

Duarte Antunes

Associate Professor

Control Systems Technology · Department of Mechanical Engineering
Eindhoven University of Technology (TU/e)

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TU/e profile: tue.nl/en/research/researchers/duarte-guerreiro-tome-antunes



PERSONAL INFORMATION

Full name	Duarte José Guerreiro Tomé Antunes
Born	10 October 1982, Viseu, Portugal · Portuguese
ORCID iD	0000-0003-3047-9334
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EDUCATION

2015–2016	BKO (University Teaching Qualification) Eindhoven University of Technology, The Netherlands.
2006–2011	PhD Instituto Superior Técnico (IST), Lisbon · Dept. of Electrical Engineering. Thesis: “Stochastic, Dynamic, and Periodic Networked Control Systems.” Supervisors: João Hespanha (UC Santa Barbara) and Carlos Silvestre (IST Lisbon). Classification: very good with distinction, cum laude, top 10%.
2000–2005	Master (Licenciatura), Electrical and Computer Engineering Instituto Superior Técnico (IST), Lisbon. GPA 18/20, top 2 of 250 students.

CURRENT POSITION

2023–present	Associate Professor Eindhoven University of Technology (TU/e) · Dept. of Mechanical Engineering · Control Systems Technology group. Section leaders: M. Steinbuch, T. Oomen, W. Heemels.
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PREVIOUS POSITIONS

2013–2023	Assistant Professor TU/e, Dept. of Mechanical Engineering, Control Systems Technology group.
2022–2023	Guest Professor Keio University, Tokyo, Japan · Dept. of Electrical Eng. · T. Namerikawa group (part-time, Oct 2022–Mar 2023).
2011–2013	Postdoctoral researcher TU/e, Dept. of Mechanical Eng., Hybrid and Networked Systems, led by W.P.M.H. Heemels.
2007–2009	Visiting researcher University of California Santa Barbara, Center for Control, Dynamical-systems, and Computation (CCDC), led by J. P. Hespanha.
2005–2006	Software developer Institute for Systems and Robotics, Lisbon · Dynamical Systems and Ocean Robotics — battery-level monitoring for underwater vehicles.

TEACHING ACTIVITIES

2021–present	Optimal Control and Reinforcement Learning (4SC000) MSc Mechanical Engineering, Systems and Control, Automotive, AI for Engineering Systems, Applied Physics · 100–110 students · 5 ECTS · responsible lecturer.
2020–2023	Signals and Systems (4SC000) BSc Mechanical Engineering · ~250 students/year · 5 ECTS · co-lecturer.
2015–2021	Optimal Control and Dynamic Programming (4SC000) 70–100 students/year · 5 ECTS · responsible lecturer.
2014–2015	Optimal Control (4K730) 150 students · 3 ECTS · responsible lecturer.
2015–2020	Honors Academy, High Tech Systems track (HA800/HA850) 15 ECTS · 15–20 students/year · coordinator.
2015–2020	Mechatronics Systems Design PDEng program, 2nd module 4–7 students/year.
2004–2015	Teaching assistant TU/e (Signalen 4CA00; System theory for control 4K580, 2013–2015) and IST Lisbon (Differential equations, Complex analysis, Computational mathematics, 2004–2006; Numerical Analysis, 2011).

SUPERVISION OF GRADUATE STUDENTS

Current PhD students

2023–2027	B. Meere Autonomous aerial radiography inspections of offshore wind turbine blades · promoter
2022–2026	M. van Zutphen Entropy Regularization for Control and Estimation · promoter
2021–2025	R. Beumer World Modelling and Decision-Making for Robots in Precision Agriculture · co-promoter
2024–present	S. Doodeman Aerial X-Ray Inspection: Gimbal Placement and Control and Autonomous Landing · promoter
2025–present	M. Vermissen Self-learning Diesel Engines · co-promoter
2026–present	T. Minten Shocking Precision: X-Ray Tech and Autonomous Drones Power the Future of Grid Inspections · co-promoter

Recently completed PhD students

2022–2026	J. van Hulst Learning-Based Calibration, Estimation, and Stage Control for Electron Microscopy · promoter
2022–2026	R. van Zuijlen Policy Iteration with Limited Data and Partial Information · promoter
2020–2024	M. Vlaswinkel Automated Risk-Aware Calibration of Internal Combustion Engines · co-promoter

