Konstantinos Gatsis

CONTACT

Address: Department of Electrical and Computer Engineering
Villanova University
Villanova, PA, USA
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ACADEMIC APPOINTMENTS

Visiting Assistant Teaching Professor Jan. 2025 - Present
Department of Electrical and Computer Engineering
Villanova University
Villanova, PA, USA

Lecturer (Assistant Professor) Jan. 2024 - Jan. 2025
Visiting Academic Jan. 2025 - Present
School of Electronics and Computer Science
Cyber-Physical Systems Group
University of Southampton, Southampton, UK

Departmental Lecturer (Fixed-term Assistant Professor) Dec. 2019 - Dec. 2023
Visiting Fellow Jan. 2024 - Present
Department of Engineering Science
Control Engineering Group
University of Oxford, Oxford, UK

Postdoctoral Researcher Oct.2016 - Oct.2019
Dept. of Electrical & Systems Engineering
GRASP (General Robotics, Automation, Sensing and Perception) Laboratory
PRECISE (Penn Research In Embedded Computing and Integrated Systems Engineering) Center
University of Pennsylvania, Philadelphia, PA

EDUCATION

PhD in Electrical & Systems Engineering Sept.2010 - Dec. 2016
University of Pennsylvania Philadelphia, PA
Thesis: Resource-aware Design of Wireless Control Systems
Advisor: Prof. George J. Pappas
Committee: Babak Hassibi (Caltech), Ali Jadbabaie (UPenn, currently MIT), Alejandro Ribeiro (UPenn)

Diploma in Electrical & Computer Engineering Sept. 2004 - May 2010
University of Patras Patras, Greece
Thesis: Robotic Vehicle Navigation
Advisor: Prof. Anthony Tzes (currently NYU Abu Dhabi)

RESEARCH INTERESTS

Cyber-Physical Systems; Control and Optimization; Learning for Autonomous Systems; Next Generation Wireless Autonomous Applications; Security and Privacy

TEACHING EXPERIENCE - UNDERGRADUATE

Instructor, Villanova University, USA

Engineering Systems Model and Control (ECE 3000) Spring 2026
Engineering Systems Model and Control Laboratory (ECE 3001) Spring 2025, 2026
Fundamentals of Signal Processing (ECE 3242) Fall 2025
Electrical Communications Spring 2025, 2026
Electrical Circuits Fundamentals Lab (ECE 2031) Spring 2025, Fall 2025

Instructor, University of Oxford, UK

Robust Control (C20) Hillary Term (Fall) 2020, 2021, 2022, 2023
Dynamic Programming and Reinforcement Learning (C21) Hillary Term (Winter) 2021, 2023, Trinity Term (Spring) 2022

Lecturer, Somerville College, University of Oxford, UK Oct.2020 - Sept. 2022
Delivering small group teaching, problem solving, revisions for 1st and 2nd Year Engineering Undergraduate students
Topics: Engineering Mathematics (Calculus, Linear Algebra, Complex Algebra, ODEs, PDEs, Signals and Systems), Introduction to Control Engineering

TEACHING EXPERIENCE - GRADUATE

Instructor, Villanova University, USA

Markov Decision Processes and Reinforcement Learning (ECE 9900) Summer 2025
Masters and PhD level course

Instructor, University of Southampton, UK

Fundamental Principles of Energy and Power Systems (ELEC 6223) Semester 1 (Autumn) 2024
MSc level course, lectures on solar energy and thermoelectric energy

Instructor, University of Oxford, UK

Introduction to Modern Control - AIMS Center for Doctoral Training Hillary Term 2023
with Professors Alessandro Abate, Kostas Margellos

Instructor, University of Pennsylvania, Philadelphia, PA

Special topics in ESE: Safe Learning for Control (ESE 680) Spring 2019
with Professors Manfred Morari, George J. Pappas

Special topics in ESE: Learning for Control (ESE 680) Spring 2018
with Professors Manfred Morari, George J. Pappas

Special topics in ESE: Dynamic Programming and Optimal Control (ESE 680) Fall 2017

Teaching Assistant, University of Pennsylvania, Philadelphia, PA

Control of Systems (ESE 406), Instructor: Prof. Bruce Kothmann Spring 2013
Introduction to Optimization Theory (ESE 504), Instructor: Prof. Ali Jadbabaie Fall 2011

