NIKOLAOS BEKIARIS-LIBERIS

Address	Department of Electrical & Computer Engineering Automation Laboratory		
	Technical University of Crete, Chania 73100, Greece		
	E-mail: bekiaris-liberis@ece.tuc.gr		
	Web: http://users.isc.tuc.gr/~nlimperis/		
Positions	 Technical University of Crete, Greece Assistant Professor, Department of Electrical and Computer Engi- neering, January 2019–current. 		
	 Technical University of Crete, Greece Marie Sklodowska-Curie Fellow, Department of Production Engineer- ing and Management, May 2017–August 2019. 		
	 Technical University of Crete, Greece Adjunct Professor, Department of Electrical & Computer Engineer- ing, September 2015–May 2017. 		
	 Technical University of Crete, Greece Postdoctoral Researcher in the Department of Production Engineering and Management, December 2014–May 2017 Lab director: Markos Papageorgiou. 		
	 5. University of California Berkeley, USA Postdoctoral Researcher in the Departments of Electrical Engineering & Computer Sciences and Civil & Environmental Engineering, August 2013–November 2014 Lab director: Alexandre Bayen. 		
Education	 University of California San Diego, USA PhD in Mechanical & Aerospace Engineering, June 2013 Advisor: Miroslav Krstic. 		
	 University of California San Diego, USA MS in Mechanical & Aerospace Engineering, February 2010 (GPA: 4.0/4.0) 		
	3. National Technical University of Athens, Greece Diploma in Electrical and Computer Engineering, November 2007		
Research Interests	• Control Theory (Distributed Parameter Systems, Delay Systems, Nonlinear Control, Switched Systems, Adaptive Control)		
	• Applications (Traffic Flow Control & Estimation, Control of Connected & Au- tomated Vehicles, Vehicle Control (including Electric Vehicles), Automotive Engines and Catalysts, Extruders/3D-Printing, Oil Drilling and Production, Cooling & Energy Systems, Occupancy Detection in Smart Buildings, Net- worked Control Systems)		

PUBLICATIONS H-index: 24. Citations: 1913 (as of: 13/04/2020, source: Google Scholar) H-index: 19. Citations: 1245 (as of: 13/04/2020, source: Scopus)

Books

1. N. Bekiaris-Liberis and M. Krstic, "Nonlinear Control Under Nonconstant Delays", SIAM, 2013. link

Book Chapters

- N. Bekiaris-Liberis, M. Jankovic and M. Krstic, "Backstepping Designs in the Presence of Non-constant Delays on the Virtual Input", in I. Karafyllis, M. Malisoff, F. Mazenc, and P. Pepe (Eds), *Recent Results on Nonlinear Time Delayed Systems*, Advances in Dynamics and Delays Series, Springer, 2015. link
- 2. N. Bekiaris-Liberis and M. Krstic, "Control of Nonlinear Systems With Delays", in T. Samad and J. Baillieul, *Encyclopedia of Systems and Control*, Springer, 2014. link

Journals

- 42. N. Bekiaris-Liberis, "Hybrid boundary stabilization of linear first-order hyperbolic PDEs despite quantized measurements and control input," Systems and Control Letters (impact factor 2.6), in preparation.
- 41. J. Qi and **N. Bekiaris-Liberis**, "Predictor-feedback stabilization of 2x2 linear hyperbolic systems with in-domain delayed actuation and application to traffic flow control via connected/automated vehicles," Automatica (impact factor: 6.4), in preparation.
- 40. Y. Zhang, M. Wang, and N. Bekiaris-Liberis, "Predictor-based cooperative adaptive cruise control of heterogeneous platoons with delays," IEEE Transactions on Intelligent Transportation Systems (impact factor 5.7), in preparation.
- 39. N. Bekiaris-Liberis and A. Delis, "PDE-based feedback control of freeway traffic flow via time-gap manipulation of ACC-equipped vehicles," IEEE Transactions on Control Systems Technology (impact factor: 4.9), to appear, 2020. link
- 38. I. Papamichail, N. Bekiaris-Liberis, A. I. Delis, D. Manolis, K.-S. Mountakis, I. K. Nikolos, C. Roncoli, & M. Papageorgiou, "Motorway traffic flow modelling, estimation and control with vehicle automation and communication systems," Annual Reviews in Control (impact factor: 4.8), vol. 48, pp. 325–346, 2019. link
- N. Bekiaris-Liberis and R. Vazquez, "Nonlinear bilateral output-feedback control for a class of viscous Hamilton-Jacobi PDEs," Automatica (impact factor: 6.4), vol. 101, pp. 223–231, 2019. link
- 36. X. Cai, N. Bekiaris-Liberis, and M. Krstic, "Input-to-state stability and inverse optimality of predictor feedback for multi-input linear systems," Automatica (impact factor 6.4), vol. 103, pp. 549–557, 2019. link
- 35. I. Karafyllis, **N. Bekiaris-Liberis**, and M. Papageorgiou, "Feedback control of nonlinear hyperbolic PDE systems inspired by traffic flow models," IEEE