Earlier completed PhD students

2017–2021	W. Kuijpers Model Selection and Optimal Control Design for Automatic Greenhouse Climate Control
2017–2022	A. Andrien Optimization-based Estimation and Control Algorithms for Quadcopter Applications (OP-ZUID funding)
2016–2020	A.T.J.R. Cobbenhagen Optimal Allocation and Classification in Multi-Agent Systems with Applications in Precision Agriculture (TKI funding)

2016–2020	M. Balaghiinaloo Consistent Event-Triggered Control for Linear Systems (oCPS Marie Curie program)
2014–2018	Dr. ir. E. van Horssen Data Intensive Feedback Control: Switched Systems Analysis and Design
2013–2017	Dr. B. Asadi Khashooei Event-Triggered Control for Linear Systems with Performance and Rate Guarantees
2011–2016	Dr. ir. T. Gommans Resource-Aware Control and Estimation

Supervisor of 50+ MSc graduation projects and 50+ BSc end projects / MSc internships.

GRANTS

2025	Shocking Precision Shocking Precision: X-Ray Tech and Autonomous Drones Power the Future of Grid Inspections · with Spect X and Avular · 1 PhD
2023	WINDMILLS RVO HER+ · Autonomous aerial radiography inspection of offshore wind turbine blades · industrial partner Avular · 1 PhD + 1 postdoc
2021	Learning in Motion EASI · industrial partner Thermo Fisher Scientific · 1 PhD
2021	ASIMOV ITEA Eureka cluster AI call 2020 · European consortium (TNO, Thermo-Fisher, EASI) · 2 PhD
2019	Synergia NWO Crossover · precision agriculture, with Wageningen University and Avular · 2 PhD
2020	Chameleon TU/e Educational Funds · adaptive course threads
2019	Using MATLAB Live Scripts in Education TU/e Educational Funds
2016	Drone Safety Cluster OP-ZUID · with Avular · 1 PhD
2016	oCPS Horizon 2020 Marie Curie · 1 PhD
2016	Drone-based multi-agent system for farming TKI HTSM · 1 PhD
2014	STW Take-off Novel UAS for Industrial Inspection, with Avular

AWARDS

- Supervisor of Tom Janssen, winner of the 2026 MSc Thesis Award of the Nederlandse Vereniging voor Techniek in de Landbouw (NVTL) — an annual prize recognizing the best bachelor's or master's thesis in agricultural engineering / technology related to agriculture in the Netherlands.
- 2019 IEEE Control Systems Letters Outstanding Paper Award — B. A. Khashooei, D. J. Antunes, W.P.M.H. Heemels, “A Consistent Threshold-Based Policy for Event-Triggered Control.”
- Best Paper Award, IEEE Intl. Conf. on Event-Based Control, Communication and Signal Processing, 2017.
- Best Student Paper Award, 17th IFAC Symposium on Automatic Control in Aerospace, Toulouse, 2007.
- Supervisor of Y. Steinbuch, winner of the TATA Steel Afstudeerprijs voor Werktuigbouwkunde en Materiaalkunde, 2016.
- Best Project Award, 2018 TMC event, Eindhoven — Honors Academy drone show.
- Outstanding Reviewer, IEEE Control Systems Letters, 2020.
- Outstanding Reviewer, Automatica (Elsevier), 2010–2011.
- Best Poster Award (top 3 of 60), 24-hour meeting, CST/D&C/HNCS, Deurne, 2012.

- PhD awarded cum laude, top 10%, IST Lisbon, 2011.
- Honorable Mention, 2004 — top 2 students among all Electrical and Computer Engineering students at IST Lisbon.

PATENTS

- Co-author with N. Kontaras (TU/e), B. Janssen (FEI), K. Kooijman (FEI) — patent application filed with the European Patent Office by FEI Company, 2014.
- Supervisor of R. de Rijk's thesis, "Robotic pose estimation using an active infrared self-ranging beacon monocular vision," leading to a patent application, 2018.
- Supervisor of N. Janssen's thesis, "Embedded learning-based model predictive control for mobile robots using Gaussian process regression," leading to a patent application, 2019.

