regulator is sufficient a priori information for adaptive stabilization. *Systems & Control Letters*, 6(2):87–91, July 1985.
- MM:83** [1332] C. J. Martin and M. Mintz. Robust filtering and prediction for linear systems with uncertain dynamics: a game-theoretic approach. *IEEE Transactions on Automatic Control*, 28(9):888–896, September 1983.
- Mar:72** [1333] A. Marzollo. *Periodic Optimization*. CISM International Centre for Mechanical Sciences Series. Springer-Verlag, New York, NY, 1 edition, 1972.
- MS:07** [1334] O. Mason and R. Shorten. On linear copositive Lyapunov functions and the stability of switched positive linear systems. *IEEE Transactions on Automatic Control*, 52(7):1346–1349, July 2007.
- MSD:07** [1335] P. Mason, M. Sigalotti, and J. Daafouz. On stability analysis of linear discrete-time switched systems using quadratic Lyapunov functions. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 5629–5633, New Orleans, LA, USA, December 2007.
- MSD:12** [1336] P. Mason, M. Sigalotti, and J. Daafouz. Comparison between classes of state-quadratic Lyapunov functions for discrete-time linear polytopic and switched systems. *Systems & Control Letters*, 61(11):1062–1068, 2012.
- Mas:99** [1337] I. Masubuchi. An exact solution to parameter-dependent convex differential inequalities. In *Proceedings of the 5th European Control Conference*, Karlsruhe, Germany, August 1999.
- Mas:06** [1338] I. Masubuchi. Dissipativity inequalities for continuous-time descriptor systems with applications to synthesis of control gains. *Systems & Control Letters*, 55(2):158–164, February 2006.
- MAS:03** [1339] I. Masubuchi, T. Akiyama, and M. Saeki. Synthesis of output feedback gain-scheduling controllers based on descriptor LPV system representation. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 6115–6120, Maui, HI, USA, December 2003.
- MKS:98** [1340] I. Masubuchi, A. Kume, and E. Shimemura. Spline-type solution to parameter-dependent LMIs. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 1753–1758, Tampa, FL, USA, December 1998.
- MOS:98** [1341] I. Masubuchi, A. Ohara, and N. Suda.  $\mathcal{LMI}$ -based controller synthesis: a unified formulation and solution. *International Journal of Robust and Nonlinear Control*, 8:669–686, 1998.
- MS:09** [1342] I. Masubuchi and C. W. Scherer. A recursive algorithm of exactness verification of relaxations for robust SDPs. *Systems & Control Letters*, 58(8):592–601, August 2009.

- McC:68** [1343] R. H. McCullough. The binary regenerative channel. *Bell System Technical Journal*, 47(8):1713–1735, October 1968.
- MR:97** [1344] A. Megretski and A. Rantzer. System analysis via integral quadratic constraints. *IEEE Transactions on Automatic Control*, 42(6):819–830, June 1997.
- Meg:93** [1345] A. Megretsky. Necessary and sufficient conditions of stability: a multiloop generalization of the circle criterion. *IEEE Transactions on Automatic Control*, 38(5):753–756, May 1993.
- MBB:04** [1346] D. Mehdi, E. K. Boukas, and O. Bachelier. Static output feedback design for uncertain linear discrete time systems. *IMA Journal of Mathematical Control and Information*, 21(1):1–13, March 2004.
- MKJM:99** [1347] H. Melkote, F. Khorrami, S. Jain, and M. S. Mattice. Robust adaptive control of variable reluctance stepper motors. *IEEE Transactions on Control Systems Technology*, 7(2):212–221, March 1999.
- MZA:06** [1348] L. Menini, L. Zaccarian, and C. T. Abdallah. *Current trends in Nonlinear Systems and Control*. Birkhäuser, Boston, MA, 2006.
- Mey:00** [1349] C. Meyer. *Matrix Analysis and Applied Linear Algebra*. SIAM, Philadelphia, PA, 2000.
- Mic:96** [1350] Z. Michalewicz. *Genetic Algorithms + Data Structures = Evolution Programs*. Springer-Verlag, New York, NY, USA, 1996.
- MM:85** [1351] A. N. Michel and R. K. Miller. Stability analysis of discrete-time interconnected systems via computer generated Lyapunov functions with applications to digital filters. *IEEE Transactions on Circuits and Systems*, 32:737–753, 1985.
- MG:90** [1352] R. H. Middleton and G. C. Goodwin. *Digital Control and Estimation: A Unified Approach*. Prentice Hall, Englewood Cliffs, NJ, 1990.
- MF-TM:00** [1353] D. Mignone, G. Ferrari-Trecate, and M. Morari. Stability and stabilization of piecewise affine and hybrid systems: an LMI approach. In *Proceedings of the 39th IEEE Conference on Decision and Control*, volume 1, pages 504–509, Sydney, Australia, 2000.
- MMR:78** [1354] W. Mills, C. Mullis, and R. Roberts. Digital filter realizations without overflow oscillations. *IEEE Transactions on Acoustic, Speech and Signal Processing*, 26(4):334–338, August 1978.
- MLC:10** [1355] M. F. Miranda, V. J. S. Leite, and A. F. Caldeira. Robust stabilization of polytopic discrete-time systems with time-varying delay in the states. In *Proceedings of the 49th IEEE Conference on Decision and Control*, pages 152–157, Atlanta, GA, USA, December 2010.
- MAM:12** [1356] M. Mohammadian, A. H. Abolmasoumi, and H. R. Momeni.  $\mathcal{H}_\infty$  mode-independent filter design for Markovian jump genetic regulatory networks with time-varying delays. *Neurocomputing*, 87:10–18, June 2012.
- MG:11** [1357] J. Mohammadpour and K. Grigoriadis. Stability and performance analysis of time-delay LPV systems with brief instability. *International Journal of Robust and Nonlinear Control*, 21(8):863–882, May 2011.
- MG:06** [1358] J. Mohammadpour and K. M. Grigoriadis. Delay-dependent  $\mathcal{H}_\infty$  filtering for a class of time-delayed LPV systems. In *Proceedings of the 2006 American Control Conference*, pages 1523–1528, Minneapolis, MN, USA, 2006.
- MG:08** [1359] J. Mohammadpour and K. M. Grigoriadis. Delay-dependent  $\mathcal{H}_\infty$  filtering for time-delayed LPV systems. *Systems & Control Letters*, 57(4):290–299, April 2008.
- MS:12** [1360] J. Mohammadpour and C. W. Scherer, editors. *Control of Linear Parameter Varying Systems with Applications*. Springer, New York, 2012.
- MP:96b** [1361] S. O. R. Moheimani and I. R. Petersen. Optimal guaranteed cost control of uncertain systems via static and dynamic output feedback. *Automatica*, 32(4):575–579, April 1996.

- MP:96a** [1362] S. O. R. Moheimani and I. R. Petersen. Quadratic guaranteed cost control with robust pole placement in a disk. *IEE Proceedings — Control Theory and Applications*, 143(1):37–43, January 1996.
- MP:97** [1363] S. O. R. Moheimani and I. R. Petersen. Optimal quadratic guaranteed cost control of a class of uncertain time-delay systems. *IEE Proceedings — Control Theory and Applications*, 144(2):183–188, 1997.
- Moh:73** [1364] R. R. Mohler. *Bilinear control process*. Academic Press, New York, USA, 1973.
- Moh:91** [1365] R. R. Mohler. *Nonlinear Systems: V.2 Application to Bilinear Control*. Prentice-Hall, Englewood Cliffs, NJ, 1991.
- MK:80** [1366] R. R. Mohler and W. J. Kolodziej. An overview of bilinear system theory and applications. *IEEE Transactions on Systems, Man, and Cybernetics*, 10(10):683–688, October 1980.
- MP:89** [1367] A. P. Molchanov and E. S. Pyatnitskii. Criteria of asymptotic stability of differential and difference inclusions encountered in control theory. *Systems & Control Letters*, 13(1):59–64, July 1989.
- Mo:75** [1368] B. P. Molinari. The stabilizing solution of the discrete algebraic Riccati equation. *IEEE Transactions on Automatic Control*, pages 396–399, 1975.
- MBP:07** [1369] V. F. Montagner, R. A. Borges, and P. L. D. Peres.  $\mathcal{H}_2$  dynamic output feedback scheduled controllers for linear time-varying polytopic systems: a convex LMI approach. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 2785–2790, New Orleans, LA, December 2007.
- MCG:03** [1370] V. F. Montagner, E. G. Carati, and H. A. Gründling. Design and analysis of a linear quadratic regulator with repetitive controller for AC power supplies. In *2003 IEEE International Symposium on Industrial Electronics, ISIE-2003*, volume 3, pages 109–114, Rio de Janeiro, Brazil, June 2003.
- MLOP:04** [1371] V. F. Montagner, V. J. S. Leite, R. C. L. F. Oliveira, and P. L. D. Peres. Controle  $\mathcal{H}_\infty$  por realimentação de estados linear variante com parâmetros: Uma abordagem LMI. In *Anais do XV Congresso Brasileiro de Automática*, Gramado, RS, September 2004.
- MLOP:06** [1372] V. F. Montagner, V. J. S. Leite, R. C. L. F. Oliveira, and P. L. D. Peres. State feedback control of switched linear systems: an LMI approach. *Journal of Computational and Applied Mathematics*, 194(2):192–206, October 2006.
- MLP:03** [1373] V. F. Montagner, V. J. S. Leite, and P. L. D. Peres. Robust control of discrete time switched systems with pole location and structural constraints. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 6242–6247, Maui, HI, USA, December 2003.
- MLP:04** [1374] V. F. Montagner, V. J. S. Leite, and P. L. D. Peres. Design of a switched control with pole location constraints for a UPS system. In *Proceedings of the IEEE International Symposium on Industrial Electronics (ISIE 2004)*, pages 441–446, Ajaccio, France, May 2004.
- MLTP:05** [1375] V. F. Montagner, V. J. S. Leite, S. Tarbouriech, and P. L. D. Peres. Stability and stabilizability of discrete-time switched linear systems with state delay. In *Proceedings of the 2005 American Control Conference*, volume 6, pages 3806–3811, Portland, OR, USA, June 2005.
- MOCBPP:07** [1376] V. F. Montagner, R. C. L. F. Oliveira, T. R. Calliero, R. A. Borges, P. L. D. Peres, and C. Prieur. Robust absolute stability and stabilization based on homogeneous polynomially parameter-dependent Lur’e functions. In *Proceedings of the 2007 American Control Conference*, pages 6021–6026, New York, NY, USA, July 2007.
- MOCBPP:09** [1377] V. F. Montagner, R. C. L. F. Oliveira, T. R. Calliero, R. A. Borges, P. L. D. Peres, and C. Prieur. Robust absolute stability and nonlinear state feedback stabilization based on polynomial Lur’e functions. *Nonlinear Analysis Series A: Theory, Methods & Applications*, 70(5):1803–181, March 2009.

- MOLP:05c** [1378] V. F. Montagner, R. C. L. F. Oliveira, V. J. S. Leite, and P. L. D. Peres. Gain scheduled state feedback control of discrete systems with time-varying uncertainties: An LMI approach. In *Proceedings of the 44th IEEE Conference on Decision and Control — European Control Conference ECC 2005*, pages 4305–4310, Seville, Spain, December 2005.
- MOLP:05a** [1379] V. F. Montagner, R. C. L. F. Oliveira, V. J. S. Leite, and P. L. D. Peres. LMI approach for  $\mathcal{H}_\infty$  linear parameter-varying state feedback control. *IEE Proceedings — Control Theory and Applications*, 152(2):195–201, March 2005.
- MOP:06b** [1380] V. F. Montagner, R. C. L. F. Oliveira, and P. L. D. Peres. Design of  $\mathcal{H}_\infty$  gain-scheduled controllers for linear time-varying systems by means of polynomial Lyapunov functions. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 5839–5844, San Diego, CA, USA, December 2006.
- MOP:06a** [1381] V. F. Montagner, R. C. L. F. Oliveira, and P. L. D. Peres. Robust stability of linear time-varying polytopic systems through polynomially parameter-dependent Lyapunov functions. In *Proceedings of the 5th IFAC Symposium on Robust Control Design (ROCOND 2006)*, Toulouse, France, July 2006.
- MOP:07** [1382] V. F. Montagner, R. C. L. F. Oliveira, and P. L. D. Peres. Necessary and sufficient LMI conditions to compute quadratically stabilizing state feedback controllers for Takagi–Sugeno systems. In *Proceedings of the 2007 American Control Conference*, pages 4059–4064, New York, NY, USA, July 2007.
- MOP:08** [1383] V. F. Montagner, R. C. L. F. Oliveira, and P. L. D. Peres. Relaxaes LMI para o projeto convexo de controladores  $\mathcal{H}_\infty$  para sistemas nebulosos de Takagi–Sugeno. In *Anais do XVII Congresso Brasileiro de Automática*, Juiz de Fora, MG, Brasil, September 2008.
- MOP:09a** [1384] V. F. Montagner, R. C. L. F. Oliveira, and P. L. D. Peres. Convergent LMI relaxations for quadratic stabilizability and  $\mathcal{H}_\infty$  control for Takagi–Sugeno fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 17(4):863–873, August 2009.
- MOP:10a** [1385] V. F. Montagner, R. C. L. F. Oliveira, and P. L. D. Peres. Relaxações convexas de convergência garantida para o projeto de controladores para sistemas nebulosos de Takagi–Sugeno. *SBA: Controle & Automação*, 21(1):82–95, Janeiro/Fevereiro 2010.
- MOPB:07** [1386] V. F. Montagner, R. C. L. F. Oliveira, P. L. D. Peres, and P.-A. Bliman. Linear matrix inequality characterisation for  $\mathcal{H}_\infty$  and  $\mathcal{H}_2$  guaranteed cost gain-scheduling quadratic stabilisation of linear time-varying polytopic systems. *IET Control Theory & Applications*, 1(6):1726–1735, November 2007.
- MOPB:09** [1387] V. F. Montagner, R. C. L. F. Oliveira, P. L. D. Peres, and P.-A. Bliman. Stability analysis and gain-scheduled state feedback control for continuous-time systems with bounded parameter variations. *International Journal of Control*, 82(6):1045–1059, June 2009.
- MOPTQ:07** [1388] V. F. Montagner, R. C. L. F. Oliveira, P. L. D. Peres, S. Tarbouriech, and I. Queinnec. Gain-scheduled controllers for linear parameter-varying systems with saturating actuators: LMI-based design. In *Proceedings of the 2007 American Control Conference*, pages 6067–6072, New York, NY, USA, July 2007.
- MP:03a** [1389] V. F. Montagner and P. L. D. Peres.  $\mathcal{H}_\infty$  control with pole location for a DC-DC converter with a switched load. In *2003 IEEE International Symposium on Industrial Electronics, ISIE-2003*, Rio de Janeiro, Brazil, June 2003. in CD-rom.
- MP:03d** [1390] V. F. Montagner and P. L. D. Peres. A new LMI condition for the robust stability of linear time-varying systems. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 6133–6138, Maui, HI, USA, December 2003.
- MP:03b** [1391] V. F. Montagner and P. L. D. Peres. Robust pole location for a DC-DC converter through parameter dependent control. In *2003 IEEE International Symposium on Circuits and Systems, ISCAS-2003*, volume 3, pages 351–354, Bangkok, Thailand, May 2003.



- MP:03c** [1392] V. F. Montagner and P. L. D. Peres. Robust state feedback control applied to a UPS system. In *2003 IEEE Industrial Electronics Society Conference, IECON-2003*, volume 1, pages 2245–2250, Roanoke, VA, November 2003.
- MP:04b** [1393] V. F. Montagner and P. L. D. Peres. Estabilidade de sistemas lineares variantes no tempo através de funções de Lyapunov dependentes de parâmetros. In *Anais do XV Congresso Brasileiro de Automática*, Gramado, RS, September 2004.
- MP:04c** [1394] V. F. Montagner and P. L. D. Peres. Robust stability and  $\mathcal{H}_\infty$  performance of linear time-varying systems in polytopic domains. *International Journal of Control*, 77(15):1343–1352, October 2004.
- MP:04a** [1395] V. F. Montagner and P. L. D. Peres. State feedback gain scheduling for linear systems with time-varying parameters. In *Proceedings of the 2004 American Control Conference*, pages 2004–2009, Boston, MA, USA, June/July 2004.
- MP:05b** [1396] V. F. Montagner and P. L. D. Peres.  $\mathcal{H}_\infty$  parameter dependent state feedback control of linear time-varying systems in polytopic domains. In *Proceedings of the 44th IEEE Conference on Decision and Control — European Control Conference ECC 2005*, pages 5006–5011, Seville, Spain, December 2005.
- MP:06** [1397] V. F. Montagner and P. L. D. Peres. State feedback gain scheduling for linear systems with time-varying parameters. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 128(2):365–370, June 2006.
- MPTQ:06** [1398] V. F. Montagner, P. L. D. Peres, S. Tarbouriech, and I. Queinnec. Improved estimation of stability regions for uncertain linear systems with saturating actuators: an LMI-based approach. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 5429–5434, San Diego, CA, December 2006.
- MSA:04** [1399] P. Montagnier, R. J. Spiteri, and J. Angeles. The control of linear time-periodic systems using Floquet–Lyapunov theory. *International Journal of Control*, 77(5):472–490, March 2004.
- MA:04** [1400] L. A. Montestruque and P. Antsaklis. Stability of model-based networked control systems with time-varying transmission times. *IEEE Transactions on Automatic Control*, 49(9):1562–1571, September 2004.
- ML:14** [1401] J. H. Moon and H. J. Lee. Digital redesign of observer-based output-feedback tracking controllers: Enhancement. *International Journal of Control*, 87(11):2420–2429, 2014.
- MPKL:01** [1402] Y. S. Moon, P. Park, W. H. Kwon, and Y. S. Lee. Delay-dependent robust stabilization of uncertain state-delayed systems. *International Journal of Control*, 74(14):1447–1455, 2001.
- MBLOP:14a** [1403] C. F. Morais, M. F. Braga, M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_\infty$  filter design through multi-simplex modeling for discrete-time Markov jump linear systems with partly unknown transition probability matrix. In *Proceedings of the 19th IFAC World Congress*, pages 5049–5054, Cape Town, South Africa, August 2014.
- MBLOP:14c** [1404] C. F. Morais, M. F. Braga, M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_2$  filter design through multi-simplex modeling for discrete-time Markov jump linear systems with partly unknown transition probability matrix. In *Proceedings of the 53rd IEEE Conference on Decision and Control*, pages 6585–6590, Los Angeles, CA, USA, December 2014.
- MBLOP:15** [1405] C. F. Morais, M. F. Braga, M. J. Lacerda, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filter design for polytopic continuous-time Markov jump linear systems with uncertain transition rates. *International Journal of Adaptive Control and Signal Processing*, 29(10):1207–1223, October 2015.
- MBLOP:12** [1406] C. F. Morais, M. F. Braga, A. S. Linguanotto, R. C. L. F. Oliveira, and P. L. D. Peres. Controle robusto por realimentação de estados para sistemas lineares discretos no tempo por meio de LMIs com parâmetros escalares. In *Anais do XIX Congresso Brasileiro de Automática*, pages 1664–1671, Campina Grande, PB, Brasil, Setembro 2012.

- MBOP:13b** [1407] C. F. Morais, M. F. Braga, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_2$  control of discrete-time Markov jump linear systems with uncertain transition probability matrix: Improved linear matrix inequality relaxations and multi-simplex modeling. *IET Control Theory & Applications*, 7:1665–1674, August 2013.
- MBOP:13a** [1408] C. F. Morais, M. F. Braga, R. C. L. F. Oliveira, and P. L. D. Peres. Robust state feedback control for discrete-time linear systems via LMIs with a scalar parameter. In *Proceedings of the 2013 American Control Conference*, pages 3876–3881, Washington, DC, USA, June 2013.
- MBOP:14** [1409] C. F. Morais, M. F. Braga, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_\infty$  static output feedback control of discrete-time Markov jump linear systems with uncertain transition probability matrix. In *Proceedings of the 2014 American Control Conference*, pages 489–494, Portland, OR, USA, June 2014.
- MBOP:15a** [1410] C. F. Morais, M. F. Braga, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  state feedback control for MJLS with uncertain probabilities. *Automatica*, 52(2):317–431, February 2015.
- MBOP:16b** [1411] C. F. Morais, M. F. Braga, R. C. L. F. Oliveira, and P. L. D. Peres. LMI-based design of  $\mathcal{H}_\infty$  dynamic output feedback controllers for MJLS with uncertain transition probabilities. In *Proceedings of the 2016 American Control Conference*, pages 5650–5655, Boston, MA, USA, July 2016.
- MBOP:16a** [1412] C. F. Morais, M. F. Braga, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_\infty$  and  $\mathcal{H}_2$  control design for polytopic continuous-time Markov jump linear systems with uncertain transition rates. *International Journal of Robust and Nonlinear Control*, 26(3):599–612, February 2016.
- MBTOP:17** [1413] C. F. Morais, M. F. Braga, E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. An LMI approach for robust stabilization of aperiodic uncertain sampled-data systems. In *Proceedings of the 56th IEEE Conference on Decision and Control*, pages 2953–2958, Melbourne, Australia, December 2017.
- MOP:09b** [1414] H. R. Moreira, R. C. L. F. Oliveira, and P. L. D. Peres. Realimentação de saída robusta a partir de controladores dependentes de parâmetros para sistemas lineares incertos discretos no tempo. In *Simpósio Brasileiro de Automação Inteligente - SBAI 2009*, Brasília, DF, Brazil, September 2009.
- MOP:11** [1415] H. R. Moreira, R. C. L. F. Oliveira, and P. L. D. Peres. Robust  $\mathcal{H}_2$  static output feedback design starting from a parameter-dependent state feedback controller for time-invariant discrete-time polytopic systems. *Optimal Control Applications and Methods*, 32(1):1–13, January/February 2011.
- MPB:99** [1416] U. F. Moreno, P. L. D. Peres, and I. S. Bonatti. Analysis of bifurcation parameters by symbolic computation. In *Proceedings of the 42nd Midwest Symposium on Circuits and Systems*, volume 2, pages 575–577, Las Cruces, NM, August 1999.
- MK:00** [1417] T. Mori and H. Kokame. A parameter-dependent Lyapunov function for a polytope of matrices. *IEEE Transactions on Automatic Control*, 45(8):1516–1519, August 2000.
- Mor:96** [1418] A. S. Morse. Supervisory control of families of linear set-point controllers — Part 1: Exact matching. *IEEE Transactions on Automatic Control*, 41(10):1413–1431, October 1996.
- Mos:15** [1419] MOSEK ApS. *The MOSEK optimization software*, 2015. <http://www.mosek.com>.
- MB:96** [1420] F. C. Mota and A. Bhaya. On d-stable and d-semistable matrices and structured singular value. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 2, pages 1284–1286, Kobe, Japan, December 1996.
- Moy:77** [1421] P. J. Moylan. Matrices with positive principal minors. *Linear Algebra and Its Applications*, 17:53–58, 1977.
- MdAPdS:10** [1422] L. A. Mozelli, G. S. C. de Avellar, R. M. Palhares, and R. F. dos Santos. Condições LMIs alternativas para sistemas Takagi–Sugeno via função de Lyapunov fuzzy. *SBA: Controle & Automação*, 21(1):96–107, Janeiro/Fevereiro 2010.