SUPERVISION - GRADUATE

(Current), Univ. of Oxford

Andre Bertolace (with Prof. K Margellos), Doctoral Student (DPhil), Part-time Oct 2021 - Present
Ondrej Bajgar (with Profs. A. Abate, M. Osborne), Doctoral Student (DPhil) Oct 2021 - Present
Keyan Miao (with Prof. A. Papachristodoulou), Doctoral Student (DPhil) Oct 2021 - Present
Liqun Zhao (with Prof. A. Papachristodoulou), Doctoral Student (DPhil) Oct 2021 - Present

(Past), Univ. of Oxford

Patrick Benjamin (with Prof. K Margellos), AIMS CDT Mini-Project Apr 2022 - June 2022
Ondrej Bajgar (with Prof. A. Abate), AIMS CDT Mini-Project Apr 2021 - June 2021

SUPERVISION - UNDERGRADUATE

3rd year Undergraduate Project Supervision, Univ. of Southampton, UK

Aahir Dasgupta,	Sept 2024 - Dec.2024
Ashvin Campanella,	Sept 2024 - Dec. 2024

4th year Undergraduate Project Supervision, Univ. of Oxford, UK

Ali (Bora) Aydin (with Prof. A. Papachristodoulou), 4YP,	Oct 2023 - Dec 2023
James Craik (with Prof. K Margellos), 4YP,	Oct 2023 - Dec 2023
Oliver Gates, 4YP,	Oct 2022 - May 2023
Edward Gunn, 4YP,	Oct 2022 - May 2023
Xuyang Zhao, 4YP,	Oct 2022 - May 2023
Toby Lam (with Prof. K Margellos), 4YP,	Oct 2021 - May 2022
Michael Harris, 4YP,	Oct 2021 - May 2022
Oscar Powell, 4YP,	Oct 2021 - May 2022
Jia Emily Tsen, 4YP,	Oct 2020 - May 2021
Oliver Farquharson, 4YP	Oct 2020 - May 2021

Undergraduate Research Project Supervision, Univ. of Oxford, UK

Jingyi Huang (with Prof. K. Margellos), Summer Project (EUROP)	Jun - Aug 2022
George Whittle, Summer Project (EUROP)	Jun - Aug 2022
Shenqi Ye (with Prof. Noa Zilberman), Summer project	July - Aug 2020

HONORS & AWARDS

IEEE Communications Society & Information Theory Society Joint Paper Award 2023
for the paper, "Age of Information in Random Access Channels," IEEE Transactions on Information Theory, Vol. 68, No. 10, pp. 6548-6568, October 2022.

Best Readings in Communications in Wireless Networked Control 2021
Five journal papers selected in the list of best readings by the IEEE Communications Society.

Best Student Paper Finalist (as co-author) 2017
56th IEEE Conference on Decision and Control, Melbourne, Australia. Awarded to V. Tzoumas for the paper "Resilient Monotone Submodular Function Maximization".

Young Author Prize Finalist (as co-author) 2017
2017 IFAC World Congress, Toulouse, France. Awarded to A. Tsiamis for the paper "State Estimation with Secrecy against Eavesdroppers".

Best Poster Award 2017
IoTDI Conference in CPSWeek 2017, Pittsburgh, PA, for the poster "Wireless Control for the IoT: Power, Spectrum, and Security Challenges".

Joseph, D'16, and Rosaline Wolf Award for Best Doctoral Dissertation (co-recipient) 2016
Awarded annually for the best dissertation from a male Electrical and Systems Engineering Ph.D. Candidate of the University of Pennsylvania.

O. Hugo Schuck Best Paper Award (Theory) 2014
Awarded by the American Automatic Control Council to the two best papers (theory and application) presented at the 2013 American Control Conference. For the paper "Optimal Power Management in Wireless Control Systems".

Best Paper Award Finalist 2014
ACM/IEEE 5th International Conference on Cyber-Physical Systems (ICCPS 2014), Berlin, Germany, for the paper "Opportunistic Scheduling of Control Tasks Over Shared Wireless Channels".

Student Best Paper Award 2013
2013 American Control Conference (ACC 2013) for the paper "Optimal Power Management in Wireless Control Systems".

