

# Curriculum vitae

## Davide M. Raimondo

Born: 07-11-1981, Pavia, Italy

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### RESEARCH INTERESTS

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

### PROFESSIONAL EXPERIENCE

<i>Jan. 13 -</i>	UNIVERSITÀ DEGLI STUDI DI PAVIA <b>Head of the Process Control Laboratory</b> , Department of Electrical, Computer and Biomedical Engineering	Pavia <i>Italy</i>
<i>Dec. 10 -</i>	UNIVERSITÀ DEGLI STUDI DI PAVIA <b>Assistant Professor (tenured 29/12/2013)</b> in the Identification and Control of Dynamic Systems Laboratory, Department of Electrical, Computer and Biomedical Engineering	Pavia <i>Italy</i>
<i>Sep. 14 - Nov. 14</i>	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) <b>Visiting scholar</b> in Prof. Braatz group, Department of Chemical Engineering	Cambridge <i>USA</i>
<i>Mar. 14 - May. 14</i>	VIENNA UNIVERSITY OF TECHNOLOGY (TU WIEN) <b>Visiting professor</b> at the Computer Engineering PhD School	Vienna <i>Austria</i>
<i>Aug. 13 - Sep. 13</i>	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) <b>Visiting scholar</b> in Prof. Braatz group, Department of Chemical Engineering	Cambridge <i>USA</i>
<i>Mar. 12 - Jun. 12</i>	MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT) <b>Visiting scholar</b> in Prof. Braatz group, Department of Chemical Engineering	Cambridge <i>USA</i>
<i>Jan. 09 - Dec. 10</i>	SWISS FEDERAL INSTITUTE FOR TECHNOLOGY (ETH) <b>Postdoc</b> in the Automatic Control Laboratory, Department of Information Technology and Electrical Engineering	Zürich <i>Switzerland</i>
<i>Nov. 08 - Dec. 08</i>	SWISS FEDERAL INSTITUTE FOR TECHNOLOGY (ETH) <b>Employee</b> in the Automatic Control Laboratory, Department of Information Technology and Electrical Engineering	Zürich <i>Switzerland</i>

<i>Jul. 07 – Jan. 08</i>	UNIVERSITÀ DEGLI STUDI DI PAVIA <b>Contracted</b> for the development of predictive control techniques for biological applications	Pavia <i>Italy</i>
<i>Oct. 06 – May 07</i>	UNIVERSIDAD DE SEVILLA <b>Academic Guest</b> in the Department of Automation and System Engineering	Sevilla <i>Spain</i>
<i>Sep. 05 – Nov. 05</i>	UNIVERSITÀ DEGLI STUDI DI PAVIA <b>Contracted</b> for the Development of robust model predictive controllers for nonlinear systems	Pavia <i>Italy</i>
<i>Sep. 01 – Jul. 05</i>	ALMO COLLEGIO BORROMEO <b>Responsible</b> of system administration	Pavia <i>Italy</i>
<i>Jul. 00 – Aug. 00</i>	GSMBOX s.p.a. <b>Contracted</b> as computer programmer	Pavia <i>Italy</i>

### ***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 <i>Professional practice examination for <b>engineering licence</b> (“esame di stato”) passed in Pavia, Italy</i>	Pavia <i>Italy</i>

### ***Placements in appeal***

November 2010 Ranked first for the position of Assistant Professor, University of Pavia, Italy.