- MP:11** [1423] L. A. Mozelli and R. M. Palhares. Stability analysis of linear time-varying systems: Improving conditions by adding more information about parameter variation. *Systems & Control Letters*, 60(5):338–343, 2011.
- MP:11c** [1424] L. A. Mozelli and R. M. Palhares. Stability analysis of Takagi–Sugeno fuzzy systems via LMI: Methodologies based on a new fuzzy Lyapunov function. *SBA: Controle & Automação*, 22(6):664–676, Novembro/Dezembro 2011.
- MPA:08** [1425] L. A. Mozelli, R. M. Palhares, and G. S. C. Avellar. Novas condições de estabilidade e de estabilização para sistemas Takagi–Sugeno baseadas na função de Lyapunov fuzzy. In *Anais do XVII Congresso Brasileiro de Automática*, Juiz de Fora, MG, Brasil, September 2008.
- MPA:09** [1426] L. A. Mozelli, R. M. Palhares, and G. S. C. Avellar. A systematic approach to improve multiple Lyapunov function stability and stabilization conditions for fuzzy systems. *Information Sciences*, 179(8):1149–1162, March 2009.
- MPSM:09** [1427] L. A. Mozelli, R. M. Palhares, F. O. Souza, and E. M. A. M. Mendes. Reducing conservativeness in recent stability conditions of TS fuzzy systems. *Automatica*, 45(6):1580–1583, June 2009.
- MCHW:03** [1428] S. Mu, T. Chu, F. Hao, and L. Wang. Output feedback control of networked control systems. In *IEEE International Conference on Systems, Man and Cybernetics*, pages 211–216, Washington, DC, USA, October 2003.
- MBB:07** [1429] Ph. Mullhaupt, D. Bucciari, and D. Bonvin. A numerical sufficiency test for the asymptotic stability of linear time-varying systems. *Automatica*, 43(4):631–638, April 2007.
- NHT:08** [1430] P. Naghshtabrizi, J. P. Hespanha, and A. R. Teel. Exponential stability of impulsive systems with application to uncertain sampled-data systems. *Systems & Control Letters*, 57(5):378–385, May 2008.
- NK:91** [1431] K. M. Nagpal and P. P. Khargonekar. Filtering and smoothing in an  $\mathcal{H}_\infty$  setting. *IEEE Transactions on Automatic Control*, 36(2):152–166, February 1991.
- NC:97** [1432] L. Naimark and N. Cohen.  $\mathcal{H}_\infty$  controller design for pure delay and other distributed systems. *International Journal of Control*, 67(3):355–369, 1997.
- NZ:97** [1433] L. Naimark and E. Zeheb. All constant gain stabilizing controllers for an interval delay system with uncertain parameters. *Automatica*, 33(9):1669–1675, 1997.
- Naj:13** [1434] F. Najson. On the Kalman–Yakubovich–Popov lemma for discrete-time positive linear systems: A novel simple proof and some related results. *International Journal of Control*, 86(10):1813–1823, 2013.
- Naj:15** [1435] F. Najson. A Lagrange duality approach to state-feedback stabilisability in switched positive linear systems. *International Journal of Control*, 88(1):138–154, 2015.
- NB:94** [1436] K. S. Narendra and J. Balakrishnan. A common Lyapunov function for stable LTI systems with commuting A-matrices. *IEEE Transactions on Automatic Control*, 39(12):2469–2471, December 1994.
- NT:73** [1437] K. S. Narendra and S. S. Tripathi. Identification and optimization of aircraft dynamics. *Journal of Aircraft*, 10, 1973.
- NN:94** [1438] Y. Nesterov and A. Nemirovskii. *Interior-Point Polynomial Algorithms in Convex Programming*. SIAM, Philadelphia, PA, 1994.
- NT:01** [1439] Ph. Neveux and G. Thomas. Robust filtering for uncertain systems. *Signal Processing*, 81(4):809–817, April 2001.
- NT:03** [1440] D. Nešić and A. R. Teel.  $\mathcal{L}_p$  stability of networked control systems. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 1188–1193, Maui, HI, USA, December 2003.
- NT:04** [1441] D. Nešić and A. R. Teel. Input-output stability properties of networked control systems. *IEEE Transactions on Automatic Control*, 49(10):1650–1667, October 2004.

- Ngu:98** [1442] S. K. Nguang. Robust  $\mathcal{H}_\infty$  control of a class of nonlinear systems with delayed state and control: an LMI approach. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 2384–2389, Tampa, FL, USA, December 1998.
- NS:03** [1443] S. K. Nguang and P. Shi.  $\mathcal{H}_\infty$  fuzzy output feedback control design for nonlinear systems: An LMI approach. *IEEE Transactions on Fuzzy Systems*, 11(3):331–340, June 2003.
- NS:06** [1444] S. K. Nguang and P. Shi. Robust  $\mathcal{H}_\infty$  output feedback control design for fuzzy dynamic systems with quadratic  $\mathcal{D}$  stability constraints: An LMI approach. *Information Sciences*, 176(15):2161–2191, August 2006.
- NS:07** [1445] S. K. Nguang and P. Shi. Delay-dependent  $\mathcal{H}_\infty$  filtering for uncertain time delay nonlinear systems: an LMI approach. *IET Control Theory & Applications*, 1(1):133–140, January 2007.
- NJ:99** [1446] T. Nguyen and F. Jabbari. Disturbance attenuation for systems with input saturation: an LMI approach. *IEEE Transactions on Automatic Control*, 44(4):852–857, April 1999.
- NRR:93** [1447] R. A. Nichols, R. T. Reichert, and W. J. Rugh. Gain scheduling for H-infinity controllers: A flight control example. *IEEE Transactions on Control Systems Technology*, 1(2):69–79, 1993.
- Nic:98** [1448] S. I. Niculescu.  $\mathcal{H}_\infty$  memoryless control with an alpha-stability constraint for time-delay systems: An LMI approach. *IEEE Transactions on Automatic Control*, 43(5):739–743, 1998.
- Nic:01b** [1449] S.-I. Niculescu. *Delay Effects on Stability: A Robust Control Approach*, volume 269 of *Lecture Notes in Control and Information Sciences*. Springer-Verlag, London, 2001.
- Nic:01** [1450] S.-I. Niculescu. On delay-dependent stability under model transformations of some neutral linear systems. *International Journal of Control*, 74(6):609–617, 2001.
- NC:99** [1451] S.-I. Niculescu and J. Chen. Frequency sweeping tests for asymptotic stability: a model transformation for multiple delays. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 4678–4683, Phoenix, AZ, USA, December 1999.
- NdSDD:95** [1452] S. I. Niculescu, C. E. de Souza, J. M. Dion, and L. Dugard. Robust  $\mathcal{H}_\infty$  memoryless control for uncertain linear systems with time-varying delay. In *Proceedings of the 3rd European Control Conference*, pages 1814–1818, Rome, Italy, 1995.
- NDD:96** [1453] S. I. Niculescu, J. M. Dion, and L. Dugard. Robust stabilization for uncertain time-delay systems containing saturating actuators. *IEEE Transactions on Automatic Control*, 41(5):742–747, 1996.
- NFL:97** [1454] S. I. Niculescu, M. Fu, and H. Li. Delay-dependent closed-loop stability of linear systems with input delay: an LMI approach. In *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 1623–1628, San Diego, CA, December 1997.
- NG:04** [1455] S.-I. Niculescu and K. Gu, editors. *Advances in Time-Delay Systems*, volume 38 of *Lecture Notes in Computational Science and Engineering*. Springer, London, 2004.
- NTDD:95a** [1456] S.-I. Niculescu, A. T. Neto, J.-M. Dion, and L. Dugard. Delay-dependent stability of linear systems with delayed state: An LMI approach. In *Proceedings of the 34th IEEE Conference on Decision and Control*, pages 1495–1497, New Orleans, LA, USA, December 1995.
- NTDD:95b** [1457] S.-I. Niculescu, S. Tarbouriech, J.-M. Dion, and L. Dugard. Stability criteria for bilinear systems with delayed state and saturating controls. In *Proceedings of the 34th IEEE Conference on Decision and Control*, pages 2064–2069, New Orleans, LA, USA, December 1995.
- NVDD:97** [1458] S. I. Niculescu, E. I. Verriest, L. Dugard, and J. M. Dion. Stability and robust stability of time-delay system: A guided tour. In L. Dugard and E. I. Verriest, editors, *Stability and Control of Time-delay Systems*, pages 1–71. Springer-Verlag, Berlin, 1997.

- NVDD:98** [1459] S. I. Niculescu, E. I. Verriest, L. Dugard, and J.-M. Dion. Stability of linear systems with delayed state: a guided tour. In *Proceedings of the 1st IFAC International Workshop on Linear Time Delay Systems*, pages 37–44, Grenoble, France, July 1998.
- NW:78** [1460] A. Nijenhuis and H. S. Wilf. *Combinatorial Algorithms*. Academic Press, New York, 1978.
- NE:05** [1461] A. Nilim and L. El Ghaoui. Robust control of Markov decision processes with uncertain transition matrices. *Operations Research*, 53(5):780–798, September-October 2005.
- NSOT:84** [1462] Y. Nishikawa, N. Sannomiya, T. Ohta, and H. Tanaka. A method for autotuning of PID control parameters. *Automatica*, 20(3):321–332, 1984.
- Nis:99** [1463] K. Nishiyama. Robust estimation of a single complex sinusoid in white noise —  $\mathcal{H}_\infty$  filtering approach. *IEEE Transactions on Signal Processing*, 47(10):2853–2856, October 1999.
- No1:82** [1464] E. Noldus. Design of robust state feedback laws. *International Journal of Control*, 35(6):935–944, June 1982.
- Oga:90** [1465] K. Ogata. *Modern Control Engineering*. Prentice-Hall, Inc., Englewood Cliffs, NJ, 1990.
- Oga:95** [1466] K. Ogata. *Discrete-Time Control Systems*. Prentice-Hall International, Inc., Upper Saddle River, NJ, USA, 1995.
- OTW:01** [1467] H. Ohtake, K. Tanaka, and H. O. Wang. Fuzzy modeling via sector nonlinearity concept. In *Joint 9th IFSA World Congress and 20th NAFIPS International Conference*, volume 1, pages 127–132, July 2001.
- Ois:06** [1468] Y. Oishi. A region-dividing approach to robust semidefinite programming and its error bound. In *Proceedings of the 2006 American Control Conference*, pages 123–129, Minneapolis, MN, USA, 2006.
- Ois:07b** [1469] Y. Oishi. Asymptotic exactness of parameter-dependent Lyapunov functions: An error bound and exactness verification. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 5666–5671, New Orleans, LA, USA, December 2007.
- Ois:07a** [1470] Y. Oishi. Polynomial-time algorithms for probabilistic solutions of parameter-dependent linear matrix inequalities. *Automatica*, 43(3):538–545, March 2007.
- OBP:08a** [1471] R. C. L. F. Oliveira, P.-A. Bliman, and P. L. D. Peres. LMIs robustas com parâmetros em um multi-simplex: Existência de soluções e aplicações em estabilidade de sistemas lineares. In *Anais do XVII Congresso Brasileiro de Automática*, Juiz de Fora, MG, Brasil, September 2008.
- OBP:08b** [1472] R. C. L. F. Oliveira, P.-A. Bliman, and P. L. D. Peres. Robust LMIs with parameters in multi-simplex: Existence of solutions and applications. In *Proceedings of the 47th IEEE Conference on Decision and Control*, pages 2226–2231, Cancun, Mexico, December 2008.
- OBP:09** [1473] R. C. L. F. Oliveira, P.-A. Bliman, and P. L. D. Peres. Selective gain-scheduling for continuous-time linear systems with parameters in multi-simplex. In *Proceedings of the 2009 European Control Conference*, pages 213–218, Budapest, Hungary, August 2009.
- OdOP:06b** [1474] R. C. L. F. Oliveira, M. C. de Oliveira, and P. L. D. Peres. LMI relaxations for robust  $\mathcal{H}_2$  performance analysis of polytopic linear systems. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 2907–2912, San Diego, CA, USA, December 2006.
- OdOP:06a** [1475] R. C. L. F. Oliveira, M. C. de Oliveira, and P. L. D. Peres. Relaxações LMI para análise de desempenho  $\mathcal{H}_2$  em sistemas lineares politópicos. In *Anais do XVI Congresso Brasileiro de Automática*, pages 1139–1144, Salvador, BA, Brasil, October 2006. In Portuguese.
- OdOP:07a** [1476] R. C. L. F. Oliveira, M. C. de Oliveira, and P. L. D. Peres. Parameter-dependent Lyapunov functions for robust stability analysis of time-varying systems in polytopic domains. In *Proceedings of the 2007 American Control Conference*, pages 6079–6084, New York, NY, USA, July 2007.



- OdOP:08** [1477] R. C. L. F. Oliveira, M. C. de Oliveira, and P. L. D. Peres. Convergent LMI relaxations for robust analysis of uncertain linear systems using lifted polynomial parameter-dependent Lyapunov functions. *Systems & Control Letters*, 57(8):680–689, August 2008.
- OdOP:09** [1478] R. C. L. F. Oliveira, M. C. de Oliveira, and P. L. D. Peres. A special time-varying Lyapunov function for robust stability analysis of LPV systems with bounded parameter variation. *IET Control Theory & Applications*, 3(10):1448–1461, October 2009.
- OdOP:11** [1479] R. C. L. F. Oliveira, M. C. de Oliveira, and P. L. D. Peres. Robust state feedback LMI methods for continuous-time linear systems: Discussions, extensions and numerical comparisons. In *Proceedings of the 2011 IEEE International Symposium on Computer Aided Control Systems Design*, pages 1038–1043, Denver, CO, USA, September 2011.
- OdOPB:07** [1480] R. C. L. F. Oliveira, M. C. de Oliveira, P. L. D. Peres, and P.-A. Bliman. Asymptotically exact  $\mathcal{H}_2$  guaranteed cost computation by means of a special parameter-dependent Lyapunov function. In *Proceedings of the 46th IEEE Conference on Decision and Control*, pages 2737–2742, New Orleans, LA, December 2007.
- OLdOP:05** [1481] R. C. L. F. Oliveira, V. J. S. Leite, M. C. de Oliveira, and P. L. D. Peres. An LMI characterization of polynomial parameter-dependent Lyapunov functions for robust stability. In *Proceedings of the 44th IEEE Conference on Decision and Control — European Control Conference ECC 2005*, pages 5024–5029, Seville, Spain, December 2005.
- OLdOMP:04** [1482] R. C. L. F. Oliveira, V. J. S. Leite, P. J. de Oliveira, V. F. Montagner, and P. L. D. Peres. Cômputo de custo garantido  $\mathcal{H}_\infty$  por meio de funções de Lyapunov dependentes de parâmetros. In *Anais do XV Congresso Brasileiro de Automática*, Gramado, RS, Setembro 2004.
- OP:03** [1483] R. C. L. F. Oliveira and P. L. D. Peres. Less conservative LMI conditions for D-stability. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 5149–5154, Maui, HI, USA, December 2003.
- OP:05e** [1484] R. C. L. F. Oliveira and P. L. D. Peres. LMI conditions for the existence of polynomially parameter-dependent Lyapunov functions assuring robust stability. In *Proceedings of the 44th IEEE Conference on Decision and Control — European Control Conference ECC 2005*, pages 1660–1665, Seville, Spain, December 2005.
- OP:05b** [1485] R. C. L. F. Oliveira and P. L. D. Peres.  $\mathcal{H}_\infty$  guaranteed cost computation via polynomially parameter-dependent Lyapunov functions. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005.
- OP:05a** [1486] R. C. L. F. Oliveira and P. L. D. Peres. A simple and less conservative test for D-stability. *SIAM Journal on Matrix Analysis and Applications*, 26(2):415–425, January 2005.
- OP:05c** [1487] R. C. L. F. Oliveira and P. L. D. Peres. Stability of polytopes of matrices via affine parameter-dependent Lyapunov functions: Asymptotically exact LMI conditions. *Linear Algebra and Its Applications*, 405:209–228, August 2005.
- OP:06a** [1488] R. C. L. F. Oliveira and P. L. D. Peres. LMI conditions for robust stability analysis based on polynomially parameter-dependent Lyapunov functions. *Systems & Control Letters*, 55(1):52–61, January 2006.
- OP:06b** [1489] R. C. L. F. Oliveira and P. L. D. Peres. LMI relaxations for homogeneous polynomial solutions of parameter-dependent LMIs. In *Proceedings of the 5th IFAC Symposium on Robust Control Design (ROCOND 2006)*, Toulouse, France, July 2006.
- OP:07a** [1490] R. C. L. F. Oliveira and P. L. D. Peres. Parameter-dependent LMIs in robust analysis: Characterization of homogeneous polynomially parameter-dependent solutions via LMI relaxations. *IEEE Transactions on Automatic Control*, 52(7):1334–1340, July 2007.

- OP:08b** [1491] R. C. L. F. Oliveira and P. L. D. Peres. A convex optimization procedure to compute  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  norms for uncertain linear systems in polytopic domains. *Optimal Control Applications and Methods*, 29(4):295–312, July/August 2008.
- OP:08a** [1492] R. C. L. F. Oliveira and P. L. D. Peres. Robust stability analysis and control design for time-varying discrete-time polytopic systems with bounded parameter variation. In *Proceedings of the 2008 American Control Conference*, pages 3094–3099, Seattle, WA, USA, June 2008.
- OP:09** [1493] R. C. L. F. Oliveira and P. L. D. Peres. Time-varying discrete-time linear systems with bounded rates of variation: Stability analysis and control design. *Automatica*, 45(11):2620–2626, November 2009.
- OP:10** [1494] R. C. L. F. Oliveira and P. L. D. Peres. Análise e controle de sistemas lineares por meio de desigualdades matriciais lineares. In A. P. Feltrin, C. R. Minussi, M. C. M. Teixeira, and R. A. R. Lázaro, editors, *Tutoriais do XVIII Congresso Brasileiro de Automática*, pages 203–229. Cultura Acadêmica, São Paulo, 2010.
- OVdVP:09** [1495] R. C. L. F. Oliveira, A. N. Vargas, J. B. R. do Val, and P. L. D. Peres. Robust stability,  $\mathcal{H}_2$  analysis and stabilisation of discrete-time Markov jump linear systems with uncertain probability matrix. *International Journal of Control*, 82(3):470–481, March 2009.
- OII:02** [1496] T. Ono, T. Ishihara, and H. Inooka. Design of sampled-data critical control systems based on the fast-discretization technique. *International Journal of Control*, 75(8):572–581, 2002.
- OM:88** [1497] E. P. Oppenheimer and A. N. Michel. Application of interval analysis techniques to linear systems: Part ii — The interval matrix exponential function. *IEEE Transactions on Circuits and Systems*, 35(10):1230–1242, October 1988.
- Rei:83** [1498] J. O’Reilly. *Observers for Linear Systems*. Academic Press, London, 1983.
- Orl:06** [1499] P. Orlowski. Methods for stability evaluation for linear time varying, discrete-time systems on finite time horizon. *International Journal of Control*, 79(3):249–262, March 2006.
- OHM:04** [1500] R. Orsi, U. Helmke, and J. B. Moore. A Newton-like method for solving rank constrained linear matrix inequalities. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 3138–3144, Paradise Island, Bahamas, December 2004.
- Ouc:95** [1501] S. Oucheriah. Measures of robustness for uncertain time-delay linear systems. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 117(4):633–635, 1995.
- Ouc:96b** [1502] S. Oucheriah. Global stabilization of a class of linear continuous time-delay systems with saturating controls. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 43(12):1012–1015, December 1996.
- Ouc:96** [1503] S. Oucheriah. Measures of robustness for uncertain time-delay linear systems (vol. 117, pp. 633, 1995). *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 118(1):65–65, 1996.
- OSS:92** [1504] H. K. Ozcetin, A. Saberi, and P. Sannuti. Design for  $\mathcal{H}_\infty$  almost disturbance decoupling problem with internal stability via state and measurement feedback — singular perturbation approach. *International Journal of Control*, 55(4):901–944, 1992.
- Pac:94** [1505] A. Packard. Gain scheduling via linear fractional transformations. *Systems & Control Letters*, 22(2):79–92, February 1994.
- PD:93** [1506] A. Packard and J. Doyle. The complex structured singular value. *Automatica*, 29(1):71–109, January 1993.
- PDB:93** [1507] A. Packard, J. Doyle, and G. Balas. Linear multivariable robust control with a  $\mu$  perspective. *Journal of Dynamic Systems, Measurement and Control — Transactions of ASME*, 115(2B):426–438, Jun 1993.

- PP:93** [1508] A. Packard and P. Pandey. Continuity properties of the real/complex structured singular value. *IEEE Transactions on Automatic Control*, 38(3):415–428, March 1993.
- PZPB:91** [1509] A. Packard, K. Zhou, P. Pandey, and G. Becker. A collection of robust control problems leading to LMI's. In *Proceedings of the 30th IEEE Conference on Decision and Control*, volume 1, pages 1245–1250, Brighton, UK, 1991.
- Pai:81** [1510] M. A. Pai. *Power System Stability*. Elsevier North-Holland, Amsterdam, The Netherlands, 1981.
- PTGdSC:02** [1511] C. Paim, S. Tarbouriech, J. M. Gomes da Silva Jr., and E. B. Castelan. Control design for linear systems with saturating actuators and  $\mathcal{L}_2$ -bounded disturbances. In *Proceedings of the 41st IEEE Conference on Decision and Control*, pages 4148–4153, Las Vegas, NV, December 2002.
- PCELD:05** [1512] R. M. Palhares, C. D. Campos, P. Ya. Ekel, M. C. R. Leles, and M. F. S. V. D'Angelo. Delay-dependent robust  $\mathcal{H}_\infty$  control of uncertain linear systems with lumped delays. *IEE Proceedings — Control Theory and Applications*, 152(1):27–33, January 2005.
- PdSP:99** [1513] R. M. Palhares, C. E. de Souza, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filter design for uncertain discrete-time state-delayed systems: an LMI approach. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 2347–2352, Phoenix, AZ, USA, December 1999.
- PdSP:01c** [1514] R. M. Palhares, C. E. de Souza, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  control for uncertain discrete-time state-delayed linear systems with Markovian jumping parameters. In *Third IFAC Workshop on Time Delay Systems*, volume 1, pages 107–112, Santa Fe, New Mexico, USA, December 2001.
- PdSP:01b** [1515] R. M. Palhares, C. E. de Souza, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  control for uncertain state-delayed linear systems with Markovian jumping parameters. In *European Control Conference – ECC 2001*, volume 1, pages 1285–1290, Porto, Portugal, September 2001.
- PdSP:01** [1516] R. M. Palhares, C. E. de Souza, and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filtering for uncertain discrete-time state-delayed systems. *IEEE Transactions on Signal Processing*, 49(8):1096–1703, August 2001.
- PG:07b** [1517] R. M. Palhares and E. N. Gonçalves. Desigualdades matriciais lineares em controle. In L. A. Aguirre, editor, *Enciclopédia de Automática: Controle e Automação*, volume 1, pages 155–195. Editora Edgard Blücher LTDA, São Paulo, 2007.
- PP:98b** [1518] R. M. Palhares and P. L. D. Peres. Optimal filtering schemes for linear discrete-time systems — an LMI approach. *International Journal of Systems Science*, 29(6):587–593, 1998.
- PP:98** [1519] R. M. Palhares and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filtering design with pole placement constraint in an LMI setting. In *Proceedings of the 8 Congreso Latinoamericano de Control Automatico*, volume 1, pages 43–48, Viña del Mar, Chile, 1998.
- PP:99c** [1520] R. M. Palhares and P. L. D. Peres. Robust filtering with guaranteed energy-to-peak performance — an  $\mathcal{LMI}$  approach. In *Proceedings of the 14th IFAC World Congress*, volume D, pages 243–248, Beijing, P. R. China, July 1999.
- PP:99a** [1521] R. M. Palhares and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filtering design with pole constraints for discrete-time systems: an LMI approach. In *Proceedings of the 1999 American Control Conference*, volume 1, pages 4418–4422, San Diego, CA, USA, June 1999.
- PP:99b** [1522] R. M. Palhares and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filtering design with pole placement constraint via LMIs. *Journal of Optimization Theory and Applications*, 102(2):239–261, August 1999.
- PP:00c** [1523] R. M. Palhares and P. L. D. Peres. Mixed  $\mathcal{L}_2 - \mathcal{L}_\infty / \mathcal{H}_\infty$  filtering for uncertain linear systems: an LMI approach. *International Journal of Systems Science*, 31(9):1091–1098, September 2000.
- PP:00a** [1524] R. M. Palhares and P. L. D. Peres. Robust filtering with guaranteed energy-to-peak performance — an LMI approach. *Automatica*, 36(6):851–858, June 2000.