PUBLICATIONS (Total Citation Count: 1700, Google Scholar, Dec 2025)

Book Chapters

[B-1] K. Gatsis and G. J. Pappas. Reinforcement learning for control using value function approximation. In J. Baillieul and T. Samad, editors, *Encyclopedia of Systems and Control*. Springer, London, 2020

Journal Papers

[J-1] L. Zhao, K. Miao, H. Cao, K. Gatsis, and A. Papachristodoulou. NLBAC: A neural ode-based algorithm for state-wise stable and safe reinforcement learning. In *Neurocomputing*, 2025

[J-2] M. Pezzutto, S. Dey, E. Garone, K. Gatsis, K. H. Johansson, and L. Schenato. Wireless control: Retrospective and open vistas. *Annual Reviews in Control*, 2024

[J-3] V. L. Silva, M. Eisen, K. Gatsis, and A. Ribeiro. Model-free design of control systems over wireless fading channels. *Signal Processing*, 197:108540, 2022

[J-4] X. Chen, K. Gatsis, H. Hassani, and S. S. Bidokhti. Age of information in random access channels. *IEEE Transactions on Information Theory*, 2022 [**IEEE Communications Society & Information Theory Society Joint Paper Award**]

[J-5] K. Gatsis and G. J. Pappas. Statistical learning for analysis of networked control systems over unknown channels. *Automatica*, 125:109386, 2021

[J-6] A. B. Alexandru, K. Gatsis, Y. Shoukry, S. A. Seshia, P. Tabuada, and G. J. Pappas. Cloud-based quadratic optimization with partially homomorphic encryption. *IEEE Transactions on Automatic Control*, 66(5):2357–2364, 2021

[J-7] K. Gatsis, H. Hassani, and G. J. Pappas. Latency-reliability tradeoffs for state estimation. *IEEE Transactions on Automatic Control*, 66(3):1009–1023, 2021

[J-8] A. Tsiamis, K. Gatsis, and G. J. Pappas. State-secrecy codes for networked linear systems. *IEEE Transactions on Automatic Control*, 65(5):2001–2015, 2020

[J-9] M. Eisen, M. M. Rashid, K. Gatsis, D. Cavalcanti, N. Himayat, and A. Ribeiro. Control aware radio resource allocation in low latency wireless control systems. *IEEE Internet of Things Journal*, 6(5):7878–7890, 2019

[J-10] M. Eisen, K. Gatsis, G. J. Pappas, and A. Ribeiro. Learning in wireless control systems over non-stationary channels. *IEEE Transactions on Signal Processing*, 67(5):1123–1137, 2019

[J-11] K. Gatsis, A. Ribeiro, and G. J. Pappas. Random access design for wireless control systems. *Automatica*, 91:1 – 9, May 2018

[J-12] K. Gatsis, M. Pajic, A. Ribeiro, and G. J. Pappas. Opportunistic control over shared wireless channels. *IEEE Transactions on Automatic Control*, 60(12):3140–3155, December 2015

[J-13] K. Gatsis, A. Ribeiro, and G. J. Pappas. Optimal power management in wireless control systems. *IEEE Transactions on Automatic Control*, 59(6):1495–1510, June 2014

Workshops

[P-1] K. Miao and K. Gatsis. Towards optimal network depths: Control-informed acceleration of training and inference in neural ODEs. In *NeurIPS Workshop on The Symbiosis of Deep Learning and Differential Equations III (DLDE)*, 2023. Poster. Available on OpenReview

Conference Papers

[C-1] A. Bertolace, K. Gatsis, and K. Margellos. Distributionally robust adversarial attacks with mirrored loss. In *IEEE Conference on Decision and Control*, 2025

[C-2] O. Bajgar, D. S. W. Gould, J. Liu, A. Abate, K. Gatsis, and M. A. Osborne. PAC apprenticeship learning with bayesian active inverse reinforcement learning. In *Reinforcement Learning Conference*, 2025

[C-3] K. Miao, L. Zhao, H. Wang, K. Gatsis, and A. Papachristodoulou. Opt-ODENet: Neural ODE controller design with differentiable optimization layers for safety and stability. In *7th Annual Learning for Dynamics & Control Conference*, pages 1217–1229. PMLR, 2025

[C-4] A. Bertolace, K. Margellos, and K. Gatsis. Sample complexity bounds for probabilistically robust adversarial machine learning. In *IEEE Conference on Decision and Control*, 2024

[C-5] K. Miao and K. Gatsis. How deep do we need: Accelerating training and inference of neural ODEs via control perspective. In *International Conference on Machine Learning (ICML)*, 2024. Acceptance rate of 27.5%

