

DAVIDE M. RAIMONDO

Born: 07-11-1981 in Pavia (Italy)

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Languages: *Italian*: mother tongue. *English*: proficient. *Spanish*: fluent.

German: basic knowledge (A2.2). *Serbo-croatian*: basic knowledge.

ACADEMIC AND RESEARCH APPOINTMENTS

Oct. 23 –	UNIVERSITY OF TRIESTE Full Professor , Department of Engineering and Architecture.	Trieste <i>Italy</i>
Dec. 21 – Sep. 23	UNIVERSITY OF PAVIA Full Professor , Department of Electrical, Computer and Biomedical Engineering ¹ .	Pavia <i>Italy</i>
Jan. 13 – Sep. 23	UNIVERSITY OF PAVIA Head of the educational Process Control Laboratory http://conpro.unipv.it/	Pavia <i>Italy</i>
Jul. 18 – Sep. 18 Oct. 17 – Feb. 18	UNIVERSITY OF KONSTANZ Visiting Professor , Department of Mathematics and Statistics.	Costanza <i>Germany</i>
May 15 – Nov. 21	UNIVERSITY OF PAVIA Associate Professor , Dept. of Electrical, Computer and Biomedical Engineering.	Pavia <i>Italy</i>
Mar. 15 – Apr. 15 Mar. 14 – Apr. 14	VIENNA UNIVERSITY OF TECHNOLOGY (TU WIEN) Visiting Professor , Computer Engineering PhD School.	Vienna <i>Austria</i>
Sep. 14 – Feb. 15 Mar. 12 – Jun. 12	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) Visiting Scholar , Prof. Braatz group, Department of Chemical Engineering.	Cambridge <i>United States</i>
Dec. 10 – May. 15 (tenured Dec. 13)	UNIVERSITY OF PAVIA Assistant Professor , Dept. of Electrical, Computer and Biomedical Engineering.	Pavia <i>Italy</i>
Nov. 08 – Dec. 10	SWISS FEDERAL INSTITUTE OF TECHNOLOGY (ETHZ) Postdoc at the Automatic Control Laboratory (IfA) Dept. of Information Technology and Electrical Engineering.	Zurich <i>Switzerland</i>
Oct. 06 – May 07	UNIVERSITY OF SEVILLE Academic Guest in the Dept. of Automation and System Engineering.	Seville <i>Spain</i>

EDUCATION

Nov. 05 – Nov. 08	UNIVERSITY OF PAVIA Ph.D. in electronics, computer science and electrical engineering Thesis title: <i>Nonlinear Model Predictive Control: Stability, Robustness and Applications</i> . Advisor: Prof. Lalo Magni (Ph.D. defended on 16-01-2009).	Pavia <i>Italy</i>
Oct. 03 – Jul. 05	UNIVERSITY OF PAVIA M.Sc. in Automatic Control Engineering. 110/110 cum laude.	Pavia <i>Italy</i>
Oct. 00 – Sep. 03	UNIVERSITY OF PAVIA B.Sc. in Computer Science Engineering. 110/110 cum laude.	Pavia <i>Italy</i>
Nov. 00 – Jul. 05	ALMO COLLEGIO BORROMEO Student . Almo Collegio Borromeo is recognized by the Italian Ministry of Education, Universities and Research as a “Highly qualified cultural institute”.	Pavia <i>Italy</i>
Nov. 00 – Nov. 05	INSTITUTE FOR ADVANCED STUDY OF PAVIA (IUSS)	Pavia

¹ From December 2021 to September 2023, he was **the youngest full professor** in the Faculty of Engineering at the University of Pavia, which includes 50 full professors, 61 associate professors, and 55 researchers.

Student. A special-status higher education institution. It holds the same prestigious standing as the Scuola Normale and Scuola Sant'Anna in Pisa, and the SISSA in Trieste.