- [1525] R. M. Palhares and P. L. D. Peres. Robust  $\mathcal{H}_\infty$  filter design with pole constraints for discrete-time systems. *Journal of The Franklin Institute*, 337(6):713–723, September 2000.
- [1526] R. M. Palhares and P. L. D. Peres. LMI approach to the mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering design for discrete-time uncertain systems. *IEEE Transactions on Aerospace and Electronic Systems*, 37(1):292–296, January 2001.
- [1527] R. M. Palhares, D. C. W. Ramos, and P. L. D. Peres. Alternative LMIs characterization of  $\mathcal{H}_2$  and central  $\mathcal{H}_\infty$  discrete-time controllers. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 2, pages 1495–1496, Kobe, Japan, 1996.
- [1528] R. M. Palhares, R. H. C. Takahashi, and P. L. D. Peres.  $\mathcal{H}_\infty$  and  $\mathcal{H}_2$  guaranteed costs computation for uncertain linear systems. *International Journal of Systems Science*, 28(2):183–188, February 1997.
- [1529] Reinaldo Martinez Palhares. *Filtragem Robusta: Uma Abordagem por Desigualdades Matriciais Lineares*. PhD thesis, FEEC — Universidade Estadual de Campinas, 1998.
- [1530] J. M. Palma. *Trade-Off entre norma h-infinito e transmissões globais aplicado a projetos de filtragem através da rede*. M.Sc. Thesis, FEEC – Universidade Estadual de Campinas, Campinas, SP, Brazil, Maio 2016.
- [1531] J. M. Palma, L. P. Carvalho, A. M. de Oliveira, A. P. C. Gonçalves, and C. Duran-Faundez. Minimizing the number of transmissions in a multi-hop network for the dynamical system filtering problem and the impact on the mean square error. In *Anais do XII Congresso Brasileiro de Automação Inteligente*, pages 1–6, Natal, RN, Brasil, Outubro 2015.
- [1532] J. M. Palma, L. P. Carvalho, and A. P. C. Gonçalves. An approach to energy efficiency in a multi-hop network control system through a trade-off between  $\mathcal{H}_\infty$  norm and global number of transmissions. In *VIII Encontro dos Alunos e Docentes do Departamento de Engenharia de Computação e Automação Industrial*, pages 1–4, Campinas, SP, Brazil, September 2015.
- [1533] J. M. Palma, L. P. Carvalho, A. P. C. Gonçalves, C. E. Galarza, and A. M. de Oliveira. Application of control theory Markov systems to minimize the number of transmissions in a multi-hop network. In *Proceedings of the 2015 Asia-Pacific Conference on Computer Aided System Engineering*, pages 296–301, Quito, Ecuador, July 2015.
- [1534] J. T. Pan, T. M. Guerra, S. M. Fei, and A. Jaadari. Robust fuzzy control of nonlinear systems with parametric uncertainties. *IEEE Transactions on Fuzzy Systems*, 20(3):594–602, June 2012.
- [1535] S. Pan, J. Sun, and S. Zhao. Robust filtering for discrete time piecewise impulsive systems. *Signal Processing*, 90(1):324–330, January 2010.
- [1536] Z. Pan and T. Başar.  $\mathcal{H}_\infty$  optimal control for singularly perturbed systems. Part i: Perfect state measurements. *Automatica*, 29(2):401–423, March 1993.
- [1537] A. Papachristodoulou, J. Anderson, G. Valmorbida, S. Prajna, P. Seiler, and P. A. Parrilo. *SOSTOOLS: Sum of squares optimization toolbox for MATLAB*. <http://arxiv.org/abs/1310.4716>, 2013. Available from <http://www.eng.ox.ac.uk/control/sostools>, <http://www.cds.caltech.edu/sostools> and <http://www.mit.edu/~parrilo/sostools>.
- [1538] A. Papachristodoulou and S. Prajna. A tutorial on sum of squares techniques for systems analysis. In *Proceedings of the 2005 American Control Conference*, pages 2686–2700, Portland, OR, USA, June 2005.
- [1539] T. Pappas, A. J. Laub, and Jr N. R. Sandel. On the numerical solution of the discrete-time algebraic Riccati equation. *IEEE Transactions on Automatic Control*, 25(4):631–641, 1980.

- PSBP:13** [1540] M. Parada, D. Sbárbaro, R. A. Borges, and P. L. D. Peres. Observer-based stabilization of uncertain linear systems with recycle: an LMI approach. In *Proceedings of the 2013 European Control Conference*, pages 2627–2632, Zurich, Switzerland, July 2013.
- Par:01** [1541] J.-H. Park. A new delay-dependent criterion for neutral systems with multiple delays. *Journal of Computational and Applied Mathematics*, 136(1-2):177–184, November 2001.
- Park:03** [1542] J. H. Park. Simple criterion for asymptotic stability of interval neutral delay-differential systems. *Applied Mathematics Letters*, 16(7):1063–1068, October 2003.
- PKW:04** [1543] J. H. Park, O. Kwon, and S. Won. LMI approach to robust  $\mathcal{H}_\infty$  filtering for neutral delay differential systems. *Applied Mathematics and Computation*, 150(1):235–244, February 2004.
- PW:00** [1544] J. H. Park and S. Won. Stability analysis for neutral delay-differential systems. *Journal of The Franklin Institute*, 337(1):1–9, January 2000.
- Par:99** [1545] P. Park. A delay-dependent stability criterion for systems with uncertain time-invariant delays. *IEEE Transactions on Automatic Control*, 44(4):876–877, April 1999.
- PK:97** [1546] P. Park and T. Kailath.  $\mathcal{H}_\infty$  filtering via convex optimization. *International Journal of Control*, 66(1):15–22, 1997.
- PMK:98** [1547] P. Park, Y. S. Moon, and W. H. Kwon. Robust stability criteria for uncertain time-delay systems. *International Journal of Control*, 1998. Submitted.
- Par:62** [1548] P. C. Parks. A new proof of the Routh-Hurwitz stability criterion using the second method of Lyapunov. *Proceedings of the Cambridge Philosophical Society*, 58:694–702, October 1962.
- Par:00** [1549] P. A. Parrilo. *Structured Semidefinite Programs and Semialgebraic Geometry Methods in Robustness and Optimization*. PhD thesis, California Institute of Technology, Pasadena, CA, USA, 2000.
- Parr:03** [1550] P. A. Parrilo. Exploiting structure in sum of squares programs. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 4664–4669, Maui, HI, USA, December 2003.
- Par:03b** [1551] P. A. Parrilo. Semidefinite programming relaxations for semialgebraic problems. *Mathematical Programming: Series B*, 96(2):293–320, 2003.
- PJ:08** [1552] P. A. Parrilo and A. Jadbabaie. Approximation of the joint spectral radius using sum of squares. *Linear Algebra and Its Applications*, 428(10):2385–2402, 2008. Special Issue on the Joint Spectral Radius: Theory, Methods and Applications.
- PL:03** [1553] P. A. Parrilo and S. Lall. Semidefinite programming relaxations and algebraic optimization in control. *European Journal of Control*, 9(2-3):307–321, 2003.
- RB:04** [1554] J. R. Partington and C. Bonnet.  $\mathcal{H}_\infty$  and BIBO stabilization of delay systems of neutral type. *Systems & Control Letters*, 52(3-4):283–288, July 2004.
- Pea:05** [1555] D. Peaucelle. *RoMulOC a YALMIP-MATLAB based Robust Multi Objective Control Toolbox*, 2005.
- PA:01b** [1556] D. Peaucelle and D. Arzelier. An efficient numerical solution for  $\mathcal{H}_2$  static output feedback synthesis. In *Proceedings of the 2001 European Control Conference*, pages 3800–3805, Porto, Portugal, September 2001.
- PA:01** [1557] D. Peaucelle and D. Arzelier. Robust performance analysis with LMI-based methods for real parametric uncertainty via parameter-dependent Lyapunov functions. *IEEE Transactions on Automatic Control*, 46(4):624–630, April 2001.
- PABB:00** [1558] D. Peaucelle, D. Arzelier, O. Bachelier, and J. Bernussou. A new robust  $\mathcal{D}$ -stability condition for real convex polytopic uncertainty. *Systems & Control Letters*, 40(1):21–30, May 2000.



- PAHG:07** [1559] D. Peaucelle, D. Arzelier, D. Henrion, and F. Gouaisbaut. Quadratic separation for feedback connection of an uncertain matrix and an implicit linear transformation. *Automatica*, 43(5):795–804, May 2007.
- PEAH:06** [1560] D. Peaucelle, Y. Ebihara, D. Arzelier, and T. Hagiwara. General polynomial parameter-dependent Lyapunov functions for polytopic uncertain systems. In *Proceedings of the 17th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2006)*, pages 2238–2242, Kyoto, Japan, July 2006.
- PG:07** [1561] W. Pedrycz and F. Gomide. *Fuzzy Systems Engineering: Toward Human-Centric Computing*. Wiley-IEEE Press, New York, NY, USA, 2007.
- PPL:09** [1562] M. M. Peet, A. Papachristodoulou, and S. Lall. Positive forms and stability of linear time-delay systems. *SIAM Journal on Control and Optimization*, 47(6):3237–3258, January 2009.
- PD:92** [1563] P. Peleties and R. DeCarlo. Asymptotic stability of m-switched systems using Lyapunov functions. In *Proceedings of the 31st IEEE Conference on Decision and Control*, volume 4, pages 3438–3439, Tucson, AZ, December 1992.
- PD:91** [1564] P. Peleties and R. A. DeCarlo. Asymptotic stability of m-switched systems using Lyapunov-like functions. In *Proceedings of the 1991 American Control Conference*, volume 2, pages 1679–1684, Boston, MA, June 1991.
- PA:04** [1565] G. J. Pereira and H. X. Araújo. Robust output feedback controller design via genetic algorithms and LMIs: the mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  problem. In *Proceedings of the 2004 American Control Conference*, pages 3309–3314, Boston, MA, USA, June/July 2004.
- Per:89** [1566] P. L. D. Peres. *Sur la robustesse des systèmes linéaire : Approche par programmation linéaire*. PhD thesis, Université Paul Sabatier — LAAS/CNRS, Toulouse, France, 1989.
- PG:93** [1567] P. L. D. Peres and J. C. Geromel.  $\mathcal{H}_2$  control for discrete-time systems: optimality and robustness. *Automatica*, 29(1):225–228, January 1993.
- PG:94** [1568] P. L. D. Peres and J. C. Geromel. An alternate numerical solution to the linear quadratic problem. *IEEE Transactions on Automatic Control*, 39(1):198–202, January 1994.
- PGA:91** [1569] P. L. D. Peres, J. C. Geromel, and A. M. K. Almulga. Quadratic stabilizability of linear uncertain systems by linear output feedback. In *Proceedings of the 1991 European Control Conference*, pages 2262–2265, Grenoble, France, 1991.
- PGB:93** [1570] P. L. D. Peres, J. C. Geromel, and J. Bernussou. Quadratic stabilizability of linear uncertain systems in convex-bounded domains. *Automatica*, 29(2):491–493, March 1993.
- PGS:91** [1571] P. L. D. Peres, J. C. Geromel, and S. R. Souza. Convex analysis of discrete-time uncertain  $\mathcal{H}_\infty$  control problem. In *Proceedings of the 30th IEEE Conference on Decision and Control*, volume 1, pages 521–526, Brighton, UK, 1991.
- PGS:93** [1572] P. L. D. Peres, J. C. Geromel, and S. R. Souza.  $\mathcal{H}_\infty$  guaranteed cost control for uncertain continuous-time linear systems. *Systems & Control Letters*, 20(6):413–418, June 1993.
- PGS:93c** [1573] P. L. D. Peres, J. C. Geromel, and S. R. Souza.  $\mathcal{H}_\infty$  robust control by static output feedback. In *Proceedings of the 1993 American Control Conference*, volume 1, pages 620–621, San Francisco, CA, USA, 1993.
- PGS:93b** [1574] P. L. D. Peres, J. C. Geromel, and S. R. Souza. Optimal  $\mathcal{H}_2$  control by output feedback. In *Proceedings of the 32nd IEEE Conference on Decision and Control*, volume 1, pages 102–107, San Antonio, USA, 1993.
- PGS:94b** [1575] P. L. D. Peres, J. C. Geromel, and S. R. Souza.  $\mathcal{H}_2$  output feedback control for discrete-time systems. In *Proceedings of the 1994 American Control Conference*, volume 3, pages 2429–2433, Baltimore, MD, USA, 1994.

- PGS:94** [1576] P. L. D. Peres, J. C. Geromel, and S. R. Souza. Optimal  $\mathcal{H}_\infty$  state feedback control for continuous-time linear systems. *Journal of Optimization Theory and Applications*, 82(2):343–359, August 1994.
- PGS:94a** [1577] P. L. D. Peres, J. C. Geromel, and S. R. Souza. Optimal  $\mathcal{H}_\infty$  state-feedback control for continuous-time linear systems. *Journal of Optimization Theory and Applications*, 82(2):343–359, August 1994.
- PGU:94** [1578] P. L. D. Peres, G. Guaitoli, and C. K. Umezú. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control of uncertain continuous-time systems with regional pole constraints. In *Proceedings of the 1st IFAC Symposium on Robust Control Design*, volume 1, pages 98–103, Rio de Janeiro, Brazil, 1994.
- PS:95a** [1579] P. L. D. Peres and S. R. Souza.  $\mathcal{H}_\infty$  decentralized output feedback control for discrete-time uncertain systems. In *Proceedings of the 1995 American Control Conference*, volume 4, pages 2926–2930, Seattle, WA, USA, 1995.
- PS:95b** [1580] P. L. D. Peres and S. R. Souza. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  decentralized output feedback control for continuous-time uncertain systems. In *Proceedings of the IFAC/IFORS/IMACS Symposium — Large Scale Systems: Theory and Applications*, volume 2, pages 569–574, London, UK, 1995.
- PSG:92b** [1581] P. L. D. Peres, S. R. Souza, and J. C. Geromel. Controle de sistemas dinâmicos sujeitos a restrições estruturais e limitante  $\mathcal{H}_\infty$ . In *Anais do IX Congresso Brasileiro de Automática*, volume 1, pages 556–561, Vitória, ES, Setembro 1992.
- PSG:92a** [1582] P. L. D. Peres, S. R. Souza, and J. C. Geromel. Optimal  $\mathcal{H}_2$  control for uncertain linear systems. In *Proceedings of the 2002 American Control Conference*, volume 4, pages 2916–2920, Chicago, IL, USA, 1992.
- PSG:94** [1583] P. L. D. Peres, S. R. Souza, and J. C. Geromel.  $\mathcal{H}_\infty$  control design by static output feedback. In *Proceedings of the 1st IFAC Symposium on Robust Control Design*, volume 1, pages 243–248, Rio de Janeiro, Brazil, 1994.
- PTGL:03** [1584] P. L. D. Peres, S. Tarbouriech, G. Garcia, and V. J. S. Leite. Robust stability of time-delay continuous-time systems in polytopic domains. In *Proceedings of the 2003 European Control Conference*, Cambridge, UK, September 2003. in CD-rom.
- PUG:94** [1585] P. L. D. Peres, C. K. Umezú, and G. Guaitoli.  $\mathcal{H}_2$  control of uncertain discrete-time systems with regional pole constraints. In *Proceedings of the 33rd IEEE Conference on Decision and Control*, volume 1, pages 565–570, Lake Buena Vista, FL, USA, December 1994.
- Per:69** [1586] S. K. Persidskii. Problem of absolute stability. *Automation and Remote Control*, 12:1889–1895, 1969.
- Pet:87** [1587] I. R. Petersen. Disturbance attenuation and  $\mathcal{H}_\infty$  optimization: a design method based on the algebraic Riccati equation. *IEEE Transactions on Automatic Control*, 32(5):427–429, May 1987.
- Pet:87b** [1588] I. R. Petersen. A procedure for simultaneously stabilizing a collection of single input linear systems using non-linear state feedback control. *Automatica*, 23(1):33–40, 1987.
- Pet:95** [1589] I. R. Petersen. Guaranteed cost LQG control of uncertain linear-systems. *IEE Proceedings — Control Theory and Applications*, 142(2):95–102, March 1995.
- PM:94a** [1590] I. R. Petersen and D. C. McFarlane. Optimal guaranteed cost control and filtering for uncertain linear systems. *IEEE Transactions on Automatic Control*, 39(9):1971–1977, 1994.
- PM:96** [1591] I. R. Petersen and D. C. McFarlane. Optimal guaranteed cost filtering for uncertain discrete-time linear systems. *International Journal of Robust and Nonlinear Control*, 6(4):267–280, 1996.
- PL:96** [1592] S. Pettersson and B. Lennartson. Stability and robustness for hybrid systems. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 2, pages 1202–1207, Kobe, Japan, December 1996.
- PEDJ:16** [1593] M. Philippe, R. Essick, G. E. Dullerud, and R. M. Jungers. Stability of discrete-time switching systems with constrained switching sequences. *Automatica*, 72:242–250, October 2016.

- PN:95** [1594] C. L. Phillips and H. T. Nagle. *Digital Control System Analysis and Design*. Prentice-Hall, Inc., Upper Saddle River, NJ, USA, 3 edition, 1995.
- PF:92** [1595] S. Phoojaruenchanachai and K. Furuta. Memoryless stabilization of uncertain linear systems including time-varying state delays. *IEEE Transactions on Automatic Control*, 37(7):1022–1026, 1992.
- Pic:93** [1596] J. Picard. Estimation of the quadratic variation of nearly observed semimartingales with applications to filtering. *SIAM Journal on Control and Optimization*, 31(2):494–517, 1993.
- PSdS:96** [1597] A. W. Pila, U. Shaked, and C. E. de Souza.  $\mathcal{H}_\infty$  filtering for continuous-time linear systems with delay. In *Proceedings of the 13th IFAC World Congress*, volume J, pages 49–54, San Francisco, CA, USA, 1996.
- PSdS:99** [1598] A. W. Pila, U. Shaked, and C. E. de Souza.  $\mathcal{H}_\infty$  filtering for continuous-time linear systems with delay. *IEEE Transactions on Automatic Control*, 44(7):1412–1417, 1999.
- PDSV:09** [1599] G. Pipeleers, B. Demeulenaere, J. Swevers, and L. Vandenberghe. Extended LMI characterizations for stability and performance of linear systems. *Systems & Control Letters*, 58(7):510–518, July 2009.
- PIH:14** [1600] G. Pipeleers, T. Iwasaki, and S. Hara. Generalizing the KYP lemma to multiple frequency intervals. *SIAM Journal on Control and Optimization*, 52(6):3618–3638, 2014.
- PV:11** [1601] G. Pipeleers and L. Vandenbergue. Generalized KYP lemma with real data. *IEEE Transactions on Automatic Control*, 56(12):2942–2946, December 2011.
- PEK:07** [1602] I. Polat, E. Eskinat, and I. E. Kose. Dynamic output feedback control of quasi-LPV mechanical systems. *IET Control Theory & Applications*, 1(4):1114–1121, 2007.
- Pop:61** [1603] V.-M. Popov. On the absolute stability of nonlinear controlled systems. *Avtomatika i telemekhanika*, 8:961–970, 1961.
- PR:01** [1604] V. Powers and B. Reznick. A new bound for Pólya’s Theorem with applications to polynomials positive on polyhedra. *Journal of Pure and Applied Algebra*, 164:221–229, 2001.
- PPSP:04** [1605] S. Prajna, A. Papachristodoulou, P. Seiler, and P. A. Parrilo. *SOSTOOLS: Sum of squares optimization toolbox for MATLAB*, 2004.
- dPI:87** [1606] G. Da Prato and A. Ichikawa. Liapunov equations for time-varying linear systems. *Systems & Control Letters*, 9(2):165–172, August 1987.
- POTP:10** [1607] C. Prieur, R. C. L. F. Oliveira, S. Tarbouriech, and P. L. D. Peres. Stability analysis and state feedback control design of discrete-time systems with a backlash. In *Proceedings of the 2010 American Control Conference*, pages 2688–2693, Baltimore, MD, USA, June/July 2010.
- PS:82** [1608] E. S. Pyatnitskii and V. I. Skorodinskii. Numerical methods of Lyapunov function construction and their application to the absolute stability problem. *Systems & Control Letters*, 2:130–135, 1982.
- PS:83** [1609] E. S. Pyatnitskii and V. I. Skorodinskii. Numerical method of construction of Lyapunov functions and absolute stability criteria in the form of numerical procedures. *Automation and Remote Control*, 11:1427–1437, 1983.
- Pya:70** [1610] E. S. Pyatnitsky. Absolute stability of non-stationary nonlinear systems. *Avtomatika i telemekhanika*, 1:5–15, 1970.
- QFY:08** [1611] J. Qiu, G. Feng, and J. Yang. New results on robust energy-to-peak filtering for discrete-time switched polytopic linear systems with time-varying delay. *IET Control Theory & Applications*, 2(9):795–806, September 2008.
- QFY:09** [1612] J. Qiu, G. Feng, and J. Yang. A new design of delay-dependent robust  $\mathcal{H}_\infty$  filtering for discrete-time T–S fuzzy systems with time-varying delay. *IEEE Transactions on Automatic Control*, 17(5):1044–1058, October 2009.

- QR:65** [1613] J. Quirk and R. Ruppert. Qualitative economics and the stability of equilibrium. *Review of Economic Studies*, 32:311–326, 1965.
- RCM:97** [1614] N. Rafee, T. Chen, and O. P. Malik. A technique for optimal digital redesign of analog controllers. *IEEE Transactions on Control Systems Technology*, 5(1):89–99, January 1997.
- RP:99** [1615] K. G. Rajesh and K. R. Padiyar. Bifurcation analysis of a three node power system with detailed models. *Electrical Power and Energy Systems*, 21(5):375–393, June 1999.
- RMG:13** [1616] A. Ramezanifar, J. Mohammadpour, and K. M. Grigoriadis. Sampled-data control of linear parameter varying time-delay systems using state feedback. In *Proceedings of the 2013 American Control Conference*, pages 6847–6852, Washington, DC, USA, June 2013.
- RMG:15** [1617] A. Ramezanifar, J. Mohammadpour, and K. M. Grigoriadis. Sampled-data  $\mathcal{H}_\infty$  filtering for linear parameter varying systems. *International Journal of Systems Science*, 46(3):474–487, March 2015.
- Ram:98** [1618] D. C. W. Ramos. Estudo de Sistemas Lineares Discretos Incertos através de Desigualdades Matriciais Lineares. Master’s thesis, Universidade Estadual de Campinas, Campinas, SP, Brazil, February 1998. In Portuguese.
- RCPP:97** [1619] D. C. W. Ramos, C. E. Câmara, P. L. D. Peres, and R. Palazzo Jr. Considerações sobre a realimentação de estados em codificadores convolucionais com aplicações em codificação e criptografia. In *Anais do XV Simpósio Brasileiro de Telecomunicações*, volume 1, pages 258–262, Recife, PE, Setembro 1997.
- RPP:96** [1620] D. C. W. Ramos, R. M. Palhares, and P. L. D. Peres. Caracterização de controladores  $\mathcal{H}_2$  e  $\mathcal{H}_\infty$  para sistemas discretos por desigualdades matriciais lineares. In *Anais do XI Congresso Brasileiro de Automática*, volume 1, pages 61–66, São Paulo, SP, Setembro 1996.
- RP:01b** [1621] D. C. W. Ramos and P. L. D. Peres. A less conservative LMI condition for the robust stability of discrete-time uncertain systems. *Systems & Control Letters*, 43(5):371–378, August 2001.
- RP:01a** [1622] D. C. W. Ramos and P. L. D. Peres. An LMI approach to compute robust stability domains for uncertain linear systems. In *Proceedings of the 2001 American Control Conference*, volume 1, pages 4073–4078, Arlington, VA, USA, June 2001.
- RP:02** [1623] D. C. W. Ramos and P. L. D. Peres. An LMI condition for the robust stability of uncertain continuous-time linear systems. *IEEE Transactions on Automatic Control*, 47(4):675–678, April 2002.
- RS:01** [1624] J. L. Ramos and J. A. M. Saldanha. Uncertainty models for switch-mode DC-DC converters. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 47(2):200–203, February 2001.
- Ram:02** [1625] R. A. Ramos. *Procedimento de Projeto de Controladores Robustos para o Amortecimento de Oscilações Eletromecânicas em Sistemas de Potência*. PhD thesis, EESC — Universidade de So Paulo, 2002.
- RAB:03** [1626] R. A. Ramos, L. F. C. Alberto, and N. G. Bretas. Linear matrix inequality based controller design with feedback linearisation: Application to power systems. *IEE Proceedings — Control Theory and Applications*, 150(5):551–556, September 2003.
- RAB:04c** [1627] R. A. Ramos, L. F. C. Alberto, and N. G. Bretas. Decentralized output feedback controller design for the damping of electromechanical oscillations. *International Journal of Electrical Power & Energy Systems*, 26(3):207–219, March 2004.
- RAB:04b** [1628] R. A. Ramos, L. F. C. Alberto, and N. G. Bretas. A new LMI-based procedure for the design of robust damping controllers for power systems. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, pages 4467–4472, Paradise Island, Bahamas, December 2004.
- RAB:04a** [1629] R. A. Ramos, L. F. C. Alberto, and N. G. Bretas. A new methodology for the coordinated design of robust decentralized power systems damping controllers. *IEEE Transactions on Power Systems*, 19(1):444–454, February 2004.

