

DAVIDE M. RAIMONDO

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

Phone: +39 333 3525930 - Home address: via Aselli 52, 27100, Pavia, Italy

Email: davide.raimondo@unipv.it

Website: <http://sisdin.unipv.it/labsisdin/raimondo/raimondo.php>

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

German: basic knowledge. *Serbo-Croatian*: basic knowledge



EDUCATION

Nov. 05 – Nov. 08	UNIVERSITY OF PAVIA Ph.D. in electronic, computer 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 Italy
Oct. 03 – Jul. 05	UNIVERSITY OF PAVIA M.Sc. in Automatic Control Engineering. 110/110 cum laude	Pavia Italy
Oct. 00 – Sep. 03	UNIVERSITY OF PAVIA B.Sc. in Computer Science Engineering. 110/110 cum laude	Pavia Italy

ACADEMIC AND RESEARCH APPOINTMENTS

May 15 –	UNIVERSITY OF PAVIA Associate Professor , Identification and Control of Dynamical Systems (ICDS) Lab, Dept. of Electrical, Computer and Biomedical Engineering	Pavia Italy
Jan. 13 –	UNIVERSITY OF PAVIA Head of the educational Process Control Lab, http://conpro.unipv.it/	Pavia Italy
Oct. 17 – Feb. 18	UNIVERSITY OF KONSTANZ Visiting Professor , Department of Mathematics and Statistics	Konstanz Germany
Dec. 10 – May 15	UNIVERSITY OF PAVIA Assistant Professor (tenured 29/12/2013), ICDS Lab	Pavia Italy
Mar. 15 – Apr. 15	VIENNA UNIVERSITY OF TECHNOLOGY (TU WIEN)	Vienna
Mar. 14 – Apr. 14	Visiting Professor , Computer Engineering PhD School	Austria
Nov. 08 – Dec. 10	SWISS FEDERAL INSTITUTE OF TECHNOLOGY (ETHZ) Postdoc at the Automatic Control Laboratory, Dept. of Information Technology and Electrical Engineering	Zürich Switzerland

RESEARCH STAYS

Oct. 15 – Nov. 15	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)	Cambridge
Sep. 14 – Feb. 15	Visiting scholar	USA
Aug. 13 – Sep. 13	Prof. Braatz group	
Mar. 12 – Jun. 12	Department of Chemical Engineering	
Oct. 06 – May 07	UNIVERSITY OF SEVILLE Academic Guest in the Dept. of Automation and System Engineering	Sevilla Spain

AWARDS

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.

QUALIFICATIONS

Italian scientific habilitation for the position of Full Professor, section 09/G1 Automatica (2018 - 2024).

RESEARCH INTERESTS

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

BIBLIOMETRIC PROFILE

Currently (January 15, 2019) Prof. Raimondo has an h index of 20 (Scopus) - 26 (Google Scholar) and a number of citations equal to 1803 (Scopus) - 2840 (Google Scholar). He is editor, author or co-author of 1 book, 28 journal papers, 1 patent (filed), 4 book chapters, and 56 conference papers. Main topics: optimization-based control, fast, cooperative and distributed control, fault diagnosis, battery management systems, autonomous surveillance, control of glycaemia. See <https://scholar.google.com/citations?user=cXZ54KEAAA&hl=en&oi=ao> for details.

PROJECTS AND FUNDING

Participant in several European projects (SEMI40, AP@HOME, IMPROVE, FEEDNETBACK), Italian projects (PRIN projects on control of glycaemia in diabetic patients), local projects (funded for collaborations with MIT), and contracts (with Stelar S.r.l. and LPE S.p.A. as principal investigator, and CESI).

SOFTWARE

Promoter and co-author of the Li-ion Simulation Battery (LIONSIMBA) toolbox, official website <http://sisdin.unipv.it/labsisdin/lionsimba.php>. Co-author of the Battery Optimal Layer Design (BOLD) toolbox <https://zenodo.org/record/1241420#.XF2QxlxKjb1>.

TEACHING AND STUDENT SUPERVISION

Teaching experience in several countries: Austria, Colombia, Germany, Italy, Switzerland.

- Lecturer of several courses at the Ph.D., Master, and Bachelor level, with a number of students ranging from 30 to 100 (8 years of experience – topics: model predictive control, basics of automatic control, optimization and graph theory). Teaching rating at University of Pavia: 9.35/10 (departmental average 8.77/10).
- Supervisor/co-supervisor of 6 PhD students (topics: cooperative control, energy management, modelling and control of Lithium-ion batteries, fault diagnosis and fault tolerant control, power electronic converters).
- Supervisor of >20 master theses, >40 bachelor theses and 5 internships (topics: wind farm layout optimization, optimal placement of energy storage devices in power grids, autonomous surveillance, stochastic reachability, design of vision systems, control of glycaemia, batteries, power plants, small scale race cars, submarines, cranes, helicopters, trains, solar trackers, design of field frequency lock).

INVITED SEMINARS, PARTICIPATION AT INTERNATIONAL CONFERENCES

- Overall >20 presentations held at international conferences (CDC, ACC, ECC, NMPC, IFAC WC, IFAC NOLCOS, IFAC NecSys, Systol, Diabetes Technology Society Annual Meetings).
- >20 invited seminars at several universities and research centers (MIT, ETH, EPFL, Imperial College, UC Berkeley, Boston Univ., TU Wien, Magdeburg Univ., Braunschweig Univ., Bochum Univ., Federal University of Minas Gerais, IIT Italy, ABB Corporate Research Center, Mitsubishi Electric Research Labs).

EDITORIAL ACTIVITY AND PROFESSIONAL SERVICE

- Member of the committee for the qualification to the profession of Computer Science Engineer (2012-2016), Member of the scientific board of the PhD program in Electronics, Computer science and Electrical Engineering (2017-). Member and secretary of the committee for the final evaluation of the PhD candidates in Electronics, Computer Science and Electrical Engineering (2018), University of Pavia. Ph.D. committee member of theses at Polytechnic University of Catalonia and University of Seville.
- Subject editor for the journals IEEE Transactions on Control Systems Technology (2019-) and Optimal Control Applications and Methods (2015-2018). Member of the IEEE Technical committee on Process Control. CEB member of IEEE Control Systems Society (2016-) and of ECC '19, '18, '15, '14. Associate Editor of CDC '16 - '18, ACC '16 - '18, IPC member of NMPC '18, '15, '12, ADCHEM '21, '15, ECC '13.
- Co-chair of the International workshop on Assessment and Future Direction of Nonlinear Model Predictive Control, Pavia, Italy, 2008. Organizer of the invited sessions “Nonlinear MPC” and “New Development in NMPC” for the 7th and 10th IFAC Symposium on Nonlinear Control Systems.