Transactions on Automatic Control (impact factor: 5.1), vol. 64, pp. 3647–3662, 2019. link

- N. Bekiaris-Liberis and M. Krstic, "Compensation of transport actuator dynamics with input-dependent moving controlled boundary," IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 63, pp. 3889–3896, 2018. link
- N. Bekiaris-Liberis and M. Krstic, "Compensation of actuator dynamics governed by quasilinear hyperbolic PDEs," Automatica (impact factor: 6.4), vol. 92, pp. 29–40, 2018. link
- 32. S. Papadopoulou, C. Roncoli, N. Bekiaris-Liberis, I. Papamichail, and M. Papageorgiou, "Microscopic simulation-based validation of a per-lane traffic state estimation scheme for highways with connected vehicles," Transportation Research Part C (impact factor: 5.8), vol. 86, pp. 441–452, 2018. link
- N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Highway traffic state estimation per lane in the presence of connected vehicles," Transportation Research Part B (impact factor: 4.6), vol. 106, pp. 1–28, 2017. link
- N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Predictor-based adaptive cruise control design," IEEE Transactions on Intelligent Transportation Systems (impact factor: 5.7), vol. 19, pp. 3181–3195, 2018. link
- 29. X. Cai, N. Bekiaris-Liberis, and M. Krstic, "Input-to-state stability and inverse optimality of linear time-varying-delay predictor feedbacks," IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 63, pp. 233–240, 2018. link
- M. Diagne, N. Bekiaris-Liberis, and M. Krstic, "Compensation of input delay that depends on delayed input," Automatica (impact factor: 6.4), vol. 85, pp. 362–373, 2017. link
- M. Diagne, N. Bekiaris-Liberis, A. Otto, and M. Krstic, "Control of transport PDE/nonlinear ODE cascades with state-dependent propagation speed," IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 62, pp. 6278–6293, 2017. link
- C. Roncoli, N. Bekiaris-Liberis, and M. Papageorgiou, "Lane-changing feedback control for efficient lane assignment at motorway bottlenecks," Transportation Research Record (impact factor: 0.54), vol. 2625, pp. 20–31, 2017.
- 25. M. Fountoulakis, N. Bekiaris-Liberis, C. Roncoli, I. Papamichail, and M. Papageorgiou, "Highway traffic state estimation with mixed connected and conventional vehicles: Microscopic simulation-based testing," Transportation Research Part C: Emerging Technologies (impact factor: 5.8), vol. 78, pp. 13–33, 2017. link
- M. Diagne, N. Bekiaris-Liberis, and M. Krstic, "Time- and state-dependent input delay-compensated bang-bang control of a screw extruder for 3D printing," International Journal of Robust and Nonlinear Control (impact factor: 4), vol. 27, pp. 3727–3757, 2017. link

- M. Jin, N. Bekiaris-Liberis, K. Weekly, C. Spanos, and A. M. Bayen, "Occupancy detection via environmental sensing," IEEE Transactions on Automation Science and Engineering (impact factor: 5.2), vol. 15, pp. 443–455, 2018. link
- C. Roncoli, N. Bekiaris-Liberis, and M. Papageorgiou, "Use of speed measurements for highway traffic state estimation: Case studies on NGSIM data and highway A20, Netherlands," Transportation Research Record (impact factor: 0.54), vol. 2559, pp. 90–100, 2016.
- N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Highway traffic state estimation with mixed connected and conventional vehicles," IEEE Transactions on Intelligent Transportation Systems (impact factor: 5.7), vol. 17, pp. 3484–3497, 2016. link
- N. Bekiaris-Liberis and M. Krstic, "Predictor-feedback stabilization of multiinput nonlinear systems," IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 62, pp. 516–531, 2017. link
- N. Bekiaris-Liberis and M. Krstic, "Stability of predictor-based feedback for nonlinear systems with distributed input delay," Automatica (impact factor: 6.4), vol. 70, pp. 195–203, 2016. link
- P.-O. Lamare and N. Bekiaris-Liberis, "Control of 2 × 2 linear hyperbolic systems: Backstepping-based trajectory generation and PI-based tracking," Systems and Control Letters (impact factor: 2.6), vol. 86, pp. 24–33, 2015. link
- K. Weekly, N. Bekiaris-Liberis, M. Jin, and A. Bayen "Modeling and estimation of the humans' effect on the CO₂ dynamics inside a conference room", IEEE Transactions on Control Systems Technology (impact factor: 4.9), vol. 23, pp. 1770–1781, 2015. link
- N. Bekiaris-Liberis, A. Bayen "Nonlinear stabilization of a viscous Hamilton-Jacobi PDE", IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 60, pp. 1698–1703, 2014. link
- N. Bekiaris-Liberis, "Simultaneous compensation of input and state delays for nonlinear systems", Systems and Control Letters (impact factor: 2.6), vol. 73, pp. 96–102, 2014. link
- 14. N. Bekiaris-Liberis and M. Krstic, "Compensation of wave actuator dynamics for nonlinear systems", IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 59, pp. 1555–1570, 2014. link
- M. Krstic and N. Bekiaris-Liberis, "Nonlinear stabilization in infinite dimension", Annual Reviews in Control (impact factor: 4.8), vol. 37, pp. 220– 231, 2013. link
- N. Bekiaris-Liberis and M. Krstic, "Nonlinear control under delays that depend on delayed states", European Journal of Control (impact factor: 1.6), vol. 19, pp. 389–398, 2013. link
- 11. N. Bekiaris-Liberis and M. Krstic, "Robustness of nonlinear predictor feedback laws to time- and state-dependent delay perturbations", Automatica (impact factor: 6.4), vol. 49, pp. 1576–1590, 2013. link

