Masaaki Nagahara *Full Professor, The University of Kitakyushu, Japan*

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Summary

Prof. Masaaki Nagahara received the bachelor's degree in engineering from Kobe University in 1998, and the master's degree and the Doctoral degree in informatics from Kyoto University in 2000 and 2003, respectively, under the supervision of Prof. Yutaka Yamamoto. He is currently a Full Professor with the Institute of Environmental Science and Technology, The University of Kitakyushu. He has been also a Visiting Professor with IIT Bombay since 2016.

He received two remarkable international awards: George S. Axelby Outstanding Paper Award in 2018 and Transition to Practice Award in 2012, from the IEEE Control Systems Society. Also, he received many awards from Japanese research societies such as Young Authors Award in 1999, Best Paper Award in 2012, and the Best Book Authors Award in 2016 from SICE, the Best Tutorial Paper Award from the IEICE Communications Society in 2014,

His research interests include automatic control, signal processing, and machine learning. He is author or co-author of more than 100 publications in top journals (e.g. IEEE Trans. on Automatic Control, IEEE Trans. on Signal Processing, Automatica, etc) and top conferences (e.g. IEEE CDC, IEEE ICASSP, IFAC WC, etc).

He is a senior member of the IEEE.

Education and Qualifications

- March 2003: **PhD**, *Informatics, Kyoto University, Japan*

  Thesis Title: Multirate digital signal processing via sampled-data H^∞ optimization, Advisor: Prof. Yutaka Yamamoto

- March 2000: **Master Degree**, *Informatics, Kyoto University, Japan*

  Thesis Title: Multirate digital signal processing based on sampled-data H^∞ control theory, Advisor: Prof. Yutaka Yamamoto

- March 1998: **Bachelor Degree**, *Engineering, Kobe University, Japan*

  Thesis Title: On the computation of value sets, Advisor: Prof. Yuzo Ohta

Positions held

- April 2016–present: **Full Professor**

  Institute of Environmental Science and Technology, The University of Kitakyushu, Japan

- October 2016–present: **Visiting Professor**

  Systems & Control Engineering (SysCon), Indian Institute of Technology (IIT) Bombay, India

- October 2012–March 2016: **Senior Lecturer**

  Graduate School of Informatics, Kyoto University, Japan

- April 2007–October 2012: **Assistant Professor**

  Graduate School of Informatics, Kyoto University, Japan

- April 2005–August 2012: **Part-time Instructor**

  School of Engineering Science, Osaka University, Japan

- April 2003–March 2007: **Associate Researcher**

  Graduate School of Informatics, Kyoto University, Japan

Short-term Positions

- As a visiting researcher, I have visited **Indian Institute of Technology Bombay** (India), **Indian Institute of Technology Hyderabad** (India), **Indian Institute of Technology Kharagpur** (India), **Paderborn University** (Germany), **Technical University of Berlin** (Germany), **University of Newcastle** (Australia), **Aalborg University** (Denmark), and **Texas Tech University** (USA).

Selected Honors and Awards

- **George S. Axelby Outstanding Paper Award** in 2018 from the IEEE Control Systems Society for the following published paper:

  – M. Nagahara, D. E. Quevedo, and D. Nesic, Maximum Hands-off Control: A Paradigm of Control Effort Minimization, *IEEE Transactions on Automatic Control*, Vol. 61, No. 3, pp. 735-747, 2016.

  This is an international award, which is annually presented to the best paper (in the two recent years) in the leading journal *IEEE Transactions on Automatic Control*.

- **Transition to Practice Award** in 2012 from the IEEE Control Systems Society for the introduction and development of the sound-processing technology incorporated in a large number of LSI chips by SANYO Semiconductor. This is an international award, which is annually presented to a distinguished contributor to the transition of control and systems theory to practical, industrial, or commercial systems.

