Curriculum vitae

Davide M. Raimondo

Born: 07-11-1981, Pavia, Italy
Home address: Via Aselli 52, 27100 Pavia, Italy
Office address: Dipartimento di Ingegneria Industriale e dell'Informazione,
Università degli Studi di Pavia, Via Ferrata 4, 27100 Pavia, Italy
Phone: +39 0382 985354
Fax: +39 0382 985373
Email: davide.raimondo@unipv.it

EDUCATION

Nov. 05 – Nov. 08	UNIVERSITÀ DEGLI STUDI DI PAVIA ***Ph.D. in electronic, computer and electrical engineering,*** Identification and Control of Dynamic Systems Laboratory, Department of Computer Engineering and Systems Science. Thesis: *Nonlinear Model Predictive Control: Stability, Robustness and Applications.* Advisor: Prof. Lalo Magni (Ph.D. thesis defended on January 16, 2009)	Pavia *Italy*
Oct. 03 – Jul. 05	UNIVERSITÀ DEGLI STUDI DI PAVIA ***Master*** in Automatic Control Engineering – Thesis: *Robust control of nonlinear systems (110/110 cum laude)*	Pavia *Italy*
Oct. 00 – Sep. 03	UNIVERSITÀ DEGLI STUDI DI PAVIA ***Bachelor*** *in Computer Science Engineering* – Thesis: *Modeling and control of a crane* (110/110 cum laude)	Pavia *Italy*
Nov. 00 – Jul. 05	ALMO COLLEGIO BORROMEO ***Student****.* Almo Collegio Borromeo has been recognized by the Italian Ministry of Education, Universities and Research as a "Highly qualified cultural institute".	Pavia *Italy*
Nov. 00 – Nov. 05	INSTITUTE FOR ADVANCED STUDY OF PAVIA (IUSS) ***Student****.* In July 2005, IUSS-Pavia was recognized as an independent and autonomous "Scuola Superiore ad ordinamento speciale" in virtue of the excellent quality of the activities carried out, attaining the same status as the Scuola Normale and the Scuola Sant'Anna in Pisa, and the SISSA in Trieste.	Pavia *Italy*

LANGUAGES

Italian**:** mother tongue - ***english*****:** proficient - ***spanish*****:** fluent - ***german*****:** basic knowledge.

QUALIFICATIONS

Jan. 14	Qualified at the national level for the position of Associate Professor, section 09/G1 Automatica	Italy
Nov. 05	UNIVERSITÀ DEGLI STUDI DI PAVIA *Professional practice examination for* ***engineering licence*** *("esame di stato") passed in Pavia, Italy.*	Pavia *Italy*

ACADEMIC AND RESEARCH EMPLOYMENT

Dec. 10 -	UNIVERSITÀ DEGLI STUDI DI PAVIA **Assistant Professor** (**tenured 29/12/2013**) in the Identification and Control of Dynamic Systems Laboratory, Department of Electrical, Computer and Biomedical Engineering	Pavia *Italy*
Jan. 09 – Dec. 10	SWISS FEDERAL INSTITUTE FOR TECHNOLOGY (ETH) **Postdoc** in the Automatic Control Laboratory, Department of Information Technology and Electrical Engineering	Zürich *Switzerland*
Nov. 08 – Dec. 08	SWISS FEDERAL INSTITUTE FOR TECHNOLOGY (ETH) **Employee** in the Automatic Control Laboratory, Department of Information Technology and Electrical Engineering	Zürich *Switzerland*
Jul. 07 – Jan. 08	UNIVERSITÀ DEGLI STUDI DI PAVIA **Contracted** for the development of predictive control techniques for biological applications	Pavia *Italy*
Sep. 05 – Nov. 05	UNIVERSITÀ DEGLI STUDI DI PAVIA **Contracted** for the Development of robust model predictive controllers for nonlinear systems	Pavia *Italy*

OTHER WORK EXPERIENCE

Sep. 01 – Jul. 05	ALMO COLLEGIO BORROMEO **Responsible** of system administration	Pavia *Italy*
Jul. 00 – Aug. 00	GSMBOX s.p.a. **Contracted** as computer programmer	Pavia *Italy*

TEACHING AND STUDENT ADVISING

Lecturer

2013-2014	Basics of Automatic Control, Università di Pavia (~100 hours/year, 9 credits)	Pavia *Italy*
2012-2013	Automatic Control and Process Control, Università di Pavia (~100 hours/year, 9 credits)	Mantova *Italy*
2011-2012	Automatic Control and Process Control, Università di Pavia (~100 hours/year, 9 credits)	Mantova *Italy*
2006-2007	Introduction to systems analysis, Università di Pavia (~20 hours/year, 1 credit)	Pavia *Italy*

Teaching assistant

2009-2011	Model Predictive Control, ETH (seminars, ~10 hours/year)	Zürich *Switzerland*

2007	Master in Methods for Management of Complex Systems, IUSS, Pavia (seminars ~10 hours)	Pavia *Italy*
2001 –2005	Tutor of computer programming (Java), Università di Pavia (~50 hours/year)	Pavia *Italy*

Teaching rating

According to the requirements necessary to apply for the una tantum incentive for the years 2012 and 2013, I declare to have obtained a rating equal to or greater than 7 in the teaching evaluation questionnaires, derived from the average of the items of evaluation D7, D8 and D9:

- D7: Are the arguments clearly stated by the professor?
- D8: Is the professor available for clarifications and explanations?
- D9: Is the schedule of lectures, tutorials and other educational activities respected?