- N. Bekiaris-Liberis, M. Jankovic and M. Krstic, "Adaptive stabilization of LTI systems with distributed input delay", International Journal of Adaptive Control and Signal Processing (impact factor: 2.2), vol. 27, pp. 47–65, 2013. link
- N. Bekiaris-Liberis and M. Krstic, "Compensation of state-dependent input delay for nonlinear systems", IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 58, pp. 275–289, 2013. link
- 8. N. Bekiaris-Liberis, M. Jankovic and M. Krstic, "Compensation of statedependent state delay for nonlinear systems", Systems and Control Letters (impact factor: 2.6), vol. 61, pp. 849–856, 2012. link
- 7. N. Bekiaris-Liberis and M. Krstic, "Compensation of time-varying input and state delays for nonlinear systems", Journal of Dynamic Systems, Measurement, and Control (impact factor: 1.4), vol. 134, paper 011009, 2012. link
- 6. N. Bekiaris-Liberis and M. Krstic, "Lyapunov stability of linear predictor feedback for distributed input delays", IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 56, pp. 655–660, 2011. link
- 5. N. Bekiaris-Liberis and M. Krstic, "Compensating the distributed effect of diffusion and counter-convection in multi-input and multi-output LTI systems", IEEE Transactions on Automatic Control (impact factor: 5.1), vol. 56, pp. 637–642, 2011.link
- M. Krstic and N. Bekiaris-Liberis, "Compensation of infinite-dimensional input dynamics", Annual Reviews in Control (impact factor: 4.8), vol. 34, pp. 233-244, 2010. link
- 3. N. Bekiaris-Liberis and M. Krstic, "Compensating the distributed effect of a wave PDE in the actuation or sensing path of MIMO LTI systems", Systems and Control Letters (impact factor: 2.6), vol. 59, pp. 713–719, 2010. link
- 2. N. Bekiaris-Liberis and M. Krstic, "Stabilization of linear strict-feedback systems with delayed integrators", Automatica (impact factor: 6.4), vol. 56, pp. 1902–1910, 2010. link
- N. Bekiaris-Liberis and M. Krstic, "Delay-adaptive feedback for linear feedforward systems", Systems and Control Letters (impact factor: 2.6), vol. 59, pp. 277–283, 2010. link

Conferences

- 55. Y. Zhang, M. Wang, J. Hu, and N. Bekiaris-Liberis, "Semi-constant spacing policy for leader-predecessor-follower platoon control via delayed measurements synchronization," IFAC World Congress, 2020.
- 54. N. Bekiaris-Liberis and A. Delis, "Feedback control of freeway traffic flow via time-gap manipulation of ACC-equipped vehicles: A PDE-based approach," IFAC Workshop on Control of Transportation Systems, 2019.
- 53. F. Tajdari, C. Roncoli, N. Bekiaris-Liberis, and M. Papageorgiou "Integrated ramp metering and lane-changing feedback control at motorway bottlenecks," European Control Conference, 2019.