INSTITUTIONAL ACTIVITIES

- Member, admission committee, Systems and Control Master (international students), TU/e — 2019–present.
- Member, admission committee, Mechanical Engineering Master, TU/e — 2021–present.
- Coordinator, Honors Academy High Tech Systems track — 2015–2020.
- Organiser, Control Systems Technology group seminars — 2014–2019.

COLLABORATIONS

Academic

F. Allgöwer (Univ. Stuttgart) · S. Hirche (TU Munich) · A. Cuenca (UP Valencia) · T. Namerikawa (Keio University) · A. Singh (Univ. of Delaware) · J. Hespanha (UC Santa Barbara) · P. Tabuada (UCLA).

Industrial

Avular · Thermo-Fisher · ASML · Accerion · Avy · Prodrive · MathWorks · Ebusco · TMC · Technolution · Lightyear · Lely · Spect X · VBTI.

INVITED TALKS AND RESEARCH VISITS

- Universität Stuttgart, Germany, 2026 (invited by F. Allgöwer) — "Memoryless Policy Iteration."
- Universität Stuttgart, Germany, 2023 (invited by F. Allgöwer) — "Consistency and Optimality of Event-Triggered Control subject to Stochastic and Worst-Case Disturbances."
- European Control Conference Workshop, Naples, 2019 — "Control and Networking in Cyber-Physical Systems."
- EAISI Machine Learning Seminars, TU/e, 2019 — "Model-Based Learning for Control and Robotics Applications."
- Nationale Wiskunde Dagen, Noordwijkerhout, 2018 — "Optimal Path Planning."
- Universitat Politècnica de València, Spain, 2017 — 3-day course, "Networked and Event-Triggered Control Systems."
- Universität Paderborn, Germany, 2016 — "Linear Quadratic Regulators Using Informed Policies."
- Océ (a Canon company), Venlo, 2014 — "Frequency-Domain Tools for Networked Control Systems."
- Keio University, Japan, 2014; Karlsruher Institut für Technologie, Germany, 2014; Rijksuniversiteit Groningen, 2013; Université Joseph Fourier, Grenoble, 2013 — variants of "Rollout Event-Triggered Control: Beyond Control Performance."
- Special session, Conference on Decision and Control, 2016 (invited by MathWorks) — "Cody Coursework: an Automatic Assessment Tool for MATLAB Programming Assignments."
- Research visit, UC Santa Barbara, Fall 2019 — hosted by J. P. Hespanha.

MEMBERSHIP OF SCIENTIFIC SOCIETIES

Senior Member, IEEE — 2020–present.

ASSOCIATE EDITOR

- Associate Editor, IEEE Transactions on Automatic Control, 2020–present.
- Associate Editor, IEEE Control Systems Letters, 2020–present.
- Associate Editor, IFAC journal Nonlinear Analysis: Hybrid Systems, 2019–2021.
- IEEE Conference Editorial Board, 2014–2019 — CDC (2014–2018), ACC (2015–2018), ECC (2013–2018), IFAC World Congress 2020.

- International Program Committee member — ECC 2013, IFAC Workshop on Distributed Estimation and Control in Networked Systems 2013, IFAC Conf. on Analysis and Design of Hybrid Systems 2012, IFAC TC 1.5 on Networked Systems, IFAC World Congress 2020.
- External referee, Italian research assessment exercise VQR 2015–2019 (ANVUR).

OTHER INFORMATION

Research interests

Stochastic and optimal control · Approximate dynamic programming · Networked control · Event-triggered control · Frequency-domain analysis · Guidance, navigation and control for autonomous vehicles · Quadcopters · Robot dogs · Multi-agent systems · Switching and hybrid systems · Systems biology · Machine and reinforcement learning.

Reviewer

Journals: Automatica, IEEE Transactions on Automatic Control, SIAM Journal on Optimization and Control, International Journal of Robust and Nonlinear Control, IEEE Transactions on Cybernetics. Conferences: CDC, ACC, ECC, IFAC World Congress, IFAC NECSYS.

PhD committees

M. Jafarian (Groningen, 2015) · P. Casau (IST Portugal, 2016) · D. Viegas (IST Portugal, 2017) · M. Thelander Andrén (KTH, 2020) · G. de Albuquerque Gleizer (TU Delft, 2022) · G. Delimpaltadakis (TU Delft, 2022) · P. Garg (TU/e, 2024) · D. Meister (Universität Stuttgart, 2026) · A. Balse (UC Louvain, 2026).