- RMB:05 [1630] R. A. Ramos, A. C. P. Martins, and N. G. Bretas. An improved methodology for the design of power system damping controllers. *IEEE Transactions on Power Systems*, 20(4):1938–1945, November 2005.
- RV:88 [1631] A. C. M. Ran and R. Vreugdenhil. Existence and comparison theorems for algebraic Riccati equations for continuous and discrete-time systems. *Linear Algebra and Its Applications*, 99:63–83, February 1988.
- Ran:96 [1632] A. Rantzer. On the Kalman-Yakubovich-Popov lemma. *Systems & Control Letters*, 28(1):7–10, June 1996.
- Ran:16 [1633] A. Rantzer. On the Kalman-Yakubovich-Popov lemma for positive systems. *IEEE Transactions on Automatic Control*, 61(5):1346–1349, May 2016.
- RJ:00 [1634] A. Rantzer and M. Johansson. Piecewise linear quadratic optimal control. *IEEE Transactions on Automatic Control*, 45(4):629–637, April 2000.
- RTS:65 [1635] H. E. Rauch, F. Tung, and C. T. Striebel. Maximum likelihood estimates of linear dynamic systems. *AIAA Journal*, 3:1445–1450, 1965.
- R-PM:08 [1636] J. Razavi-Panah and V. J. Majd. A robust multi-objective DPDC for uncertain T–S fuzzy systems. *Fuzzy Sets and Systems*, 159(20):2749–2762, October 2008.
- RPGHP:03 [1637] C. Rech, H. Pinheiro, H. A. Gründling, H. L. Hey, and J. R. Pinheiro. Comparison of digital control techniques with repetitive integral action for low cost PWM inverters. *IEEE Transactions on Power Electronics*, 18(1):401–410, January 2003.
- RPGP:00 [1638] C. Rech, H. Pinheiro, H. A. Gründling, and J. R. Pinheiro. Comparison of discrete control techniques for UPS applications. In *2000 IEEE Industry Applications Society Conference, IAS-2000*, pages 2531–2537, 2000.
- Red:85 [1639] R. Redheffer. Volterra multipliers - I. *SIAM Journal on Algebraic and Discrete Methods*, 6(4):612–623, 1985.
- Reg:92 [1640] P. Regalia. On finite Lyapunov functions for companion matrices. *IEEE Transactions on Automatic Control*, 37(10):1640–1644, October 1992.
- RU:99 [1641] K. Reif and R. Unbehauen. The extended Kalman filter as an exponential observer for nonlinear systems. *IEEE Transactions on Signal Processing*, 47(8):2324–2328, August 1999.
- RWL:12 [1642] S. Reimann, W. Wu, and S. Liu. A novel control-schedule codesign method for embedded control systems. In *Proceedings of the 2012 American Control Conference*, pages 3766–3771, Montreal, QC, Canada, June 2012.
- RW:06 [1643] B.-J. Rhee and S. Won. A new fuzzy Lyapunov function approach for a Takagi–Sugeno fuzzy control system design. *Fuzzy Sets and Systems*, 157(9):1211–1228, May 2006.
- Ric:03 [1644] J.-P. Richard. Time-delay systems: an overview of some recent advances and open problems. *Automatica*, 39(10):1667–1694, October 2003.
- RW:97 [1645] P. Rocha and J. C. Willems. Behavioral controllability of delay-differential systems. *SIAM Journal on Control and Optimization*, 35(1):254–264, 1997.
- Roc:70 [1646] R. T. Rockafellar. *Convex Analysis*. Princeton University Press, 1970.
- Rom:96 [1647] B. G. Romanchuk. Computing regions of attraction with polytopes: planar case. *Automatica*, 32(12):1727–1732, 1996.
- RACS:10 [1648] J. M. T. Romano, R. Attux, C. C. Cavalcante, and R. Suyama. *Unsupervised Signal Processing: Channel Equalization and Source Separation*. CRC Press, Boca Raton, FL, 1st edition, September 2010.



- RdOP0:16** [1649] L. B. R. R. Romão, M. C. de Oliveira, P. L. D. Peres, and R. C. L. F. Oliveira. State-feedback and filtering problems using the generalized KYP lemma. In *Proceedings of the 2016 IEEE International Symposium on Computer Aided Control Systems Design*, pages 1054–1059, Buenos Aires, Argentina, September 2016.
- ROP:15** [1650] L. B. R. R. Romão, R. C. L. F. Oliveira, and P. L. D. Peres. Projeto de filtros robustos  $\mathcal{H}_2$  usando LMIs com escalares. In *Anais do XII Congresso Brasileiro de Automação Inteligente*, pages 630–635, Natal, RN, Brasil, Outubro 2015.
- Ros:63** [1651] H. H. Rosenbrook. The stability of linear time-dependent control systems. *International Journal of Electronics and Control*, 15(1):73–80, July 1963.
- RD:09** [1652] B. Roszak and E. J. Davison. Necessary and sufficient conditions for stabilizability of positive LTI systems. *Systems & Control Letters*, 58(7):474–481, July 2009.
- Rot:93** [1653] M. A. Rotea. The generalized  $\mathcal{H}_2$  control problem. *Automatica*, 29(2):373–385, March 1993.
- RW:95** [1654] M. A. Rotea and D. Williamson. Optimal realization of finite wordlength digital filters and controllers. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 42(2):61–72, February 1995.
- RL:06** [1655] M. Rotkowitz and S. Lall. A characterization of convex problems in decentralized control. *IEEE Transactions on Automatic Control*, 51(2):274–286, February 2006.
- RSI:96** [1656] H. Rotstein, M. Sznaier, and M. Idan.  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering theory and an aerospace application. *International Journal of Robust and Nonlinear Control*, 6(4):347–366, May 1996.
- RS:00** [1657] W. J. Rugh and J. S. Shamma. Research on gain scheduling. *Automatica*, 36(10):1401–1425, October 2000.
- RB:83** [1658] E. P. Ryan and N. J. Buckingham. On asymptotically stabilizing feedback control of bilinear systems. *IEEE Transactions on Automatic Control*, 28(8):863–864, August 1983.
- SLS:95** [1659] A. Saberi, Z. Lin, and A. A. Stoorvogel.  $\mathcal{H}_2$  almost disturbance decoupling problem with internal stability. In *Proceedings of the 1995 American Control Conference*, volume 5, pages 3414–3418, Seattle, USA, 1993.
- SLT:96** [1660] A. Saberi, Z. Lin, and A. R. Teel. Control of linear systems with saturating actuators. *IEEE Transactions on Automatic Control*, 41(3):368–378, March 1996.
- SK:13** [1661] M. S. Sadabadi and A. Karimi. An LMI formulation of fixed-order  $\mathcal{H}_\infty$  and  $\mathcal{H}_2$  controller design for discrete-time systems with polytopic uncertainty. In *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 2453–2458, December 2013.
- SP:16** [1662] M. S. Sadabadi and D. Peaucelle. From static output feedback to structured robust static output feedback: A survey. *Annual Reviews in Control*, 42:11–26, 2016.
- SLC:89** [1663] M. G. Safonov, D. J. N. Limebeer, and R. Y. Chiang. Simplifying the  $\mathcal{H}_\infty$  theory via loop shaping, matrix pencil and descriptor concepts. *International Journal of Control*, 50(6):2467–2488, 1989.
- Sal:09** [1664] A. Sala. On the conservativeness of fuzzy and fuzzy-polynomial control of nonlinear systems. *Annual Reviews in Control*, 33(1):48–58, April 2009.
- SA:07a** [1665] A. Sala and C. Ariño. Asymptotically necessary and sufficient conditions for stability and performance in fuzzy control: Applications of Polya’s theorem. *Fuzzy Sets and Systems*, 158(24):2671–2686, December 2007.
- SGB:05** [1666] A. Sala, T. M. Guerra, and R. Babuška. Perspectives of fuzzy systems and control. *Fuzzy Sets and Systems*, 156(3):432–444, December 2005.

- [SVAS:78] [1667] N. R. Sandell Jr., P. Varaiya, M. Athans, and M. G. Safonov. Survey of decentralized control methods for large scale systems. *IEEE Transactions on Automatic Control*, 23(2):108–128, April 1978.
- [SV:92] [1668] S. R. Sanders and G. C. Verghese. Lyapunov-based control for switched power converters. *IEEE Transactions on Power Electronics*, 7(1):17–24, January 1992.
- [SU:03] [1669] S. Sasaki and K. Uchida. Quadratic cost output feedback control for bilinear systems. *International Journal of Systems Science*, 34(5):345–355, April 2003.
- [Sas:99] [1670] S. Sastry. *Nonlinear Systems: Analysis, Stability and Control*. Interdisciplinary Applied Mathematics: Systems and Control. Springer, New York, NY, 1999.
- [Sat:04] [1671] M. Sato. Filter design for LPV systems using biquadratic Lyapunov functions. In *Proceedings of the 2004 American Control Conference*, pages 1368–1373, Boston, MA, USA, July 2004.
- [Sat:05b] [1672] M. Sato. Performance analysis of LPV systems using higher-order Lyapunov functions. In *Proceedings of the 16th IFAC World Congress*, Prague, Czech Republic, July 2005.
- [Sat:05] [1673] M. Sato. Robust performance analysis of linear time-invariant parameter-dependent systems using higher-order Lyapunov functions. In *Proceedings of the 2005 American Control Conference*, pages 615–620, Portland, OR, USA, June 2005.
- [Sat:06] [1674] M. Sato. Filter design for LPV systems using quadratically parameter-dependent Lyapunov functions. *Automatica*, 42(11):2017–2023, November 2006.
- [Sat:10b] [1675] M. Sato. Gain-scheduled  $\mathcal{H}_\infty$  filters using inexactly measured scheduling parameters. In *Proceedings of the 2010 American Control Conference*, pages 3088–3093, Baltimore, MD, USA, June 2010.
- [Sat:10c] [1676] M. Sato. Gain-scheduled output-feedback controllers using inexactly measured scheduling parameters. In *Proceedings of the 49th IEEE Conference on Decision and Control*, pages 3174–3180, December 2010.
- [Sat:11] [1677] M. Sato. Discrete-time gain-scheduled output-feedback controllers exploiting inexact scheduling parameters via parameter-dependent Lyapunov functions. In *Proceedings of the 50th IEEE Conference on Decision and Control — European Control Conference ECC 2011*, pages 1938–1943, Orlando, FL, USA, December 2011.
- [Sat:15b] [1678] M. Sato. Gain-scheduled output feedback controllers for discrete-time LPV systems using bounded inexact scheduling parameters. In *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 730–735, Osaka, Japan, December 2015.
- [SEP:10] [1679] M. Sato, Y. Ebihara, and D. Peaucelle. Gain-scheduled state-feedback controllers using inexactly measured scheduling parameters:  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  problems. In *Proceedings of the 2010 American Control Conference*, pages 3094–3099, Baltimore, MD, USA, June-July 2010.
- [SP:06] [1680] M. Sato and D. Peaucelle. Robust stability/performance analysis for linear time-invariant polytopically parameter-dependent systems using polynomially parameter-dependent Lyapunov functions. In *Proceedings of the 45th IEEE Conference on Decision and Control*, pages 5814–5819, San Diego, CA, December 2006.
- [SP:13] [1681] M. Sato and D. Peaucelle. Gain-scheduled output-feedback controllers using inexact scheduling parameters for continuous-time LPV systems. *Automatica*, 49(4):1019–1025, April 2013.
- [SE:02] [1682] A. V. Savkin and R. J. Evans. *Hybrid Dynamical Systems. Controller and Sensor Switching Problems*. Birkhäuser, Boston, MA, USA, 2002.
- [SP:94] [1683] A. V. Savkin and I. R. Petersen. A connection between  $\mathcal{H}_\infty$  control and the absolute stabilizability of uncertain systems. *Systems & Control Letters*, 23:197–203, 1994.
- [SSE:99] [1684] A. V. Savkin, E. Skafidas, and R. J. Evans. Robust output feedback stabilizability via controller switching. *Automatica*, 35(1):69–74, January 1999.

- [1685] A. H. Sayed. *Adaptive filters*. John Wiley & Sons, Hoboken, NJ, 2011.
- [1686] L. Schenato. To zero or to hold control inputs with lossy links? *IEEE Transactions on Automatic Control*, 54(5):1093–1099, May 2009.
- [1687] C. Scherer.  $\mathcal{H}_\infty$ -control by state-feedback and fast algorithms for the computation of optimal  $\mathcal{H}_\infty$ -norms. *IEEE Transactions on Automatic Control*, 35(10):1090–1099, October 1990.
- [1688] C. Scherer. The state-feedback  $\mathcal{H}_\infty$ -problem at optimality. *Automatica*, 30(2):293–305, 1994.
- [1689] C. Scherer. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control. In A. Isidori, editor, *Trends in Control*, pages 173–216. Springer-Verlag, Berlin, 1995.
- [1690] C. Scherer, P. Gahinet, and M. Chilali. Multiobjective output-feedback control via LMI optimization. *IEEE Transactions on Automatic Control*, 42(7):896–911, July 1997.
- [1691] C. W. Scherer.  $\mathcal{H}_\infty$ -control by state-feedback: an iterative algorithm and characterization of high-gain occurrence. *Systems & Control Letters*, 12(5):383–391, June 1989.
- [1692] C. W. Scherer. Mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control for time-varying and linear parametrically-varying systems. *International Journal of Robust and Nonlinear Control*, 6(9-10):929–952, 1996.
- [1693] C. W. Scherer. A full block S-procedure with applications. In *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 1510–1515, San Diego, CA, USA, December 1997.
- [1694] C. W. Scherer. Robust performance analysis for parameter-dependent systems using tensor product splines. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 2216–2221, Tampa, FL, USA, December 1998.
- [1695] C. W. Scherer. LPV control and full block multipliers. *Automatica*, 37(3):361–375, March 2001.
- [1696] C. W. Scherer. Higher-order relaxations for robust LMI problems with verifications for exactness. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 4652–4657, Maui, HI, USA, December 2003.
- [1697] C. W. Scherer. Relaxations for robust linear matrix inequality problems with verifications for exactness. *SIAM Journal on Matrix Analysis and Applications*, 27(2):365–395, June 2005.
- [1698] C. W. Scherer. LMI relaxations in robust control. *European Journal of Control*, 12(1):3–29, January–February 2006.
- [1699] C. W. Scherer and C. W. J. Hol. Asymptotically exact relaxations for robust LMI problems based on matrix-valued sum-of-squares. In *Proceedings of the 16th International Symposium on Mathematical Theory of Networks and Systems (MTNS 2004)*, Leuven, Belgium, July 2004.
- [1700] C. W. Scherer and C. W. J. Hol. Matrix sum-of-squares relaxations for robust semi-definite programs. *Mathematical Programming: Series B*, 107(1-2):189–211, June 2006.
- [1701] W. E. Schmitendorf. Designing stabilizing controllers for uncertain systems using Riccati equation approach. *IEEE Transactions on Automatic Control*, 33(4):376–378, 1988.
- [1702] G. M. Schoen and H. P. Geering. A note on robustness bounds for large-scale time-delay systems. *International Journal of Systems Science*, 26(12):2441–2444, 1995.
- [1703] G. Scorletti and L. El Ghaoui. Improved LMI conditions for gain scheduling and related control problems. *International Journal of Robust and Nonlinear Control*, 8(10):845–877, August 1998.
- [1704] G. Scorletti and V. Fromion. A unified approach to time-delay system control: robust and gain-scheduled. In *Proceedings of the 1998 American Control Conference*, pages 2391–2395, Philadelphia, PA, USA, June 1998.

- [SS:03] [1705] P. Seiler and R. Sengupta. A bounded real lemma for jump systems. *IEEE Transactions on Automatic Control*, 48(9):1651–1654, September 2003.
- [SS:05] [1706] P. Seiler and R. Sengupta. An  $\mathcal{H}_\infty$  approach to networked control. *IEEE Transactions on Automatic Control*, 50(3):356–364, March 2005.
- [SB:11] [1707] T. Senthilkumar and P. Balasubramaniam. Delay-dependent robust stabilization and  $\mathcal{H}_\infty$  control for nonlinear stochastic systems with Markovian jump parameters and interval time-varying delays. *Journal of Optimization Theory and Applications*, 151(1):100–120, May 2011.
- [SB:14] [1708] T. Senthilkumar and P. Balasubramaniam. Non-fragile robust stabilization and  $\mathcal{H}_\infty$  control for uncertain stochastic time delay systems with Markovian jump parameters and nonlinear disturbances. *International Journal of Adaptive Control and Signal Processing*, 28(3-5):464–478, March–May 2014.
- [SJK:97] [1709] R. Sepulchre, M. Jankovic, and P. Kokotovic, editors. *Constructive Nonlinear Control*. Communications and Control Engineering. Springer-Verlag, New York, USA, 1997.
- [SGdS:12] [1710] A. Seuret and J. M. Gomes Da Silva Jr. Taking into account period variations and actuator saturation in sampled-data systems. *Systems & Control Letters*, 61(12):1286–1293, December 2012.
- [Sey:94] [1711] R. Seydel. *Practical Bifurcations and Stability Analysis*. Springer Verlag, New York, NY, 2nd edition, 1994.
- [SB:92] [1712] S. M. Shahruz and S. Behtash. Design of controllers for linear parameter-varying systems by the gain scheduling technique. *Journal of Mathematical Analysis and Applications*, 168:195–217, 1992.
- [Sha:90] [1713] U. Shaked.  $\mathcal{H}_\infty$ -minimum error state estimation of linear stationary processes. *IEEE Transactions on Automatic Control*, 35(5):554–558, 1990.
- [Sha:01] [1714] U. Shaked. Improved LMI representations for the analysis and the design of continuous-time systems with polytopic type uncertainty. *IEEE Transactions on Automatic Control*, 46(4):652–656, April 2001.
- [Sha:03] [1715] U. Shaked. An LPD approach to robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  static output-feedback design. *IEEE Transactions on Automatic Control*, 48(5):866–872, May 2003.
- [SS:95] [1716] U. Shaked and C. E. de Souza. Continuous-time tracking problems in an  $\mathcal{H}_\infty$  setting: a game theory approach. *IEEE Transactions on Automatic Control*, 40(5):841–852, May 1995.
- [SdS:95] [1717] U. Shaked and C. E. de Souza. Robust minimum variance filtering. *IEEE Transactions on Signal Processing*, 43(11):2474–2483, November 1995.
- [ST:92a] [1718] U. Shaked and Y. Theodor. A frequency-domain approach to the problems of  $\mathcal{H}_\infty$ -minimum error state estimation and deconvolution. *IEEE Transactions on Signal Processing*, 40(12):3001–3011, December 1992.
- [ST:92b] [1719] U. Shaked and Y. Theodor.  $\mathcal{H}_\infty$ -optimal estimation: a tutorial. In *Proceedings of the 31st IEEE Conference on Decision and Control*, pages 2278–2286, Tucson, AZ, December 1992.
- [SYdS:98] [1720] U. Shaked, I. Yaesh, and C. E. de Souza. Bounded real criteria for linear time-delay systems. *IEEE Transactions on Automatic Control*, 43(7):1016–1022, 1998.
- [SA:90] [1721] J. S. Shamma and M. Athans. Analysis of gain scheduled control for nonlinear plants. *IEEE Transactions on Automatic Control*, 35(8):898–907, August 1990.
- [SA:91] [1722] J. S. Shamma and M. Athans. Guaranteed properties of gain scheduled control for linear parameter-varying plants. *Automatica*, 27(3):559–564, 1991.
- [SA:92] [1723] J. S. Shamma and M. Athans. Gain scheduling: Potential hazards and possible remedies. *IEEE Control Systems Magazine*, 12(3):101–107, June 1992.

- SR:95 [1724] Z. Shao and J. T. Rowland. Stability of time-delay singularly perturbed systems. *IEE Proceedings — Control Theory and Applications*, 142(2):111–113, 1995.
- SL:15 [1725] J. Shen and J. Lam. On static output-feedback stabilization for multi-input multi-output positive systems. *International Journal of Robust and Nonlinear Control*, 25(16):3154–3162, November 2015.
- SL:16a [1726] J. Shen and J. Lam. Some extensions on the bounded real lemma for positive systems. *IEEE Transactions on Automatic Control*, 2016. DOI: 10.1109/TAC.2016.2606426.
- SL:16b [1727] J. Shen and J. Lam. Static output-feedback stabilization with optimal  $l_1$ -gain for positive linear systems. *Automatica*, 63:248–253, January 2016.
- Shen:97 [1728] J. C. Shen. Designing stabilising controllers and observers for uncertain linear systems with time-varying delay. *IEE Proceedings — Control Theory and Applications*, 144(4):331–333, 1997.
- SY:12b [1729] M. Shen and G.-H. Yang.  $\mathcal{H}_2$  filter design for discrete-time Markov jump linear systems with partly unknown transition probabilities. *Optimal Control Applications and Methods*, 33(3):318–337, May/June 2012.
- SY:12a [1730] M. Shen and G.-H. Yang.  $\mathcal{H}_2$  state feedback controller design for continuous Markov jump linear systems with partly known information. *International Journal of Systems Science*, 43(4):786–796, 2012.
- SY:12 [1731] M. Shen and G.-H. Yang. New analysis and synthesis conditions for continuous Markov jump linear systems with partly known transition probabilities. *IET Control Theory & Applications*, 6(14):2318–2325, September 2012.
- SZY:92 [1732] G. Shi, Y. Zou, and C. Yang. An algebraic approach to robust  $\mathcal{H}_\infty$  control via state feedback. *Systems & Control Letters*, 18(5):365–370, May 1992.
- Shi:98 [1733] P. Shi. Filtering on sampled-data systems with parametric uncertainty. *IEEE Transactions on Automatic Control*, 43(7):1022–1027, 1998.
- SB:97 [1734] P. Shi and E. K. Boukas.  $\mathcal{H}_\infty$  control for Markovian jumping linear systems with parametric uncertainty. *Journal of Optimization Theory and Applications*, 95(2):75–99, 1997.
- SBA:99c [1735] P. Shi, E. K. Boukas, and R. K. Agarwal. Control of Markovian jump discrete-time systems with norm bounded uncertainty and unknown delay. *IEEE Transactions on Automatic Control*, 44(11):2139–2144, 1999.
- SBA:99b [1736] P. Shi, E. K. Boukas, and R. K. Agarwal. Kalman filtering for continuous-time uncertain systems with Markovian jump parameters. *IEEE Transactions on Automatic Control*, 44(8):1592–1597, 1999.
- SBA:99d [1737] P. Shi, E. K. Boukas, and R. K. Agarwal. Robust control for Markovian jumping discrete-time systems. *International Journal of Systems Science*, 30(8):787–797, 1999.
- SBA:99a [1738] P. Shi, E. K. Boukas, and R. K. Agarwal. Robust Kalman filtering for continuous-time Markovian jump uncertain systems. In *Proceedings of the 1999 American Control Conference*, pages 4413–4417, San Diego, CA, June 1999.
- SBSA:98 [1739] P. Shi, E. K. Boukas, S. P. Shi, and R. K. Agarwal.  $\mathcal{H}_\infty$  control of discrete-time linear uncertain systems with delayed-state. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 4551–4552, Tampa, FL, USA, December 1998.
- SBSA:03 [1740] P. Shi, E. K. Boukas, Y. Shi, and R. K. Agarwal. Optimal guaranteed cost control of uncertain discrete time-delay systems. *Journal of Computational and Applied Mathematics*, 157(2):435–451, August 2003.
- SLL:12 [1741] P. Shi, X. Luan, and C.-L. Liu.  $\mathcal{H}_\infty$  filtering for discrete-time systems with stochastic incomplete measurement and mixed delays. *IEEE Transactions on Industrial Electronics*, 59(6):2732–2739, June 2012.