- 52. N. Bekiaris-Liberis and R. Vazquez, "Nonlinear bilateral full-state feedback trajectory tracking for a class of viscous Hamilton-Jacobi PDEs," IEEE Conference on Decision and Control, 2018.
- 51. I. Karafyllis, **N. Bekiaris-Liberis**, and M. Papageorgiou, "Traffic flow inspired analysis and boundary control for a class of 2×2 hyperbolic systems," European Control Conference, 2018.
- 50. **N. Bekiaris-Liberis** and M. Krstic, "Control of nonlinear systems with actuator dynamics governed by quasilinear first-order hyperbolic PDEs," European Control Conference, 2018.
- 49. **N. Bekiaris-Liberis** and M. Krstic, "Compensation of transport actuator dynamics with input-dependent moving controlled boundary," European Control Conference, 2018.
- 48. N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Predictor-based adaptive cruise control design with integral action," IFAC Symposium on Control in Transportation Systems, 2018.
- 47. S. Papadopoulou, C. Roncoli, N. Bekiaris-Liberis, I. Papamichail, and M. Papageorgiou, "Validation of a per lane traffic state estimation scheme for highways with connected vehicles," IEEE Conference on Intelligent Transportation Systems, 2017.
- 46. N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Structural observability of multi-lane traffic with connected vehicles," IEEE Conference on Intelligent Transportation Systems, 2017.
- N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Traffic state estimation per lane in highways with connected vehicles," 2017 EWGT Meeting, 2017.
- 44. M. Diagne, **N. Bekiaris-Liberis**, and M. Krstic, "Compensation of input delay that depends on delayed input," American Control Conference, 2017.
- 43. C. Roncoli, **N. Bekiaris-Liberis**, and M. Papageorgiou, "Lane-changing feedback control for efficient lane assignment at motorway bottlenecks," Transportation Research Board Annual Meeting, 2017.
- 42. M. Fountoulakis, N. Bekiaris-Liberis, C. Roncoli, I. Papamichail, and M. Papageorgiou, "Highway traffic state estimation with mixed connected and conventional vehicles: Microscopic simulation-based testing," IEEE Conference on Intelligent Transportation Systems, 2016.
- C. Roncoli, N. Bekiaris-Liberis, and M. Papageorgiou, "Optimal lane-changing control at motorway bottlenecks," IEEE Conference on Intelligent Transportation Systems, 2016.
- 40. N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Predictor-based adaptive cruise control design," IEEE Multi-Conference on Systems and Control, 2016.
- M. Diagne, N. Bekiaris-Liberis, A. Otto, and M. Krstic, "Control of transport PDE/nonlinear ODE cascades with state-dependent propagation speed," IEEE Conference on Decision and Control, 2016.

- 38. N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Highway traffic state estimation with mixed connected and conventional vehicles," IFAC Symposium on Control in Transportation Systems, 2016.
- N. Bekiaris-Liberis and M. Krstic, "Stability of predictor-based feedback for nonlinear systems with distributed input delay," American Control Conference, 2016.
- 36. C. Roncoli, **N. Bekiaris-Liberis**, and M. Papageorgiou, "Highway traffic state estimation using speed measurements: Case studies on NGSIM data and highway A20 in the Netherlands," Transportation Research Board, 2015.
- 35. N. Bekiaris-Liberis, C. Roncoli, and M. Papageorgiou, "Highway traffic state estimation with mixed connected and conventional vehicles using speed measurements," IEEE Conference on Intelligent Transportation Systems, 2015.
- 34. M. Diagne, N. Bekiaris-Liberis, and M. Krstic, "Time- and state-dependent input delay-compensated bang-bang-control of a screw extruder for 3D printing," ASME Dynamic Systems and Control Conference, 2015.
- 33. N. Bekiaris-Liberis and M. Krstic, "Predictor-feedback stabilization of multiinput nonlinear systems," IEEE Conference on Decision and Control, 2015.
- M. Jin, N. Bekiaris-Liberis, K. Weekly, C. Spanos, and A. M. Bayen, "Sensing by proxy: Occupancy detection based on indoor CO2 concentration," International Conference on Mobile Ubiquitous Computing, Systems, Services, and Technologies, 2015.
- P.-O. Lamare and N. Bekiaris-Liberis, and A. Bayen, "Control of 2×2 linear hyperbolic systems: Backstepping-based trajectory generation and PI-based tracking," European Control Conference, 2015.
- F. Mazenc, S.-I Niculescu, N. Bekiaris-Liberis, "Asymptotic stabilization of linear time-varying systems with input delays via delayed static output feedback," American Control Conference, 2015.
- 29. K. Weekly, **N. Bekiaris-Liberis**, A. Bayen "Modeling and estimation of the humans' effect on the CO₂ dynamics inside a conference room", IEEE Conference on Decision and Control, 2014.
- N. Bekiaris-Liberis, A. Bayen "Nonlinear stabilization of a viscous Hamilton-Jacobi PDE", IEEE Conference on Decision and Control, 2014.
- 27. N. Bekiaris-Liberis, "Simultaneous compensation of input and state delays for nonlinear systems", European Control Conference, 2014.
- M. Krstic, N. Bekiaris-Liberis and R. Vazquez, "PDE control designs inspired by problems in off-shore drilling and oil production", *Plenary Paper*, 1st IFAC Workshop on Control of Systems Governed by Partial Differential Equations, 2013.
- N. Bekiaris-Liberis and M. Krstic, "Nonlinear control under input delays that depend on delayed states", IEEE Conference on Decision and Control, 2013.