Session chair

CDC 2008, 2014, 2018, 2019, 2024 · ACC 2020 · ECC 2014, 2015.

Research metrics

Google Scholar (September 2026) — All: 2,410 citations, h-index 27, i10-index 51. Since 2021: 1,262 citations, h-index 21, i10-index 31.

FIVE SELECTED PUBLICATIONS

Rollout event-triggered control: Beyond periodic control performance.

Duarte Antunes and W.P.M.H. Heemels · *IEEE Transactions on Automatic Control*, 59(12):3296–3311, 2014.

First proof that event-triggered control can outperform periodic control for any linear system — a foundational result, extending Approximate Dynamic Programming techniques (rollout vs. base policies). Connects directly to current work on model-based reinforcement learning.

A consistent threshold-based policy for event-triggered control.

B. Asadi Khashooei, Duarte J. Antunes, and W.P.M.H. Heemels · *IEEE Control Systems Letters*, 2(3):447–452, 2018.

★ 2019 CSL Outstanding Paper Award

Shows that periodic-control performance is convex in the sampling rate, enabling an event-triggered strategy with consistency guarantees.

Model predictive control for quadcopters with almost global trajectory tracking guarantees.

A.R.P. Andriën, E. Lefeber, D. J. Antunes, and W.P.M.H. Heemels · *IEEE Transactions on Automatic Control*, 69(8):5216–5230, 2024.

Develops an MPC scheme for quadcopters with formal guarantees of almost-global trajectory tracking, addressing the topological obstructions inherent to attitude control.

Stability of networked control systems with asynchronous renewal links: An impulsive systems approach.

Duarte Antunes, João Hespanha, and Carlos Silvestre · *Automatica*, 49(2):402–413, 2013.

Key result from the PhD thesis, building on M.H.A. Davis's piecewise-deterministic systems theory for non-linear systems with asynchronous transmission delays.

Opportunities for control engineering in arable precision agriculture.

A.T.J.R. Cobbenhagen, Duarte J. Antunes, M.J.G. van de Molengraft, and W.P.M.H. Heemels · *Annual Reviews in Control*, 51:47–55, 2021.

The Control Systems Technology group's vision for control engineering's role in precision farming — foundational for the current precision-agriculture research line.

JOURNAL PUBLICATIONS

| Complete list sourced from Google Scholar (scholar.google.com/citations?user=QwBcszsAAAAJ), September 2026.