- **Best Tutorial Paper Award** in 2014 from the IEICE Communications Society for the quality of a tutorial paper, "A User's Guide to Compressed Sensing for Communications Systems," published in IEICE Transactions on Communications. This award is annually presented to the best-quality tutorial paper published in the journal.

- **Best Paper Award** in 2012 from the SICE for the quality of a research paper , "H^∞ design of periodically nonuniform interpolation and decimation for non-band-limited signals," published in SICE Journal of Control, Measurement, and System Integration. This award is annually presented to high-quality papers published in the journal.

- **Senior member of IEEE** in 2014 presented by the IEEE. Senior member is the highest grade for which IEEE members can apply.

Prfofessional Activities

- Associate Editor of *Asian Journal of Control*, 2019–
- Associate Editor of *SICE Journal of Control, Measurement, and System Integration* (JCMSI), 2015–
- Associate Editor for *Conference Editorial Board, IEEE Control Systems Society*, 2013–
- Member of
  - IEEE CSS Technical Committees on Networks and Communications, 2018–
  - IFAC Technical Committee 2.1 Control Design, 2014–
  - IEEE Signal Processing Society, Signal Processing Theory and Methods (SPTM) Technical Committee (Affiliate Member), 2014–

Collaborators from Outside Japan

- **Australia:** Prof. Dragan Nešić (The University of Melbourne), Prof. Brian D. O. Anderson (Australian National University)
- **India:** Prof. Dabasish Chatterjee (Indian Institute of Technology Bombay), Prof. Srikant Sukumar (Indian Institute of Technology Bombay), Prof. D. Manjunath (Indian Institute of Technology Bombay), Prof. Mathukumalli Vidyasagar (Indian Institute of Technology Hyderabad)
- **United States:** Prof. Pramod P. Khargonekar (University of California Irvine), Prof. Clyde F. Martin (Texas Tech University),
- **Europe:** Prof. Daniel E. Quevedo (University of Paderborn, Germany), Prof. Jan Østergaard (Aalborg University, Denmark)

Publications

Books (written in Japanese)

1. **M. Nagahara**, K. Okano, M. Ogura, and M. Wakaiki, *Networked Control*, Corona Publishing, 2019. ISBN 978-4-339-03227-7
2. M. Kawata, S. Azuma, H. Ichikawa, T. Urakubo, T. Ohtsuka, T. Kai, S. Kunimatsu, K. Sawada, **M. Nagahara**, and H. Minami, *Control Engineering Learned with Inverted Pendulums*, Morikita Publishing, 2017. ISBN 978-4627792210
3. **M. Nagahara**, *Sparse Modeling*, Corona Publishing, 2016. ISBN 978-4-339-03222-2
4. S. Azuma, **M. Nagahara**, H. Ishii, N. Hayashi, K. Sakurama, and T. Hatanaka, *Control of Multi-agent Systems*, Corona Publishing, 2015. ISBN 978-4-339-03322-9

Book Chapters

1. Y. Yamamoto and **M. Nagahara**, Digital Control, *Wiley Encyclopedia of Electrical and Electronics Engineering*, J. G. Webster (Ed.), Wiley, Feb. 2018. Online ISBN: 9780471346081
2. K. Yamamoto, Y. Yamamoto, and **M. Nagahara**, Hypertracking Beyond the Nyquist Frequency, *Emerging Applications of Control and Systems Theory*, A Festschrift in Honor of M. Vidyasagar, pp. 369-379, Springer, 2018. ISBN 978-3-319-67068-3

3. **M. Nagahara**, K. Hamaguchi, and Y. Yamamoto, Active noise control with sampled-data filtered-x adaptive algorithm, *Mathematical System Theory*, A Festschrift in Honor of Uwe Helmke on the Occasion of his Sixtieth Birthday, pp. 275-290, CreateSpace, 2013. ISBN 978-1470044008

4. **M. Nagahara**, Min-max design of FIR digital filters by semidefinite programming, *Applications of Digital Signal Processing*, pp. 193-210, InTech, Nov. 2011. ISBN 978-953-307-406-1