- 24. N. Bekiaris-Liberis and M. Krstic, "Oil drilling inspired compensation of wave actuator dynamics for nonlinear systems", IEEE Conference on Decision and Control, 2013.
- M. Krstic and N. Bekiaris-Liberis, "Nonlinear Stabilization in Infinite Dimension", *Plenary Paper*, 9th IFAC Symposium on Nonlinear Control Systems, 2013.
- N. Bekiaris-Liberis and M. Krstic, "Stabilization in the supremum norm of wave PDE/nonlinear ODE cascades", Mediterranean Conference on Control and Automation, 2013.
- N. Bekiaris-Liberis and M. Krstic, "Robustness to time- and state-dependent delay perturbations in networked nonlinear control systems", American Control Conference, 2013.
- M. Krstic and N. Bekiaris-Liberis, "Control of nonlinear delay systems: A Tutorial", IEEE Conference on Decision and Control, 2012.
- 19. N. Bekiaris-Liberis, M. Jankovic and M. Krstic, "PDE-based analysis and control of the oxygen storage level in three-way catalytic converters", IEEE Conference on Decision and Control, 2012.
- N. Bekiaris-Liberis, M. Jankovic and M. Krstic, "Adaptive stabilization of LTI systems with distributed input delay", IEEE Conference on Decision and Control, 2012.
- N. Bekiaris-Liberis, M. Jankovic and M. Krstic, "Compensation of statedependent state delay for nonlinear systems", American Control Conference, 2012.
- N. Bekiaris-Liberis and M. Krstic, "Compensation of state-dependent delays under local stabilizability assumption", American Control Conference, 2012.
- 15. **N. Bekiaris-Liberis** and M. Krstic, "Compensation of state-dependent input delay for nonlinear systems", IEEE Conference on Decision and Control, 2011.
- 14. **N. Bekiaris-Liberis** and M. Krstic, "Stabilization of nonlinear strict-feedback systems with time-varying delayed integrators", ASME Dynamic Systems and Control Conference, 2011.
- 13. N. Bekiaris-Liberis and M. Krstic, "Compensation of time-varying input delay for nonlinear systems", Mediterranean Conference on Control and Automation, Corfu, Greece, 2011.
- 12. N. Bekiaris-Liberis and M. Krstic, "Lyapunov stability of linear predictor feedback for distributed input delays", IEEE Conference on Decision and Control, 2010.
- 11. N. Bekiaris-Liberis and M. Krstic, "Compensating the distributed effect of counter-convection and diffusion in multi-input and multi-output LTI systems", IEEE Conference on Decision and Control, 2010.
- 10. N. Bekiaris-Liberis and M. Krstic, "Compensating the distributed effect of a wave PDE in the actuation or sensing path of multi-input and multi-output LTI systems", 2010 ASME Dynamic Systems and Control Conference.

- 9. N. Bekiaris-Liberis and M. Krstic, "Delay-adaptive feedback for linear feedforward systems", American Control Conference, Baltimore, USA, 2010.
- 8. N. Bekiaris-Liberis and M. Krstic, "Stabilization of linear strict-feedback systems with delayed integrators", American Control Conference, Baltimore, USA, 2010.
- 7. A. Pyrkin, A. Smyshlyaev, **N. Bekiaris-Liberis** and M. Krstic, "Rejection of sinusoidal disturbance of unknown frequency for linear systems with input delay", American Control Conference, Baltimore, USA, 2010.
- A. Pyrkin, A. Smyshlyaev, N. Bekiaris-Liberis and M. Krstic, "Output control algorithm for unstable plant with input delay and cancellation of unknown biased harmonic disturbance", IFAC Workshop on Time Delay Systems ,Prague, Czech, 2010.
- 5. N. Bekiaris Liberis and M. Krstic, "On stabilizing strict-feedback linear systems with delayed integrators," Mediterranean Conference on Control and Automation, Thessaloniki, Greece, June 2009.
- 4. K. G. Arvanitis, A. K. Boglou, **N. Bekiaris Liberis**, G. D. Pasgianos, "A simple method of tuning three-term controllers for integrating dead-time processes with inverse response," European Control Conference, Budapest, Hungary, 2009.
- 3. K. G. Arvanitis, A. K. Boglou, **N. Bekiaris Liberis**, G. D. Pasgianos, "Tuning three-term controllers for integrating and stable or unstable first order plus dead-time processes," European Control Conference, Budapest, Hungary, 2009.
- 2. K. G. Arvanitis, G. D. Pasgianos, A. K. Boglou, **N. Bekiaris Liberis**, "A new method of tuning three term controllers for dead-time processes with a negative/positive zero," ICINCO-SPSMC, Milan, Italy, 2009.
- 1. N. Bekiaris Liberis, A. K. Boglou, K. G. Arvanitis, G. D. Pasgianos, P. N. Paraskevopoulos, "Design of nonlinear adaptive steam valve controllers for a turbo-generator system," IASTED International Conference, Corfu, Greece, June 2008.
- RECOGNITIONS 1. Member of the research team, receiving the 2018 IEEE ITS Outstanding Application Award, IEEE Intelligent Transportation Systems Society.
 - 2. Marie Sklodowska-Curie Individual Fellowship Grant (about 13.5% of the submitted proposals was funded in the 2016 Reintegration scheme), European Commission, 2017.
 - 3. Best Paper Award, International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (UBICOMM), 2015.
 - 4. Chancellor's Dissertation Medal in Engineering (Best Dissertation Award in Engineering among 150 PhDs granted in 2013), Jacobs School of Engineering, University of California, San Diego, 2014.
 - 5. Finalist for Best Student Paper Award, IEEE Conference on Decision and Control, 2013.