Italy

BIBLIOMETRIC PROFILE

Davide M. Raimondo has an h index of 32 (Scopus²) - 37 (Google Scholar³) and a number of citations equal to 4209 (Scopus) - 6441 (Google Scholar). He is the author of over 115 publications, including editor of a book, author or co-author of 43 peer-reviewed journal articles, 4 book chapters, 68 conference proceedings, and 1 patent. His main research topics include optimization-based control, fast, cooperative, and distributed control, fault diagnosis, battery management systems, autonomous surveillance, and glucose control.

RESEARCH INTERESTS

Theory: control, optimization, fault detection, and isolation. **Applications:** energy, robotics, logistics, medical.

APPLICATION PORTFOLIO

- Battery management systems.
- Autonomous surveillance with pan-tilt-zoom cameras.
- Optimal placement of wind turbines and energy storage systems.
- Forecasting energy production for wind farms.
- Optimization of forecasts and bids in the deregulated electricity market.
- Optimal power flow.
- Energy management for HVAC systems (Heating, Ventilation, Air-conditioning).
- Mobile robotics for a semiconductor production site.
- Logistics optimization.
- Glucose control in diabetic patients (participated in clinical hospital trials).



BATTERY-RELATED EXPERTISE

- Modeling of cells using equivalent circuits and electrochemical models.
- Design of experiments for identifying battery model parameters.
- Development of fast and reliable simulators for cells and battery packs.
- Model-based and AI-driven battery management systems. Main objectives:
 - optimal trade-off between charging and aging;
 - active charge balancing between cells;
 - fault detection.

Collaborations



PATENTS

L. Magni, G. De Nicolao, D.M. Raimondo, C. Cobelli, C. Dalla Man, *Predictive control based system and method for control of insulin delivery in diabetes using glucose sensing*, US Patent App. 12/740,275, 2010.

TOOLBOXES



Promoter e co-author of the **Li-ion Simulation Battery (LIONSIMBA) toolbox**, official website <http://sisdin.unipv.it/labsisdin/lionsimba.php>⁴. Co-author of the **Battery Optimal Layer Design (BOLD) toolbox** <https://zenodo.org/record/1241420#.XF2QxIxKjb1>.

HONORS AND AWARDS

- **Senior IEEE Membership** (2022 –).
- **Automatica Paper Prize Award 2014-2016** for *Constrained zonotopes: A new tool for set-based estimation and fault detection*, J.K. Scott, D.M. Raimondo, G.R. Marseglia, R.D. Braatz, Automatica, 69, 126-136, 2016.

² <https://www.scopus.com/authid/detail.uri?authorId=23009807600>

³ <https://scholar.google.it/citations?user=cXZ54KEAAAAJ&hl=it&oi=ao>

⁴ >18,000 views worldwide since 2016. >165 citations on Google Scholar for the reference document *Lionsimba: a matlab framework based on a finite volume model suitable for li-ion battery design, simulation, and control*, M Torchio, L Magni, RB Gopaluni, RD Braatz, DM Raimondo, Journal of The Electrochemical Society 163 (7), A1192

- 11th IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes - **SAFEPROCESS 2022 Best Student Paper Award** for *Model-based thermal fault detection in Li-ion batteries using a set-based approach*, G. Saccani, D. Locatelli, A. Tottoli, D.M. Raimondo.
- **Teresian Medal** (Oct. 2022). An academic honor awarded by the Rector of the University of Pavia to faculty members promoted to full professor during the inauguration ceremony of the academic year.