.

Participation as president in exam committees

- Course: *Basics of Automatic Control*, Università di Pavia, Pavia, Italy
  Number of evaluated tests: 167
  Number of exam sessions: 7

- Course: *Automatic Control and Process Control*, Università di Pavia, Mantova, Italy
  Number of evaluated tests: 85
  Number of exam sessions: 18

Student advising

Master thesis

Pavia – Italy

1. Optimal placement **of wind turbines** on a continuous domain: an MILP-based approach, A. Arbasini
2. **Fast evaluation** of explicit nonlinear MPC**,** F. Fassina (Erasmus at Ruhr Universität Bochum)
3. Automatic remote control of 1:27 scale **race cars**, F. Fiorentino (Erasmus at Ruhr Universität Bochum)
4. Optimal placement of **wind turbines** of a wind farm, D. Colli
5. Design and implementation of ***infrared vision system*** and ***breaking control*** of a small-scale train, A. Barbieri
6. Nonlinear model predictive control of ***glycaemia*** in type 1 diabetic patients, S. Riverso
7. Validation of a linear model predictive control of ***glycaemia*** in type 1 diabetic patients, G. Ferrario
8. Experimentation in silico of predictive control algorithms for the control of ***glycaemia*** in type 1 diabetic patients, R. Tessera
9. Modeling and control of the start-up phase of a ***combined cycle power plant***, A. Ferramosca
10. Predictive control of the start-up phase of a ***combined cycle power plant***, D. Polli

Zürich – Switzerland

1. Implementation of **a stochastic reachability** framework for **surveillance** with pan-tilt-zoom cameras, S. Aufdenblatten
2. ***Reachability*** analysis of ***nonlinear systems****:* an approach based on conservative approximations, O. Huber
3. ***Patrolling*** algorithms for pan-tilt-zoom ***cameras***, M. Pattarello
4. Control of Multiple Cameras for Tracking and ***Surveillance***, D. Sturzenegger
5. A set theoretic method for verifying feasibility of a ***fast*** explicit ***nonlinear*** model predictive ***controller***, S. Riverso

Bachelor thesis

Pavia – Italy

1. Design and implementation of a 3D ***infrared vision system***, M. Grecchi
2. Adaptive control of an RC helicopter based on the **modeling** of the **lithium battery**, G. Bellazzi
3. Design of a remote control system for an **RC helicopter**, A. Ricci
4. **Embedded tracking control** of an inverted pendulum, M. Rotulo
5. **Embedded predictive control** of an inverted pendulum, A. Mezzadra
6. Implementation HW and SW of an angular position transducer for a laboratory ***crane***, T. Barroero

Zürich – Switzerland

1. MPC based **Trajectory Tracking** for 1:43 scale race cars, L. Wunderli
2. Software Framework for **Position Control** of 1:43 scale **race cars**, F. Ferrara
3. Infrared based **vision system** for tracking 1:43 scale **race cars**, M. Rutschmann

Internship supervision

1. Development of control logics of a **coal power plant**, Erika Strotz
2. Standardization of HMI interfactes on **injection presses**, Daniele Prando
3. Development of a distributed control system for the supervision of a **metro station**, Nabih Sawers Ebied Fady
4. Implementation of **cryptographic** algorithms for the security of **telemetric data** archives, Lorenzo Merlano

Stage for high school students at the Faculty of Engineering, University of Pavia

2012 – 2014 *Computer Science for automation* (~3hours/year)

Presentation at high schools

2012 *Automatic control: from robotics to biomedicine* Mantova *Italy*

ORGANIZATIONAL ACTIVITIES

Jan. 13 –	Head of the educational Process Control Laboratory, Department of Electrical, Computer and Biomedical Engineering	Pavia *Italy*

OTHER INSTITUTIONAL ACTIVITIES

2012–	Member of the committee for the qualification to the profession of Computer Science Engineer	Pavia *Italy*

OTHER COMMITTEE MEMBER

2012-	Advisory board member of the Alumni IUSS Association	Pavia *Italy*

RESEARCH ACTIVITY

RESEARCH INTERESTS

Optimization-based control, model predictive control, fault-tolerant control, distributed control, high-speed control, autonomous surveillance, renewable energy and control of glucose concentration in subjects with diabetes.

FUNDED RESEARCH PROJECTS

- PRIN project, Ministero dell'Università e della Ricerca Scientifica e Tecnologica, Italy
  Artificial pancreas: physiological models, control algorithms and clinical trial
  Pavia Unit: *Predictive control algorithms for the artificial pancreas* (2008 - 2010)
  Role: participant.