[C-6] O. Bajgar, A. Abate, K. Gatsis, and M. Osborne. Walking the values in Bayesian inverse reinforcement learning. In *40th Conference on Uncertainty in Artificial Intelligence (UAI)*, 2024. Spotlight presentation

[C-7] O. Gates, M. Newton, and K. Gatsis. Scalable forward reachability analysis of multi-agent systems with neural network controllers. In *62nd IEEE Conference on Decision and Control*, 2023

[C-8] A. Bertolace, K. Margellos, and K. Gatsis. Homomorphically encrypted gradient descent algorithms for quadratic programming. In *62nd IEEE Conference on Decision and Control*, 2023

[C-9] L. Zhao, K. Gatsis, and A. Papachristodoulou. Stable and safe reinforcement learning via a barrier-lyapunov actor-critic approach. In *62nd IEEE Conference on Decision and Control*, 2023

[C-10] K. Miao and K. Gatsis. Learning robust state observers using Neural ODEs. In *Learning for Dynamics and Control Conference (L4DC)*, 2023

[C-11] K. Gatsis. Federated reinforcement learning at the edge: Exploring the learning-communication tradeoff. In *European Control Conference (ECC)*, 2022

[C-12] K. Gatsis. Linear regression over networks with communication guarantees. In *3rd Annual Learning for Dynamics & Control Conference*, 2021

[C-13] K. Gatsis. Adaptive scheduling for machine learning tasks over networks. In *2021 American Control Conference (ACC)*, 2021

[C-14] X. Chen, K. Gatsis, H. Hassani, and S. S. Bidokhti. Age of information in random access channels. In *IEEE International Symposium on Information Theory (ISIT)*, 2020

[C-15] V. L. Silva, M. Eisen, K. Gatsis, and A. Ribeiro. Resource allocation in large-scale wireless control systems with graph neural networks. In *IFAC World Congress*, 2020

[C-16] H. Hu, K. Gatsis, M. Morari, and G. J. Pappas. Non-cooperative distributed MPC with iterative learning. In *IFAC World Congress*, 2020

[C-17] K. Gatsis and G. J. Pappas. Learning to control over unknown wireless channels. In *IFAC World Congress*, 2020

[C-18] V. L. Silva, M. Eisen, K. Gatsis, and A. Ribeiro. Resource allocation in wireless control systems via deep policy gradient. In *2020 IEEE 21st International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, 2020

[C-19] H. Hu, K. Gatsis, M. Morari, and G. J. Pappas. Tuning communication latency for distributed model predictive control. In *8th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*, 2019

[C-20] M. Eisen, M. M. Rashid, K. Gatsis, D. Cavalcanti, N. Himayat, and A. Ribeiro. Control aware communication design for time sensitive wireless systems. In *2019 IEEE International Conference on Acoustics, Speech and Signal Processing*, 2019

[C-21] A. Tsiamis, K. Gatsis, and G. J. Pappas. An information matrix approach for state secrecy. In *57th IEEE Conference on Decision and Control (CDC 2018)*, Miami Beach, FL, 2018

[C-22] K. Gatsis and G. J. Pappas. Sample complexity of networked control systems over unknown channels. In *57th IEEE Conference on Decision and Control (CDC 2018)*, Miami Beach, FL, 2018

[C-23] M. Eisen, K. Gatsis, G. J. Pappas, and A. Ribeiro. Learning in non-stationary wireless control systems via newton's method. In *American Control Conference 2018 (ACC 2018)*, Milwaukee, WI, 2018

[C-24] A. Tsiamis, K. Gatsis, and G. J. Pappas. State-secrecy codes for stable systems. In *American Control Conference 2018 (ACC 2018)*, Milwaukee, WI, 2018

[C-25] N. J. Watkins, K. Gatsis, M. Morari, and G. J. Pappas. Scenario-based model predictive control for energy harvesting actuators. In *American Control Conference 2018 (ACC 2018)*, Milwaukee, WI, 2018

[C-26] M. Eisen, K. Gatsis, G. J. Pappas, and A. Ribeiro. Optimization of switched linear systems over non-stationary wireless channels. In *2018 IEEE 19th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, 2018

[C-27] M. Eisen, K. Gatsis, G. J. Pappas, and A. Ribeiro. Learning statistically accurate resource allocations in non-stationary wireless systems. In *2018 IEEE International Conference on Acoustics, Speech and Signal Processing*, 2018