LIST OF GRANTS

- Key Digital Technologies Joint Undertaking Research and Innovation Actions (HORIZON-KDT-JU-2022-2-RIA-Topic-1-General). Title: Intelligent, Safe, and Secure Connected Electrical Mobility Solutions: Towards the European Green Deal and Seamless Mobility (EcoMobility). Role: **Principal Investigator** at the University of Trieste (October 2023 - Present). Funding: €360,000 (co-funding: €126,000 from the European Union). Duration: 3 years (2023-2026).
- Key Digital Technologies Joint Undertaking Research and Innovation Actions (HORIZON-KDT-JU-2022-2-RIA-Topic-1-General). Title: Intelligent, Safe, and Secure Connected Electrical Mobility Solutions: Towards the European Green Deal and Seamless Mobility (EcoMobility). Role: **Principal Investigator** at the University of Pavia (May-September 2023). Initial Funding: €750,000 (co-funding: €260,000 from the European Union, €120,000 from the Ministry of University and Research). Duration: 3 years (2023-2026). The funding was subsequently reduced to €390,000 (co-funding: €136,500 from the European Union, €64,000 from the Ministry of University and Research) following an amendment and the inclusion of the University of Trieste in the consortium.
- National Relevant Interest Projects (PRIN) (An Italian project involving multiple universities). Title: Monitoring and Control Underpinning the Energy-Aware Factory of the Future: Novel Methodologies and Industrial Validation. Role: **Principal Investigator at the University of Pavia**. Funding Amount: €130,000 (€101,000 from the Ministry of Education, University, and Research; €29,000 from the University of Pavia). The total funding for the project is €917,000. Duration: 3 years (2019-2022).
- Research Contract with ENI S.p.A. Role: **Principal Investigator** (PI). Project: Modeling, forecasting, and optimization of optimal bidding strategies in the free electricity market. Duration: 29 months (2020-2022). Funding Amount: €110,000 + VAT.
- Research Contract with ENI S.p.A. Role: **Principal Investigator** (PI). Project: Forecasting energy production from a wind farm in Italy. Duration: 18 months (2020-2021). Funding Amount: €79,000 + VAT.
- Research Contract with ENI S.p.A. Role: **Co-Principal Investigator** (Co-PI). Project: Development of forecasting models for energy production from Italian plants. Duration: 3 months (2022). Funding Amount: €35,000 + VAT.
- Contribution from the Lombardy Region for initiatives aimed at enhancing human capital and strengthening three new ENEA research laboratories. Role: Principal Investigator. Project Title: Integration of Electric Vehicles into Smart Grids. The funding was allocated for a PhD position. The candidate collaborated with the new ENEA laboratory for smart cities at Kilometro Rosso, Bergamo. Funding Amount: €61,500 (€48,000 from the Lombardy Region, €13,500 from the University of Pavia). Duration: 3 years (2019-2022).
- Research contract with LPE S.p.A. Role: **Principal Investigator**. Project: Modeling and Control of Epitaxial Reactors. Duration: 6 months (2019). Funding Amount: €16,000 + VAT.
- Research contract with Stelar S.R.L. Role: **Principal Investigator**. Project: Characterization, Modeling, and Design of Software for Simulating the Magnetic Field Control Loop for Fast Field Cycling NMR. Duration: 2 years (2016-2018). Funding Amount: €60,000 + VAT.
- **Consultancy** for FibonacciLab, an Efeso Group Company. Project: Logistics Optimization. Period: February 2020. Funding Amount: €5,600.
- Pavia-Boston Project. Promoted by the Pro-Rector for the Third Mission, University of Pavia. Role: **Recipient/Lead Professor for research stays at MIT and for visiting professors and students from the University of Pavia**. Hosted Professors: R.D. Braatz, G. Stephanopoulos (MIT), C. Belta (BU). Duration: 2014-2019. Funding Amount: €22,000.

SUPERVISION

2 Postdocs, 9 PhD students (2 as co-advisor), **1 research assistant**, over **30 master theses**, over **50 bachelor theses**. **PhD thesis topics**: cooperative control, energy systems, management of lithium-ion batteries, vehicle-to-grid, fault diagnosis, and fault-tolerant control, power electronic converters. **Bachelor's/master's thesis topics**: optimization of wind farm layouts, optimal placement of energy storage devices in electrical grids, autonomous surveillance, vision system design, blood glucose

control, battery control and testing, power plants, small-scale racing cars, submarines, cranes, helicopters, solar trackers, etc.

TEACHING ACTIVITIES

Experience in various countries: Austria, Colombia, Germany, Italy, Spain, Switzerland, with class sizes ranging from 2 to 170 students.