- FEEDNETBACK (2008-2011)
  EU's Senventh Framework Programme
  Role: participant.

- IMPROVE (2009-2012) *Implementing manufacturing science solutions to increase equipment productivity and fab performance*
  European Nanoelectronics Initiative Advisory Council
  Role: participant.

- AP@HOME (2010-2014) *Bringing the Artificial Pancreas Home*
  EU's Senventh Framework Programme
  Role: participant.

- CESI-RICERCA, Centro Elettrotecnico Sperimentale Italiano (2006)
  Research contract number: ODAR06436
  Optimized procedures for the start-up of combined cycle plants
  Role: participant.

- PROJECT PAVIA-BOSTON
  Project promoted by the Pro-Rector in charge of the Third Mission, University of Pavia.
  Total contribution: 4k€.

EDITORIAL ACTIVITIES AND PROGRAM COMMITTEES

International Program Committees

2015	International program committee member of the Nonlinear Model Predictive Control 2015 (NMPC'15)	Sevilla *Spain*
2015	International program committee member of the European Control Conference 2014 (ECC'15)	Linz *Austria*
2015	International program committee member of the International Symposium on Advanced Control of Chemical Processes (ADCHEM 2015)	Whistler *Canada*
2014	International program committee member of the European Control Conference 2014 (ECC'14)	Strasbourg *France*
2013	International program committee member of the European Control Conference 2013 (ECC'13)	Zürich *Switzerland*
2012	International program committee member of the Nonlinear Model Predictive Control 2012 (NMPC'12)	Noordwijkerhout *The Netherlands*

Organization of scientific events

2010	Invited session Nonlinear Model Predictive Control, 10th IFAC Symposium on Nonlinear Control Systems	Bologna *Italy*
2008	Co-chair of the International workshop on Assessment and Future Direction of Nonlinear Model Predictive Control	Pavia *Italy*
2007	Invited session New Development in NMPC, 7th IFAC Symposium on Nonlinear Control Systems	Pretoria *South Africa*

Reviewer activity

Reviewer of Applied Mathematics and Computation, Automatica, IEEE Transaction on Automatic Control, IEEE Transaction on Biomedical Engineering, International Journal of Control, International Journal of Adaptive Control and Signal Processing, International Journal of Robust and Nonlinear Control, International Journal of System Science, Journal of Process Control, SIAM Journal on Control and Optimization, System & Control Letters, Springer Lectures Notes in Control and Information Sciences Series (LNCIS), Conference on Nonlinear Model Predictive Control (NMPC), European Control Conference (ECC), IEEE American Control Conference (ACC), IEEE Conference on Decision and Control (CDC), IFAC World Congress, IFAC Symposium on Nonlinear Control Systems (NOLCOS), IFAC Workshop on Estimation and Control of Networked Systems, International Symposium on Mathematical Theory of Networks and Systems, Mediterranean Conference on Control and Automation.

PH.D. STUDENTS

Ph.D. courses

2014	Short course on Moving Horizon Estimation as part of the Hybrid Systems Course, TU Wien (role: lecturer, ~10 hours)	Vienna *Austria*

2014	Model Predictive Control (Special Topics in Cyber-Physical Systems), Computer Engineering PhD School, TU Wien (role: lecturer, ~30 hours)	Vienna *Austria*

Advising

Nov. 12 -	*Roberto Giuseppe Marseglia (supervisor: Dr. Davide M. Raimondo)* *Topic*: Fault tolerant control	Pavia *Italy*
Nov. 13 -	*Marcello Torchio (supervisor: Prof. Lalo Magni)* *Topic: Energy efficient control*	Pavia *Italy*

External Ph.D. thesis committee member

2014	PhD committee member for Feng Xu, Automatic Control Departament, Universitat Politècnica de Catalunya	Barcelona *Spain*
2013	PhD committee member for Isabel Jurado Flores, Department of Systems Engineering and Automation, University of Seville	Sevilla *Spain*

Management of seminars and international research exchange visits

Organization of seminars at University of Pavia

Jul. 2013	Joel Paulson, Process Systems Engineering Laboratory, Massachusetts Institute of Technology, *Stochastic Nonlinear Model Predictive Control with Probabilistic Constraints*	Pavia *Italy*
May 2014	Prof. Ali Mesbah, Dept. of Chemical and Biomolecular Engineering, University of California, Berkeley, *Advanced Control for Complex Dynamical Systems*	Pavia *Italy*
Jul. 2013	Dr. Joseph K. Scott, Process Systems Engineering Laboratory, Massachusetts Institute of Technology, *Input Design for Guaranteed Fault Diagnosis Using Zonotopes.*	Pavia *Italy*
Mar. 2013	Stefano Grassi, Department of Civil, Environmental and Geomatic, ETH Zurich, *Optimal spatio-temporal exploitation of renewable energy resources: biomass and wind case studies.*	Pavia *Italy*

Organization of research exchange visits at University of Pavia

1. Dr. Joseph K. Scott, Postdoc, Process Systems Engineering Laboratory, Massachusetts Institute of Technology, duration: 1 month (June-July 2013).