[C-28] A. Alexadru, K. Gatsis, and G. J. Pappas. Privacy preserving cloud-based quadratic optimization. In *55th Annual Allerton Conference on Communication, Control, and Computing*, October 2017

[C-29] V. Tzoumas, K. Gatsis, A. Jadbabaie, and G. J. Pappas. Resilient monotone submodular function maximization. In *56th IEEE Conference on Decision and Control (CDC 2017)*, Melbourne, Australia, December 2017 [**Best Student Paper Finalist for V. Tzoumas**]

[C-30] A. Tsiamis, K. Gatsis, and G. J. Pappas. State estimation codes for perfect secrecy. In *56th IEEE Conference on Decision and Control (CDC 2017)*, Melbourne, Australia, December 2017

[C-31] N. J. Watkins, K. Gatsis, C. Nowzari, and G. J. Pappas. Battery management for control systems with energy harvesting sensors. In *56th IEEE Conference on Decision and Control (CDC 2017)*, Melbourne, Australia, December 2017

[C-32] A. Tsiamis, K. Gatsis, and G. J. Pappas. State estimation with secrecy against eavesdroppers. *IFAC-PapersOnLine*, 50(1):8385 – 8392, July 2017. 20th IFAC World Congress, Toulouse, France [**Young Author Prize Finalist for A. Tsiamis**]

[C-33] Y. Shoukry, K. Gatsis, A. Alanwar, G. J. Pappas, S. A. Seshia, M. Srivastava, and P. Tabuada. Privacy-aware quadratic optimization using partially homomorphic encryption. In *55th IEEE Conference on Decision and Control (CDC 2016)*, Las Vegas, NV, December 2016

[C-34] K. Gatsis, A. Ribeiro, and G. J. Pappas. State-based communication design for wireless control systems. In *55th IEEE Conference on Decision and Control (CDC 2016)*, Las Vegas, NV, December 2016

[C-35] K. Gatsis, A. Ribeiro, and G. J. Pappas. Control-aware random access communication. In *Proc. of the ACM/IEEE 7th International Conference on Cyber-Physical Systems (ICCPS 2016)*, Vienna, Austria, April 2016

[C-36] K. Gatsis, A. Ribeiro, and G. J. Pappas. Control with random access wireless sensors. In *Proc. of the 54th IEEE Conference on Decision and Control (CDC 2015)*, Osaka, Japan, December 2015

[C-37] K. Gatsis, A. Ribeiro, and G. J. Pappas. Decentralized channel access for wireless control systems. In *Proc. of the 5th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys)*, Philadelphia, PA, September 2015

[C-38] K. Gatsis, U. Topcu, and G. J. Pappas. Value of forecasts in planning under uncertainty. In *Proc. of the 2015 American Control Conference (ACC 2015)*, Chicago, IL, July 2015

[C-39] K. Gatsis, M. Pajic, A. Ribeiro, and G. J. Pappas. Opportunistic sensor scheduling in wireless control systems. In *Proc. of the 53rd IEEE Conference on Decision and Control (CDC 2014)*, Los Angeles, CA, December 2014

[C-40] K. Gatsis, M. Pajic, A. Ribeiro, and G. J. Pappas. Opportunistic scheduling of control tasks over shared wireless channels. In *Proc. of the ACM/IEEE 5th International Conference on Cyber-Physical Systems (ICCPS 2014)*, Berlin, Germany, April 2014 [**Best Paper Award Finalist**]

[C-41] K. Gatsis, M. Pajic, A. Ribeiro, and G. J. Pappas. Power-aware communication for wireless sensor-actuator systems. In *Proc. of the 52nd IEEE Conference on Decision and Control (CDC 2013)*, Florence, Italy, December 2013

[C-42] K. Gatsis, A. Ribeiro, and G. J. Pappas. Optimal power management in wireless control systems. In *Proc. of the 2013 American Control Conference (ACC 2013)*, Washington DC, June 2013 [**O. Hugo Schuck Best Paper Award, Student Best Paper Award**]

[C-43] G. Siamantas, K. Gatsis, and A. Tzes. Mobile robot-assisted cellular environment coverage. In *Proc. of the 6th IFIP International Conference on Artificial Intelligence Applications and Innovations (AIAI 2010)*, Larnaca, Cyprus, October 2010