5. **M. Nagahara**, YY filter — a paradigm of digital signal processing, *Perspectives in Mathematical System Theory, Control, and Signal Processing*, pp. 331-340, Springer, 2010. ISBN 978-3-540-93917-7

6. **M. Nagahara**, Sound source separation, Audio signal compression, Synthesizer, Digital signal processing, *Encyclopedia of Sound*, Maruzen, 2006. (in Japanese) ISBN 978-4621076606

7. Y. Yamamoto and **M. Nagahara**, Digital filter design via sampled-data control theory, *Control and Modeling of Complex Systems: Cybernetics in the 21st Century*, pp. 31-43, Birkhauser, Dec. 2002. ISBN 978-1-4612-0023-9

Journal Articles

1. **M. Nagahara**, D. Chatterjee, N. Challapalli, and M. Vidyasagar, CLOT norm minimization for continuous hands-off control, *Automatica*, 2019 (to appear)

2. T. Iwata, Y. Oishi, and **M. Nagahara**, Realization of sparse control using the model predictive control scheme, *SICE Transactions*, Vol. 56, No. 3, 2020 (in Japanese)

3. K. Nakashima, T. Matsuda, **M. Nagahara**, and T. Takine, Multihop TDMA-based wireless networked control systems robust against bursty packet losses: a two-path approach, *IEICE Transactions on Communications*, 2019

4. H. Sasahara, **M. Nagahara**, K. Hayashi, and Y. Yamamoto, Self-Interference Suppression based on Sampled-Data H^∞ Control for Baseband Signal Subspaces, *SICE Journal of Control, Measurement, and System Integration*, Vol. 12, No. 5, pp. 182-189, Sept 2019

5. T. Ikeda, **M. Nagahara**, and K. Kashima, Maximum Hands-off Distributed Control for Consensus of Multi-Agent Systems with Sampled-data State Observation, *IEEE Transactions on Control of Network Systems*, Vol. 6, No. 2, pp. 852-862, June 2019

6. T. Ikeda and **M. Nagahara**, Time-Optimal Hands-off Control for Linear Time-Invariant Systems, *Automatica*, Vol. 99, pp. 54-58, 2019

7. N. Hayashi and **M. Nagahara**, Distributed Proximal Minimization Algorithm for Constrained Convex Optimization over Strongly Connected Networks, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*, Vol. E102-A, No. 02, Feb. 2019.

8. S. Ohno, Y. Ishihara, and **M. Nagahara**, Min-Max Design of Error Feedback Quantizers without Overloading, *IEEE Transactions on Circuits and Systems I: Regular Papers*, Vol. 65, No. 4, pp. 1395-1405, Apr. 2018

9. T. Ikeda and **M. Nagahara**, Discrete-valued Model Predictive Control using Sum-of-Absolute-Values Optimization, *Asian Journal of Control*, Vol. 20, No. 1, pp. 196-206, 2018

10. S. Ohno, T. Shiraki, M. R. Tariq, and **M. Nagahara**, Mean Squared Error Analysis of Quantizers with Error Feedback, *IEEE Transactions on Signal Processing*, Vol. 65, No. 22, pp. 5970-5981, Nov. 2017

11. H. Sasahara, K. Hayashi, and **M. Nagahara**, Multiuser Detection based on MAP Estimation with Sum-of-Absolute-Values Relaxation, *IEEE Transactions on Signal Processing*, vol. 65, no. 21, pp. 5621-5634, Nov. 2017.

12. T. Ikeda, **M. Nagahara**, and S. Ono, Discrete-Valued Control of Linear Time-Invariant Systems by Sum-of-Absolute-Values Optimization, *IEEE Transactions on Automatic Control*, Vol. 62, No. 6, pp. 2750-2763, June 2017.

13. N. Hayashi, **M. Nagahara**, and Y. Yamamoto, Robust AC Voltage Regulation of Microgrids in Islanded Mode with Sinusoidal Internal Model, *SICE Journal of Control, Measurement, and System Integration*, Vol. 10, No. 2 p. 62-69, 2017.