2026 Tempering the Bayes Filter towards Improved Model-Based Estimation.

M. van Zutphen, D. Herceg, G. Delimpaltadakis, D. J. Antunes · *IEEE Open Journal of Control Systems*.

2026 How improving performance may imply losing consistency in event-triggered consensus.

D. Meister, D. J. Antunes, F. Allgöwer · *Automatica*, 185:112768.

2026 Tilt-based aberration estimation in transmission electron microscopy.

J. S. van Hulst, E. M. Franken, B. J. Janssen, W.P.M.H. Heemels, D. J. Antunes · *Mechatronics*, 117:103529.

- 2026 Can event-triggered control improve the l_2 gain of h^∞ optimal periodic control and transmit at a lower average rate?**
D. J. Antunes, J. P. Hespanha · *IEEE Transactions on Automatic Control* (accepted, in press).
- 2025 Least-squares temporal difference with expected eligibility traces.**
R. van Zuijlen, D. Antunes · *Machine Learning*, 114(12):269.
- 2025 Calibration of Electron Microscopes Through Deep Learning and Bayesian Optimization.**
J. S. van Hulst, R.A.C. van Zuijlen, N. Javaheri, M. Diephuis, D. J. Antunes, et al. · *IEEE Access*.
- 2025 To harvest or not to harvest: Mapping and decision-making for a selective table grape harvesting robot.**
R. Beumer, L. Saraceni, D. Nardi, D. Antunes, R. van de Molengraft, et al. · *IEEE Robotics and Automation Letters*.
- 2025 X-ray image generation for robotic radiography: a case study on motion blur in drone-based wind turbine inspections.**
B. Meere, S. Doodeman, F. P. Vidal, P. Chanfreut, E. Torta, D. Antunes · *Journal of Nondestructive Evaluation*, 44(4):139.
- 2024 Model predictive control for quadcopters with almost global trajectory tracking guarantees.**
A.R.P. Andriën, E. Lefeber, D. J. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Automatic Control*, 69(8):5216–5230.
- 2024 Linear quadratic path-following via online trajectory speed optimization.**
D. J. Antunes · *IEEE Transactions on Automatic Control*, 69(8):5643–5650.
- 2023 Frequency-domain analysis of aperiodic control loops with identically distributed delays.**
D. J. Antunes · *Automatica*, 151:110626.
- 2022 Weather forecast error modelling and performance analysis of automatic greenhouse climate control.**
W.J.P. Kuipers, D. J. Antunes, S. van Mourik, E. J. van Henten, M.J.G. van de Molengraft · *Biosystems Engineering*, 214:207–229.
- 2021 Decentralized LQ-consistent event-triggered control over a shared contention-based network.**
M. Balaghiinaloo, D. J. Antunes, M. H. Mamduhi, S. Hirche · *IEEE Transactions on Automatic Control*, 67(3):1430–1437.
- 2021 Lighting systems and strategies compared in an optimally controlled greenhouse.**
W.J.P. Kuipers, D. Katzin, S. van Mourik, D. J. Antunes, S. Hemming, M.J.G. van de Molengraft · *Biosystems Engineering*, 202:195–216.
- 2021 An l_2 -consistent event-triggered control policy for linear systems.**
M. Balaghiinaloo, D. J. Antunes, W.P.M.H. Heemels · *Automatica*, 125:109412.
- 2021 Fruit development modelling and performance analysis of automatic greenhouse control.**
W.J.P. Kuipers, D. J. Antunes, S. Hemming, E. J. van Henten, M.J.G. van de Molengraft · *Biosystems Engineering*, 208:300–318.
- 2021 Frequency-domain analysis of networked control systems modeled by Markov jump linear systems.**
D. J. Antunes, H. Qu · *IEEE Transactions on Control of Network Systems*, 8(2):906–916.
- 2021 Opportunities for control engineering in arable precision agriculture.**
A. Cobbenhagen, D. J. Antunes, M.J.G. van de Molengraft, W.P.M.H. Heemels · *Annual Reviews in Control*, 51:47–55.
- 2020 Novel bounds on the probability of misclassification in majority voting: leveraging the majority size.**
A. Cobbenhagen, A. Carè, M. C. Campi, F. A. Ramponi, D. J. Antunes, W.P.M.H. Heemels · *IEEE Control Systems Letters*, 5(5):1513–1518.
- 2020 Near-optimal MAP estimation for Markov jump linear systems using relaxed dynamic programming.**
A.R.P. Andriën, D. J. Antunes · *IEEE Control Systems Letters*, 4(4):815–820.
- 2020 Optimal-time quadcopter descent trajectories avoiding the vortex ring and autorotation states.**
A. Talaeizadeh, D. Antunes, H. Nejat Pishkenari, A. Alasty · *Mechatronics*, 68:102362.
- 2020 Image-based feedback control for drift compensation in an electron microscope.**
E. P. van Horssen, B. J. Janssen, A. Kumar, D. Antunes, W.P.M.H. Heemels · *IFAC Journal of Systems and Control*, 11:100074.
- 2019 Event- and deadline-driven control of a self-localizing robot with vision-induced delays.**
E. P. van Horssen, J.A.A. van Hooijdonk, D. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Industrial Electronics*, 67(2):1212–1221.
- 2019 Consistent event-triggered control for discrete-time linear systems with partial state information.**
D. J. Antunes · *IEEE Control Systems Letters*, 4(1):181–186.
- 2019 Switched LQG control for linear systems with multiple sensing methods.**
E. P. van Horssen, D. Antunes, W.P.M.H. Heemels · *Automatica*, 103:217–229.
- 2018 Periodic event-triggered sampling and dual-rate control for a wireless networked control system with applications to UAVs.**
A. Cuenca, D. J. Antunes, A. Castillo, P. Garcia, B. A. Khashooei, W.P.M.H. Heemels · *IEEE Transactions on Industrial Electronics*, 66(4):3157–3166.
- 2018 Beyond performance/cost tradeoffs in motion control: A multirate feedforward design with application to a dual-stage wafer system.**
J. van Zundert, T. Oomen, J. Verhaegh, W. Aangenent, D. J. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Control Systems Technology*, 28(2):448–461.
- 2018 Stochastic thresholds in event-triggered control: A consistent policy for quadratic control.**
F. D. Brunner, D. Antunes, F. Allgöwer · *Automatica*, 89:376–381.
- 2018 A consistent threshold-based policy for event-triggered control.**
B. Asadi Khashooei, D. J. Antunes, W.P.M.H. Heemels · *IEEE Control Systems Letters*, 2(3):447–452. 2019 CSL Outstanding Paper Award.
- 2017 Output-based event-triggered control with performance guarantees.**
B. Asadi Khashooei, D. J. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Automatic Control*, 62(7):3646–3652.
- 2017 Consistent dynamic event-triggered policies for linear quadratic control.**
D. J. Antunes, B. Asadi Khashooei · *IEEE Transactions on Control of Network Systems*, 5(3):1386–1398.