### ***Committee Member***

2012-	Advisory board member of the Alumni IUSS Association	Pavia <i>Italy</i>
2012-	Member of the committee for the qualification to the profession of Computer Science Engineer	Pavia <i>Italy</i>
2014	International program committee member of the European Control Conference 2014 (ECC'14)	Strasbourg <i>France</i>
2013	PhD committee member for Isabel Jurado Flores, Department of Systems Engineering and Automation, University of Seville	Sevilla <i>Spain</i>
2013	International program committee member of the European Control Conference 2013 (ECC'13)	Zürich <i>Switzerland</i>
2012	International program committee member of the Nonlinear Model Predictive Control 2012 (NMPC'12)	Noordwijkerhout <i>The Netherlands</i>

### **Organization of scientific events**

2010	Invited session Nonlinear Model Predictive Control, 10 <sup>th</sup> IFAC Symposium on Nonlinear Control Systems	Bologna Italy
2008	International workshop on Assessment and Future Direction of Nonlinear Model Predictive Control	Pavia Italy
2007	Invited session New Development in NMPC, 7 <sup>th</sup> IFAC Symposium on Nonlinear Control Systems	Pretoria South Africa

### **Invited Seminars**

May 14	<i>Active Fault Diagnosis for Uncertain Systems, TU Wien, Ring Lecture Current Trends in Computer Science</i>	Vienna Austria
Jan. 14	<i>Active Input Design for Fault Diagnosis: a Set-Based Approach, Automatic Control Laboratory, TU Wien</i>	Vienna Austria
Jan. 14	<i>Active Input Design for Fault Diagnosis: a Set-Based Approach, Automatic Control Laboratory, ABB Schweiz AG</i>	Baden Switzerland
Jan. 14	<i>Active Input Design for Fault Diagnosis: a Set-Based Approach, Automatic Control Laboratory, IfA, ETH</i>	Zürich Switzerland
Sep. 13	<i>Active Input Design for Fault Diagnosis: a Set-Based Approach, Automatic Control Laboratory, EPFL</i>	Lausanne Switzerland
Sep. 13	<i>Design of Active Inputs for Set-Based Fault Diagnosis, Mitsubishi Electric Research Laboratories</i>	Cambridge USA
Jul. 13	<i>Approximate nonlinear explicit MPC based on reachability analysis, European Control Conference (ECC) 2013</i>	Zürich Switzerland
Apr. 13	<i>Optimal placement of wind turbines, Institute of Cartography and Geoinformation (IKG), ETH</i>	Zürich Switzerland
May 12	<i>Time-optimal control for constrained nonlinear systems: A fast explicit approximation, Process systems engineering laboratory seminar, Department of Chemical Engineering, MIT</i>	Cambridge USA
Jan. 12	<i>An approximate explicit minimum time controller for nonlinear systems with feasibility and stability guarantees, ABB Schweiz AG</i>	Baden Switzerland
Oct. 11	<i>An approximate explicit minimum time controller for nonlinear systems with feasibility and stability guarantees, Ruhr-Universität Bochum</i>	Bochum Germany
May 08	<i>Robust Nonlinear Model Predictive Control, Automatic Control Laboratory, Department of Information Technology and Electrical Engineering, ETH</i>	Zürich Switzerland

### ***Supervision of Ph.D. students***

Nov. 12 - *Roberto Giuseppe Marseglia* Pavia  
Topic: Fault tolerant control Italy

### ***Co-supervision of Ph.D. students***

Nov. 13 - *Marcello Torchio* Pavia  
Topic: Energy efficient control Italy

### ***Supervision of master and semester projects***

#### Pavia – Italy

1. **Fast evaluation** of explicit nonlinear MPC, F. Fassina (Erasmus at Ruhr Universität Bochum)
2. Automatic remote control of 1:27 scale **race cars**, F. Fiorentino (Erasmus at Ruhr Universität Bochum)
3. Design of a remote control system for an **RC helicopter**, A. Ricci
4. **Embedded tracking control** of an inverted pendulum, M. Rotulo
5. Optimal placement of **wind turbines** of a wind farm, D. Colli
6. **Embedded predictive control** of an inverted pendulum, A. Mezzadra
7. Design and implementation of **infrared vision system** and **breaking control** of a small-scale train, A. Barbieri
8. Nonlinear model predictive control of **glycaemia** in type 1 diabetic patients, S. Riverso
9. Validation of a linear model predictive control of **glycaemia** in type 1 diabetic patients, G. Ferrario
10. Experimentation in silico of predictive control algorithms for the control of **glycaemia** in type 1 diabetic patients, R. Tessera
11. Modeling and control of the start-up phase of a **combined cycle power plant**, A. Ferramosca
12. Predictive control of the start-up phase of a **combined cycle power plant**, D. Polli
13. Implementation HW and SW of an angular position transducer for a laboratory **crane**, T. Barroero