PhD courses

2024	Lecturer , State estimation and fault detection: a set-based approach, University of Trieste, Italy
2020	Lecturer , Constrained Zonotopes for state estimation and fault detection, University of Seville, Spain
2018	Lecturer , Predictive Control, Universidades Autónomas de Occidente, Bucaramanga, Manizales, Colombia
2014 and 2015	Lecturer , Model Predictive Control (Special Topics in Cyber-Physical Systems), Doctoral School in Computer Engineering, TU Wien, Austria

Master's Degree Courses

2024 –	Lecturer , Modelling and Control of Cyber-physical Systems II, University of Trieste, Italy
2023 –	Lecturer , Modelling and Control of Cyber-physical Systems I, University of Trieste, Italy
2016 – 2023	Lecturer , Advanced Automation and Control, University of Pavia, Italy
2017 – 2018	Lecturer , Optimal Control of ODEs, University of Konstanz, Germany
2014	Lecturer , Moving Horizon Estimation (Hybrid Systems Course), TU Wien, Austria
2009 – 2011	Teaching assistant , Model Predictive Control, ETHZ, Switzerland

Bachelor's Degree Courses

2011 – 2023	Lecturer , Basics of Automatic Control, University of, Italy
2006 – 2007	Lecturer , Introduction to systems analysis, University of Pavia, Italy
2001 – 2005	Tutor of Java Programming, University of Pavia, Italy

INSTITUTIONAL RESPONSIBILITIES

University of Trieste, Italy

2024 -	Representative of the University of Trieste on the Board of Directors of Rachael S.r.l.
2024	Chair of the admission committee for the PhD program in Industrial and Information Engineering (PNRR call 40th cycle).
2023 -	Delegate for outgoing career guidance, Department of Engineering and Architecture.

University of Pavia, Italy

2023	Chair of the final evaluation committee for two PhD candidates in Automation for the PhD program in Electronics, Computer Science, and Electrical Engineering.
2022 – 2023	Member of the quality committee for the PhD program in Electronics, Computer Science, and Electrical Engineering.
2021	Member and secretary of the admission committee for the PhD program in Electronics, Computer Science, and Electrical Engineering.
2017 – 2023	Member of the Faculty Board for the PhD program in Electronics, Computer Science, and Electrical Engineering.
2016 – 2021	Coordinator of the Automation Tutoring Project, Faculty of Engineering.
2018	Member and Secretary of the Final Evaluation Committee for PhD Candidates in Electronics,

Computer Science, and Electrical Engineering.

2015 – 2016 **Coordinator** of promotional activities for the Automation sector.

2012 – 2016 **Member** of the Committee for the Qualification to Practice as a Computer Engineer.

INVITED SEMINARS AND PARTICIPATION IN INTERNATIONAL CONFERENCES

- Over 25 presentations given at international conferences (ACC, CDC, Diabetes Technology Society Meeting, ECC, IFAC NecSys, IFAC NOLCOS, IFAC WC, MTNS, NMPC, SYSTOL)
- Over 25 invited seminars at universities and research centers (Scania, ABB Corporate Research Center, Bochum Univ., Boston Univ., EPFL, ETH, Federal Univ. of Minas Gerais, IIT Italy, Imperial College, Magdeburg Univ., MIT, Mitsubishi Electric Research Labs, TU Braunschweig, TU Eindhoven, TU Wien, UC Berkeley)
- **Invited speaker** at the workshop "Advanced Battery Management: Recent Advances and Future Innovations," American Control Conference, Toronto, 2024.
- **Invited speaker** at the workshop "Lithium-Ion Batteries: Challenges and Opportunities," 13th IFAC Symposium on Dynamics and Control of Process Systems (DYCOPS, Busan, Republic of Korea, 2022). The presentation was recorded and made available to participants only after the conference.