6.	Outstanding Graduate Student Award, Department of Mechanical and	ł
	Aerospace Engineering, University of California, San Diego, 2012.	

- 7. Finalist for Best Student Paper Award, ASME Dynamic Systems and Control Conference, 2010.
- 8. Jacobs School of Engineering Fellow, University of California, San Diego, 2008.
- 9. Accepted to be a member of MENSA (organization for people that belong in the upper 2% of the world's population based on their IQ), Greek Chapter, 2004.
- LECTURES 1. IEEE Conference on Decision and Control 2012, Tutorial Lecture, Hawai, December 2012.
 - 2. European Embedded Control Institute, Lecturer within the International Graduate School on Control, San Diego, February 2020.
 - 3. Ioannou Fest, Larnaca, June 2013.
- INVITED1. Department of Computer Science and Control Systems, ITMO University,
St. Petersburg, Russia, May 2018.
 - College of Information Science & Technology, Donghua University, Shanghai, China, March 2018.
 - College of Control Science & Engineering, Zhejiang University, Hangzhou, China, March 2018.
 - 4. College of Mathematics, Physics, and Information Engineering, **Zhejiang** Normal University, Jinhua, China, March 2018.
 - 5. Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Thessaloniki, Greece, February 2018.
 - Department of Applied Mathematics & Physical Sciences, National Technical University of Athens, Greece, November 2017.
 - 7. Department of Engineering Sciences, University of Oxford, Oxford, October 2017.
 - 8. Department of Computer Sciences, University of Zaragoza, Zaragoza, July 2017.
 - 9. Department of Electrical and Computer Engineering, **Technical University** of Crete, Chania, June 2017.
 - 10. Department of Production Engineering and Management, Technical University of Crete, Chania, June 2014.
 - 11. Department of Electrical and Electronic Engineering, Imperial College, London, June 2014.
 - 12. Automatic Control Laboratory, ETH, Zurich, May 2014.
 - 13. Department of Electrical and Computer Engineering, University of Illinois, Urbana-Champaign, Champaign, February 2014.

- 14. Department of Mechanical Engineering, **Delft University of Technology**, **Delft**, December 2013.
- Department of Mechanical Engineering, University of Puerto, Mayaquez, October 2013.
- 16. Department of Chemical Engineering, MIT, Cambridge, May 2013.
- 17. Department of Mechanical Engineering, MIT, Cambridge, May 2013.
- Department of Mechanical and Materials Engineering, FIU, Miami, May 2013.
- 19. Faculty of Mathematics and Natural Sciences, University of Groningen, Groningen, April 2013.
- Department of Mechanical Engineering, University of Texas, Dallas, April 2013.
- 21. Department of Electrical Engineering and Computer Science, Northwestern University, April 2013.
- Department of Electrical and Computer Engineering, NYU Poly, March 2013.
- Department of Aerospace Engineering, University of Michigan, Ann Arbor, March 2013.
- 24. School of Electrical Engineering and Computer Science, University of Newcastle, Australia, March 2013.
- Department of Mechanical Engineering, Stanford University, Stanford, February 2013.
- EDITORSHIP 1. Associate Editor for Automatica. 2019–Current
 - 2. Associate Editor for IEEE Transactions on Intelligent Transportation Systems. 2019–Current
 - 3. **Guest Editor** for the International Journal of Adaptive Control and Signal Processing, special issue: Robust Adaptive Control: Legacies and Horizons.
 - 4. **Guest Editor** for the Transportation Research Part C, special issue: Management of Future Traffic Systems.
 - 5. Associate Editor for the 2020 European Control Conference.
 - 6. Associate Editor for the 2018, 2019 IFAC Workshops on Time Delay Systems.
 - 7. Associate Editor for the 2018, 2019, 2020 IEEE Conferences on Intelligent Transportation Systems.
 - 8. Associate Editor for the 2019 International Conference on System Theory, Control and Computing.