14. H. Sasahara, K. Hayashi and **M. Nagahara**, Symbol Detection for Faster-Than-Nyquist Signaling by Sum-of-Absolute-Values Optimization, *IEEE Signal Processing Letters*, vol. 23, no. 12, pp. 1853-1857, Dec. 2016.

15. **M. Nagahara**, J. Ostergaard, D. E. Quevedo, Discrete-time hands-off control by sparse optimization, *EURASIP Journal on Advances in Signal Processing*, 2016:76, Dec. 2016.

16. D. Chatterjee, **M. Nagahara**, D. E. Quevedo, and K. S. M. Rao, Characterization of maximum hands-off control, *Systems & Control Letters*, vol. 94, pp. 31-36, Aug. 2016.

17. **M. Nagahara** and Y. Yamamoto, Digital repetitive controller design via sampled-data delayed signal reconstruction, *Automatica*, Vol. 65, pp. 203–209, 2016.

18. T. Ikeda and **M. Nagahara**, Value function in maximum hands-off control for linear systems, *Automatica*, vol. 64, pp. 190-195, Feb. 2016

19. **M. Nagahara**, D. E. Quevedo, and D. Nesic, Maximum hands-off control: a paradigm of control effort minimization, *IEEE Transactions on Automatic Control* Vol. 61, No. 3, pp. 735–747, 2016.

20. **M. Nagahara**, Discrete Signal Reconstruction by Sum of Absolute Values, IEEE Signal Processing Letters, Vol. 22, no. 10, pp. 1575-1579, Oct. 2015.

21. H. Sasahara, **M. Nagahara**, K. Hayashi, and Y. Yamamoto, Digital Cancelation of Self-Interference for Single-Frequency Full-Duplex Relay Stations via Sampled-Data Control, *SICE Journal of Control, Measurement, and System Integration*, Vol. 8, No. 5, pp. 321-327, 2015.

22. **M. Nagahara** and C. F. Martin, L^1 Control Theoretic Smoothing Splines, *IEEE Signal Processing Letters*, vol. 21, no. 11, pp. 1394-1397, Nov. 2014.

23. **M. Nagahara**, D. E. Quevedo, and J. Østergaard, Sparse Packetized Predictive Control for Networked Control over Erasure Channels, *IEEE Transactions on Automatic Control* Vol. 59, No. 7, pp. 1899–1905, July 2014.

24. **M. Nagahara** and Y. Yamamoto, H^∞-optimal fractional delay filters, *IEEE Transactions on Signal Processing* Vol. 61, No. 18, pp. 4473–4480, 2013.

25. **M. Nagahara** and C. F. Martin, Monotone Smoothing Splines Using General Linear Systems, *Asian Journal of Control*, Vol. 5, No. 2, pp. 461-468, Mar. 2013.

26. K. Hayashi, **M. Nagahara**, and T. Tanaka, A User's Guide to Compressed Sensing for Communications Systems, invited paper, *IEICE Trans. on Communications*, Vol. E96-B, No. 3, pp. 685-712, Mar. 2013.

27. **M. Nagahara** and Y. Yamamoto, Frequency domain min-max optimization of noise-shaping delta-sigma modulators, *IEEE Transactions on Signal Processing* Vol. 60, No. 6, pp. 2828–2839, 2012.

28. Y. Yamamoto, **M. Nagahara** and P. P. Khargonekar, A Brief Overview of Signal Reconstruction via Sampled-Data H^∞ Optimization, *Applied and Computational Mathematics*, Vol. 11, No. 1, pp. 3-18, 2012.

29. **M. Nagahara**, T. Matsuda, and K. Hayashi, Compressive Sampling for Remote Control Systems, *IEICE Trans. on Fundamentals*, Vol. E95-A, No. 4, pp. 713-722, Apr. 2012.