Other Publications

[O-1] K. Gatsis and G. J. Pappas. Optimization, learning, and control for the internet-of-things. In *Princeton Day of Optimization*, Princeton, NJ, September 2018. Poster

[O-2] K. Gatsis and G. J. Pappas. Secure and resource-efficient monitoring and control for the IoT. In *'Meet the Faculty Candidate' Poster Session, 56th IEEE Conference on Decision and Control (CDC 2017)*, Melbourne, Australia, December 2017. Poster

[O-3] K. Gatsis, A. Ribeiro, and G. J. Pappas. Power and spectrum optimization for wireless autonomous systems. In *DIMACS Workshop on Distributed Optimization, Information Processing, and Learning*, Rutgers University, New Brunswick, NJ, August 2017. Poster

[O-4] K. Gatsis and G. J. Pappas. Wireless control for the IoT: Power, spectrum, and security challenges. In *2nd IEEE International Conference on Internet-of-Things Design and Implementation (IoTDI), CPSWeek 2017*, Pittsburgh, PA, April 2017. Poster [**Best Poster Award**]

[O-5] K. Gatsis, A. Ribeiro, and G. J. Pappas. Optimal design principles for wireless control systems. In *'Meet the Faculty Candidate' Poster Session, 55th IEEE Conference on Decision and Control (CDC 2016)*, Las Vegas, NV, December 2016. Poster

[O-6] K. Gatsis, M. Pajic, A. Ribeiro, and G. J. Pappas. Optimal resource management in wireless control systems. In *2014 NSF Cyber-Physical Systems Principal Investigators' Meeting*, Arlington, VA, November 2014. Poster

SELECTED TALKS

Seminar, Institute for Systems Theory and Automatic Control, University of Stuttgart, Germany — June 2024

Seminar, Department of Electrical Engineering and Computer Science, University of California - Irvine, USA — February 2023

Seminar, Control Engineering Group, University of Cambridge, UK — February 2023

Seminar, ELO-X Embedded Learning and Optimisation Workshop, Leuven, Belgium — April 2022

Seminar (remote), Information Processing and Communications Lab, Imperial College London, UK — May 2021

Seminar (remote), CRAN, Université de Lorraine (Nancy, France) — Apr. 2021

Talk (remote), Oxford-Man Institute Machine Learning Workshop, Oxford, UK — Dec. 2020

Seminar (remote), Control Systems Seminar, University of Manchester, UK — Dec. 2020

Seminar (remote), Toshiba Research Europe, UK — Nov. 2020

Seminar (remote), Department of Automatic Control and Systems Engineering, University of Sheffield, UK — Oct. 2020

Seminar, Department of Electrical & Systems Engineering,
Washington University in St. Louis, St. Louis, MO Apr. 2019

Seminar, Department of Electrical & Computer Engineering,
Northeastern University, Boston, MA Mar. 2019

Seminar, Department of Electrical, Computer & Energy Engineering,
University of Colorado Boulder, CO Mar. 2019

Seminar, Department of Electrical & Computer Engineering,
University of Toronto, Canada Mar. 2019

Seminar, Department of Electrical & Computer Engineering,
University of California Riverside, Riverside, CA Mar. 2019

Seminar, Polytechnic School, Arizona State University, Tempe, AZ Feb. 2019

Seminar, Department of Electrical & Computer Engineering,
University of Illinois at Chicago, Chicago, IL Feb. 2019

Invited talk at Information Theory and Applications (ITA) Workshop, San Diego, CA Feb. 2019

Seminar, Online, Intel Science and Technology Center for Wireless Autonomous Systems Dec. 2018

Seminar, Link Lab, University of Virginia, Charlottesville, VA Apr. 2018

Seminar, Department of Electrical Engineering,
Columbia University, New York, NY Mar. 2018

Seminar, Department of Electrical & Computer Engineering,
University of Michigan, Ann Arbor, MI Jan. 2018

Invited talk at Modeling and Optimization: Theory and Applications (MOPTA) Conference,
Lehigh University, Bethlehem, PA Aug. 2016

CCSP Seminar, University of Maryland, College Park, MD Mar. 2016

ISS Seminar, Harvard University, Cambridge, MA Feb. 2016

Invited talk at Information Theory and Applications (ITA) Workshop, San Diego, CA Feb. 2016

PhD Colloquium, Electrical & Systems Engineering, University of Pennsylvania Aug. 2015