- 2017 Event-driven control with deadline optimization for linear systems with stochastic delays.**
E. van Horssen, S. Prakash, D. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Control of Network Systems*, 5(4):1819–1829.
- 2017 Resource-aware MPC for constrained linear systems: Two rollout approaches.**
T.M.P. Gommans, T.A.F. Theunisse, D. J. Antunes, W.P.M.H. Heemels · *Journal of Process Control*, 51:68–83.
- 2016 Intercellular variability in protein levels from stochastic expression and noisy cell cycle processes.**
M. Soltani, C. A. Vargas-Garcia, D. Antunes, A. Singh · *PLoS Computational Biology*, 12(8):e1004972.
- 2016 Linear quadratic regulation of switched systems using informed policies.**
D. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Automatic Control*, 62(6):2675–2688.
- 2015 Frequency-domain analysis of control loops with intermittent data losses.**
D. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Automatic Control*, 61(8):2295–2300.
- 2015 Stochastic networked control systems with dynamic protocols.**
D. Antunes, J. P. Hespanha, C. Silvestre · *Asian Journal of Control*, 17(1):99–110.
- 2015 Quantifying gene expression variability arising from randomness in cell division times.**
D. Antunes, A. Singh · *Journal of Mathematical Biology*, 71(2):437–463.
- 2015 The impact of deadline misses on the control performance of high-end motion control systems.**
W. Geelen, D. Antunes, J.P.M. Voeten, R.R.H. Schiffelers, W.P.M.H. Heemels · *IEEE Transactions on Industrial Electronics*, 63(2):1218–1229.
- 2014 Output regulation for non-square linear multi-rate systems.**
D. Antunes, J. P. Hespanha, C. Silvestre · *International Journal of Robust and Nonlinear Control*, 24(5):968–990.
- 2014 Self-triggered linear quadratic control.**
T. Gommans, D. Antunes, T. Donkers, P. Tabuada, W.P.M.H. Heemels · *Automatica*, 50(4):1279–1287.
- 2014 Rollout event-triggered control: Beyond periodic control performance.**
D. Antunes, W.P.M.H. Heemels · *IEEE Transactions on Automatic Control*, 59(12):3296–3311.
- 2013 Stability of networked control systems with asynchronous renewal links: An impulsive systems approach.**
D. Antunes, J. Hespanha, C. Silvestre · *Automatica*, 49(2):402–413.
- 2013 Stochastic hybrid systems with renewal transitions: Moment analysis with application to networked control systems with delays.**
D. Antunes, J. P. Hespanha, C. Silvestre · *SIAM Journal on Control and Optimization*, 51(2):1481–1499.
- 2011 Volterra integral approach to impulsive renewal systems: Application to networked control.**
D. J. Antunes, J. P. Hespanha, C. J. Silvestre · *IEEE Transactions on Automatic Control*, 57(3):607–619.
- 2010 On the design of multi-rate tracking controllers: Application to rotorcraft guidance and control.**
D. Antunes, C. Silvestre, R. Cunha · *International Journal of Robust and Nonlinear Control*, 20(16):1879–1902.