30. Y. Yamamoto, **M. Nagahara**, and P. P. Khargonekar, Signal Reconstruction via H^∞ Sampled-Data Control Theory — Beyond the Shannon Paradigm, *IEEE Transactions on Signal Processing*, Vol. 60, No. 2, pp. 613-625, Feb. 2012.

31. S. Miyazaki, T. Kudoh, **M. Nagahara**, N. Hayashi, and Y. Yamamoto, Power Balancing Control for Energy Management Systems, *Panasonic Technical Journal*, Vol. 57, No. 4, pp. 17-22, Jan. 2012. (in Japanese)

32. T. Matsuda, **M. Nagahara**, and K. Hayashi, Link quality classifier with compressed sensing based on l1-l2 optimization, *IEEE Communications Letters*, vol. 15, no. 10, pp. 1117-1119, Oct. 2011.

33. **M. Nagahara**, M. Ogura, and Y. Yamamoto, H^∞ design of periodically nonuniform interpolation and decimation for non-band-limited signals, *SICE Journal of Control, Measurement, and System Integration*, Vol. 4, No. 5, pp. 341-348, 2011.

34. **M. Nagahara** and Y. Yamamoto, H^∞ optimal approximation for causal spline interpolation, *Signal Processing*, Vol. 91, No. 2, pp. 176-184, 2011.

35. K. Kashima, Y. Yamamoto and **M. Nagahara**, Optimal wavelet expansion via sampled-data control theory, *IEEE Signal Processing Letters*, Vol. 11, Issue 2, pp. 79-82, 2004.

36. Y. Yamamoto, B. D. O. Anderson, **M. Nagahara** and Y. Koyanagi, Optimizing FIR approximation for discrete-time IIR filters, *IEEE Signal Processing Letters*, Vol. 10, Issue 9, pp. 273-276, 2003.

37. **M. Nagahara**, Y. Yamamoto, Sampled-data H^∞ design for digital communication systems, *Transactions of ISCIE*, Vol. 16, No. 1, pp. 38-43, 2003 (in Japanese)

38. Y. Wakasa, D. Yasufuku, **M. Nagahara** and Y. Yamamoto, Sampled-data design of interpolators using the cutting-plane method, *SICE Transactions*, Vol. 38, No. 5, pp. 462-468, 2002 (in Japanese)

39. **M. Nagahara** and Y. Yamamoto, Sampled-data H^∞ design of interpolators, *Transactions of ISCIE*, Vol. 14, No. 10, pp. 483-489, 2001 (in Japanese)

Refereed Conference Proceedings

1. M. Kishida, **M. Nagahara**, and D. Chatterjee, Discrete-time maximum hands-off control with minimum switches, *2019 IEEE Conference on Decision and Control* (CDC), pp. 529-534, Nice, France, 11 Dec 2019.

2. S. Azuma and **M. Nagahara**, Majority determination on binary-valued communication networks, *2019 IEEE Conference on Decision and Control* (CDC), pp. 885-889, Nice, France, 11 Dec 2019.

3. M. Barforooshan, **M. Nagahara**, and J. Ostergaard, Sparse packetized predictive control over communication networks with packet dropouts and time delays, *2019 IEEE Conference on Decision and Control* (CDC), pp. 8272-8277, Nice, France, 13 Dec 2019.

4. K. Nakashima, T. Matsuda, **M. Nagahara**, and T. Takine, Control Vector Selection with State Clustering for Wireless Networked Control Systems, *IEEE 90th Vehicular Technology Conference: VTC2019-Fall*, Honolulu, Hawaii, USA, pp.1-5, 22-25 September 2019.

5. Y. Fujimoto, T. Tokushige, **M. Nagahara**, Bayesian LPV-FIR identification of wheelchair dynamics, *SICE Annual Conference*, Hiroshima, 12 Sept, pp. 1036-1039, 2019.

6. Y. Fujimoto, F. Abe, **M. Nagahara**, Room impulse response estimation with kernel-based regularization, *SICE Annual Conference*, Hiroshima, 11 Sept, pp. 528-531, 2019.