2. Joel Paulson, Ph.D. student, Process Systems Engineering Laboratory, Massachusetts Institute of Technology, duration: 1 month (June-July 2014). The visit was possible thanks to the project Cariplo "Support to the internationalization of Ph.D. students".

Organization of research exchange visits at Massachusetts Institute of Technology (MIT)

- Roberto Marseglia, Ph.D. student, duration: 5 months (August-December 2013).

- Roberto Marseglia, Ph.D. student, duration: 1.5 months (November-December 2014). The visit was possible thanks to the project Pavia-Boston.

- Marcello Torchio, Ph.D. student, duration: 5 months (November 2014-March 2015).

Results in technology transfer

Patents

- Magni L. D. M. Raimondo, G. De Nicolao, C. Dalla Man and C. Cobelli **Predictive Control Based System And Method For Control Of Insulin Delivery In Diabetes Using Glucose Sensing,** International Patent Application Serial No. PCT/US2008/082063, filed 31/10/2008

Invited seminars, participation to international conferences and research exchange visits

Participation in International Conferences

Overall 16 presentations held at international conferences (SysTol, ECC, NMPC, IFAC WC, IFAC NOLCOS, IFAC NecSys'09, Diabetes Technology Society Annual Meetings).

Invited talks held at International Conferences

Jul. 13	*Approximate nonlinear explicit MPC based on reachability analysis,* European Control Conference (ECC) 2013	Zürich *Switzerland*

Papers at invited sessions of international conferences

Sep. 10	*Fast explicit nonlinear model predictive control via multiresolution function approximation with guaranteed stability,* Symposium on Nonlinear Control Systems (NOLCOS) 2010	Bologna *Italy*
Sep. 10	*A Nonlinear Model Predictive Control Scheme with Multirate Integral Sliding Mode,* Symposium on Nonlinear Control Systems (NOLCOS) 2010	Bologna *Italy*
Aug. 07	*Regional Input-to-State Stability of Min-Max Model Predictive Control,* Symposium on Nonlinear Control Systems (NOLCOS) 2007	Pretoria *South Africa*
Aug. 07	*A Decentralized MPC Algorithm for Nonlinear Systems,* Symposium on Nonlinear Control Systems (NOLCOS) 2007	Pretoria *South Africa*

Research exchange visits

Sep. 14 - Nov. 14	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) **Visiting scholar** in Prof. Braatz group, Department of Chemical Engineering	Cambridge *USA*
Mar. 14 - May. 14	VIENNA UNIVERSITY OF TECHNOLOGY (TU WIEN) **Visiting professor** at the Computer Engineering PhD School	Vienna *Austria*

Aug. 13 - Sep. 13	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) **Visiting scholar** in Prof. Braatz group, Department of Chemical Engineering	Cambridge *USA*
Mar. 12 - Jun. 12	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) **Visiting scholar** in Prof. Braatz group, Department of Chemical Engineering	Cambridge *USA*
Oct. 06 – May 07	UNIVERSIDAD DE SEVILLA **Academic Guest** in the Department of Automation and System Engineering	Sevilla *Spain*

Invited Seminars

May 14	*Active Fault Diagnosis for Uncertain Systems, TU Wien, Ring Lecture Current Trends in Computer Science*	Vienna *Austria*
Jan. 14	*Active Input Design for Fault Diagnosis: a Set-Based Approach, Automatic Control Laboratory, TU Wien*	Vienna *Austria*
Jan. 14	*Active Input Design for Fault Diagnosis: a Set-Based Approach, Automatic Control Laboratory,* ABB Schweiz AG	Baden *Switzerland*
Jan. 14	*Active Input Design for Fault Diagnosis: a Set-Based Approach, Automatic Control Laboratory,* IfA, ETH	Zürich *Switzerland*
Sep. 13	*Active Input Design for Fault Diagnosis: a Set-Based Approach,* Automatic Control Laboratory, EPFL	Lausanne *Switzerland*
Sep. 13	*Design of Active Inputs for Set-Based Fault Diagnosis,* Mitsubishi Electric Research Laboratories	Cambridge *USA*
Apr. 13	*Optimal placement of wind turbines,* Institute of Cartography and Geoinformation (IKG), ETH	Zürich *Switzerland*
May 12	*Time-optimal control for constrained nonlinear systems: A fast explicit approximation,* Process systems engineering laboratory seminar, Department of Chemical Engineering, MIT	Cambridge *USA*
Jan. 12	*An approximate explicit minimum time controller for nonlinear systems with feasibility and stability guarantees*, ABB Schweiz AG	Baden *Switzerland*
Oct. 11	*An approximate explicit minimum time controller for nonlinear systems with feasibility and stability guarantees*, Ruhr-Universität Bochum	Bochum *Germany*
May 08	*Robust Nonlinear Model Predictive Control,* Automatic Control Laboratory, Department of Information Technology and Electrical Engineering, ETH	Zürich *Switzerland*

BIBLIOMETRIC PROFILE

Davide M. Raimondo currently (December 4, 2014) has an h index of 11 (Scopus) - 14 (Google Scholar) and a number of citations equal to 673 (Scopus) - 1182 (Google Scholar).