 GRANTS
 AWARDED
 PI: "Partial Differential Equation Model-Based Control of Traffic Flow," HORI-ZON2020, Marie Sklodowska-Curie Action, Individual Fellowship, 2017–2019. Grants Submitted

- 1. **PI:** "Secure control of infinite-dimensional systems with application to vehicular traffic," *European Research Council Starting Grant*, 60 months (under review).
- 2. Co-I: "Smart integrated management system for electric vehicles charging stations," Co-funded by the Greek Ministry of Economy & Development and the European Union, 30 months (under review).
- 3. Co-I: "System for personalized management of electric vehicles charging/discharging," Co-funded by the Greek Ministry of Economy & Development and the European Union, 15 months (not funded).

GRANTS PREPARATION

- PI: Prepared a full proposal for the 2nd Call of the Hellenic Foundation of Research and Innovation for Research Projects to Support Faculty Members & Researchers. Project duration: 36 months. (To be submitted; Submission process was suspended due to COVID-19; Original submission deadline: 31/03/2020.)
 - 2. Participated in proposal writing as member of TUC's team: "Road Infrastructure Ready for Mixed Vehicle Traffic Flows," *HORIZON2020, Research and Innovation Action, Automated Road Transport*, 2017–2020.
 - 3. Participated in proposal writing as member of TUC's team: "Synergetic Emergent Behavior in Cyber-Physical Systems of Systems," *HORI-*ZON2020, Research and Innovation Action, Information and Communication Technologies, 2016 (not funded).

Industry	Intern	
Experience	Ford Research & Advanced Engineering, Ford Motor Company, Dearborn, USA	July, 2012 - September, 2012
	PDE-Based Control of the Oxygen Storage Level in The ther Results and Experimental Validation. Group director: Dr. Mrdjan Jankovic.	hree-Way Catalytic Converters: Fur-
	Intern	July 2011 - September 2011
	Ford Motor Company, Dearborn, USA	Sury, 2011 - September, 2011
	PDE-Based Control of the Oxygen Storage Level in The Group director: Dr. Mrdjan Jankovic.	hree-Way Catalytic Converters.
Teaching Experience	1. Instructor Technical University of Crete Dep. of Electrical & Computer Engineering SYS 603: "Nonlinear Systems" (graduate)	Spring 2019, 2020
	2. Instructor	
	Technical University of Crete Dep. of Electrical & Computer Engineering SYS 401: "Linear Systems" (undergraduate)	Fall 2015–2019

3.	Instructor			
	Technical University of CreteSpring 2016–2020Dep. of Electrical & Computer EngineeringSYS 402: "Control Theory With Applications" (undergraduate)			
4.	Co-Instructor			
	University of California, BerkeleyJanuary 2014 - May 2014Departments of Civil & EnvironmentalEngineering and Electrical Engineering &Computer SciencesCE 291ECE 291EME 236EE 291: "Control and Optimization of Distributed Parameters			
	Systems". Instructor: Prof. Alexandre Bayen			
5.	Teaching Assistant			
	University of California, San Diego September 2011 - December 2011 Department of Mechanical and Aerospace Engineering			
	MAE 287: "Control of Distributed Parameters Systems". Instructor: Prof. Miroslav Krstic			
6.	Teaching Assistant			
	University of California, San Diego July 2009 - December 2009 Department of Mechanical and Aerospace Engineering MAE 143A: "Signale and Systems" Instructor: Prof. Miroclay Kretia			
7	Topoling Accistant			
1.	Iteracting Assistant September 2006 - January 2007 National Technical University of Athens September 2006 - January 2007 Department of Electrical and Computer Engineering "Linear Control" Instructor: Prof Paraskeyas Paraskeyopoulos			
8	Teaching Assistant			
0.	Agricultural University of Athens February 2006 - June 2006 Department of Natural Resources Management and Agricultural Engineering "Sensor and Measurement Devices". Instructor: Prof. Kostas Arvanitis.			
1.	Manolis Proestakis, Undergraduate, Technical University of Crete, Greece. Topic: "Predictor-feedback control of traffic flow at distant bottlenecks".			
2.	Michalis Fanouriadis, Undergraduate, Technical University of Crete, Greece. Topic: "PLC-based control and operation of a pumping station".			
3.	Argiris Tigas, Undergraduate, Technical University of Crete, Greece. Topic: "Dryer temperature control for drywall production".			
	Currently: Control engineer, KNAUF, Greece.			
4.	Farzam Tajdari, PhD, Aalto University, Finland. Topic: "Integrated ramp metering and lane-changing feedback control at mo- torway bottlenecks". (Led so far to 1 conference paper.)			
5.	Vasilis Markantonakis, MS, Technical University of Crete, Greece. Topic: "Development of software for implementation of multi-lane traffic esti- mation methodologies."			
	Currently: PhD student, Technical University of Crete, Greece.			

Student Supervision 6. Alexandros Tanzanakis, Undergraduate, Technical University of Crete, Greece. Topic: "Energy efficient control of bipedal robot locomotion in dynamic environments."

Currently: PhD student, ETH, Switzerland.