#### 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. MPC based Trajectory Tracking for 1:43 scale **race cars**, L. Wunderli

4. Software Framework for Position Control of 1:43 scale **race cars**, F. Ferrara
5. **Patrolling** algorithms for pan-tilt-zoom **cameras**, M. Pattarello
6. Control of Multiple Cameras for Tracking and **Surveillance**, D. Sturzenegger
7. A set theoretic method for verifying feasibility of a **fast** explicit **nonlinear** model predictive **controller**, S. Rivero
8. **Infrared** based **vision system** for tracking 1:43 scale race cars, M. Rutschmann

### Teaching activity

2013-	Basics of Automatic Control, Università di Pavia (~100 hours/year)	Pavia Italy
2014	Course on Moving Horizon Estimation as part of the Hybrid Systems Course, TU Wien (~10 hours)	Vienna Austria
2014	Model Predictive Control (Special Topics in Cyber-Physical Systems), Computer Engineering PhD School, TU Wien (~30 hours/year)	Vienna Austria
2011-2013	Automatic Control and Process Control, Università di Pavia (~100 hours/year)	Mantova Italy
2009-2011	Model Predictive Control, ETH (~10 hours/year)	Zürich Switzerland
2008-2011	Modeling and control of biological systems, Università di Padova (~12 hours/year)	Padova Italy
2006-2007	Introduction to systems analysis, Università di Pavia (~25 hours/year)	Pavia Italy
2007	Master in Methods for Management of Complex Systems, IUSS, Pavia (~10 hours)	Pavia Italy
2001 -2005	Tutor of computer programming (Java), Università di Pavia (~50 hours/year)	Pavia Italy

### EDUCATION

Nov. 05 - Nov. 08	UNIVERSITÀ DEGLI STUDI DI PAVIA <b>Ph.D. in electronic, computer and electrical engineering</b> , Identification and Control of Dynamic Systems Laboratory, Department of Computer Engineering and Systems Science. Thesis: <i>Nonlinear Model Predictive Control: Stability, Robustness and Applications</i> . Advisor: Prof. Lalo Magni (Ph.D. thesis defended on January 16, 2009)	Pavia Italy
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Oct. 03 - Jul. 05	UNIVERSITÀ DEGLI STUDI DI PAVIA <b>Master</b> in Automatic Control Engineering – Topic of the thesis: <i>Robust control of nonlinear systems (110/110 cum laude)</i>	Pavia Italy
Oct. 00 - Sep. 03	UNIVERSITÀ DEGLI STUDI DI PAVIA <b>Bachelor</b> in Computer Science Engineering – Topic of the thesis: <i>Modeling and control of a crane (110/110 cum laude)</i>	Pavia Italy
Nov. 00 - Jul. 05	ALMO COLLEGIO BORROMEIO <b>Student.</b> 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) <b>Student.</b> 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

<i>Italian</i>	Mother tongue
<i>English</i>	Proficient
<i>Spanish</i>	Fluent
<i>German</i>	Basic Knowledge
<i>Portoguese</i>	Good Understanding

## COMPUTER SKILLS

<i>Platforms</i>	Unix, Linux, MS Windows NT/2000/XP/Vista/Seven/8, DOS
<i>Languages</i>	C, C++, Java, HTML, Visual Basic
<i>Technical Programs</i>	Matlab / Simulink, Labview, CPLEX, Yalmip
<i>Office &amp; Productivity</i>	Microsoft Office, Open Office, Latex, Adobe Acrobat, Ghostscript, Adobe Illustrator, Irfanview, Corel Draw