Selected Publications

International Journals	**Citations Scopus**	**Citations Scholar**	**Impact Factor**
1. 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 (IJRNC), published online, DOI: 10.1002/rnc.3244, 2014			2.652
2. N. Kariotoglou, D.M. Raimondo, S. Summers, J. Lygeros, **Design of intelligent surveillance systems using stochastic reachability and hierarchical task allocation,** Journal of Dynamic Systems, Measurement, and Control, 137(3), 031008, 2014			1.039
3. 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		2	3.132
4. 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	1	4	3.132
5. 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		2	3.132
6. F. Tedesco, D. M. Raimondo, A. Casavola, **Collision avoidance command governor for multi-vehicle unmanned systems,** International Journal of Robust and Nonlinear Control (IJRNC), 24(16), 2309–2330, 2014	1	2	2.652
7. 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	20	32	3.167
8. 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	64	68	1.532
9. G. Pin, D. M. Raimondo, L. Magni, T. Parisini, **Robust Model Predictive Control of Nonlinear Systems with Bounded and State-Dependent Uncertainties**, IEEE Transactions on Automatic Control, 54(7), 1681-1687, 2009	30	41	3.167

10. D. M. Raimondo, D. Limon, M. Lazar, L. Magni and E. F. Camacho, **Min-max model predictive control of nonlinear systems: a unifying overview on stability**, European Journal of Control, 15(1), 5-21, 2009	34	53	0.792
11. L. Magni, D. M. Raimondo, C. Dalla Man, M. Breton, S. Patek, G. de Nicolao, C. Cobelli, and B. Kovatchev. **Evaluating the efficacy of closed-loop glucose regulation via control-variability grid analysis (CVGA).** Journal of Diabetes Science and Technology, 2(4), 630-635, 2008	70	80	n.a.
12. E. Franco, L. Magni, T. Parisini, M. M. Polycarpou and D. M. Raimondo, **Cooperative Constrained Control of Distributed Agents with Nonlinear Dynamics and Delayed Information Exchange: a Stabilizing Receding Horizon Approach**, IEEE Transactions on Automatic Control, 53(1), 324-338, 2008	53	85	3.167
13. L. Magni, D. M. Raimondo, L. Bossi, C. Dalla Man, G. De Nicolao, B. Kovatchev and Claudio Cobelli, **Model Predictive Control of type 1 diabetes: an in silico trial**, Journal of Diabetes Science and Technology, 1(6), 804-812, 2007	116	138	n.a.
14. D. M. Raimondo, L. Magni and R. Scattolini, **Decentralized MPC of Nonlinear Systems: an Input-to-State Stability Approach**, International Journal of Robust and Nonlinear Control, 17(17), 1651-1667, 2007	53	86	2.652
15. C. Dalla Man, D. M. Raimondo, R. A. Rizza, C. Cobelli, **GIM, Simulation Software of Meal Glucose–Insulin Model**, Journal of Diabetes Science and Technology, 1(3), 323-330, 2007	87	134	n.a.
16. L. Magni, D. M. Raimondo and R. Scattolini, **Regional Input-to-state Stability for Nonlinear Model Predictive Control**, IEEE Transactions on Automatic Control, 51(9), 1548-1553, 2006	85	100	3.167

Average numer of citations per publication (selected publications only)

38.375 (Scopus) - 51.688 (Scholar)

Total impact factor (selected publications only): 33.383

Average impact factor (selected publications with available impact factor only): 2.567

Average impact factor (selected publications only): 2.086

Full Publication List

Books	**Citations Scopus**	**Citations Scholar**
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.		92

International Journals	**Citations Scopus**	**Citations Scholar**	**Impact Factor**
1. 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 (IJRNC), published online, DOI: 10.1002/rnc.3244, 2014			2.652
2. N. Kariotoglou, D.M. Raimondo, S. Summers, J. Lygeros, **Design of intelligent surveillance systems using stochastic reachability and hierarchical task allocation,** Journal of Dynamic Systems, Measurement, and Control, 137(3), 031008, 2014			1.039
3. 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 for the 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 Theurapeutics**,** 16(10),1-10, 2014			2.293
4. 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		2	2.235
5. 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		2	3.132
6. 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	1	4	3.132
7. 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		2	3.132