ORGANIZATION OF SCIENTIFIC CONFERENCES

2023 **Co-organizer** of the conference IET Energy Storage Conference, 15-16 November 2023, Glasgow, UK

2023 **Co-organizer** of the invited session Machine Learning and Big Data Applied to Energy Storage System Modeling and Control, IFAC WC 2023 (Yokohama, Japan)

2010 e 2007 **Organizer** of the invited sessions Nonlinear MPC (2010, Bologna, Italy) and New Development in NMPC (2007, Pretoria, South Africa) for the IFAC Symposium on Nonlinear Control Systems.

2008 **Co-organizer** of the International Workshop on Assessment and Future Direction of Nonlinear Model Predictive Control, Pavia, Italy

EDITORIAL ACTIVITY

2023 **Reviewer** of 1 research project, National Science Center, Poland

2023 **Reviewer** of 1 bilateral cooperation program CONICET - CUIA

2022 **Associate editor for the special issue** "State-of-the-art Applications of Model Predictive Control", IEEE Transactions on Control Systems Technology

2020 – **Subject editor** for the journal Automatica

2022 **Member of the International Program Committee** for the IFAC CAO 2022 Conference

2020 **Member of the International Program Committee** for the IEEE CDC '20

2021, 2020 and 2017 **Reviewer** of 3 research projects, Czech Science Foundation

2019 – **Subject editor** for the journal IEEE Transactions on Control Systems Technology

2017 **Reviewer** of 1 research project, Research Foundation Flanders (FWO), Belgium

2016 – 2021 **Member of the Conference Editorial Board** for the IEEE Control Systems Society

2015 – 2018 **Subject editor** for the journal Optimal Control Applications and Methods

2014 – 2019 **Member of the Conference Editorial Board** for the European Control Conference

2012 – **Member of the International Program Committee** for the NMPC Conference

EXTERNAL EXAMINER OF PHD THESES

2024	Malin Andersson, KTH (thesis opponent)	Stockholm Sweden
2022	Alesi Augusto de Paula, Federal University of Minas Gerais	Belo Horizonte Brazil
2021	Khalik Zuan, TU Eindhoven	Eindhoven The Netherlands

2021	Carmelina Ierardi, Loyola University	Seville <i>Spain</i>
2021	Qualifying exam Alesi Augusto de Paula, Federal University of Minas Gerais	Belo Horizonte <i>Brazil</i>
2018	Qualifying exam Brenner Santana Rego, Federal University of Minas Gerais	Belo Horizonte <i>Brazil</i>
2014	Feng Xu, Universitat Politècnica de Catalunya	Barcelona <i>Spain</i>
2013	Isabel Jurado Flores, University of Seville	Seville <i>Spain</i>

MEMBERSHIPS

2019 - IEEE Membership, IEEE Control Systems Society Membership.