- SMNI:09** [1742] P. Shi, M. Mahmoud, S. K. Nguang, and A. Ismail. Robust filtering for jumping systems with mode-dependent delays. *Signal Processing*, 86(1):140–152, January 2009.
- SWC:98b** [1743] L. S. Shieh, W. Wang, and G. Chen. Discretization of cascaded continuous-time controllers and uncertain systems. *Circuits Systems and Signal Processing*, 17(5):591–611, October 1998.
- SWT:98** [1744] L.-S. Shieh, W.-M. Wang, and J. S. H. Tsai. Digital redesign of  $\mathcal{H}_\infty$  controller via bilinear approximation method for state-delayed systems. *International Journal of Control*, 70(5):665–683, 1998.
- SZS:92** [1745] L. S. Shieh, J. L. Zhang, and J. W. Sunkel. A new approach to the digital redesign of continuous-time controllers. *Control Theory and Advanced Technology*, 8(1):37–57, January 1992.
- SWZ:97** [1746] Leang-San Shieh, Wei-Min Wang, and Jing-Bo Zheng. Robust control of sampled-data uncertain systems using digitally redesigned observer-based controllers. *International Journal of Control*, 66(1):43–64, 1997.
- SF:98a** [1747] T. Shimomura and T. Fujii. Subspace controller design to the mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  synthesis with uncommon LMI solutions. In *Proceedings of the 1998 American Control Conference*, pages 547–549, Philadelphia, PA, USA, June 1998.
- STF:01** [1748] T. Shimomura, M. Takahashi, and T. Fujii. Extended-space control design with parameter-dependent Lyapunov functions. In *Proceedings of the 40th IEEE Conference on Decision and Control*, pages 2157–2162, Orlando, FL, USA, December 2001.
- SMK:09** [1749] R. Shorten, O. Mason, and C. King. An alternative proof of the Barker, Berman, Plemmons (BBP) result on diagonal stability and extensions. *Linear Algebra and Its Applications*, 430(1):34–40, January 2009.
- SWMWK:07** [1750] R. Shorten, F. Wirth, O. Mason, K. Wulff, and C. King. Stability criteria for switched and hybrid systems. *SIAM Review*, 49(4):545–592, 2007.
- SN:03** [1751] R. N. Shorten and K. S. Narendra. On common quadratic Lyapunov functions for pairs of stable LTI systems whose system matrices are in companion form. *IEEE Transactions on Automatic Control*, 48(4):618–621, April 2003.
- SLL:09** [1752] Z. Shu, J. Lam, and P. Li. On positive filtering with  $\mathcal{H}_\infty$  performance for compartmental networks. *International Journal of Systems Science*, 40(9):961–971, September 2009.
- SDB:05** [1753] G. J. Silva, A. Datta, and S. P. Bhattacharyya. *PID Controllers for Time Delay Systems*. Birkhäuser, Boston, 2005.
- SJTACM:12** [1754] J. H. P. Silva, E. I. M. Junior, M. C. M. Teixeira, E. Assunç ao, R. Cardim, and M. R. Moreira. Controle  $\mathcal{H}_\infty$  com chaveamento do ganho da realimentação do vetor de estado para sistemas lineares incertos. In *Anais do XIX Congresso Brasileiro de Automática*, pages 2276–2281, Campina Grande, PB, September 2012.
- SV:95** [1755] T. Singh and S. R. Vadali. Robust time-delay control of multimode systems. *International Journal of Control*, 62(6):1329–1339, 1995.
- Sinha:95** [1756] A. S. C. Sinha. Stabilization of uncertain large-scale delay-differential control systems. *International Journal of Systems Science*, 26(11):2227–2233, 1995.
- Sir:91** [1757] H. Sira-Ramirez. Nonlinear P-I controller design for switched mode dc-to-dc power converters. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 38(4):410–417, April 1991.
- SESP:99** [1758] E. Skafidas, R. J. Evans, A. V. Savkin, and I. Petersen. Stability results for switched controller systems. *Automatica*, 35(4):553–564, April 1999.
- Ske:88** [1759] R. E. Skelton. *Dynamic Systems Control*. John Wiley & Sons, Inc., New York, USA, 1988.

- SIG:98** [1760] R. E. Skelton, T. Iwasaki, and K. Grigoriadis. *A Unified Algebraic Approach to Linear Control Design*. Taylor & Francis, Bristol, PA, 1998.
- Sko:90** [1761] V. I. Skorodinskii. Iterational method of construction of Lyapunov-Krasovskii functionals for linear systems with delay. *Automation and Remote Control*, 51(9):1205–1212, 1990.
- SS:89** [1762] T. Söderström and P. Stoica. *System Identification*. Prentice Hall, Englewood Cliffs NJ, 1989.
- SBD:85** [1763] Y. C. Soh, C. S. Berger, and K. P. Dabke. On the stability properties of polynomials with perturbed coefficients. *IEEE Transactions on Automatic Control*, 30(10):1033–1036, October 1985.
- SEPB:87** [1764] Y. C. Soh, R. J. Evans, I. R. Petersen, and R. E. Betz. Robust pole assignment. *Automatica*, 23(5):601–610, September 1987.
- SEBM:09** [1765] M. Soliman, A. L. Elshafei, F. Bendary, and W. Mansour. LMI static output-feedback design of fuzzy power system stabilizers. *Expert Systems with Applications*, 36(3, Part 2):6817–6825, April 2009.
- SEBM:10** [1766] M. Soliman, A. L. Elshafei, F. Bendary, and W. Mansour. Robust decentralized PID-based power system stabilizer design using an ILMI approach. *Electric Power Systems Research*, 80(12):1488–1497, December 2010.
- Sol:94** [1767] V. Solo. On the stability of slowly time-varying linear-systems. *Mathematics of Control Signals and Systems*, 7(4):331–350, 1994.
- SK:98** [1768] S. H. Song and J. K. Kim.  $\mathcal{H}_\infty$  control of discrete-time linear systems with norm-bounded uncertainties and time delay in state. *Automatica*, 34(1):137–139, 1998.
- SKYK:99** [1769] S. H. Song, J. K. Kim, C. H. Yim, and H. C. Kim.  $\mathcal{H}_\infty$  control of discrete-time linear systems with time-varying delays in state. *Automatica*, 35(9):1587–1591, 1999.
- SMP:09** [1770] F. O. Souza, L. A. Mozelli, and R. M. Palhares. On stability and stabilization of T–S fuzzy time-delayed systems. *IEEE Transactions on Fuzzy Systems*, 17(6):1450–1455, December 2009.
- SPB:08** [1771] F. O. Souza, R. M. Palhares, and K. A. Barbosa. New improved delay-dependent  $\mathcal{H}_\infty$  filter design for uncertain neutral systems. *IET Control Theory & Applications*, 2(12):1033–1043, December 2008.
- SDGD:14** [1772] M. Souza, G. S. Deaecto, J. C. Geromel, and J. Daafouz. Self-triggered linear quadratic networked control. *Optimal Control Applications and Methods*, 35(5):524–538, September/October 2014.
- SFG:14** [1773] M. Souza, A. R. Fioravanti, and J. C. Geromel.  $\mathcal{H}_2$  sampled-data filtering of linear systems. *IEEE Transactions on Signal Processing*, 62(18):4839–4846, September 2014.
- SG:15** [1774] M. Souza and J. C. Geromel. On a convex characterisation of stability and performance for hybrid linear systems. In *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 6623–6628, Osaka, Japan, December 2015.
- SVRK:13** [1775] S. Srinivasan, M. Vallabhan, S. Ramaswamy, and U. Kotta. Adaptive LQR controller for Networked Control Systems subjected to random communication delays. In *Proceedings of the 2013 American Control Conference*, pages 783–787, Washington, DC, EUA, June 2013.
- SD:91** [1776] G. Stein and J. Doyle. Beyond singular values and loopshapes. *AIAA Journal of Guidance and Control*, 14(1):5–16, 1991.
- SR:99** [1777] D. J. Stilwell and W. J. Rugh. Interpolation of observer state feedback controllers for gain scheduling. *IEEE Transactions on Automatic Control*, 44(6):1225–1229, June 1999.
- SR:00** [1778] D. J. Stilwell and W. J. Rugh. Stability preserving interpolation methods for the synthesis of gain scheduled controllers. *Automatica*, 36(5):665–671, May 2000.
- Sto:91** [1779] A. A. Stoorvogel. The singular  $\mathcal{H}_\infty$  control with dynamic measurement feedback. *SIAM Journal on Control and Optimization*, 29(1):160–184, 1991.

- [Sto:92] [1780] A. A. Stoorvogel. *The  $\mathcal{H}_\infty$  Control Problem: A State Space Approach*. Prentice Hall, Englewood Cliffs, NJ, USA, 1992.
- [Sto:92a] [1781] A. A. Stoorvogel. The singular  $\langle_2$  problem. *Automatica*, 28(3):627–631, 1992.
- [Sto:93] [1782] A. A. Stoorvogel. The robust  $\mathcal{H}_2$  control problem: a worst-case design. *IEEE Transactions on Automatic Control*, 38(9):1358–1370, September 1993.
- [SS:99] [1783] A. A. Stoorvogel and A. Saberi (Eds.). Special Issue: Control Problems with Constraints. *International Journal of Robust and Nonlinear Control*, 9(10), 1995.
- [ST:90] [1784] A. A. Stoorvogel and H. L. Trentelman. The quadratic matrix inequality in singular  $\mathcal{H}_\infty$  control with state feedback. *SIAM Journal on Control and Optimization*, 28(5):1190–1208, 1990.
- [Str:88] [1785] G. Strang. *Linear Algebra and Its Applications*. Saunders, 3rd edition, 1988.
- [Str:03] [1786] G. Strang. *Introduction to Linear Algebra*. Wellesley-Cambridge Press, 3rd edition, 2003.
- [Stu:99] [1787] J. F. Sturm. Using SeDuMi 1.02, a MATLAB toolbox for optimization over symmetric cones. *Optimization Methods and Software*, 11(1–4):625–653, 1999. <http://sedumi.ie.lehigh.edu/>.
- [SWC:98] [1788] H. Su, J. Wang, and J. Chu. Robust memoryless  $\mathcal{H}_\infty$  control for uncertain linear time-delay systems. In *Proceedings of the 1998 American Control Conference*, pages 3730–3731, Philadelphia, PA, USA, June 1998.
- [SCW:98] [1789] H. Y. Su, J. Chu, and J. C. Wang. A memoryless robust stabilizing controller for a class of uncertain linear time-delay system. *International Journal of Systems Science*, 29(2):191–197, 1998.
- [Su:94] [1790] J. H. Su. Further results on the robust stability of linear-systems with a single time-delay. *Systems & Control Letters*, 23(5):375–379, 1994.
- [Su:98] [1791] J. H. Su. Quantitative robustness measure of uncertain time delay systems via nonsingularity analysis. *IEEE Transactions on Automatic Control*, 43(5):729–732, 1998.
- [SFT:94] [1792] J. H. Su, I. K. Fong, and C. L. Tseng. Stability analysis of linear-systems with time-delay. *IEEE Transactions on Automatic Control*, 39(6):1341–1344, 1994.
- [SLT:91] [1793] T. J. Su, P. L. Liu, and J. T. Tsay. Stabilization of delay-dependence for saturating actuator systems. In *Proceedings of the 30th IEEE Conference on Decision and Control*, pages 2891–2892, Brighton, UK, December 1991.
- [SS:94] [1794] T. J. Su and W. J. Shyr. Robust D-stability for linear uncertain discrete time-delay systems. *IEEE Transactions on Automatic Control*, 39(2):425–428, 1994.
- [SSWB:14] [1795] X. Su, P. Shi, L. Wu, and M.V. Basin. Reliable filtering with strict dissipativity for T–S fuzzy time-delay systems. *IEEE Transactions on Cybernetics*, 44(12):2470–2483, December 2014.
- [SWS:13] [1796] X. Su, L. Wu, and P. Shi. Sensor networks with random link failures: distributed filtering for T–S fuzzy systems. *IEEE Transaction on Industrial Informatics*, 9(3):1739–1750, August 2013.
- [SARA:91] [1797] R. Suarez, J. Alvarez-Ramirez, and J. Alvarez. Linear systems with single saturated input: stability analysis. In *Proceedings of the 30th IEEE Conference on Decision and Control*, pages 223–228, Brighton, UK, December 1991.
- [SP:05] [1798] K. P. Sun and A. Packard. Robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filters for uncertain LFT systems. *IEEE Transactions on Automatic Control*, 50(5):715–720, May 2005.
- [SGK:11] [1799] W. Sun, H. Gao, and O. Kaynak. Finite frequency  $\mathcal{H}_\infty$  control for vehicle active suspension systems. *IEEE Transactions on Control Systems Technology*, 19(2):416–422, March 2011.
- [SKS:94] [1800] W. Sun, P. P. Khargonekar, and D. Shim. Solution to the positive real control problem for linear time-invariant systems. *IEEE Transactions on Automatic Control*, 39:2034–2046, 1994.

- [SCHC:96] [1801] Y.-J. Sun, J.-S. Cheng, J.-G. Hsieh, and C.-C. Chen. Feedback control of a class of nonlinear singularly perturbed systems with time delay. *International Journal of Systems Science*, 27(6):589–596, June 1996.
- [SH:98] [1802] Y. J. Sun and J. G. Hsieh. Robust stabilization for a class of uncertain nonlinear systems with time-varying delay: Razumikhin-type approach. *Journal of Optimization Theory and Applications*, 98(1):161–173, 1998.
- [SLH:98] [1803] Y. J. Sun, C. H. Lien, and J. G. Hsieh. Comments on D-stability of continuous time-delay systems subjected to a class of highly structured perturbations. *IEEE Transactions on Automatic Control*, 43(5):689–689, 1998.
- [Sun:08] [1804] Z. Sun. A note on marginal stability of switched systems. *IEEE Transactions on Automatic Control*, 53(2):625–31, March 2008.
- [SG:03] [1805] Z. D. Sun and S. S. Ge. Dynamic output feedback stabilization of a class of switched linear systems. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 50(8):1111–1115, August 2003.
- [SGL:02] [1806] Z. D. Sun, S. S. Ge, and T. H. Lee. Controllability and reachability criteria for switched linear systems. *Automatica*, 38(5):775–786, May 2002.
- [SKPJ:10] [1807] H. C. Sung, D. W. Kim, J.-B. Park, and Y.-H. Joo. Robust digital control of fuzzy systems with parametric uncertainties: LMI-based digital redesign approach. *Fuzzy Sets and Systems*, 161(6):919–933, March 2010.
- [SPJ:12] [1808] H. C. Sung, J. B. Park, and Y. H. Joo. Robust control of observer-based sampled-data systems: Digital redesign approach. *IET Control Theory & Applications*, 6(12):1842–1850, August 2012.
- [SPJ:14] [1809] H. C. Sung, J.-B. Park, and Y.-H. Joo. Observer-based sampled-data control for nonlinear systems: Robust intelligent digital redesign approach. *International Journal of Control, Automation, and Systems*, 12(3):486–496, June 2014.
- [SADG:97] [1810] V. L. Syrmos, C. T. Abdallah, P. Dorato, and K. Grigoriadis. Static output feedback – A survey. *Automatica*, 33(2):125–137, February 1997.
- [TRN:09] [1811] Mo. Tabbara, A. Rantzer, and D. Nešić. On controller & capacity allocation co-design for networked control systems. *Systems & Control Letters*, 58(9):672–676, September 2009.
- [Tad:90] [1812] G. Tadmor. Worst-case design in the time domain — the maximum principle and the standard H-infinity problem. *Mathematics of Control Signals and Systems*, 3(4):301–324, 1990.
- [Tad:97a] [1813] G. Tadmor. Robust control in the gap: A state-space solution in the presence of a single input delay. *IEEE Transactions on Automatic Control*, 42(9):1330–1335, 1997.
- [Tad:97b] [1814] G. Tadmor. Weighted sensitivity minimization in systems with a single input delay: a state space solution. *SIAM Journal on Control and Optimization*, 35(5):1445–1469, 1997.
- [Tak:98b] [1815] K. Takaba. Robust  $\mathcal{H}_2$  control of descriptor system with time-varying uncertainty. *International Journal of Control*, 71(4):559–579, 1998.
- [TK:96a] [1816] K. Takaba and T. Katayama. Discrete-time  $\mathcal{H}_\infty$  algebraic Riccati equation and parametrization of all  $\mathcal{H}_\infty$  filters. *International Journal of Control*, 64(6):1129–1149, June 1996.
- [TK:96b] [1817] K. Takaba and T. Katayama.  $\mathcal{H}_2$  optimal output feedback control for descriptor systems. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 1, pages 1015–1020, Kobe, Japan, 1996.
- [TS:85] [1818] T. Takagi and M. Sugeno. Fuzzy identification of systems and its applications to modeling and control. *IEEE Transactions on Systems, Man, and Cybernetics*, SMC-15(1):116–132, January 1985.

- Tak:96** [1819] R. H. C. Takahashi. *Controle Singular de Sistemas Incertos*. PhD thesis, FEEC — Universidade Estadual de Campinas, 1998.
- TDPP:00** [1820] R. H. C. Takahashi, D. A. Dutra, R. M. Palhares, and P. L. D. Peres. On robust non-fragile static state-feedback controller synthesis. In *Proceedings of the 39th IEEE Conference on Decision and Control*, volume 1, pages 4909–4914, Sydney, AUS, December 2000.
- TPP:99** [1821] R. H. C. Takahashi, R. M. Palhares, and P. L. D. Peres. Discrete-time singular observers:  $\mathcal{H}_2/\mathcal{H}_\infty$  optimality and unknown inputs. *International Journal of Control*, 72(6):481–492, April 1999.
- TP:96a** [1822] R. H. C. Takahashi and P. L. D. Peres. Sliding modes solution for the  $\langle_2$  singular problem. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 1, pages 243–248, Kobe, Japan, 1996.
- TP:98** [1823] R. H. C. Takahashi and P. L. D. Peres.  $\mathcal{H}_\infty$  design of switching surfaces for sliding modes control with non-matching disturbances. *IEE Proceedings — Control Theory and Applications*, 145(4):435–441, July 1998.
- TP:99b** [1824] R. H. C. Takahashi and P. L. D. Peres.  $\mathcal{H}_2$  guaranteed cost switching surface design for sliding modes with non-matching disturbances. *IEEE Transactions on Automatic Control*, 44(11):2214–2218, November 1999.
- TP:99a** [1825] R. H. C. Takahashi and P. L. D. Peres. Unknown input observers for uncertain systems: a unifying approach. *European Journal of Control*, 5(2–4):261–275, 1999.
- TPF:97** [1826] R. H. C. Takahashi, P. L. D. Peres, and P. A. V. Ferreira. Multiobjective  $\mathcal{H}_\infty/\mathcal{H}_\infty$  guaranteed cost PID design. *IEEE Control Systems Magazine*, 17(5):37–47, October 1997.
- TRP:02** [1827] R. H. C. Takahashi, D. C. W. Ramos, and P. L. D. Peres. Robust control synthesis via a genetic algorithm and LMIs. In *Proceedings of the 15th IFAC World Congress*, volume 1, pages 1664–1669, Barcelona, Spain, July 2002.
- Tam:75** [1828] H. Tamura. Decentralized optimization for distributed-lag models of discrete systems. *Automatica*, 11(6):593–602, 1975.
- TGW:99** [1829] K. Tan, K. M. Grigoriadis, and F. Wu. State-feedback control of LPV sampled-data systems. In *Proceedings of the 38th IEEE Conference on Decision and Control*, volume 4, pages 3894–3899, Phoenix, AR, USA, 1999.
- TGW:02** [1830] K. Tan, K. M. Grigoriadis, and F. Wu. Output-feedback control of LPV sampled-data systems. *International Journal of Control*, 75(4):252–264, 2002.
- TS:99** [1831] H. Tanaka and T. Sugie. New characterization of fixed-order controllers based on LMI. *International Journal of Control*, 72(1):58–74, 1999.
- THW:01** [1832] K. Tanaka, T. Hori, and H. O. Wang. A fuzzy Lyapunov approach to fuzzy control system design. In *Proceedings of the 2001 American Control Conference*, pages 4790–4795, Arlington, VA, USA, June 2001.
- THW:03** [1833] K. Tanaka, T. Hori, and H. O. Wang. A multiple Lyapunov function approach to stabilization of fuzzy control systems. *IEEE Transactions on Fuzzy Systems*, 11(4):582–589, August 2003.
- TIW:96** [1834] K. Tanaka, T. Ikeda, and H. O. Wang. Robust stabilization of a class of uncertain nonlinear systems via fuzzy control: Quadratic stabilizability,  $\mathcal{H}_\infty$  control theory, and linear matrix inequalities. *IEEE Transactions on Fuzzy Systems*, 4(1):1–13, February 1996.
- TIW:98** [1835] K. Tanaka, T. Ikeda, and H. O. Wang. Fuzzy regulators and fuzzy observers: Relaxed stability conditions and LMI-based designs. *IEEE Transactions on Fuzzy Systems*, 6(2):250–265, May 1998.



- TIW:98a** [1836] K. Tanaka, T. Ikeda, and H. O. Wang. A unified approach to controlling chaos via an LMI-based fuzzy control system design. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 45(10):1021–1040, October 1998.
- TOW:07** [1837] K. Tanaka, H. Ohtake, and H. O. Wang. A descriptor system approach to fuzzy control system design via fuzzy Lyapunov functions. *IEEE Transactions on Fuzzy Systems*, 15(3):333–341, June 2007.
- TOW:09** [1838] K. Tanaka, H. Ohtake, and H. O. Wang. Guaranteed cost control of polynomial fuzzy systems via a sum of squares approach. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 39(2):561–567, April 2009.
- TW:01** [1839] K. Tanaka and H. Wang. *Fuzzy Control Systems Design and Analysis: A Linear Matrix Inequality Approach*. John Wiley & Sons, New York, NY, 2001.
- TL:11** [1840] T. Tanaka and C. Langbort. The bounded real lemma for internally positive systems and H-infinity structured static state feedback. *IEEE Transactions on Automatic Control*, 56(9):2218–2223, September 2011.
- TGK:16** [1841] Y. Tang, H. Gao, and J. Kurths. Robust  $\mathcal{H}_{\infty}$  self-triggered control of networked systems under packet dropouts. *IEEE Transactions on Cybernetics*, 46(12):3294–3305, December 2016.
- TAC:05** [1842] S. Tarbouriech, C. T. Abdallah, and J. N. Chiasson. *Advances in Communication Control Networks*, volume 308. Springer-Verlag, Heidelberg, GE, 2005.
- TG:97a** [1843] S. Tarbouriech and G. Garcia, editors. *Control of Uncertain Systems with Bounded Inputs*, volume 227 of *Lecture Notes in Control and Information Sciences*. Springer-Verlag, Berlin, Germany, 1997.
- TG:98** [1844] S. Tarbouriech and G. Garcia. Robust stability of uncertain linear systems with saturating inputs: an LMI approach. In *Proceedings of the IFAC Conference on System Structure and Control*, pages 379–384, Brighton, UK, 1998.
- TG:99** [1845] S. Tarbouriech and G. Garcia. Stabilization of neutral linear time-delay systems with saturating actuators. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 2011–2016, Phoenix, AZ, USA, December 1999.
- TGG:07** [1846] S. Tarbouriech, G. Garcia, and A. H. Glatfelter, editors. *Advanced Strategies in Control Systems with Input and Output Constraints*, volume 346 of *Lecture Notes in Control and Information Sciences*. Springer-Verlag, Berlin, Germany, 2007.
- TGGdS:02** [1847] S. Tarbouriech, G. Garcia, and J. M. Gomes da Silva Jr. Robust stability of uncertain polytopic linear time-delay systems with saturating inputs: an LMI approach. *Computers & Electrical Engineering*, 28(3):157–169, May 2002.
- TGGdSQ:11** [1848] S. Tarbouriech, G. Garcia, J. M. Gomes da Silva Jr., and I. Queinnec. *Stability and Stabilization of Linear Systems with Saturating Actuators*. Springer, London, UK, 2011.
- TPGQ:00** [1849] S. Tarbouriech, G. Garcia, P. L. D. Peres, and I. Queinnec. Delay-dependent stabilization of time-delay systems with saturating actuators. In *IEEE 39th Conference on Decision and Control*, volume 1, pages 3248–3253, Sydney, Australia, December 2000.
- TPGQ:00** [1850] S. Tarbouriech, G. Garcia, P. L. D. Peres, and I. Queinnec. Stabilization of linear discrete-time delay systems with additive disturbance and saturating actuators. In *Proceedings of the 3rd IFAC Symposium on Robust Control Design (ROCOND 2000)*, volume 1, pages 151–156, Prague, Czech Republic, June 2000.
- TGdS:00** [1851] S. Tarbouriech and J. M. Gomes da Silva Jr. Synthesis of controllers for continuous-time delay systems with saturating controls via LMIs. *IEEE Transactions on Automatic Control*, 45(1):105–111, January 2000.