8. F. Tedesco, D. M. Raimondo, A. Casavola, **Collision avoidance command governor for multi-vehicle unmanned systems,** International Journal of Robust and Nonlinear Control (IJRNC), 24(16), 2309–2330, 2014	1	2	2.652
9. 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	20	32	3.167
10. 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	64	68	1.532
11. G. Pin, D. M. Raimondo, L. Magni, T. Parisini, **Robust Model Predictive Control of Nonlinear Systems with Bounded and State-Dependent Uncertainties**, IEEE Transactions on Automatic Control, 54(7), 1681-1687, 2009	30	41	3.167
12. D. M. Raimondo, D. Limon, M. Lazar, L. Magni and E. F. Camacho, **Min-max model predictive control of nonlinear systems: a unifying overview on stability**, European Journal of Control, 15(1), 5-21, 2009	34	53	0.792
13. L. Magni, D. M. Raimondo, C. Dalla Man, M. Breton, S. Patek, G. de Nicolao, C. Cobelli, and B. Kovatchev. **Evaluating the efficacy of closed-loop glucose regulation via control-variability grid analysis (CVGA).** Journal of Diabetes Science and Technology, 2(4), 630-635, 2008	70	80	n.a.
14. E. Franco, L. Magni, T. Parisini, M. M. Polycarpou and D. M. Raimondo, **Cooperative Constrained Control of Distributed Agents with Nonlinear Dynamics and Delayed Information Exchange: a Stabilizing Receding Horizon Approach**, IEEE Transactions on Automatic Control, 53(1), 324-338, 2008	53	85	3.167
15. L. Magni, D. M. Raimondo, L. Bossi, C. Dalla Man, G. De Nicolao, B. Kovatchev and Claudio Cobelli, **Model Predictive Control of type 1 diabetes: an in silico trial**, Journal of Diabetes Science and Technology, 1(6), 804-812, 2007	116	138	n.a.
16. D. M. Raimondo, L. Magni and R. Scattolini, **Decentralized MPC of Nonlinear Systems: an Input-to-State Stability Approach**, International Journal of Robust and Nonlinear Control, 17(17), 1651-1667, 2007	53	86	2.652
17. C. Dalla Man, D. M. Raimondo, R. A. Rizza, C. Cobelli, **GIM, Simulation Software of Meal Glucose–Insulin Model**, Journal of Diabetes Science and Technology, 1(3), 323-330, 2007	87	134	n.a.
18. L. Magni, D. M. Raimondo and R. Scattolini,			

	Regional Input-to-state Stability for Nonlinear Model Predictive Control, IEEE Transactions on Automatic Control, 51(9), 1548-1553, 2006	85	100	3.167

Book Chapters		**Citations Scopus**	**Citations Scholar**
1.	F. Tedesco, D. M. Raimondo, A. Casavola, **A distributed reference management scheme in presence of non-convex constraints: an MPC based approach,** Distributed MPC Made Easy		2
2.	D. M. Raimondo, S. Riverso, S. Summers, C.N. Jones, J. Lygeros, M. Morari, **A set theoretic method for verifying feasibility of a fast explicit nonlinear Model Predictive Controller**, Springer book documenting the LCCC Theme Semester, pp. 289-311, 2011		7
3.	D. M. Raimondo, D. Limon, T. Alamo and L. Magni, **Robust Model Predictive Control Algorithms for Nonlinear Systems: an Input-to-State Stability Approach,** Model Predictive Control, Tao Zheng (Ed.), ISBN: 978-953-307-102-2, Sciyo, 2010		3
4.	D. Limon, T. Alamo, D. M. Raimondo, J. M. Bravo, D. Munoz de la Pena, A. Ferramosca and E. F. Camacho, **Input-to-State Stability: an unifying framework for Robust Model Predictive Control**, Nonlinear Model Predictive Control, LNCIS 384, pp. 1-26, 2009	22	85

International Conferences		**Citations Scopus**	**Citations Scholar**
1.	M. Torchio, N.A. Wolff, D.M. Raimondo, L. Magni, U. Krewer, B. Gopaluni, J. Paulson, R.D. Braatz, **Real-time Model Predictive Control for the Optimal Charging of a Lithium-ion Battery**, ACC 2015		
2.	G.R. Marseglia, A. Arbasini, S. Grassi, M. Raubal, D.M. Raimondo, **Optimal placement of wind turbines on a continuous domain: an MILP-based approach**, ACC 2015		
3.	M. Torchio, L. Magni, D.M. Raimondo, **A mixed integer SDP approach for the optimal placement of energy storage devices in power grids with renewable penetration**, ACC 2015		
4.	J.A. Paulson, D.M. Raimondo, R. Findeisen, R.D. Braatz, S. Streif, **Active Fault Diagnosis for Uncertain Nonlinear Systems,** ECC 2014		
5.	G.R. Marseglia, J.K. Scott, L. Magni, R.D. Braatz, D.M. Raimondo, **A Hybrid Stochastic-Deterministic Approach For Active Fault Diagnosis Using Scenario Optimization,** IFAC WC 2014		
6.	J.K. Scott, G.R. Marseglia, L. Magni, R.D. Braatz, D.M. Raimondo, **A Hybrid Stochastic-Deterministic Input Design Method for Active Fault Diagnosis**, CDC 2013	1	2
7.	D.M. Raimondo, G.R. Marseglia, R.D. Braatz, J.K. Scott, **Fault-**		