PUBLICATIONS AND PATENTS⁵

BOOKS	
1.	L. Magni, D.M. Raimondo, F. Allgower (EDS), Nonlinear model predictive control: Towards new challenging applications , Springer Lecture Notes in Control and Information Sciences series, vol. 384, 2009, citations: 242 (S.G.)
INTERNATIONAL JOURNALS	
1.	G. Piombo, S. Fasolato, R. Heymer, M.F. Hidalgo, M.F. Niri, D.M. Raimondo, J. Marco, S. Onori, Full factorial design of experiments dataset for parallel-connected lithium-ion cells imbalanced performance investigation , Data in Brief, 53, 110227, 2024
2.	M. Capelletti, D.M. Raimondo, G. De Nicolao, Wind power curve modelling: A probabilistic Beta regression approach , Renewable Energy, 223, 119970, 2024
3.	A.A. de Paula, D.M. Raimondo, G.V. Raffo, B.O.S. Teixeira, Set-based state estimation for discrete-time constrained nonlinear systems: an approach based on constrained zonotopes and DC programming , Automatica, 159, 111401, 2024
4.	F. Dabbene, M. Cannon, M. Chamanbaz, A. Isaksson, M. Mammarella, D.M. Raimondo, Guest Editorial Special Issue on State-of-the-Art Applications of Model Predictive Control , IEEE Transactions on Control Systems Technology, 31(5), 1965-1970, 2023, I.F. 5.418
5.	A. Pozzi, D.M. Raimondo, Stochastic Model Predictive Control Approach for the Optimal Charging of an Electric Vehicle Battery Pack , Journal of Energy Storage, 55, 105332, 2022, I.F. 6.583
6.	B.S. Rego, D. Locatelli, D.M. Raimondo, and G.V. Raffo, Set-based joint state and parameter estimation of discrete-time systems using constrained zonotopes , Automatica 142, 110425, 2022, I.F. 5.944
7.	S. Park, A. Pozzi, M. Whitemeyer, H. Perez, A. Kandel, G. Kim, Y. Choi, W.T. Joe, D.M. Raimondo, S. Moura, A Deep Reinforcement Learning Framework for Fast Charging of Li-ion Batteries , IEEE Transactions on Transportation Electrification, 8(2), 2770-2784, 2022, I.F. 7.64, citations: 5 (S.G.), 4 (SC.)
8.	G. Sacconi, G. Ciaramella, D.M. Raimondo, A computationally efficient implementation of a battery pack electrochemical model using waveform relaxation , Journal of Energy Storage, 46, 103758, 2022, I.F. 6.583
9.	B.S. Rego, S.G. Vrachimis, M.M. Polycarpou, G.V. Raffo and D.M. Raimondo, State estimation and leakage detection of water distribution systems using constrained zonotopes , IEEE TCST, 30(5), 1920-1933, 2022, I.F. 5.312, citations: 1 (S.G.)
10.	B.S. Rego, J.K. Scott, D.M. Raimondo, G.V. Raffo, Set-valued state estimation based on constrained zonotopes of nonlinear discrete-time systems with state equality constraints , Automatica 129, 109638, 2021, I.F. 5.944, citations: 10 (SC.), 13 (S.G.)
11.	M. Rubagotti, G. P. Incremona, D. M. Raimondo, A. Ferrara, Constrained Nonlinear Discrete-Time Sliding Mode Control Based on a Receding Horizon Approach , IEEE Transactions on Automatic Control, 2020, doi: 10.1109/TAC.2020.3024349, I.F. 5.625, citations: 10 (SC.), 12 (S.G.)

⁵ In the following, the acronyms I.F., SC., and S.G. refer respectively to the journal's Impact Factor, SCOPUS, and Google Scholar.