- TGdSG:04** [1852] S. Tarbouriech, J. M. Gomes da Silva Jr., and G. Garcia. Delay-dependent anti-windup strategy for linear systems with saturating inputs and delayed outputs. *International Journal of Robust and Nonlinear Control*, 14(7):665–682, May 2004.
- TGdSQG:03** [1853] S. Tarbouriech, J. M. Gomes da Silva Jr., I. Queinnec, and G. Garcia. Improving the stability region of saturated linear systems controlled by dynamic delayed output feedback through anti-windup strategy. In *Proceedings of the 4th IFAC International Workshop on Linear Time Delay Systems*, Rocquencourt, France, September 2003. in CD-rom.
- TPGQ:02** [1854] S. Tarbouriech, P. L. D. Peres, G. Garcia, and I. Queinnec. Delay-dependent stabilization and disturbance tolerance for time-delay systems subject to actuator saturation. *IEE Proceedings — Control Theory and Applications*, 149(5):387–393, September 2002.
- TPGdS:06** [1855] S. Tarbouriech, C. Prieur, and J. M. Gomes da Silva Jr. Stability analysis and stabilization of systems presenting nested saturations. *IEEE Transactions on Automatic Control*, 51(8):1364–1371, August 2006.
- TQCP:09** [1856] S. Tarbouriech, I. Queinnec, T. R. Calliero, and P. L. D. Peres. Control design for bilinear systems with a guaranteed region of stability: an LMI-based approach. In *Proceedings of the 17th Mediterranean Conference on Control and Automation (MED2009)*, pages 809–814, Thessaloniki, Greece, June 2009.
- TAA:03** [1857] M. C. M. Teixeira, E. Assunção, and R. G. Avellar. On relaxed LMI-based designs for fuzzy regulators and fuzzy observers. *IEEE Transactions on Fuzzy Systems*, 11(5):613–623, October 2003.
- TPA:00** [1858] M. C. M. Teixeira, H. C. Pietrobom, and E. Assunção. Novos resultados sobre a estabilidade e controle de sistemas não-lineares utilizando modelos fuzzy e LMI. *SBA: Controle & Automação*, 11(2):37–48, Jan/Fev/Mar/Abr 2000.
- TZ:99** [1859] M. C. M. Teixeira and S. H. Žak. Stabilizing controller design for uncertain nonlinear systems using fuzzy models. *IEEE Transactions on Fuzzy Systems*, 7(2):133–142, April 1999.
- TKM:99** [1860] C. Teolis, M. Mattice, and H. G. Kwatny. Symbolic computing tools for nonsmooth dynamics and control. *Variable Structure Systems, Sliding Mode and Nonlinear Control*, 247:237–262, 1999.
- TVZ:94** [1861] A. Tesi, A. Vicino, and G. Zappa. Convexity properties of polynomials with assigned root location. *IEEE Transactions on Automatic Control*, 39(3):668–672, March 1994.
- TVG:96** [1862] A. Tesi, F. Villoresi, and R. Genesio. On the stability domain estimation via a quadratic Lyapunov function: convexity and optimality properties for polynomial systems. *IEEE Transactions on Automatic Control*, 41(11):1650–1657, November 1996.
- TS:96a** [1863] Y. Theodor and U. Shaked. A dynamic game approach to mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  estimation. *International Journal of Robust and Nonlinear Control*, 6(4):331–345, 1996.
- TS:96b** [1864] Y. Theodor and U. Shaked. Robust discrete-time minimum variance filtering. *IEEE Transactions on Signal Processing*, 44(2):181–189, February 1996.
- TSdS:94** [1865] Y. Theodor, U. Shaked, and C. E. de Souza. A game theory approach to robust discrete-time  $\mathcal{H}_\infty$  estimation. *IEEE Transactions on Signal Processing*, 42(6):1486–1495, 1994.
- Tib:00** [1866] B. Tibken. Estimation of the domain of attraction for polynomial systems via LMI’s. In *Proceedings of the 39th IEEE Conference on Decision and Control*, pages 3860–3865, Sydney, Australia, December 2000.
- TH:00** [1867] B. Tibken and O. Hachicho. Estimation of the domain of attraction for polynomial systems using multidimensional grid. In *Proceedings of the 39th IEEE Conference on Decision and Control*, pages 3870–3874, Sydney, Australia, December 2000.
- TC:12** [1868] L. Tie and K.-Y. Cai. On controllability of a class of discrete-time homogeneous bilinear systems with solvable controls. *International Journal of Robust and Nonlinear Control*, 22(6):591–603, April 2012.

- Tin:06** [1869] C.-S. Ting. Stability analysis and design of Takagi–Sugeno fuzzy systems. *Information Sciences*, 176(19):2817–2845, October 2006.
- TC:11** [1870] C.-S. Ting and Y.-N. Chang. Robust anti-windup controller design of time-delay fuzzy systems with actuator saturations. *Information Sciences*, 181(15):3225–3245, August 2011.
- TH:94** [1871] E. Tissir and A. Hmamed. Stability-tests of interval time-delay systems. *Systems & Control Letters*, 23(4):263–270, 1994.
- TF:08** [1872] M. G. Todorov and M. D. Fragoso. Output feedback  $\mathcal{H}_\infty$  control of continuous-time infinite Markovian jump linear systems via LMI methods. *SIAM Journal on Applied Mathematics*, 47(2):950–974, 2008.
- TF:16** [1873] M. G. Todorov and M. D. Fragoso. New methods for mode-independent robust control of Markov jump linear systems. *Systems & Control Letters*, 90:38–44, April 2016.
- TFC:15** [1874] M. G. Todorov, M. D. Fragoso, and O. L. V. Costa. A new approach for the  $\mathcal{H}_\infty$  control of Markov jump linear systems with partial information. In *Proceedings of the 54th IEEE Conference on Decision and Control*, pages 3592–3597, Osaka, Japan, December 2015.
- TOP:09a** [1875] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. LMI relaxations for nonquadratic stabilization of discrete-time Takagi–Sugeno systems based on polynomial fuzzy Lyapunov functions. In *Proceedings of the 17th Mediterranean Conference on Control and Automation (MED2009)*, pages 7–12, Thessaloniki, Greece, June 2009.
- TOP:09b** [1876] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Relaxações LMIs para estabilização não-quadrática  $\mathcal{H}_2$  de sistemas nebulosos discretos de Takagi–Sugeno. In *Anais do IX Congresso Brasileiro de Automação Inteligente*, Brasília, DF, Brasil, September 2009.
- TOP:10b** [1877] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Controle seletivo com critério  $\mathcal{H}_2$  de sistemas nebulosos Takagi–Sugeno. In *Anais do XVIII Congresso Brasileiro de Automática*, pages 4118–4125, Bonito, MS, Brasil, September 2010.
- TOP:10a** [1878] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Selective stabilization of Takagi–Sugeno fuzzy systems. In *Proceedings of the 2010 IEEE International Conference on Fuzzy Systems*, pages 2772–2779, Barcelona, Spain, July 2010.
- TOP:11a** [1879] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Improved stabilization conditions for Takagi–Sugeno fuzzy systems via fuzzy integral Lyapunov functions. In *Proceedings of the 2011 American Control Conference*, pages 4970–4975, San Francisco, CA, USA, June 2011.
- TOP:11c** [1880] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. An LMI-based approach to static output feedback stabilization of T–S fuzzy systems. In *Proceedings of the 18th IFAC World Congress*, pages 12593–12598, Milano, Italy, August 2011.
- TOP:11d** [1881] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Relaxações LMIs para realimentação de saída  $\mathcal{H}_\infty$  de sistemas nebulosos Takagi–Sugeno contínuos no tempo. In *Anais do X Congresso Brasileiro de Automação Inteligente*, pages 903–908, São João del-Rei, MG, Brasil, September 2011.
- TOP:11b** [1882] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Selective  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  stabilization of Takagi–Sugeno fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 19(5):890–900, October 2011.
- TOP:12b** [1883] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Realimentação dinâmica de saída de ordem reduzida para sistemas nebulosos Takagi–Sugeno discretos no tempo. In *Anais do XIX Congresso Brasileiro de Automática*, pages 2928–2934, Campina Grande, PB, Brasil, Setembro 2012.
- TOP:12a** [1884] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. Reduced-order dynamic output feedback control of continuous-time T–S fuzzy systems. *Fuzzy Sets and Systems*, 207:27–44, November 2012.
- TOP:13a** [1885] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres. LMI relaxations for  $\mathcal{H}_\infty$  and  $\mathcal{H}_2$  static output feedback of Takagi–Sugeno continuous-time fuzzy systems. *Journal of Control, Automation and Electrical Systems*, 24:33–45, April 2013.

- TOP:15** [1886] E. S. Tognetti, R. C. L. F. Oliveira, and P. L. D. Peres.  $\mathcal{H}_\infty$  and  $\mathcal{H}_2$  nonquadratic stabilisation of discrete-time Takagi-Sugeno systems based on multi-instant fuzzy Lyapunov functions. *International Journal of Systems Science*, 46(1):76–87, January 2015.
- TO:10** [1887] E. S. Tognetti and V. A. Oliveira. Fuzzy pole placement based on piecewise Lyapunov functions. *International Journal of Robust and Nonlinear Control*, 20(5):571–578, March 2010.
- TTT:99** [1888] K. C. Toh, M. J. Todd, and R. Tütüncü. SDPT3 — A Matlab software package for semidefinite programming, Version 1.3. *Optimization Methods and Software*, 11(1):545–581, 1999.
- TO:95** [1889] O. Toker and H. Ozbay. Gap metric problem for MIMO delay systems — parametrization of all suboptimal controllers. *Automatica*, 31(7):931–940, 1995.
- THV:10** [1890] R. Tóth, P. S. C. Heuberger, and P. M. J. Van den Hof. Discretisation of linear parameter-varying state-space representations. *IET Control Theory & Applications*, 4(10):2082–2096, October 2010.
- TPAE:13** [1891] J.-F. Tregouet, D. Peaucelle, D. Arzelier, and Y. Ebihara. Periodic memory state-feedback controller: New formulation, analysis, and design results. *IEEE Transactions on Automatic Control*, 58(8):1986–2000, August 2013.
- TA:94** [1892] H. Trinh and M. Aldeen. Stabilization of uncertain dynamic delay systems by memoryless feedback controllers. *International Journal of Control*, 59(6):1525–1542, 1994.
- TA:95b** [1893] H. Trinh and M. Aldeen. D-stability analysis of discrete-delay perturbed systems. *International Journal of Control*, 61(2):493–505, 1995.
- TA:95a** [1894] H. Trinh and M. Aldeen. Robust stability of singularly perturbed discrete-delay systems. *IEEE Transactions on Automatic Control*, 40(9):1620–1623, 1995.
- TA:97** [1895] H. Trinh and M. Aldeen. A memoryless state observer for discrete time-delay systems. *IEEE Transactions on Automatic Control*, 42(11):1572–1577, 1997.
- Tro:99** [1896] A. Trofino. Parameter dependent Lyapunov functions for a class of uncertain linear systems: an LMI approach. In *Proceedings of the 38th IEEE Conference on Decision and Control*, volume 1, pages 2341–2346, Phoenix, AZ, December 1999.
- Tro:02** [1897] A. Trofino. Robust, stable and reduced order dynamic output feedback controllers with guaranteed  $\mathcal{H}_2$  performance. In *Proceedings of the 41st IEEE Conference on Decision and Control*, Las Vegas, NV, USA, December 2002. 3470–3475.
- Tro:09** [1898] A. Trofino. Sufficient LMI conditions for the design of static and reduced order controllers. In *Proceedings of the 48th IEEE Conference on Decision and Control — 28th Chinese Control Conference*, pages 6668–6673, Shanghai, P. R. China, December 2009.
- TASC:09** [1899] A. Trofino, D. Assmann, C. C. Scharlau, and D. F. Coutinho. Switching rule design for switched dynamic systems with affine vector fields. *IEEE Transactions on Automatic Control*, 54(9):2215–2222, September 2009.
- TCB:04** [1900] A. Trofino, D. F. Coutinho, and K. A. Barbosa. Improved  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  conditions for uncertain linear systems. In *Anais do XV Congresso Brasileiro de Automática*, Gramado, RS, Setembro 2004. in CD-rom.
- TCB:05** [1901] A. Trofino, D. F. Coutinho, and K. A. Barbosa. Improved  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  conditions for robust analysis and control synthesis of linear systems. *SBA: Controle & Automação*, 16(4):427–434, Outubro/Novembro/Dezembro 2005.
- TdS:01** [1902] A. Trofino and C. E. de Souza. Biquadratic stability of uncertain linear systems. *IEEE Transactions on Automatic Control*, 46(8):1303–1307, August 2001.

- TLDDN:97** [1903] A. Trofino, H. Li, L. Dugard, J. M. Dion, and S. I. Niculescu. Constrained robust guaranteed cost control for uncertain linear time-delay systems. In *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 1615–1620, San Diego, CA, December 1997.
- TSZ:93** [1904] J. S. H. Tsai, L. S. Shieh, and J. L. Zhang. An improvement on the digital redesign method based on the block-pulse function approximation. *Circuits Systems and Signal Processing*, 12(1):37–49, March 1993.
- TI:93** [1905] K. S. Tsakalis and P. A. Ioannou. *Linear Time-Varying Systems: Control and Adaptation*. Prentice Hall, Englewood Cliffs, NJ, 1993.
- TLS:96** [1906] J. T. Tsay, P. L. Liu, and T. J. Su. Robust stability for perturbed large-scale time-delay systems. *IEEE Proceedings — Control Theory and Applications*, 143(3):233–236, 1996.
- TFS:94** [1907] C. L. Tseng, I. K. Fong, and J. H. Su. Robust stability analysis for uncertain delay systems with output-feedback controller. *Systems & Control Letters*, 23(4):271–278, 1994.
- Tse:06** [1908] C.-S. Tseng. Robust fuzzy filter design for nonlinear systems with persistent bounded disturbances. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 36(4):940–945, August 2006.
- TC:06** [1909] C.-S. Tseng and B.-S. Chen.  $\mathcal{H}_\infty$  fuzzy control design for nonlinear systems subject to actuator saturation. In *Proceedings of the 2006 IEEE International Conference on Fuzzy Systems*, pages 783–788, Vancouver, BC, Canada, July 2006.
- TB:04** [1910] P. Tsiotras and P.-A. Bliman. An exact stability analysis test for single-parameter polynomially-dependent linear systems. In *Proceedings of the 43rd IEEE Conference on Decision and Control*, volume 1, pages 1337–1340, Paradise Island, Bahamas, December 2004.
- TB:06** [1911] P. Tsiotras and P.-A. Bliman. An exact stability analysis test for single-parameter polynomially-dependent linear systems. *IEEE Transactions on Automatic Control*, 51(7):1161–1164, July 2006.
- TV:96** [1912] G. I. Tsoutsinos and R. B. Vinter. Duality theorems for convex problems with time-delay. *Journal of Optimization Theory and Applications*, 87(1):167–195, 1995.
- TAA:02** [1913] H. D. Tuan and P. Apkarian. Low nonconvexity-rank bilinear matrix inequalities: algorithms and applications in robust controller and structure designs. *IEEE Transactions on Automatic Control*, 45(11):2111–2117, November 2002.
- TANY:01** [1914] H. D. Tuan, P. Apkarian, T. Narikiyo, and Y. Yamamoto. Parameterized linear matrix inequality techniques in fuzzy control system design. *IEEE Transactions on Fuzzy Systems*, 9(2):324–332, April 2001.
- TAN:01** [1915] H. D. Tuan, P. Apkarian, and T. Q. Nguyen. Robust and reduced-order filtering: New LMI-based characterizations and methods. *IEEE Transactions on Signal Processing*, 49(12):2975–2984, December 2001.
- TH:97** [1916] H. D. Tuan and S. Hosoe. On robust and  $\mathcal{H}_\infty$  controls for a class of linear and bilinear systems with nonlinear uncertainty. *Automatica*, 33(7):1373–1377, 1997.
- TSAN:05** [1917] H. D. Tuan, T. T. Son, P. Apkarian, and T. Q. Nguyen. Low-order IIR filter bank design. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 52(8):1673–1683, August 2005.
- TFP:94** [1918] J. Tuch, A. Feuer, and Z. J. Palmor. Time-delay estimation in continuous linear time-invariant systems. *IEEE Transactions on Automatic Control*, 39(4):823–827, 1994.
- TOJC:97** [1919] Y. Y. Tzou, R. S. Ou, S. L. Jung, and M. Y. Chang. High-performance programmable AC power source with low harmonic distortion using DSP-based repetitive control technique. *IEEE Transactions on Power Electronics*, 12(4):715–725, July 1997.



- [Uhl:07] [1920] T. Uhl. The inverse identification problem and its technical application. *Archive of Applied Mechanics*, 77(5):325–337, May 2007.
- [Uhl:79] [1921] F. Uhlig. A recurring theorem about pairs of quadratic forms and extensions: A survey. *Linear Algebra and Its Applications*, 25(1):219–237, 1979.
- [UYK:96] [1922] S. Ushida, S. Yamamoto, and H. Kimura. Quadratic stabilization by  $\mathcal{H}_\infty$  state feedback controllers with adjustable parameters. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 1, pages 1003–1008, Kobe, Japan, 1996.
- [VL:87] [1923] P. Vaidyanathan and V. Liu. An improved sufficient condition for absence of limit cycles in digital filters. *IEEE Transactions on Circuits and Systems*, 34(3):319–332, March 1987.
- [VMS:01] [1924] G. E. Valderrama, P. Mattavelli, and A. M. Stankovic. Reactive power and unbalance compensation using STATCOM with dissipativity-based control. *IEEE Transactions on Control Systems Technology*, 9(5):718–727, September 2001.
- [VLP:07] [1925] G. Valmórbida, V. J. S. Leite, and P. L. D. Peres. Condições LMI do teorema do ganho pequeno escalonado para análise de estabilidade de sistemas incertos com atraso. *SBA: Controle & Automação*, 18(4):447–458, Outubro/Novembro/Dezembro 2007.
- [Val:06] [1926] G. Valmórbida. Estabilidade de sistemas com atraso: Anlise de incertezas e de saturação empregando desigualdades matriciais lineares. Master’s thesis, Universidade Estadual de Campinas, Campinas, SP, Brazil, Maro 2006.
- [VTG:09] [1927] G. Valmórbida, S. Tarbouriech, and G. Garcia. Region of attraction estimates for polynomial systems. In *Proceedings of the 48th IEEE Conference on Decision and Control — 28th Chinese Control Conference*, pages 5947–5952, Shanghai, P.R. China, December 2009.
- [VTG:10] [1928] G. Valmórbida, S. Tarbouriech, and G. Garcia. State feedback design for input-saturating quadratic systems. *Automatica*, 46(7):1196–1202, July 2010.
- [VTG:13] [1929] G. Valmórbida, S. Tarbouriech, and G. Garcia. Design of polynomial control laws for polynomial systems subject to actuator saturation. *IEEE Transactions on Automatic Control*, 58(7):1758–1770, July 2013.
- [WV:08] [1930] J.-W. van Wingerden and M. Verhaegen. Subspace identification of multivariable LPV systems: a novel approach. In *Proceedings of the 2008 IEEE International Conference on Computer-Aided Control System Design*, pages 840–845, San Antonio, TX, USA, September 2008.
- [VB:00] [1931] J. G. VanAntwerp and R. D. Braatz. A tutorial on linear and bilinear matrix inequalities. *Journal of Process Control*, 10(4):363–385, August 2000.
- [VB:96] [1932] L. Vandenberghe and S. Boyd. Semidefinite programming. *SIAM Review*, 38(1):49–95, March 1996.
- [VBW:98] [1933] L. Vandenberghe, S. P. Boyd, and S. Wu. Determinant maximization with linear matrix inequality constraints. *SIAM Journal on Matrix Analysis and Applications*, 19(2):499–533, 1998.
- [VFdV:07] [1934] A. N. Vargas, W. Furloni, and J. B. R. do Val. Control of observed Markov jump linear systems with constraints on state and input: A necessary optimality condition. In *Proceedings of the 3rd IFAC Symposium on System, Structure and Control (SSSC07)*, pages 250–255, Foz do Iguaçu, PR, Brazil, October 2007.
- [VMP:89] [1935] R. J. Veillette, J. V. Medanic, and W. R. Perkins. Robust stabilization and disturbance rejection for systems with structured uncertainty. In *Proceedings of the 28th IEEE Conference on Decision and Control*, pages 936–941, Tampa, FL, USA, 1989.
- [VMP:92] [1936] R. J. Veillette, J. V. Medanić, and W. R. Perkins. Design of reliable control systems. *IEEE Transactions on Automatic Control*, 37(3):280–304, March 1992.

- VMVF:05** [1937] M. Velasco, P. Marti, R. Villa, and J. M. Fuertes. Stability of networked control systems with bounded sampling rates and time delays. In *31st Annual Conference of IEEE Industrial Electronics Society*, pages 2417–2422, Raleigh, NC, USA, November 2005.
- VG:05** [1938] J. M. Velni and K. M. Grigoriadis. Delay-dependent  $\mathcal{H}_\infty$  filtering for state-delayed LPV systems. In *Proceedings of the 13th Mediterranean Conference on Control and Automation*, pages 1538–1543, Limassol, Cyprus, June 2005.
- VG:07** [1939] J. M. Velni and K. M. Grigoriadis. Less conservative results of delay-dependent  $\mathcal{H}_\infty$  filtering for a class of time-delayed LPV systems. *International Journal of Control*, 80(2):281–291, February 2007.
- VG:08** [1940] J. M. Velni and K. M. Grigoriadis. Delay-dependent  $\mathcal{H}_\infty$  filtering for time-delayed LPV systems. *Systems & Control Letters*, 57(4):290–299, April 2008.
- Ver:99** [1941] E. I. Verriest. Robust stability and adaptive control of time-varying neutral systems. In *Proceedings of the 38th IEEE Conference on Decision and Control*, pages 4690–4695, Phoenix, AZ, December 1999.
- VFK:93** [1942] E. I. Verriest, M. K. H. Fan, and J. Kullstam. Frequency domain robust stability criteria for linear delay systems. In *Proceedings of the 32nd IEEE Conference on Decision and Control*, pages 3473–3478, December 1993.
- VI:95** [1943] E. I. Verriest and A. F. Ivanov. Robust stability of delay-difference equations. In *Proceedings of the 34th IEEE Conference on Decision and Control*, pages 386–391, New Orleans, LA, December 1995.
- VSVG:99** [1944] E. Vidal-Idiarte, L. M. Salamero, H. Valderrama, and F. Guinjoa.  $\mathcal{H}_\infty$  control of DC-to-DC switching converters. In *1999 IEEE International Symposium on Circuits and Systems, ISCAS-1999*, volume 5, pages 238–241, Orlando, FL, 1999.
- Vid:93** [1945] M. Vidyasagar. *Nonlinear Systems Analysis*. Prentice-Hall, Englewood Cliffs, NJ, 1993.
- VK:77** [1946] A. Vieira and T. Kailath. On another approach to the Schur-Cohn criterion. *IEEE Transactions on Circuits and Systems*, CAS-24:218–220, April 1977.
- VOP:14** [1947] H. S. Vieira, R. C. L. F. Oliveira, and P. L. D. Peres. Relaxações LMIs com escalares para realimentação de estados robusta de sistemas politópicos. In *Anais do XX Congresso Brasileiro de Automática*, pages 1112–1118, Belo Horizonte, MG, Brasil, Setembro 2014.
- VOP:15** [1948] H. S. Vieira, R. C. L. F. Oliveira, and P. L. D. Peres. Robust stabilization and  $\mathcal{H}_\infty$  control by means of state-feedback for polytopic linear systems using LMIs and scalar searches. In *Proceedings of the 2015 American Control Conference*, pages 5966–5973, Chicago, IL, USA, July 2015.
- Vol:31** [1949] V. Volterra. *Leons sur la Thorie Mathematique de la Lutte pour la Vie*. Gauthier-Villars, Paris, 1931.
- vZPS:97** [1950] F. J. Von Zuben, P. L. D. Peres, and S. R. Souza. A linear optimization approach to mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  control for discrete-time uncertain systems. *SBA: Controle & Automação*, 8(3):113–120, Setembro/Dezembro 1997.
- SZ:05** [1951] D. D. Š and A. I. Zečević. Control of large-scale systems: Beyond decentralized feedback. *Annual Reviews in Control*, 29(2):169–179, 2005.
- Sil:78** [1952] D. D. Šiljak. *Large Scale Dynamic Systems: Stability and Structure*. Elsevier North-Holland, Amsterdam, 1978.
- Sil:91** [1953] D. D. Šiljak. *Decentralized Control of Complex Systems*. Academic Press, San Diego, 1991.
- Sil:11** [1954] D. D. Šiljak. *Decentralized Control of Complex Systems*. Dover Books on Electrical Engineering, 2011.
- WSS:06** [1955] N. Wada, K. Saito, and M. Saeki. Model predictive control for linear parameter varying systems using parameter dependent Lyapunov function. *IEEE Transactions on Circuits and Systems II: Express Briefs*, 53(12):1446–1450, December 2006.