	Tolerant Model Predictive Control with Active Fault Isolation, SysTol 2013		4
8.	D.M. Raimondo, R.D. Braatz, J.K. Scott, **Active Fault Diagnosis using Moving Horizon Input Design,** ECC 2013	4	5
9.	N. Kariotoglou, S. Summers, D. M. Raimondo, J. Lygeros, **Hierarchical task allocation for multi-agent systems encoded by stochastic reachability specifications,** ECC 2013		2
10.	K.K.K. Kim, D. M. Raimondo, R. D. Braatz, **Optimum Input Design for Fault Detection and Diagnosis: Model-based Prediction and Statistical Distance Measures,** ECC 2013		2
11.	J. K. Scott, R. Findeisen, R. D. Braatz, D. M. Raimondo, **Design of Active Inputs for Set-Based Fault Diagnosis,** ACC 2013	1	13
12.	S.M. Huck, N. Kariotoglou, S. Summers, D.M. Raimondo, J. Lygeros, **Design of importance-map based randomized patrolling strategies,** Complexity in Engineering (COMPENG), 2012, pp. 1—6, 2012		4
13.	D.M. Raimondo, O. Huber, M. Schulze Darup, M. Mönnigmann, M. Morari, **Constrained time-optimal control for nonlinear systems: a fast explicit approximation,** NMPC'12, 2012		1
14.	N. Kariotoglou, D. M. Raimondo, S. Summers, and J. Lygeros, **A stochastic reachability framework for autonomous surveillance with pan-tilt-zoom cameras**, CDC 2011, pp. 1411--1416, 2011	1	7
15.	D. M. Raimondo, N. Kariotoglou, S. Summers, and J. Lygeros, **Probabilistic certification of pan-tilt-zoom camera surveillance systems**, CDC 2011, pp. 2064—2069, 2011	2	10
16.	D. Axehill, T. Besselmann, D. M. Raimondo and M. Morari, **Suboptimal Explicit Hybrid MPC via Branch and Bound**, IFAC WC 2011, Milano	2	4
17.	D. M. Raimondo, S. Riverso, C. N. Jones and M. Morari, **A robust explicit nonlinear MPC controller with input-to-state stability guarantees**, IFAC WC 2011, Milano	2	6
18.	M. Rubagotti, D. M. Raimondo, C. N. Jones, L. Magni, A. Ferrara and M. Morari, **A Nonlinear Model Predictive Control Scheme with Multirate Integral Sliding Mode**, 8th IFAC Symposium on Nonlinear Control Systems, Bologna, September 2010		2
19.	S. Summers, D. M. Raimondo, C.N. Jones, J. Lygeros, M. Morari, **Fast explicit nonlinear model predictive control via multiresolution function approximation with guaranteed stability,** 8th IFAC Symposium on Nonlinear Control Systems, Bologna, September 2010	1	11
20.	F. Tedesco, D. M. Raimondo, A. Casavola, J. Lygeros, **Distributed collision avoidance for interacting vehicles: a command governor approach,** 2nd IFAC Workshop on Estimation and Control of Networked Systems (NecSys'10), September 2010, Annecy, France	2	9
21.	D. M. Raimondo, S. Gasparella, D. Sturzenegger, J. Lygeros, M. Morari, **A tracking algorithm for PTZ cameras,** 2nd IFAC Workshop on Estimation and Control of Networked Systems (NecSys'10), September 2010, Annecy, France	1	9
22.	M. N. Zeilinger, C. N. Jones, D. M. Raimondo, M. Morari, **Real-time MPC - Stability through Robust MPC design,** CDC'09	7	17