7. S. M. Rayyan and **M. Nagahara**, State-Space Realization of Linear Time-Invariant Systems with Maximum Measure of Quality, *12th Asian Control Conference* (ASCC), pp. 1376-1379, 12 June 2019.

8. **M. Nagahara** and D. Chatterjee, Continuity of the Combined L^1-L^2 Optimal Control for Linear Systems, *5th Indian Control Conference* (ICC), pp. 506-509, Delhi, Jan, 2019.

9. Y. Yamamoto, K. Yamamoto, and **M. Nagahara**, Sampled-data Filters with Compactly Supported Acquisition Prefilters, *2018 IEEE Conference on Decision and Control* (CDC), pp. 6650-6655, Miami Beach, 19 Dec 2018.

10. M. Kishida, M. Barforooshan, and **M. Nagahara**, Maximum Hands-Off Control for Discrete-time Linear Systems Subject to Polytopic Uncertainties, *7th IFAC Workshop on Distributed Estimation and Control in Networked Systems* (NecSys2018), pp. 355-360, Groningen, Aug. 2018.

11. K. Fujimoto, J. Muramatsu, and M. nagahara, Dynamical Model of Overconfidence Phenomena Due to ZE-type Confirmation Bias,, *IEEE International Conference on Systems, Man, and Cybernetics* (SMC2018), 7-10 Oct 2018.

12. **M. Nagahara** and D. Chatterjee, Optimal Control with Sparsity Constraints in the Frequency Domain, *SICE Annual Conference*, pp. 398-400, Nara, 12 Sept, 2018.

13. N. Hayashi and **M. Nagahara**, Consensus-Based Distributed Event-Triggered Sparse Modeling, *SICE Annual Conference*, pp. 1801-1805, Nara, 14 Sept, 2018.

14. K. Nakashima, T. Matsuda, **M. Nagahara**, and T. Takine, Control Vector Selection with Delay Estimation in Wireless Networked Control Systems, *IEEE International Conference on Consumer Electronics*, Taichung, Taiwan, pp. 81-82, 19-21 May 2018.

15. K. Yamamoto, **M. Nagahara**, Y. Yamamoto, Signal Reconstruction with Generalized Sampling, *56th IEEE Conference on Decision and Control* (CDC2017), Melbourne, Australia, Dec. 12-15, 2017.

16. **M. Nagahara**, S. Takahashi, H. Higuchi, and T. Takebayashi, Sparse Optimization of Physical Distribution Systems based on Maximum Hands-off Control, *2017 International Symposium on Nonlinear Theory & Its Applications* (NOLTA2017), Cancun, Mexico, Dec. 4-7, 2017.

17. K. Nakashima, T. Matsuda, **M. Nagahara**, and T. Takine, Cross-Layer Design of an LQG Controller in Multihop TDMA-Based Wireless Networked Control Systems, *IEEE 28th Annual International Symposium on Personal, Indoor, and Mobile Radio Communications* (PIMRC), Montreal, QC, Canada, October 8-13, 2017.

18. **M. Nagahara**, N. Challapalli, and M. Vidyasagar, CLOT Optimization for Distributed Hands-Off Control with Continuity, *SICE Annual Conference*, Sept. 21, 2017.

19. K. Yamamoto, Y. Yamamoto, and **M. Nagahara**, Hypertracking Beyond the Nyquist Frequency, *Emerging Applications of Control and System Theory* (EACST 2017), Dallas, Texas, USA, Sept. 2017.

20. K. Yamamoto, Y. Yamamoto, and **M. Nagahara**, Simultaneous rejection of signals below and above the Nyquist frequency, *1st IEEE Conference on Control Technology and Applications* (CCTA), Hawaii, USA, Aug. 29, 2017.

21. N. Challapalli, **M. Nagahara**, and M. Vidyasagar, Continuous Hands-off Control by CLOT Norm Minimization, *20th IFAC World Congress 2017*, pp. 15019-15024, Toulouse, France, July 14, 2017.