- Wal:03** [1956] R. Wallin. User's guide to kypd solver. Technical Report LiTH-ISY-R-2517, Department of Electrical Engineering, Linköping University, Linköping, Sweden, April 2003.
- WT:00** [1957] G. F. Wallis and R. Tymerski. Generalized approach for  $\mu$ -synthesis of robust switching regulators. *IEEE Transactions on Aerospace and Electronic Systems*, 36(2):422–431, 2000.
- WY:01** [1958] G. C. Walsh and H. Ye. Scheduling of networked control systems. *IEEE Control Systems Magazine*, 21(1):57–65, February 2001.
- WYB:02** [1959] G. C. Walsh, H. Ye, and L. G. Bushnell. Stability analysis of networked control systems. *IEEE Transactions on Control Systems Technology*, 10(3):438–446, May 2002.
- WH:13** [1960] C. Wang and T. Huang. Static output feedback control for positive linear continuous-time systems. *International Journal of Robust and Nonlinear Control*, 23(14):1537–1544, September 2013.
- WB:98** [1961] F. Wang and V. Balakrishnan. Improved stability analysis and gain-scheduled controller synthesis for parameter-dependent systems. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 1771–1776, Tampa, FL, USA, December 1998.
- WB:02** [1962] F. Wang and V. Balakrishnan. Improved stability analysis and gain-scheduled controller synthesis for parameter-dependent systems. *IEEE Transactions on Automatic Control*, 47(5):720–734, May 2002.
- WB:03** [1963] F. Wang and V. Balakrishnan. Robust steady-state filtering for systems with deterministic and stochastic uncertainties. *IEEE Transactions on Signal Processing*, 51(10):2550–2558, October 2003.
- WL:08** [1964] F.-Y. Wang and D. Liu. *Networked Control Systems: Theory and Applications*. Springer-Verlag, London, 2nd edition, 2008.
- WJ:13** [1965] H. Wang and H. Ju. Reliable  $\mathcal{H}_\infty$  filtering for LPV systems with sensor faults in finite frequency domain. *International Journal of Systems Science*, 44(12):2310–2320, December 2013.
- WY:08** [1966] H. Wang and G. H. Yang. A finite frequency approach to filter design for uncertain discrete-time systems. *International Journal of Adaptive Control and Signal Processing*, 22(6):533–550, August 2008.
- WTG:95** [1967] H. O. Wang, K. Tanaka, and M. F. Griffin. Parallel distributed compensation of nonlinear systems by Takagi–Sugeno fuzzy model. In *Proceedings of the 4th IEEE International Conference on Fuzzy Systems and The 2nd International Fuzzy Engineering Symposium*, pages 531–538, Yokohama, Japan, March 1995.
- WTG:96** [1968] H. O. Wang, K. Tanaka, and M. F. Griffin. An approach to fuzzy control of nonlinear systems: Stability and design issues. *IEEE Transactions on Fuzzy Systems*, 4(1):14–23, February 1996.
- WSGW:07** [1969] J. Wang, P. Shi, H. Gao, and J. Wang. Gain-scheduled stabilisation of linear parameter-varying systems with time-varying input delay. *IET Control Theory & Applications*, 1(5):1276–1285, 2007.
- WLT:98** [1970] Q.-G. Wang, T. H. Lee, and K. K. Tan. *Finite-Spectrum Assignment for Time-Delay Systems*, volume 239 of *Lecture Notes in Control and Information Sciences*. Springer-Verlag, London, 1998.
- Wan:04** [1971] R.-J. Wang. Observer-based fuzzy control of fuzzy time-delay systems with parametric uncertainties. *International Journal of Systems Science*, 35(12):671–683, October 2004.
- WL:05** [1972] W.-J. Wang and W.-W. Lin. Decentralized PDC for large-scale T–S fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 13(6):779–786, December 2005.
- WM:97** [1973] W. J. Wang and L. G. Mau. Stabilization and estimation for perturbed discrete time-delay large-scale systems. *IEEE Transactions on Automatic Control*, 42(9):1277–1282, 1997.
- WHG:98** [1974] Y. Wang, D. J. Hill, and G. Guo. Robust decentralized control for multimachine power systems. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 45(3):271–279, March 1998.

- WSD:17** [1975] Y. Wang, H. Shen, and D. Duan. On stabilization of quantized sampled-data neural-network-based control systems. *IEEE Transactions on Cybernetics*, pages 1–12, 2017. To appear. DOI: <http://dx.doi.org/10.1109/TCYB.2016.2581220>.
- WSS:05** [1976] Y. Wang, Z. Q. Sun, and F. C. Sun. Modeling and control of networked control systems with random delays. In *Proceedings of the 8th International Workshop on Hybrid Systems: Computation and Control*, pages 655–666, Zurich, Switzerland, March 2005.
- WR:04a** [1977] Y. J. Wang and J. B. Rawlings. A new robust model predictive control method I: theory and computation. *Journal of Process Control*, 14(3):231–247, April 2004.
- WR:04b** [1978] Y. J. Wang and J. B. Rawlings. A new robust model predictive control method II: examples. *Journal of Process Control*, 14(3):249–262, April 2004.
- Wang:98** [1979] Z. Wang. Robust  $\mathcal{H}_\infty$  reliable control for linear state delayed systems with parameter uncertainty. In *Proceedings of the 1998 American Control Conference*, pages 2405–2409, Philadelphia, PA, USA, June 1998.
- WGU:97** [1980] Z. Wang, Z. Guo, and H. Unbehauen. Robust  $\mathcal{H}_2/\mathcal{H}_\infty$ -state estimation for discrete-time systems with error variance constraints. *IEEE Transactions on Automatic Control*, 42(10):1431–1435, 1997.
- WHU:99** [1981] Z. Wang, B. Huang, and H. Unbehauen. Robust  $\mathcal{H}_\infty$  observer design of linear state delayed systems with parametric uncertainty: the discrete-time case. *Automatica*, 35:1161–1167, 1999.
- WHU:99b** [1982] Z. Wang, B. Huang, and H. Unbehauen. Robust  $\mathcal{H}_\infty$  observers for uncertain time-delay systems: (I) the continuous-time case. In *Proceedings of the 14th IFAC World Congress*, volume G, pages 231–236, Beijing, P. R. China, July 1999.
- WYHL:05** [1983] Z. Wang, F. Yang, D. W. C. Ho, and X. Liu. Robust finite-horizon filtering for stochastic systems with missing measurements. *IEEE Signal Processing Letters*, 12(6):437–440, 2005.
- WH:00** [1984] Z. D. Wang and B. Huang. Robust  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering for linear systems with error variance constraints. *IEEE Transactions on Signal Processing*, 48(8):2463–2467, August 2000.
- WHU:99a** [1985] Z. D. Wang, B. Huang, and H. Unbehauen. Robust  $\mathcal{H}_\infty$  observer design of linear state delayed systems with parametric uncertainty: the discrete-time case. *Automatica*, 35(6):1161–1167, 1999.
- WUF:96** [1986] R. Watanabe, K. Uchida, and M. Fujita. A new LMI approach to analysis of linear systems with scheduling parameter — reduction to finite number of LMI conditions. In *Proceedings of the 35th IEEE Conference on Decision and Control*, pages 1663–1665, Kobe, Japan, December 1996.
- WG:98** [1987] J. T. Watson and K. M. Grigoriadis. Optimal unbiased filtering via linear matrix inequalities. *Systems & Control Letters*, 35(2):111–118, September 1998.
- WQKW:13** [1988] Y. Wei, J. Qiu, H. R. Karimi, and M. Wang. A new design of  $\mathcal{H}_\infty$  filtering for continuous-time Markovian jump systems with time-varying delay and partially accessible mode information. *Signal Processing*, 93(9):2392–2407, September 2013.
- WW:89** [1989] S. Weiland and J. C. Willems. Almost disturbance decoupling with internal stability. *IEEE Transactions on Automatic Control*, 34:277–286, 1989.
- Wer:06** [1990] A. Wernrud. Computation of approximate value functions for constrained control problems. In *Proceedings of the 17th International Symposium on Mathematical Theory of Networks and Systems*, pages 2271–2276, Kyoto, Japan, 2006.
- WB:92** [1991] B. Wie and D. S. Bernstein. Benchmark problems for robust control design. *Journal of Guidance, Control, and Dynamics*, 15(5):1057–1059, September-October 1992.
- Wil:71** [1992] J. C. Willems. Least squares stationary optimal control and algebraic Riccati equation. *IEEE Transactions on Automatic Control*, AC-16(6):621–634, December 1971.

- Wil:82 [1993] J. C. Willems. Almost invariant subspaces: an approach to high gain feedback design. Part II: almost conditionally invariant subspaces. *IEEE Transactions on Automatic Control*, 27:1071–1085, 1982.
- Wil:91 [1994] J. C. Willems. Paradigms and puzzles in the theory of dynamical systems. *IEEE Transactions on Automatic Control*, 36(3):259–294, March 1991.
- Wil:89 [1995] D. A. Wilson. Convolution and Hankel operator norms for linear systems. *IEEE Transactions on Automatic Control*, 34(1):94–97, 1989.
- Wim:98 [1996] H. K. Wimmer. Diagonal matrix solutions of a discrete-time Lyapunov inequality. *IEEE Transactions on Automatic Control*, 43(3):442–445, 1998.
- WSWW:16 [1997] D. Wu, X. M. Sun, C. Wen, and W. Wang. Redesigned predictive event-triggered controller for networked control system with delays. *IEEE Transactions on Cybernetics*, 46(10):2195–2206, October 2016.
- WWC:10 [1998] D. Wu, J. Wu, and S. Chen. Robust stabilisation control for discrete-time networked control systems. *International Journal of Control*, 83(9):1885–1894, September 2010.
- Wu:01 [1999] F. Wu. A generalized LPV system analysis and control synthesis framework. *International Journal of Control*, 74(7):745–759, May 2001.
- WD:06 [2000] F. Wu and K. Dong. Gain-scheduled control of LFT systems using parameter-dependent Lyapunov functions. *Automatica*, 42(1):39–50, January 2006.
- WG:97 [2001] F. Wu and K. M. Grigoriadis. LPV systems with parameter-varying time delays. In *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 966–971, San Diego, CA, December 1997.
- WG:01 [2002] F. Wu and K. M. Grigoriadis. LPV systems with parameter-varying time delays: Analysis and control. *Automatica*, 37:221–229, 2001.
- WL:04 [2003] F. Wu and B. Lu. On convexified robust control synthesis. *Automatica*, 40(6):1003–1010, June 2004.
- WP:04 [2004] F. Wu and S. Prajna. A new solution approach to polynomial LPV system analysis and synthesis. In *Proceedings of the 2004 American Control Conference*, pages 1362–1367, Boston, MA, USA, June/July 2004.
- WYPB:96 [2005] F. Wu, X. H. Yang, A. Packard, and G. Becker. Induced  $\mathcal{L}_2$ -norm control for LPV systems with bounded parameter variation rates. *International Journal of Robust and Nonlinear Control*, 6:983–998, 1996.
- WC:04 [2006] H.-N. Wu and K.-Y. Cai.  $\mathcal{H}_2$  guaranteed cost fuzzy control for uncertain nonlinear systems via linear matrix inequalities. *Fuzzy Sets and Systems*, 148(3):411–429, December 2004.
- WC:06 [2007] H.-N. Wu and K.-Y. Cai.  $\mathcal{H}_2$  guaranteed cost fuzzy control design for discrete-time nonlinear systems with parameter uncertainty. *Automatica*, 42(7):1183–1188, July 2006.
- Wu:98 [2008] H. S. Wu. Sufficient conditions for robust stability of LQG optimal control systems including delayed perturbations. *Journal of Optimization Theory and Applications*, 98(1):437–451, 1998.
- WM:94a [2009] H. S. Wu and K. Mizukami. Robust stability of a class of uncertain nonlinear dynamical-systems with time-varying delay. *International Journal of Systems Science*, 25(12):2285–2296, 1994.
- WM:94b [2010] H. S. Wu and K. Mizukami. Robust stabilization of uncertain linear dynamical-systems with time-varying delay. *Journal of Optimization Theory and Applications*, 82(3):593–606, 1994.
- WM:96 [2011] H. S. Wu and K. Mizukami. Linear and nonlinear stabilizing continuous controllers uncertain dynamical systems including state delay. *IEEE Transactions on Automatic Control*, 41(1):116–121, 1996.
- WWM:94 [2012] H. S. Wu, R. A. Willgoss, and K. Mizukami. Robust stabilization for a class of uncertain dynamical-systems with time-delay. *Journal of Optimization Theory and Applications*, 82(2):361–378, 1994.



- WH:94** [2013] J. W. Wu and K. S. Hong. Delay-independent exponential stability-criteria for time-varying discrete delay systems. *IEEE Transactions on Automatic Control*, 39(4):811–814, 1994.
- Wu:74** [2014] M. Wu. A note on stability of linear time-varying systems. *IEEE Transactions on Automatic Control*, 19(2):162–162, April 1974.
- WZ:07** [2015] Z. Wu and W. Zhou. Delay-dependent robust  $\mathcal{H}_\infty$  control for uncertain singular time-delay systems. *IET Control Theory & Applications*, 1(5):1234–1241, September 2007.
- XM:11** [2016] Y. Xia and M. S. Mahmoud. Switched state feedback for uncertain continuous-time systems with interval delays. *International Journal of Robust and Nonlinear Control*, 21(9):1046–1056, June 2011.
- XW:03** [2017] G. Xie and L. Wang. Controllability and stabilizability of switched linear-systems. *Systems & Control Letters*, 48(2):135–155, February 2003.
- XW:09** [2018] G. Xie and L. Wang. Periodic stabilizability of switched linear control systems. *Automatica*, 45(9):2141–2148, 2009.
- Xie:96** [2019] L. Xie. Output feedback  $\mathcal{H}_\infty$  control of systems with parameter uncertainty. *International Journal of Control*, 63(4):741–750, 1996.
- XdS:90** [2020] L. Xie and C. E. de Souza. Robust  $\mathcal{H}_\infty$  control for linear time-invariant systems with norm-bounded uncertainty in the input matrix. *Systems & Control Letters*, 14(5):389–396, June 1990.
- XdS:93** [2021] L. Xie and C. E. de Souza.  $\mathcal{H}_\infty$  state estimation for linear periodic systems. *IEEE Transactions on Automatic Control*, 38(11):1704–1707, 1993.
- XdS:95** [2022] L. Xie and C. E. de Souza. On robust filtering for linear systems with parameter uncertainty. In *Proceedings of the 34th IEEE Conference on Decision and Control*, volume 1, pages 2087–2092, New Orleans, LA, December 1995.
- XdSF:91b** [2023] L. Xie, C. E. de Souza, and M. D. Fragoso.  $\mathcal{H}_\infty$  filtering for linear periodic systems with parameter uncertainty. *Systems & Control Letters*, 17(5):343–350, November 1991.
- XdSF:91** [2024] L. Xie, C. E. de Souza, and M. Fu.  $\mathcal{H}_\infty$  estimation for discrete-time linear uncertain systems. *International Journal of Robust and Nonlinear Control*, 1(2):111–123, April/June 1991.
- XdSW:96** [2025] L. Xie, C. E. de Souza, and Y. Wang. Robust filtering for a class of discrete-time uncertain nonlinear systems: an  $\mathcal{H}_\infty$  approach. *International Journal of Robust and Nonlinear Control*, 6(4):297–312, 1996.
- XDSF:03** [2026] L. Xie, C. Du, U. Shaked, and E. Fridman. An improved robust  $\mathcal{H}_2$  filtering for linear time-delay systems. In *Proceedings of the 2003 American Control Conference*, pages 1890–1895, Denver, CO, June 2003.
- XLZZ:04** [2027] L. Xie, L. Lu, D. Zhang, and H. Zhang. Improved robust  $\mathcal{H}_2$  and  $\mathcal{H}_\infty$  filtering for uncertain discrete-time systems. *Automatica*, 40(5):873–880, May 2004.
- XSf:97** [2028] L. Xie, S. Shishkin, and M. Fu. Piecewise Lyapunov functions for robust stability of linear time-varying systems. *Systems & Control Letters*, 31(3):165–171, August 1997.
- XS:94** [2029] L. Xie and Y. C. Soh. Robust Kalman filtering for uncertain systems. *Systems & Control Letters*, 22:123–129, 1994.
- XSdS:94** [2030] L. Xie, Y. C. Soh, and C. E. de Souza. Robust kalman filtering for uncertain discrete-time systems. *IEEE Transactions on Automatic Control*, 39(6):1310–1314, 1994.
- XYS:98** [2031] L. H. Xie, W. Y. Yan, and Y. C. Soh.  $\mathcal{L}_2$  optimal filter reduction: a closed-loop approach. *IEEE Transactions on Signal Processing*, 46(1):1760–1768, January 1998.

- [Xie:05] [2032] W. Xie.  $\mathcal{H}_2$  gain scheduled state feedback for LPV system with new LMI formulation. *IEE Proceedings — Control Theory and Applications*, 152(6):693–697, November 2005.
- [Xie:05b] [2033] W. Xie. Quadratic L2 gain performance LPV system design by a LTI controller with ILMI algorithm. *IEE Proceedings — Control Theory and Applications*, 152(2):125–128, March 2005.
- [Xie:08] [2034] W. Xie. An equivalent LMI representation of Bounded Real Lemma for continuous-time systems. *Journal of Inequalities and Applications*, 2008(1):1–8, January 2008.
- [XYM:14] [2035] X. Xie, D. Yang, and H. Ma. Observer design of discrete-time T–S fuzzy systems via multi-instant homogenous matrix polynomials. *IEEE Transactions on Fuzzy Systems*, 22(6):1714–1719, December 2014.
- [XYZ:14] [2036] X. Xie, D. Yue, T. Ma, and X. Zhu. Further studies on control synthesis of discrete-time T–S fuzzy systems via augmented multi-indexed matrix approach. *IEEE Transactions on Cybernetics*, 44(12):2784–2791, Dec 2014.
- [XYZX:16] [2037] X. Xie, D. Yue, H. Zhang, and Y. Xue. Control synthesis of discrete-time T–S fuzzy systems via a multi-instant homogeneous polynomial approach. *IEEE Transactions on Cybernetics*, 46(3):630–640, March 2016.
- [XLZ:15] [2038] X.-P. Xie, Z.-W. Liu, and X.-L. Zhu. An efficient approach for reducing the conservatism of LMI-based stability conditions for continuous-time T–S fuzzy systems. *Fuzzy Sets and Systems*, 263:71–81, 2015.
- [XLZ:14] [2039] X.-P. Xie, Z.-W. Liu, and X.-L. Zhu. An efficient approach for reducing the conservatism of LMI-based stability conditions for continuous-time T–S fuzzy systems. *Fuzzy Sets and Systems*, 263:71–81, 2015.
- [XM:96] [2040] X. Xin and T. Mita. The design of strictly proper  $\mathcal{H}_\infty$  controllers for general generalized plants via LMI. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 1, pages 1009–1014, Kobe, Japan, 1996.
- [XL:07] [2041] J. Xiong and J. Lam. Stabilization of linear systems over networks with bounded packet loss. *Automatica*, 43(1):80–87, January 2007.
- [XL:09] [2042] J. Xiong and J. Lam. Robust  $\mathcal{H}_2$  control of Markovian jump systems with uncertain switching probabilities. *International Journal of Systems Science*, 40(3):255–265, March 2009.
- [XLGH:05] [2043] J. Xiong, J. Lam, H. Gao, and D. W. C. Ho. On robust stabilization of Markovian jump systems with uncertain switching probabilities. *Automatica*, 41(5):897–903, May 2005.
- [Xu:94] [2044] B. G. Xu. Robust stability of delay dependence for linear uncertain systems — comments. *IEEE Transactions on Automatic Control*, 39(11):2365–2365, 1994.
- [Xu:95] [2045] B. G. Xu. On delay-independent stability of large-scale systems with time delays. *IEEE Transactions on Automatic Control*, 40(5):930–933, 1995.
- [XFB:96] [2046] B. G. Xu, Y. F. Fu, and L. Bai. Further results on robust bounds for large-scale time-delay systems with structured and unstructured uncertainties. *International Journal of Systems Science*, 27(12):1491–1495, 1996.
- [XuM:96] [2047] H. Xu and K. Mizukami. Upper and lower bounds of  $\mathcal{H}_\infty$  optimal performance for a class of continuous-time descriptor systems. In *Proceedings of the 35th IEEE Conference on Decision and Control*, volume 1, pages 1021–1026, Kobe, Japan, 1996.
- [Xu:02] [2048] S. Xu. Robust  $\mathcal{H}_\infty$  filtering for a class of discrete-time uncertain nonlinear systems with state delay. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 49(12):1853–1859, December 2002.
- [XC:04] [2049] S. Xu and T. Chen. Robust  $\mathcal{H}_\infty$  control for uncertain discrete-time systems with time-varying delays via exponential output feedback controllers. *Systems & Control Letters*, 51(3-4):171–183, 2004.

- [XL:05] [2050] S. Xu and J. Lam. Robust  $\mathcal{H}_\infty$  control for uncertain discrete-time-delay fuzzy systems via output feedback controllers. *IEEE Transactions on Fuzzy Systems*, 13(2):82–93, February 2005.
- [XLY:01b] [2051] S. Xu, J. Lam, and C. Yang.  $\langle_\infty$  and positive-real control for linear neutral delay systems. *IEEE Transactions on Automatic Control*, 46(8):1321–1326, August 2001.
- [XLY:01a] [2052] S. Xu, J. Lam, and C. Yang. Quadratic stability and stabilization of uncertain linear discrete-time systems with state delay. *Systems & Control Letters*, 43(2):77–84, 2001.
- [XLYV:03] [2053] S. Xu, J. Lam, C. Yang, and E. I. Verriest. An LMI approach to guaranteed cost control for uncertain linear neutral delay systems. *International Journal of Robust and Nonlinear Control*, 13(1):35–53, January 2003.
- [XA:94] [2054] D. Y. Xue and D. P. Atherton. A suboptimal reduction algorithm for linear-systems with a time-delay. *International Journal of Control*, 60(2):181–196, 1994.
- [YCS:98] [2055] I. Yaesh, A. Cohen, and U. Shaked. Delayed state-feedback  $\mathcal{H}_\infty$  control. In *Proceedings of the 1st IFAC International Workshop on Linear Time Delay Systems*, pages 63–68, Grenoble, France, July 1998.
- [YS:91] [2056] I. Yaesh and U. Shaked. A transfer function approach to the problems of discrete-time systems:  $\mathcal{H}_\infty$  optimal linear control and filtering. *IEEE Transactions on Automatic Control*, 36(11):1264–1271, November 1991.
- [YSb:92] [2057] I. Yaesh and U. Shaked. Game theory approach to optimal linear state estimation and its relation to the minimum  $\mathcal{H}_\infty$ -norm estimation. *IEEE Transactions on Automatic Control*, 37(6):828–831, 1992.
- [YS:96] [2058] I. Yaesh and U. Shaked. Design of linear tracking filters via robust  $\mathcal{H}_2$  optimization. *IEEE Transactions on Aerospace and Electronic Systems*, 32(1):388–394, 1996.
- [YS:09b] [2059] I. Yaesh and U. Shaked. Robust reduced-order output-feedback  $\mathcal{H}_\infty$  control. In *Proceedings of the 6th IFAC Symposium on Robust Control Design (ROCOND 2009)*, pages 155–160, Haifa, Israel, June 2009.
- [Yak:62] [2060] V. A. Yakubovich. The solution of certain matrix inequalities in automatic control theory. *Soviet Math. Dokl.*, 3:620–623, 1962.
- [Yak:64] [2061] V. A. Yakubovich. Solution of certain matrix inequalities encountered in nonlinear control theory. *Soviet Math. Dokl.*, 5:652–656, 1964.
- [Yak:67] [2062] V. A. Yakubovich. Frequency conditions of absolute stability of the control systems with some non-linear and linear non-stationary blocks. *Avtomatika i telemekhanika*, 6:5–30, 1967.
- [Yak:92] [2063] V. A. Yakubovich. Nonconvex optimization problem: the infinite-horizon linear-quadratic control problem with quadratic constraints. *Systems & Control Letters*, 19(1):13–22, July 1992.
- [YS:75] [2064] V. A. Yakubovich and V. M. Starzhinskii. *Linear Differential Equations with Periodic Coefficients*. Wiley, New York, NY, 1 edition, 1975.
- [YFK:03] [2065] M. Yamashita, K. Fujisawa, and M. Kojima. Implementation and evaluation of SDPA 6.0 (Semidefinite Programming Algorithm 6.0). *Optimization Methods and Software*, 18(4):491–505, August 2003.
- [YTK:99] [2066] J. J. Yan, J. S. H. Tsai, and F. C. Kung. Robust stability analysis of interval systems with multiple time-varying delays: Evolutionary programming approach. *Journal of The Franklin Institute*, 336:711–720, 1999.
- [YO:07] [2067] P. Yan and H. Ozbay. On switching  $\mathcal{H}_\infty$  controllers for a class of linear parameter varying systems. *Systems & Control Letters*, 56(7-8):504–511, 2007.