CONFERENCE PUBLICATIONS

- 2025 Smart exploration in reinforcement learning using bounded uncertainty models.**
J. S. van Hulst, W.P.M.H. Heemels, D. J. Antunes · *CDC 2025*, 5132–5138.
- 2025 Beyond KL-divergence: Risk aware control through cross entropy and adversarial entropy regularization.**
M. van Zutphen, D. Herceg, D. J. Antunes · *CDC 2025*, 806–812.
- 2025 Maximum a posteriori least-squares temporal difference.**
R.A.C. van Zuijlen, D. J. Antunes · *ACC 2025*, 3533–3538.
- 2024 Predictable interval MDPs through entropy regularization.**
M. van Zutphen, G. Delimpaltadakis, W.P.M.H. Heemels, D. J. Antunes · *CDC 2024*, 6659–6664.
- 2024 Infinite-horizon linear quadratic path-following.**
D. J. Antunes · *CDC 2024*, 3253–3258.
- 2024 Optimal sampling schedules for l_2 and h_∞ state-feedback control.**
D. J. Antunes, J. P. Hespanha · *ECC 2024*, 2623–2629.
- 2024 Data-efficient quadratic Q-learning using LMIs.**
J. S. van Hulst, W.P.M.H. Heemels, D. J. Antunes · *CDC 2024*, 1161–1166.
- 2023 Consistent event-triggered consensus on complete graphs.**
D. J. Antunes, D. Meister, T. Namerikawa, F. Allgöwer, W.P.M.H. Heemels · *CDC 2023*, 3911–3916.
- 2023 Complexity-bounded relaxed dynamic programming.**
R. M. Beumer, M.J.G. van de Molengraft, D. J. Antunes · *CDC 2023*, 4279–4284.
- 2023 Bayesian estimation for linear systems with nonlinear output and general noise distribution using Fourier basis functions.**
R.A.C. van Zuijlen, J. S. van Hulst, W.P.M.H. Heemels, D. J. Antunes · *CDC 2023*, 2166–2171.
- 2023 Estimation of dynamic Gaussian processes.**
J. van Hulst, R. van Zuijlen, D. Antunes, W.P.M.H. Heemels · *CDC 2023*, 3206–3211.
- 2023 Optimal stopping problems in low-dimensional feature spaces: Lossless conditions and approximations.**
M. van Zutphen, W.P.M.H. Heemels, D. J. Antunes · *CDC 2023*, 1776–1781.

- 2023 Active subsampling using deep generative models by maximizing expected information gain.**
K.C.E. van de Camp, H. Joudeh, D. J. Antunes, R.J.G. van Sloun · ICASSP 2023.
- 2022 Adaptive sampling and actuation for POMDPs: Application to precision agriculture.**
D. J. Antunes, R. M. Beumer, M.J.G. van de Molengraft, W.P.M.H. Heemels · CDC 2022, 2399–2404.
- 2021 Near-optimal recursive identification for Markov switched systems.**
A. Andriën, D. J. Antunes · CDC 2021, 132–138.
- 2020 Model predictive tracking controller for quadcopters with setpoint convergence guarantees.**
A. Andriën, D. Kremers, D. Kooijman, D. Antunes · ACC 2020, 3205–3210.
- 2020 LQ-power consistent control: Leveraging transmission power selection in control systems.**
M. Balaghiinaloo, D. J. Antunes, V. S. Varma, R. Postoyan, W.P.M.H. Heemels · ECC 2020, 1701–1706.
- 2020 Embedded learning-based model predictive control for mobile robots using Gaussian process regression.**
N.H.J. Janssen, L. Kools, D. J. Antunes · ACC 2020, 1124–1130.
- 2019 An L2-consistent data transmission sequence for linear systems.**
M. Hadi Balaghi, D. J. Antunes, W.P.M.H. Heemels, et al. · CDC 2019, 2622–2627.
- 2019 Trajectory tracking for quadrotors with attitude control on $SO(2) \times S(1)$.**
D. Kooijman, A. P. Schoellig, D. J. Antunes · ECC 2019, 4002–4009.
- 2019 Filtering and smoothing in the presence of outliers using duality and relaxed dynamic programming.**
A.R.P. Andrien, D. J. Antunes · CDC 2019, 6038–6043.
- 2018 A switched system approach to optimize mixing of fluids.**
V. S. Dolk, M. Lauret, D. J. Antunes, P. D. Anderson, W.P.M.H. Heemels · IFAC-PapersOnLine, 51(16):31–36.
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