22. H. Sasahara, K. Hayashi, **M. Nagahara**, Symbol Detection for Faster-than-Nyquist Signaling by Sum-of-Absolute-Values Optimization, *42nd IEEE International Conference on Acoustics, Speech and Signal Processing* (ICASSP 2017), 2017.

23. S. Ohno, T. Shiraki, M. R. Tariq, **M. Nagahara**, Rate-distortion analysis of delta-sigma modulators, *42nd IEEE International Conference on Acoustics*, Speech and Signal Processing (ICASSP 2017), 2017.

24. Y. Yamamoto, K. Yamamoto and **M. Nagahara**, Tracking of signals beyond the Nyquist frequency, *55th IEEE Conference on Decision and Control* (CDC), Las Vegas, NV, 2016, pp. 4003-4008.

25. T. Ikeda, **M. Nagahara** and K. Kashima, Consensus by maximum hands-off distributed control with sampled-data state observation, *55th IEEE Conference on Decision and Control* (CDC), Las Vegas, NV, 2016, pp. 962-966.

26. M. R. Tariq, S. Ohno and **M. Nagahara**, Synthesis of IIR error feedback filters for $\Delta\,\Sigma$ modulators using approximation, *2016 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference* (APSIPA), Jeju, 2016.

27. R. Hayakawa, K. Hayashi, H. Sasahara, and **M. Nagahara**, Massive Overloaded MIMO Signal Detection via Convex Optimization with Proximal Splitting, *The 2016 European Signal Processing Conference* (EUSIPCO), Aug.-Sept. 2016.

28. T. Ikeda, **M. Nagahara** and D. E. Quevedo, Quantized self-triggered control by sum-of-absolute-values optimization, *22nd International Symposium on Mathematical Theory of Networks and Systems* (MTNS), Minneapolis, Jul. 2016.

29. H. Sasahara, K. Hayashi, **M. Nagahara**, and Y. Yamamoto, Control Theoretical Approach for Single-Frequency Full-Duplex Wireless Relaying, *22nd International Symposium on Mathematical Theory of Networks and Systems* (MTNS), Minneapolis, Jul. 2016.

30. T. Ikeda and **M. Nagahara**, Fundamental analysis of sparse optimal control and its application to discrete-valued control, *2016 American Control Conference* (ACC), Boston, Jul. 2016.

31. T. Ikeda and **M. Nagahara**, Maximum hands-off control without normality assumption, *2016 American Control Conference* (ACC), Boston, Jul. 2016.

32. H. Sasahara, K. Hayashi, and **M. Nagahara**, Mutiuser Detection by MAP Estimation with Sum-of-Absolute-Values Relaxation, *IEEE International Conference on Communications* (ICC) 2016, May 2016.

33. T. Ikeda and **M. Nagahara**, Computation of maximum hands-off control, *SICE International Symposium on Control Systems 2016*, Nagoya, Mar. 9, 2016.

34. H. Sasahara, K. Hayashi, and **M. Nagahara**, Faster-than-Nyquist Signaling by Sum-of-Absolute-Values, *SICE International Symposium on Control Systems 2016*, Nagoya, Mar. 2016.

35. H. Sasahara, **M. Nagahara**, K. Hayashi, Y. Yamamoto, Sampled-data H^∞ optimization for self-interference suppression in baseband signal subspaces, *54th IEEE Conference on Decision and Control* (CDC), Osaka, pp. 7244-7249, Dec. 18, 2015.

36. H. Sasahara, **M. Nagahara**, K. Hayashi, Y. Yamamoto, Time-domain equalization for single-frequency full-duplex wireless relay using H2 optimal control, *47th ISCIE International Symposium on Stochastic Systems Theory and Its Applications* (SSS'15), Hawaii, Dec. 5, 2015.