ACADEMIC SERVICE

Doctoral Thesis Examiner
Zijing Wang, University of Oxford, UK, July 2023
Tahmoores Farjam, University of Aalto, Finland, December 2022
Jingyue Lu, University of Oxford, UK, January 2022
Natascha Harth, University of Glasgow, UK, August 2021

Doctoral Progress Examiner, University of Oxford
Patrick Benjamin, Confirmation of Status, Sept 2023
Han Wang, Confirmation of Status, Sept 2023, Transfer of Status, Nov 2021
Yana Lishkova, Confirmation of Status, Sept 2022, Transfer of Status, Oct 2020
Martin Doff-Sotta, Confirmation of Status, Sept 2022, Transfer of Status, Oct 2020

Olivia Gallupova, Transfer of Status, Nov 2022
Alec Edwards, Transfer of Status, Sept 2021

PUBLIC ENGAGEMENT ACTIVITIES

Open Days, Department of Engineering Science, Univ. of Oxford 2022
Quadcopter arena experimental platform

Siemens Innovation Ecosystem Website article. 2022
Robust and Resilient Smart Mobility. K. Gatsis, D. Gohlich, S. Park, T. Son. Available online

PERSONAL DEVELOPMENT

Postgraduate Certificate in Academic Practice, Univ. of Southampton, Sep 2024 -
to develop knowledge and skills in learning and teaching

Innovation Leadership Programme, Univ. of Oxford, 2021

REVIEWING ACTIVITIES

Peer Reviewer
Engineering and Physical Sciences Research Council (EPSRC), UK
Research Grants Council (RGC), Hong Kong

Journal Reviewer
IEEE Transactions on Automatic Control, Automatica, IEEE Control Systems Magazine, IEEE Transactions on Signal Processing, IEEE Transactions on Power Systems, IEEE Transactions on Wireless Communications, IEEE Journal of Selected Topics in Signal Processing, ACM Transactions on Cyber-Physical Systems, IEEE Transactions on Control of Network Systems, IEEE Embedded Systems Letters, IEEE Control Systems Letters, IEEE Communications Letters

Conference Reviewer
Conference on Robot Learning 2020, On multiple occasions for IEEE Conference on Decision and Control, American Control Conference, Cyber-Physical Systems Week, European Control Conference, IFAC World Congress

PROFESSIONAL ACTIVITIES

Award Committee 2025
European Systems & Control PhD Thesis Award 2025

Local Publicity Chair July 2024
Conference on Learning for Dynamics and Control (L4DC), Oxford, UK

Seminar Organizer Jan. 2020 - May 2022
Control Group Seminar Series, Department of Engineering Science, University of Oxford, UK

Workshop Organizer
Workshop on Distributed Learning and Multi-agent Learning Dec. 2021
During 60th IEEE Conference on Decision and Control (Online), December 12, 2021
Co-organizers: Vijay Gupta, University of Notre Dame, USA. Number of Participants: 135

Workshop on Learning for Control Dec. 2018
During 57th IEEE Conference on Decision and Control, Miami Beach, Florida, December 16, 2018
Co-organizers: Pramod P. Khargonekar, Manfred Morari, George J. Pappas. Estimated Number of Participants: 200

Program Committee Member

Annual Learning for Dynamics & Control Conference (L4DC), 2021 - 2024
9th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NECSYS), 2022

Associate Editor
American Control Conference (2021 - 2024), IEEE Conference on Decision and Control (2021 - 2024)

Conference Session Organizer July 2020
Open Invited Session on "Control for Next Generation Wireless Networks", 2020 IFAC World Congress, Berlin, Germany
Co-organizers: D. Baumann, K. H. Johansson, S. Trimpe

Member
Conference Editorial Board, IEEE Control Systems Society Aug. 2020 - 2024

Member
Institute of Electrical and Electronics Engineers (IEEE)

Member
Engineering and Physical Sciences Research Council (EPSRC) Associate Peer Review College

FUNDING

Past
UK EPSRC Standard Grant, “Edgy Organism”, Start date: July 2024 (tentative), 30 months, Role: Co-PI. Total value: 1.7M GBP (2.1M USD), Share ∼300K GBP (380K USD)).

Trilateral Seed Funding – University of Oxford, TU Berlin, Siemens Digital Industries
“Robust and Resilient Digital Twin of Connected Mobility for Safety and Energy Efficiency”
Mar 2022 – Dec 2022, Role: Co-PI, Total value: 33K GBP/37K EUR