- 7. Sofia Papadopoulou, MS, Technical University of Crete, Greece. Topic: "Microsimulation-based testing of multi-lane traffic estimation methodologies." (Led so far to 1 journal and 1 conference papers.)
- Antonis Georgantas, Undergraduate, Technical University of Crete, Greece. Topic: "Traffic flow optimization via lane-changing control." Currently: PhD student, KIOS Research and Innovation Center of Excellence, Cyprus.
- Iris Philopoulou, Undergraduate, Technical University of Crete, Greece. Topic: "Real-data testing of multi-lane traffic estimation methodologies." Currently: MS student, National Technical University of Athens, Greece.
- Markos Fountoulakis, MS, Technical University of Crete, Greece.
 "Microscopic simulation-based testing of highway traffic state estimation algorithms in the presence of connected/automated vehicles". (Led so far to 1 journal and 1 conference papers.)
- Mamadou Diagne, Postdoctoral, University of California, San Diego, USA. "Predictor feedback control of extruders". (Led so far to 3 journal and 3 conference papers.)

Currently: Assistant Professor, Rensselaer Polytechnic Institute, USA.

- 12. Pierre-Olivier Lamare, Graduate, CNRS, Grenoble, France.
 "Control of 2 × 2 hyperbolic systems with application to the Aw-Rascle traffic model". (Led so far to 1 journal and 1 conference papers.)
 Currently: Postdoctoral Researcher, Mines ParisTech, France.
- Kevin Weekly, Graduate, University of California, Berkeley, USA.
 "PDE-Based modeling and estimation of human occupancy in smart buildings". (Led so far to 2 journal and 2 conference papers.)
 Currently: Research Scientist, Fitbit, USA.
- Ming Jin, Graduate, University of California, Berkeley, USA.
 "Data-driven PDE model-based occupancy detection using indoor CO2 concentration". (Led so far to 2 journal and 1 conference papers.)
 Currently: Postdoctoral researcher, University of California, Berkeley, USA.
- Mandy Huo, Undergraduate, University of California, Berkeley, USA. Topic: "Frequency domain representation of hyperbolic systems." Currently: PhD student, University of California, Berkeley, USA.
- Anton Pyrkin, Graduate, ITMO University, Saint Petersburg, Russia.
 "Disturbance rejection for input delay systems". (2 conference papers.)
 Currently: Associate Professor and Dean of Faculty of Control Systems and Industrial Robotics, ITMO University, Saint Petersburg, Russia.

PhD Committees	1. Kallirroi Porfyri (Department of Production Engineering & Management, TUC). PhD thesis: "Macroscopic traffic flow modeling in the presence of Vehicle Au- tomation and Communication Systems".
Institutional Responsibili-	1. Member of PhD theses examining committees, Technical University of Crete, Greece.
TIES	2. Member of undergraduate diploma theses examining committees, Technical University of Crete, Greece.
	3. Committee member for equipment supply, Technical University of Crete, Greece.
	4. Undergraduate studies academic advisor, Technical University of Crete, Greece.
Conference & Workshop	1. Founding Organizer for the 1st Symposium on Management of Future Traf- fic Systems. link
ORGANIZATION	2. Main Organizer of workshop <i>Traffic Flow Control via PDE Techniques</i> or- ganized within the 2018 IEEE Conference on Decision and Control. link
Invited Sessions Organizer	1. Control for Large Scale Traffic Networks, 2019 IEEE Conference on Decision and Control.
Professional Activities	 Books and Paper Reviewing. Book Series: Springer Briefs Series in Control, Automation, and Robotics. Birkhauser. Journals: IEEE Transactions on Automatic Control. Automatica. Systems and Control Letters. IEEE Transactions on Control Systems Technology. European Journal on Control. International Journal of Adaptive Control and Signal Processing. International Journal of Robust and Nonlinear Control. IMA Journal on Mathematical Control and Information. Signal Processing. Journal of the Franklin Institute. Transportation Research Part C. IEEE Transactions on Intelligent Transportation Systems. Transportation Research Part B. International Journal of Control. SIAM Journal on Control and Optimization. IET Control Theory & Applications. AIMS Journal: Mathematical Control & Related Fields. The Canadian Journal of Chemical Engineering. Journal of Optimization Theory & Applications. International Journal of Systems Science. Kybernetika. Conferences: IEEE Conference on Decision and Control 2010–2020. American Control Conference 2010–2020. European Control Conference 2014–2020. IFAC NOLCOS 2014. IFAC World Congress 2017, 2020. IEEE Multi-Conference on Systems and Control 2016. IEEE Conference on Intelligent Transportation Systems 2016–2020. Member of the IEEE Control Systems Society Technical Committee
	on Distributed Parameter Systems. 2019–Current

3. Member of the IFAC Technical Committee on Transportation Systems. 2019–Current

4. Member of the IFAC Technical Committee on Distributed Parameter Systems. 2019–Current

PROGRAMMING• Matlab, Simulink

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