37. T. Ikeda and **M. Nagahara**, Discrete model predictive control by sum-of-absolute-values optimization, *47th ISCIE International Symposium on Stochastic Systems Theory and Its Applications* (SSS'15), Hawaii, Dec. 5, 2015.

38. M. Ogura, **M. Nagahara**, and V. M. Preciado, L^1-optimal disturbance rejection for disease spread over time-varying networks, *The First International Symposium on Swarm Behavior and Bio-Inspired Robotics* (SWARM2015), pp. 377-378, October 28-30, Kyoto, 2015.

39. H. Sasahara, **M. Nagahara**, K. Hayashi, and Y. Yamamoto, Loop-Back Interference Suppression for OFDM Signals via Sampled-Data Control *10th Asian Control Conference* (ASCC), paper ID: 1570072769, pp. 1-4, May-Jun. 2015.

40. T. Ikeda and **M. Nagahara**, Continuity of the Value Function in Sparse Optimal Control, *10th Asian Control Conference* (ASCC), paper ID: 1570074957, pp. 1-4, May-Jun. 2015.

41. H. Sasahara, **M. Nagahara**, K. Hayashi, and Y. Yamamoto, Communication Performance Analysis of Sampled-Data H^∞ Optimal Coupling Wave Canceler *SICE International Symposium on Control Systems*, 513-5 (2 pages), Mar. 2015.

42. T. Ikeda and **M. Nagahara**, Value Functions in Sparse Optimal and L^1 Optimal Controls, *SICE International Symposium on Control Systems*, 513-3 (6 pages), Mar. 2015.

43. **M. Nagahara**, H. Sasahara, K. Hayashi, and Y. Yamamoto, Sampled-data H^∞ design of coupling wave cancelers in single-frequency full-duplex relay stations, *SICE Annual Conference 2014*, pp. 401-406, Sept. 2014.

44. **M. Nagahara** and Y. Yamamoto, FIR digital filter design by sampled-data H^∞ discretization, *19th IFAC World Congress*, pp. 3110-3115, Aug. 2014.

45. **M. Nagahara**, D. E. Quevedo, and D. Nesic, Maximum-hands-off control and L^1 optimality, *52nd IEEE Conference on Decision and Control* (CDC), pp. 3825-3830, Dec. 2013.

46. **M. Nagahara** and Y. Yamamoto, Optimal discretization of analog filters via sampled-data H^∞ control theory, *2013 IEEE Multi-Conference on Systems and Control* (MSC 2013), pp. 527-532, Aug. 2013.

47. **M. Nagahara** and C. F. Martin, L^1-optimal splines for outlier rejection, *The 59th World Statistics Congress*, pp. 1137-1142, Aug. 2013.

48. **M. Nagahara**, D. E. Quevedo, and J. Ostergaard, Packetized predictive control for rate-limited networks via sparse representation, *51st IEEE Conference on Decision and Control* (CDC), pp. 1362-1367, Dec. 2012.

49. **M. Nagahara**, Y. Yamamoto, S. Miyazaki, T. Kudoh, and N. Hayashi, H^∞ control of microgrids involving gas turbine engines and batteries, *51st IEEE Conference on Decision and Control* (CDC), pp. 4241-4246, Dec. 2012.

50. **M. Nagahara**, D. Quevedo, and J. Ostergaard, Sparsely-packetized predictive control by orthogonal matching pursuit *Mathematical Theory of Networks and Systems* (MTNS2012), paper ID: 0156 (3 pages), Jul. 2012.

51. **M. Nagahara** and Y. Yamamoto, H^∞ optimal fractional delay filters with application to pitch shifting, *2012 IFAC Workshop on Time Delay Systems*, pp. 61-66, Jun. 2012.

52. **M. Nagahara**, D. E. Quevedo, T. Matsuda, and K. Hayashi, Compressive sampling for networked feedback control, *IEEE International Conference on Acoustics, Speech, and Signal Processing* (ICASSP), pp. 2733-2736, Mar. 2012.

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