23. D. M. Raimondo, P. Hokayem, J. Lygeros, M. Morari, **An iterative decentralized MPC algorithm for large-scale nonlinear systems,** 1st IFAC Workshop on Estimation and Control of Networked Systems (NecSys'09), 24-26 September 2009, Venice, Italy	4	5
24. M. Rubagotti, D. M. Raimondo, A. Ferrara and L. Magni, **Robust model predictive control of continuous-time sampled-data nonlinear systems with integral sliding mode,** European Control Conference 2009, ECC'09, 23-26 August 2009, Budapest, Hungary		3
25. D. Limon, T. Alamo, D. M. Raimondo, J. M. Bravo, D. Munoz de la Pena and E. F. Camacho, **Input-to-State Stability: an unifying framework for Robust Model Predictive Control**, International Workshop on Assessment and future directions of NMPC (Keynote), September 5-9, 2008, Pavia, Italy		
26. L. Magni, D. M. Raimondo, S. Riverso, C. Dalla Man, G. De Nicolao and C. Cobelli **Nonlinear model predictive control of glucose concentration for Type-1 diabetic patients,** International Workshop on Assessment and future directions of NMPC, September 5-9, 2008, Pavia, Italy		
27. M. Rubagotti, D. M. Raimondo, A. Ferrara and L. Magni, **Robust nonlinear MPC with integral sliding mode for systems with matched disturbances,** International Workshop on Assessment and future directions of NMPC, September 5-9, 2008, Pavia, Italy		
28. L. Magni, D. M. Raimondo, C. Dalla Man, G. De Nicolao, B. Kovatchev and Claudio Cobelli, **Model Predictive Control of glucose concentration in subjects with type 1 diabetes: an in silico trial**, 17th IFAC World Congress July 6-11, 2008, Seoul, Korea		16
29. B. Kovatchev, D. M. Raimondo, M. Breton, S. Patek and C. Cobelli, **In Silico Testing and in Vivo Experiments with Closed-Loop Control of Blood Glucose in Diabetes**, 17th IFAC World Congress July 6-11, 2008, Seoul, Korea		3
30. G. Pin, L. Magni, T. Parisini, D. M. Raimondo, **Robust Receding-Horizon Control of Nonlinear Systems with State Dependent Uncertainties: an Input-to-State Stability Approach**, 2008 American Control Conference, June 11-13, 2008, Westin Seattle Hotel, Seattle, Washington, USA	6	9
31. D. M. Raimondo, L. Magni, G. De Nicolao, C. Dalla Man and C. Cobelli, **Assessing the effect of sc insulin absorbtion delay on closed-loop glucose control**, 27th Workshop of the AIDPIT Study Group, 2nd European Diabetes Technology and Transplantation Meeting (EuDTT), Innsbruck-Igls / Austria, Jan 27-29, 2008		
32. D. M. Raimondo, T. Alamo, D. Limon and E. F. Camacho, **Towards the practical implementation of Min-Max Nonlinear Model Predictive Control,** 46th IEEE Conference on Decision and Control, New Orleans, LA, USA, December 12-14 2007	3	4
33. D. M. Raimondo, L. Magni, C. Dalla Man, G. De Nicolao, B. Kovatchev and C. Cobelli, **Closed-loop control of glucose concentration in subjects with type 1 diabetes**, Diabetes Technology Society, Seventh Annual Meeting, San Francisco		

Airport Hyatt Regency Hotel, October 25-27, 2007		
34. D. M. Raimondo, L. Magni and R. Scattolini, **Decentralized Open-Loop MPC of Nonlinear Systems: an Input-to-State Stability Approach**, European Control Conference 2007, Kos, Greece 2-5 July 2007		
35. D. M. Raimondo, L. Magni and R. Scattolini, **A Decentralized MPC Algorithm for Nonlinear Systems,** NOLCOS 2007, Pretoria, South Africa, August 2007		
36. D. M. Raimondo, D. Limon, M. Lazar, L. Magni and E. F. Camacho, **Regional Input-to-State Stability of Min-Max Model Predictive Control,** NOLCOS 2007, Pretoria, South Africa, August 2007		
37. L. Magni, C. Dalla Man, D. M. Raimondo, G. De Nicolao, B. Kovatchev and C. Cobelli, **NMPC of glucose concentration in subjects with type 1 diabetes, Nonlinear Model Based Control** - Software and applications (NMPC - SOFAP, 2007), April 19-20, Loughborough, UK, 2007		
38. L. Magni, D. M. Raimondo and R. Scattolini, **Input-to-state Stability for Nonlinear Model Predictive Control**, 45th IEEE Conference on Decision and Control, San Diego, California USA, December 13-15, 2006		3
39. D. M. Raimondo and L. Magni, **A Robust Model Predictive Control Algorithm for Nonlinear Systems with a Low Computational Burden**, IFAC Workshop on Nonlinear Model Predictive Control for Fast Systems 2006, Grenoble, France, Oct 9-11, 2006		7

Submitted
1. L.C. Foguth, J.A. Paulson, R.D. Braatz, and D.M. Raimondo, **Fast Robust Model Predictive Control of High-dimensional Systems**, submitted to ECC 2015

Davide M. Raimondo is also coauthor of the following deliverables of the European Project Feednetback FP7 ICT-2007.3.7 Project reference: 223866

1. Deliverable D6.1: **Integration of control, communication, computation, complexity and energy considerations in a coherent design strategy**, Davide Raimondo, Peter Hokayem, Stephan Huck, John Lygeros, Manfred Morari, Alireza Farhadi, Carlos Canudas de Wit, Sandro Zampieri, Luca Schenato, Angelo Cenedese, Paul Smyth, Jacek Czyz, Giambattista Gennari

2. Deliverable 09.11: **Exploitation Plan,** Costis Kompis, Prateek Sureka, Stephan Huck, Davide Raimondo, Francisco Rubio, Carlo Fischione, Tobias Oechtering, Angelo Cenedese, Luca Schenato, Olivier DeBardonneche, Giambattista Gennari, Piero Donaggio, Paul Smyth, Jacek Czyz

Pavia 03/12/2014

Sincerely,
Davide M. Raimondo