12. A. Pozzi, M. Zambelli, A. Ferrara, D.M. Raimondo, Balancing-Aware Charging Strategy For Series-Connected Lithium-Ion Cells: A Nonlinear Model Predictive Control Approach , IEEE Transactions on Control Systems Technology, 28(5), 1862-1877, 2020, I.F. 5.312, citations: 10 (SC.), 22 (S.G.)
13. A. Pozzi, M. Torchio, R.D. Braatz, D.M. Raimondo, Optimal Charging of an Electric Vehicle Battery Pack: a Real-Time Sensitivity-Based MPC , Journal of Power Sources, 461, 228133, 2020, I.F. 8.247, citations: 21 (SC.), 25 (S.G.)
14. B.S. Rego, G.V. Raffo, J.K. Scott, D.M. Raimondo Guaranteed methods based on constrained zonotopes for set-valued state estimation of nonlinear discrete-time systems , Automatica, 111, 108614, 2020, I.F. 5.944, citations: 23 (SC.), 36 (S.G.)
15. F. Boem, A.J. Gallo, D.M. Raimondo and T. Parisini, Distributed Fault-Tolerant Control of Large-Scale Systems: an Active Fault Diagnosis Approach , IEEE Transactions on Control of Network Systems, 7(1),8700304, pp. 288-301, 2020, I.F. 3.467, citations: 38 (SC.), 44 (S.G.)
16. G. Galuppini, R. Rolfi, C. Toffanin, D.M. Raimondo, Y. Xia, G. Ferrante, L. Magni, Towards a Model-Based Field-Frequency Lock for NMR: Experimental Validation , Applied Magnetic Resonance, 1-23, 2019, I.F. 0.864, citations: 1 (SC.), 3 (S.G.)
17. I.D. Campbell, K. Gopalakrishnan, M. Marinescu, M. Torchio, G.J. Offer and D.M. Raimondo, Modelled Optimal Layer Configuration of Lithium-ion Cells: Fast Charging, Plating Avoidance & Common Module Design for Electric Vehicles , Journal of Energy Storage, 22, 228-238, 2019, I.F. 6.583, citations: 40 (SC.), 43 citations (S.G.)
18. A. Pozzi, G. Ciarabella, S. Volkwein, D.M. Raimondo, Optimal design of experiments for a lithium-ion cell: parameters identification of an isothermal single particle model with electrolyte dynamics , Industrial & Engineering Chemistry Research, 58 (3), 1286–1299, 2019, I.F. 3.573, citations: 30 (SC.), 42 (S.G.)
19. G. Galuppini, L. Magni, D.M. Raimondo, Model Predictive Control of Systems with Actuators Subject to Dead-Zone and Saturation: Robustness Analysis and Experimental Validation , Control Engineering Practice, 78, 56–64, 2018, I.F. 3.475, citations: 24 (SC.), 30 (S.G.)
20. M. Torchio, L. Magni, R.D. Braatz, D.M. Raimondo, Design of Piecewise Affine and Linear Time Varying based Model Predictive Control Strategies for Advanced Battery Management Systems , Journal of Electrochemical Society, 164 (4), A949-A959, 2017, I.F. 3.721, citations: 18 (SC.), 25 (S.G.)
21. G.R. Marseglia, D.M. Raimondo, Active fault diagnosis: a multi-parametric approach , Automatica, 79, 223-230, 2017, I.F. 5.944, citations: 39 (SC.), 54 (S.G.)
22. D.M. Raimondo, G.R. Marseglia, R.D. Braatz, J.K. Scott, Closed-Loop Input Design for Guaranteed Fault Diagnosis using Set-Valued Observers , Automatica, 74, 107-117, 2016, I.F. 5.944, citations: 62 (SC.), 75 (S.G.)
23. M. Torchio, L. Magni, B. Gopaluni, R.D. Braatz, and D.M. Raimondo, LIONSIMBA - a Matlab framework based on a finite volume model suitable for Li-ion battery design, simulation, and control , Journal of Electrochemical Society, 163 (7), A1192-A1205, 2016, I.F. 3.721, citations: 117 (SC.), 166 (S.G.)
24. J.K. Scott, D.M. Raimondo, G.R. Marseglia, R.D. Braatz, Constrained Zonotopes: A New Tool for Set-Based Estimation and Fault Detection , Automatica, 69, 126-136, 2016, I.F. 5.944, citations: 138 (SC.), 196 (S.G.), Automatica best paper award
25. D.M. Raimondo, M. Rubagotti, C.N. Jones, L. Magni, A. Ferrara, M. Morari, Multirate sliding mode disturbance compensation for model predictive control , International Journal of Robust and Nonlinear Control, 25(16), 2984-3003, 2015, I.F. 3.503, citations: 22 (SC.), 29 (S.G.)
26. N. Kariotoglou, D.M. Raimondo, S. Summers, J. Lygeros, Multi-Agent Autonomous Surveillance: A Framework Based on Stochastic Reachability and Hierarchical Task Allocation , Journal of Dynamic Systems, Measurement, and Control, 137(3), 031008, 2015, I.F. 1.83, citations: 9 (SC.), 19 (S.G.)
27. H. Zisser, E. Renard, B. Kovatchev, C. Cobelli, A. Avogaro, R. Nimri, B.A. Buckingham, H.P. Chase, F.J. Doyle III, J. Lum, P. Calhoun, C. Kollman, E. Dassau, A. Farret, J. Place, M. Breton, C. Dalla Man, S. Del Favero, D. Bruttomesso, A. Filippi, R. Scotton, L. Magni, C. Toffanin, D.M. Raimondo, G. De Nicolao, M. Phillip, E. Atlas, I. Muller, S. Miller, R.W. Beck, Control to Range Study Group, Multi-center Closed-Loop Insulin Delivery Study Identifies Challenges for Keeping Blood Glucose in a Safe Range by a Control Algorithm in Adults and Adolescents with Type 1 Diabetes From Various Sites , Diabetes Technology and Therapeutics, 16 (10), 613-622, 2014, I.F. 4.403, citations: 35 (SC.), 52 (S.G.)