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## PUBLICATIONS

### 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.

### International Journals

1. D.M. Raimondo, M. Rubagotti, C.N. Jones, L. Magni, A. Ferrara, M. Morari, **Multirate sliding mode disturbance compensation for model predictive control**, IJRNC, accepted
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, accepted

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 Therapeutics*, 16(10),1-10, 2014
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
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
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
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
8. F. Tedesco, D. M. Raimondo, A. Casavola, **A Command Governor approach for multiple vehicles collision avoidance problems**, *International Journal of Robust and Nonlinear Control*, 2013
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
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
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
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
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
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
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
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
  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
  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

#### Book Chapters

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, to appear
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
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
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

#### Patents

1. 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

#### International Conferences

1. J.A. Paulson, D.M. Raimondo, R. Findeisen, R.D. Braatz, S. Streif, **Active Fault Diagnosis for Uncertain Nonlinear Systems**, ECC 2014, accepted
2. 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, accepted
3. 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, accepted
4. D.M. Raimondo, G.R. Marseglia, R.D. Braatz, J.K. Scott, **Fault-Tolerant Model Predictive Control with Active Fault Isolation**, SysTol 2013, accepted
5. D.M. Raimondo, R.D. Braatz, J.K. Scott, **Active Fault Diagnosis using Moving Horizon Input Design**, ECC 2013, accepted
6. N. Kariotoglou, S. Summers, D. M. Raimondo, J. Lygeros, **Hierarchical task allocation for multi-agent systems encoded**

- by stochastic reachability specifications**, ECC 2013, accepted
7. 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, accepted
  8. J. K. Scott, R. Findeisen, R. D. Braatz, D. M. Raimondo, **Design of Active Inputs for Set-Based Fault Diagnosis**, ACC 2013, accepted
  9. 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
  10. 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
  11. 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
  12. 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
  13. D. Axehill, T. Besselmann, D. M. Raimondo and M. Morari, **Suboptimal Explicit Hybrid MPC via Branch and Bound**, IFAC WC 2011, Milano
  14. D. M. Raimondo, S. Rivero, C. N. Jones and M. Morari, **A robust explicit nonlinear MPC controller with input-to-state stability guarantees**, IFAC WC 2011, Milano
  15. 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
  16. 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
  17. 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
  18. 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
  19. M. N. Zeilinger, C. N. Jones, D. M. Raimondo, M. Morari, **Real-time MPC - Stability through Robust MPC design**, CDC'09
  20. 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
  21. 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

22. 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
23. L. Magni, D. M. Raimondo, S. Rivero, 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
24. 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
25. 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
26. 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
27. 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
28. D. M. Raimondo, L. Magni, G. De Nicolao, C. Dalla Man and C. Cobelli, **Assessing the effect of sc insulin absorption 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
29. D. M. Raimondo, T. Alamo, D. Limon and E. F. Camacho, **Towards the practical implementation of Min-Max Nonlinear Model Predictive Control**, 46<sup>th</sup> IEEE Conference on Decision and Control, New Orleans, LA, USA, December 12-14 2007
30. 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
31. 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
32. D. M. Raimondo, L. Magni and R. Scattolini, **A Decentralized MPC Algorithm for Nonlinear Systems**, NOLCOS 2007, Pretoria, South Africa, August 2007
33. 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
34. 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

35. 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
36. 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

Submitted

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**, submitted to 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**, submitted to ACC 2015
3. M. Torchio, D.M. Raimondo, L. Magni, **A mixed integer SDP approach for the optimal placement of energy storage devices in power grids with renewable penetration**, submitted to ACC 2015

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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

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Reviewing for scientific journals, organizations and publishing houses

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

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