- YH:02** [2068] F. Yang and Y. S. Hung. Robust mixed  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering with regional pole assignment for uncertain discrete-time systems. *IEEE Transactions on Circuits and Systems Part I: Fundamental Theory and Applications*, 49(8):1236–1241, August 2002.
- YWHG:06** [2069] F. Yang, Z. Wang, Y. S. Hung, and M. Gani.  $\mathcal{H}_\infty$  control for networked systems with random communication delays. *IEEE Transactions on Automatic Control*, 51(3):511–518, March 2006.
- YD:08** [2070] G.-H. Yang and J. Dong. Robust stability of polytopic systems via affine parameter-dependent Lyapunov functions. *SIAM Journal on Control and Optimization*, 47(5):2642–2662, October 2008.
- YD:10** [2071] G.-H. Yang and J. Dong. Switching fuzzy dynamic output feedback  $\mathcal{H}_\infty$  control for nonlinear systems. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 40(2):505–516, April 2010.
- YGS:11** [2072] R. Yang, H. Gao, and P. Shi. Delay-dependent  $\mathcal{L}_2$ - $\mathcal{L}_\infty$  filter design for stochastic time-delay systems discrete time-delay systems. *IET Control Theory & Applications*, 5(1):1–8, January 2011.
- YGSZ:09** [2073] R. Yang, H. Gao, P. Shi, and L. Zhang. Delay-dependent energy-to-peak filter design for stochastic systems with time delay: A delay partitioning approach. In *Proceedings of the 48th IEEE Conference on Decision and Control — 28th Chinese Control Conference*, pages 5472–5477, Shanghai, P. R. China, December 2009.
- Yan:06** [2074] T. C. Yang. Networked control system: A brief survey. *IEE Proceedings — Control Theory and Applications*, 153(4):403–412, July 2006.
- YT:98** [2075] Y. Yang and A. L. Tits. Generic pole assignment may produces very fragile designs. In *Proceedings of the 37th IEEE Conference on Decision and Control*, pages 1745–1746, Tampa, FL, December 1998.
- YZK:96** [2076] Y. X. Yao, Y. M. Zhang, and R. Kovacevic. Parameterisation of observers for time delay systems and its application in observer design. *IEE Proceedings — Control Theory and Applications*, 143(3):225–232, 1996.
- YZK:97** [2077] Y. X. Yao, Y. M. Zhang, and R. Kovacevic. Functional observer and state feedback for input time-delay systems. *International Journal of Control*, 66(4):603–617, 1997.
- Yed:85a** [2078] R. K. Yedavalli. Improved measures of stability robustness for linear state model. *IEEE Transactions on Automatic Control*, 30:577–579, 1985.
- Yed:85b** [2079] R. K. Yedavalli. Perturbations bounds for robust stability in linear state space models. *International Journal of Control*, 42:1507–1517, 1985.
- Yed:02a** [2080] R. K. Yedavalli. It suffices to check only two special vertex matrices in Kronecker space to analyze the robust stability of an interval matrix. In *Proceedings of the 2002 American Control Conference*, volume 1, pages 1266–1271, Anchorage, AK, May 2002.
- YL:86** [2081] R. K. Yedavalli and Z. Liang. Reduced conservatism in stability robustness bounds by state transformation. *IEEE Transactions on Automatic Control*, 31:863–866, 1986.
- YZ:96** [2082] Z. Yi and S. M. Zhong. Robust stability of a class of uncertain nonlinear dynamical systems with time-varying delay — Comment. *International Journal of Systems Science*, 27(5):515–516, 1996.
- YMG:08** [2083] J. Yick, B. Mukherjee, and D. Ghosal. Wireless sensor network survey. *Computer Networks*, 52(12):2292–2330, August 2008.
- Yon:09a** [2084] J. Yoneyama. Output feedback control for fuzzy systems with immeasurable premise variables. In *Proceedings of the 2009 IEEE International Conference on Fuzzy Systems*, pages 802–807, Jeju Island, Korea, August 2009.
- Yon:10b** [2085] J. Yoneyama. LMI approach to output feedback control for fuzzy systems. In *Proceedings of the 2010 IEEE International Conference on Fuzzy Systems*, pages 2174–2179, Barcelona, Spain, July 2010.

- YNKI:00** [2086] J. Yoneyama, M. Nishikawa, H. Katayama, and A. Ichikawa. Output stabilization of Takagi–Sugeno fuzzy systems. *Fuzzy Sets and Systems*, 111(2):253–266, April 2000.
- YNKI:01** [2087] J. Yoneyama, M. Nishikawa, H. Katayama, and A. Ichikawa. Design of output feedback controllers for Takagi–Sugeno fuzzy systems. *Fuzzy Sets and Systems*, 121(1):127–148, July 2001.
- YNKI:01b** [2088] J. Yoneyama, M. Nishikawa, H. Katayama, and A. Ichikawa.  $\mathcal{H}_\infty$  control for Takagi–Sugeno fuzzy systems. *International Journal of Systems Science*, 32(7):915–924, 2001.
- YL:97** [2089] M. G. Yoon and B. H. Lee. A new approximation method for time-delay systems. *IEEE Transactions on Automatic Control*, 42(7):1008–1012, 1997.
- YGB:13** [2090] J. You, H. Gao, and M. V. Basin. Further improved results on  $\mathcal{H}_\infty$  filtering for discrete time-delay systems. *Signal Processing*, 93(7):1845–1852, July 2013.
- YD:13** [2091] S. You and J. C. Doyle. A Lagrangian dual approach to the generalized KYP lemma. In *Proceedings of the 52nd IEEE Conference on Decision and Control*, pages 2447–2452, Florence, Italy, 2013.
- YY:09** [2092] G.-R. Yu and C.-S. You. T–S fuzzy control of time-delay systems using multiple Lyapunov functions. In *Proceedings of the 7th Asian Control Conference*, pages 1012–1017, Hong Kong, China, August 2009.
- YS:97** [2093] J. Yu and A. Sideris.  $\mathcal{H}_\infty$  control with parametric Lyapunov functions. *Systems & Control Letters*, 30:57–69, 1997.
- YWZY:09** [2094] J. Yu, L. Wang, G. Zhang, and M. Yu. Output feedback stabilisation of networked control systems via switched system approach. *International Journal of Control*, 82(9):1665–1677, September 2009.
- YXW:07** [2095] J. Yu, G. Xie, and L. Wang. Robust stabilization of discrete-time switched uncertain systems subject to actuator saturation. In *Proceedings of the 2007 American Control Conference*, pages 2109–2112, New York, NY, USA, July 2007.
- YC:99** [2096] L. Yu and J. Chu. An LMI approach to guaranteed cost control of linear uncertain time-delay systems. *Automatica*, 35(6):1155–1159, June 1999.
- YXS:96** [2097] L. Yu, J. Chu, and H. Y. Su. Robust memoryless  $\mathcal{H}_\infty$  controller design for linear time-delay systems with norm-bounded. *Automatica*, 32(12):1759–1762, 1996.
- YWC:05** [2098] M. Yu, L. Wang, and T. Chu. Sampled-data stabilisation of networked control systems with nonlinearity. *IEE Proceedings — Control Theory and Applications*, 152(6):609–614, November 2005.
- YSV:04** [2099] W. Yu, Z. Sahinoglu, and A. Vetro. Energy efficient JPEG 2000 image transmission over wireless sensor networks. In *Proceedings of the 2004 Global Telecommunications Conference*, pages 2738–2743, Dallas, TX, USA, November 2004.
- YLL:13** [2100] X. Yu, J. Liu, and H. Li. Performance analysis of adaptive filters for time-varying systems. In *Proceedings of the 32nd Chinese Control Conference*, pages 8572–8575, Xi’an, China, July 2013.
- YT:04** [2101] X. Yu and K. Tomsovic. Application of linear matrix inequalities for load frequency control with communication delays. *IEEE Transactions on Power Electronics*, 19(3):1508–1515, August 2004.
- YCW:03** [2102] Z. W. Yu, H. T. Chen, and P. Y. Woo. Polytopic gain scheduled H-infinity control for robotic manipulators. *Robotica*, 21(5):495–504, Sep-Oct 2003.
- YAJ:96** [2103] L. Yuan, L. E. K. Achenie, and W. Jiang. Robust  $\mathcal{H}_\infty$  control for linear discrete-time systems with norm-bounded time varying uncertainty. *Systems & Control Letters*, 27:199–208, 1996.
- Yuan:96** [2104] L. S. Yuan. Robust analysis and synthesis of linear time-delay systems with norm-bounded time-varying uncertainty. *Systems & Control Letters*, 28(5):281–289, 1996.



- [YH:04] [2105] D. Yue and Q.-L. Han. A delay-dependent stability criterion of neutral systems and its application to a partial element equivalent circuit model. *IEEE Transactions on Circuits and Systems Part II: Analog and Digital Signal Processing*, 51(12):685–689, December 2004.
- [Zam:79] [2106] G. Zames. On the metric complexity of causal linear systems:  $\epsilon$ -entropy and  $\epsilon$ -dimension for continuous time. *IEEE Transactions on Automatic Control*, 24(2):222–230, 1979.
- [Zam:81] [2107] G. Zames. Feedback and optimal sensitivity: model reference transformations, multiplicative semi-norms and approximate inverses. *IEEE Transactions on Automatic Control*, 26(2):301–320, April 1981.
- [Zam:06] [2108] F. Zampolli. Optimal monetary policy in a regime-switching economy: The response to abrupt shifts in exchange rate dynamics. *Journal of Economic Dynamics and Control*, 30(9–10):1527–1567, September–October 2006.
- [ZCT:98] [2109] Z. Q. Zang, A. Cantoni, and K. L. Teo. Continuous-time envelope-constrained filter design via Laguerre filters and  $\mathcal{H}_\infty$  optimization methods filtering approach. *IEEE Transactions on Signal Processing*, 46(10):2601–2610, October 1998.
- [Zel:94] [2110] A. L. Zelentsovsky. Nonquadratic Lyapunov functions for robust stability analysis of linear uncertain systems. *IEEE Transactions on Automatic Control*, 39(1):135–138, January 1994.
- [ZGM:08] [2111] M. Zerar, K. Guelton, and N. Manamanni. Linear fractional transformation based H-infinity output stabilization for Takagi–Sugeno fuzzy models. *Mediterranean Journal of Measurement and Control*, 4(8):111–121, July 2008.
- [ZLA:03] [2112] G. S. Zhai, H. Lin, and P. J. Antsaklis. Quadratic stabilizability of switched linear systems with polytopic uncertainties. *International Journal of Control*, 76(7):747–753, May 2003.
- [ZLX:09] [2113] B. Zhang, J. Lam, and S. Xu. Deconvolution filtering for stochastic systems via homogeneous polynomial Lyapunov functions. *Signal Processing*, 89(4):605–614, April 2009.
- [ZSW:16] [2114] D. Zhang, P. Shi, and Q.-G. Wang. Energy-efficient distributed control of large-scale systems: A switched system approach. *International Journal of Robust and Nonlinear Control*, 26(14):3101–3117, September 2016.
- [ZSWY:17] [2115] D. Zhang, P. Shi, Q.-G. Wang, and L. Yu. Analysis and synthesis of networked control systems: A survey of recent advances and challenges. *ISA Transactions*, 66:376–392, January 2017.
- [ZSZY:17] [2116] D. Zhang, P. Shi, W. A. Zhang, and L. Yu. Energy-efficient distributed filtering in sensor networks: A unified switched system approach. *IEEE Transactions on Cybernetics*, pages 1–12, 2017. To appear. DOI: <http://dx.doi.org/10.1109/TCYB.2016.2553043>.
- [ZCC:09] [2117] G. Zhang, X. Chen, and T. Chen. Digital redesign via the generalised bilinear transformation. *International Journal of Control*, 82(4):741–754, April 2009.
- [ZLL:06] [2118] H. Zhang, C. Li, and X. Liao. Stability analysis and  $\mathcal{H}_\infty$  controller design of fuzzy large-scale systems based on piecewise Lyapunov functions. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 36(3):685–698, June 2006.
- [ZMS:10] [2119] H. Zhang, A. S. Mehr, and Y. Shi. Improved robust energy-to-peak filtering for uncertain linear systems. *Signal Processing*, 90(9):2667–2675, September 2010.
- [ZSM:12] [2120] H. Zhang, Y. Shi, and A. S. Mehr. On  $\mathcal{H}_\infty$  filtering for discrete-time Takagi–Sugeno fuzzy systems. *IEEE Transactions on Fuzzy Systems*, 20(2):396–401, April 2012.
- [ZSS-M:10] [2121] H. Zhang, Y. Shi, and A. Saadat Mehr. Robust energy-to-peak filtering for networked systems with time-varying delays and randomly missing data. *IET Control Theory & Applications*, 4(12):2921–2936, December 2010.

- [ZXT:11] [2122] H. Zhang, X. Xie, and S. Tong. Homogenous polynomially parameter-dependent  $\mathcal{H}_\infty$  filter designs of discrete-time fuzzy systems. *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, 41(5):1313–1322, October 2011.
- [ZKT:03] [2123] H. R. Zhang, C. Knospe, and P. Tsiotras. New results for the analysis of linear systems with time-invariant delays. *International Journal of Robust and Nonlinear Control*, 13(12):1149–1175, October 2003.
- [ZKT:01] [2124] J. Zhang, C. Knospe, and P. Tsiotras. Stability of time-delay systems: equivalence between Lyapunov and scaled small-gain conditions. *IEEE Transactions on Automatic Control*, 46(3):482–486, March 2001.
- [ZX:09] [2125] J. Zhang and Y. Xia. New LMI approach to fuzzy  $\mathcal{H}_\infty$  filter designs. *IEEE Transactions on Circuits and Systems II: Express Briefs*, 56(9):739–743, September 2009.
- [ZXS:09] [2126] J. Zhang, Y. Xia, and P. Shi. Parameter-dependent robust  $\mathcal{H}_\infty$  filtering for uncertain discrete-time systems. *Automatica*, 45(2):560–565, February 2009.
- [ZSM:11] [2127] J. Zhang, Y. Xia, P. Shi, and M. S. Mahmoud. New results on stability and stabilisation of systems with interval time-varying delay. *IET Control Theory & Applications*, 5(3):429–436, February 2011.
- [ZB:09c] [2128] L. Zhang and E. K. Boukas.  $\mathcal{H}_\infty$  control for discrete-time Markovian jump linear systems with partly unknown transition probabilities. *International Journal of Robust and Nonlinear Control*, 19(8):868–883, July 2009.
- [ZB:09b] [2129] L. Zhang and E. K. Boukas.  $\mathcal{H}_\infty$  control of a class of extended Markov jump linear systems. *IET Control Theory & Applications*, 3(7):834–842, July 2009.
- [ZB:09a] [2130] L. Zhang and E. K. Boukas. Mode-dependent filtering for discrete-time Markovian jump linear systems with partly unknown transition probabilities. *Automatica*, 45(6):1462–1467, June 2009.
- [ZB:09] [2131] L. Zhang and E. K. Boukas. Stability and stabilization of Markovian jump linear systems with partly unknown transition probabilities. *Automatica*, 45(2):463–468, February 2009.
- [ZGK:13] [2132] L. Zhang, H. Gao, and O. Kaynak. Network-induced constraints in Networked Control Systems — A survey. *IEEE Transaction on Industrial Informatics*, 9(1):403–416, February 2013.
- [ZL:10] [2133] L. Zhang and J. Lam. Necessary and sufficient conditions for analysis and synthesis of Markov jump linear systems with incomplete transition descriptions. *IEEE Transactions on Automatic Control*, 55(7):1695–1701, July 2010.
- [ZS:08] [2134] L. Zhang and P. Shi.  $\ell_2$ – $\ell_\infty$  Model reduction for switched LPV systems with average dwell time. *IEEE Transactions on Automatic Control*, 53(10):2443–2448, November 2008.
- [ZS:11] [2135] L. Zhang and P. Shi.  $\mathcal{H}_\infty$  filtering for a class of switched linear parameter varying systems. *International Journal of Systems Science*, 42(5):781–788, May 2011.
- [ZSBW:07] [2136] L. Zhang, P. Shi, E.-K. Boukas, and C. Wang. Robust  $\mathcal{L}_2$ – $\mathcal{L}_\infty$  filtering for switched linear discrete time-delay systems with polytopic uncertainties. *IET Control Theory & Applications*, 1(3):722–730, May 2007.
- [ZT:99] [2137] M. Zhang and T. J. Tarn. Observer-based  $\mathcal{H}_\infty$ -control for uncertain time-delay systems by using LMI. In *Proceedings of the 14th IFAC World Congress*, volume G, pages 203–208, Beijing, P. R. China, July 1999.
- [ZBP:01] [2138] W. Zhang, M. S. Branicky, and S. M. Phillips. Stability of networked control systems. *IEEE Control Systems Magazine*, 21(1):84–99, February 2001.
- [ZYJ:07] [2139] W. A. Zhang, L. Yu, and X. F. Jiang. Delay-dependent generalized  $\mathcal{H}_2$  filtering for uncertain systems with multiple time-varying state delays. *Signal Processing*, 87(4):709–724, April 2007.

- [ZTI:03] [2140] X. Zhang, P. Tsiotras, and T. Iwasaki. Parameter-dependent Lyapunov functions for exact stability analysis of single-parameter dependent LTI systems. In *Proceedings of the 42nd IEEE Conference on Decision and Control*, pages 5168–5173, Maui, HI, USA, December 2003.
- [ZTK:02] [2141] X. Zhang, P. Tsiotras, and C. Knospe. Stability analysis of LPV time-delayed systems. *International Journal of Control*, 75(7):538–558, May 2002.
- [ZZ:02] [2142] X. L. Zhang and J. Zhao. An algorithm of uniform ultimate boundedness for a class of switched linear systems. *International Journal of Control*, 75(16-17):1399–1405, November 2002.
- [ZHWZ:12] [2143] Y. Zhang, Y. He, M. Wu, and J. Zhang. State estimation for Markovian jump systems with time-varying delay and partial information on transition probabilities. *IET Control Theory & Applications*, 6(16):2549–2555, January 2012.
- [ZZWS:17] [2144] Z. Zhang, H. Zhang, Z. Wang, and Q. Shan. Non-fragile exponential  $\mathcal{H}_\infty$  control for a class of nonlinear networked control systems with short time-varying delay via output feedback controller. *IEEE Transactions on Cybernetics*, pages 1–12, 2017. To appear. DOI: <http://dx.doi.org/10.1109/TCYB.2016.2585601>.
- [ZWLLYG:10] [2145] J. Zhao, L. Wang, S. Li, X. Liu, Z. Yuan, and Z. Gao. A survey of congestion control mechanisms in wireless sensor networks. In *Proceedings of the 2010 6th International Conference on Intelligent Information Hiding and Multimedia Signal Processing*, pages 719–722, Darmstadt, Germany, October 2010.
- [ZLYL:14] [2146] X. Zhao, X. Liu, S. Yin, and H. Li. Improved results on stability of continuous-time switched positive linear systems. *Automatica*, 50(2):614–621, February 2014.
- [ZZSL:12] [2147] X. Zhao, L. Zhang, P. Shi, and M. Liu. Stability of switched positive linear systems with average dwell time switching. *Automatica*, 48(6):1132–1137, June 2012.
- [ZWL:02] [2148] F. Zheng, Q. Wang, and T. H. Lee. On the design of multivariable PID controllers via LMI approach. *Automatica*, 38:517–526, 2002.
- [ZWL:02b] [2149] F. Zheng, Q. G. Wang, and T. H. Lee. A heuristic approach to solving a class of bilinear matrix inequality problems. *Systems & Control Letters*, 47(2):111–119, October 2002.
- [ZW:09] [2150] Q. Zheng and F. Wu. Regional stabilisation of polynomial non-linear systems using rational Lyapunov functions. *International Journal of Control*, 82(9):1605–1615, September 2009.
- [Zho:06] [2151] Q. C. Zhong. *Robust Control of Time-delay Systems*. Springer-Verlag, London, 2006.
- [ZD:98] [2152] K. Zhou and J. C. Doyle. *Essentials of Robust Control*. Prentice Hall, New York, 1998.
- [ZDG:96] [2153] K. Zhou, J. C. Doyle, and K. Glover. *Robust and Optimal Control*. Prentice Hall, Upper Saddle River, NJ, USA, 1996.
- [ZK:87] [2154] K. Zhou and P. P. Khargonekar. Stability robustness bounds for linear state-spacemodels with structured uncertainty. *IEEE Transactions on Automatic Control*, 32:612–623, 1987.
- [ZK:88b] [2155] K. Zhou and P. P. Khargonekar. An algebraic Riccati equation approach to  $\mathcal{H}_\infty$  optimization. *Systems & Control Letters*, 11:85–91, 1988.
- [ZK:88a] [2156] K. Zhou and P. P. Khargonekar. Robust stabilization of linear systems with norm bounded time varying uncertainty. *Systems & Control Letters*, 10:17–20, January 1988.
- [ZKSN:95] [2157] K. Zhou, P. P. Khargonekar, J. Stoustrup, and H. H. Niemann. Robust performance of systems with structured uncertainties in state space. *Automatica*, 31(2):249–255, February 1995.
- [ZF:06] [2158] S. Zhou and G. Feng. Generalised  $\mathcal{H}_2$  controller synthesis for uncertain discrete-time fuzzy systems via basis-dependent Lyapunov functions. *IEE Proceedings — Control Theory and Applications*, 153(1):74–80, January 2006.

- ZFLX:05** [2159] S. Zhou, G. Feng, J. Lam, and S. Xu. Robust  $\mathcal{H}_\infty$  control for discrete-time fuzzy systems via basis-dependent Lyapunov functions. *Information Sciences*, 174(3–4):197–217, August 2005.
- ZLX:07** [2160] S. Zhou, J. Lam, and A. Xue.  $\mathcal{H}_\infty$  filtering of discrete-time fuzzy systems via basis-dependent Lyapunov function approach. *Fuzzy Sets and Systems*, 158(2):180–193, January 2007.
- ZLZ:07** [2161] S. Zhou, J. Lam, and W. X. Zheng. Control design for fuzzy systems based on relaxed nonquadratic stability and  $\mathcal{H}_\infty$  performance conditions. *IEEE Transactions on Fuzzy Systems*, 15(2):188–199, April 2007.
- ZZZ:06** [2162] S. Zhou, B. Zhang, and W. X. Zheng. Gain-scheduled  $\mathcal{H}_\infty$  filtering of parameter-varying systems. *International Journal of Robust and Nonlinear Control*, 16(8):397–411, May 2006.
- ZRL:09** [2163] S. S. Zhou, W. Ren, and J. Li. Generalized  $\mathcal{H}_2/\mathcal{H}_\infty$  filtering for discrete-time nonlinear system with T–S fuzzy models. In *Proceedings of the 6th International Conference on Fuzzy Systems and Knowledge Discovery*, volume 6, pages 530–534, Tianjin, China, August 2009.
- Zhu:97** [2164] J. J. Zhu. PD-spectral theory for multivariable linear time-varying systems. In *Proceedings of the 36th IEEE Conference on Decision and Control*, pages 3908–3913, San Diego, CA, December 1997.
- ZSX:02** [2165] X. Zhu, Y. C. Soh, and L. Xie. Robust Kalman filter design for discrete time-delay systems. *Circuits Systems and Signal Processing*, 21(3):319–335, May 2002.
- ZY:08** [2166] X. L. Zhu and G. H. Yang. Jensen inequality approach to stability analysis of discrete-time systems with time-varying delay. In *Proceedings of the 2008 American Control Conference*, pages 1644–1649, Seattle, WA, USA, June 2008.
- ZWGL:14** [2167] L. Zou, Z. Wang, H. Gao, and X. Liu. Event-triggered state estimation for complex networks with mixed time delays via sampled data information: The continuous-time case. *IEEE Transactions on Cybernetics*, 45(12):2804–2815, December 2015.
- ZLWL:12** [2168] Z. Zuo, Y. Liu, Y. Wang, and H. Li. Finite-time stochastic stability and stabilisation of linear discrete-time Markovian jump systems with partly unknown transition probabilities. *IET Control Theory & Applications*, 6(10):1522–1526, May 2012.
- ZWH:04** [2169] Z. Zuo, J. Wang, and L. Huang. Robust stabilization for non-linear discrete-time systems. *International Journal of Control*, 77(4):384–388, March 2004.
- ZW:07** [2170] Z. Q. Zuo and Y. Wang. An improved set invariance analysis and gain-scheduled control of LPV systems subject to actuator saturation. *Circuits Systems and Signal Processing*, 26(5):635–649, September–October 2007.