28. H.P. Chase, F.J. Doyle, III, H. Zisser, E. Renard, R. Nimri, C. Cobelli, B.A. Buckingham, D.M. Maahs, S. Anderson, L. Magni, J. Lum, P. Calhoun, C. Kollman, R.W. Beck, Control to Range Study Group, Multicenter closed-loop/hybrid meal bolus insulin delivery with type 1 diabetes , Diabetes Technology and Therapeutics, 16 (10), 623–632, 2014, I.F. 4.403, citations: 36 (SC.)
29. M. Jiang, X. Zhu, M. Molaro, M. Rasche, H. Zhang, K. Chadwick, D.M. Raimondo, K.K.K. Kim, L. Zhou, Z. Zhu, M. Wong, D. O'Grady, D. Hebrault, J. Tedesco, R.D. Braatz, Modification of Crystal Shape through Deep Temperature Cycling , Industrial & Engineering Chemistry Research, 53(13), 5325-5336, 2014, I.F. 3.573, citations: 55 (SC.), 73 (S.G.)
30. J. K. Scott, R. Findeisen, R. D. Braatz, D. M. Raimondo, Input Design for Guaranteed Fault Diagnosis Using Zonotopes , Automatica, 50(6),1580-1589, 2014, I.F. 5.944, citations: 117 (SC.), 146 (S.G.)
31. M. N. Zeilinger, D. M. Raimondo, A. Domahidi, M. Morari, C. N. Jones, On Real-time Robust Model Predictive Control , Automatica, 50(3), 683-694, 2014, I.F. 5.944, citations: 77 (SC.), 126 (S.G.)
32. D. Axehill, T. Besselmann, D. M. Raimondo, M. Morari, A Parametric Branch and Bound Approach to Suboptimal Explicit Hybrid MPC , Automatica, 50(1), 240-246, 2014, I.F. 5.944, citations: 38 (SC.), 62 (S.G.)
33. F. Tedesco, D. M. Raimondo, A. Casavola, Collision avoidance command governor for multi-vehicle unmanned systems , International Journal of Robust and Nonlinear Control, 24(16), 2309–2330, 2014, I.F. 3.503, citations: 13 (SC.), 21 (S.G.)
34. M. Rubagotti, D.M. Raimondo, A. Ferrara and L. Magni, Robust model predictive control with integral sliding mode in continuous-time sampled-data nonlinear systems . IEEE Transactions on Automatic Control, 56(3), 556-570, 2011, I.F. 5.625, citations: 141 (SC.), 183 (S.G.)
35. L. Magni, D. M. Raimondo, C. Dalla Man, G. De Nicolao, B. Kovatchev, C. Cobelli, Model Predictive Control of glucose concentration in type I diabetic patients: an in silico trial , Biomedical Signal Processing and Control, 4(4), 338-346, 2009 (invited contribution), I.F. 3.88, citations: 152 (SC.), 197 (S.G.)
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4. S. Fasolato, D.M. Raimondo, **Observability analysis of a Li-ion cell equivalent circuit model based on interval arithmetic**, VPPC, accepted
3. G. Saccani, D. Locatelli, A. Tottoli, D.M. Raimondo, **Thermal fault-detection in series connected Li-ion cells: a set-based approach using constrained zonotopes**, CCTA, 2022
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