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Brief biography

Maria Prandini was born in Brescia in 1969. She obtained the Laurea degree in Electrical Engineering (Politecnico di Milano 1994), and the Ph.D. degree in Information Technology (Università degli Studi di Brescia 1998) with a dissertation on adaptive control of stochastic systems. After receiving her Ph.D., she was a visiting postdoctoral researcher at the Department of Electrical Engineering and Computer Sciences, University of California at Berkeley, from 1998 to 2000. She also held visiting positions at Delft University of Technology (1998), Cambridge University (2000), UC Berkeley (2005), and ETH Zurich (2006).

From December 2002 to January 2011, she was Assistant Professor at the Dipartimento di Elettronica e Informazione of the Politecnico di Milano. Starting from February 2011, she is Associate Professor at the same department.

She was work-package leader in the EC-funded FP5 project HYBRIDGE (2002–2005) and principal investigator in the EC-funded FP6 project iFly (2007–2011). She is currently principal investigator in the EC-funded FP7 project MoVeS (from October 1, 2010).

She is associate editor of IEEE Transactions on Automatic Control, IEEE Transactions on Control Systems Technology, and Nonlinear Analysis: Hybrid Systems; discussion editor of European Journal of Control; member of the IFAC Technical Committee on Discrete Event and Hybrid Systems; and member of the IEEE Control Systems Society Conference Editorial Board.

Personal Data

Date and place of birth: September 8, 1969, Brescia, Italy
Citizenship: Italian

Education

Ph.D., Information Technology (Automatic Control)

Università degli Studi di Brescia, Italy, April 1998.

Ph.D. Advisor: Prof. Marco C. Campi.

Dissertation Title: *Adaptive LQG control: optimality analysis and robust controller design.*

Laurea, Electrical Engineering

Politecnico di Milano, Italy, February 1994.

GPA: 100/100 cum laude.

Work Experience

- December 2002 – January 2011: Politecnico di Milano, Italy
Assistant Professor, Dipartimento di Elettronica e Informazione
- September 2006: Swiss Federal Institute of Technology (ETH), Zurich, Switzerland
Visiting Researcher, Automatic Control Laboratory
- August 2005: University of California at Berkeley, USA
Visiting Researcher, EECS Department
- April 2000 – December 2002: Università degli Studi di Brescia, Italy
Research Assistant, Dipartimento di Elettronica per l'Automazione
- September 2001 – October 2001: University of Cambridge, UK
Visiting Researcher, Department of Engineering
- November 1999 – February 2000: University of California at Berkeley, USA
Postdoctoral Researcher, EECS Department
- August 1999 – October 1999: Università degli Studi di Brescia, Italy
Postdoctoral Researcher, Dipartimento di Elettronica per l'Automazione
- August 1998 – July 1999: University of California at Berkeley, USA
Postdoctoral Researcher, EECS Department
- Spring 1999: University of California at Berkeley, USA
Instructor of the graduate level course EECS 223 on Stochastic Systems: Estimation and Control
- March 1998 – July 1998: Delft University of Technology, The Netherlands
Postdoctoral researcher, Mechanical Engineering Department
- January 1994 – December 1997: Università degli Studi di Brescia, Italy
Graduate Student Researcher, Dipartimento di Elettronica per l'Automazione

Research Activity

Research Interests

Stochastic systems, hybrid systems, air traffic management, randomized methods, adaptive control, system identification.

Research Programs

Principal Investigator

Modelling, verification and control of complex systems: From foundations to power network applications (MoVeS), European Commission, FP7, 2010-2013.

Safety, Complexity and Responsibility based design and validation of highly automated Air Traffic Management (iFLY), European Commission, FP6, research contract TREN/07/FP6AE/S07.71574/037180, 2007-2011.

Workpackage leader

Distributed control and stochastic analysis of hybrid systems, supporting safety critical real-time systems design (HYBRIDGE), European Commission, Information Society Technologies (IST), FP5, research contract IST-2001-32460, 2002-2005.

Team Member

Innovative techniques and applications of system identification and adaptive control, Italian Ministry for Education, University and Research (MIUR), 2010–2011

Innovative techniques and applications of system identification and adaptive control, Italian Ministry for Education, University and Research (MIUR), 2007–2008

Innovative methods and algorithms for the identification and adaptive control of technological systems, Italian Ministry for Education, University and Research (MIUR), 2005–2006

Innovative methods for the identification and adaptive control of industrial systems, Italian Ministry for Education, University and Research (MIUR), 2003–2004

Identification and adaptive control of industrial systems, Italian Ministry for Education, University and Research (MIUR), 2001–2002

Adaptive and robust controllers design. Italian Ministry for Education, University and Research (MIUR), 1999–2000

Identification, control and adaptive predictors, Italian Ministry for Education, University and Research (MIUR), 1995–1997

Nonlinear and adaptive control, European Commission, Human Capital Mobility project, 1994–1996.

Invited presentations

Delft University of Technology, The Netherlands (1998, 2000); University of California at Berkeley, USA (1998, 1999); Simon Fraser University, Canada (1999); Stanford University, USA (2000); University of Pennsylvania, USA (2000); George Mason University, USA (2000); Swiss Federal Institute of Technology, Switzerland (2000, 2006); Royal Institute of Technology, Sweden (2001); Eurocontrol Experimental Centre, Bretigny-sur-Orge, France (2005).

Collaborations

Sergio Bittanti, Politecnico di Milano, Italy; Henk Blom, National Aerospace Laboratory, The Netherlands; Marco C. Campi, Università degli Studi di Brescia, Italy; João P. Hespanha, University of California at Santa Barbara, USA; Jianghai Hu, Purdue University, USA; John Lygeros, ETH Zurich, Switzerland; Shankar Sastry, University of California at Berkeley, USA.

Teaching Activity

Graduate Courses

Organizer and lecturer of the course on Hybrid Systems, Politecnico di Milano, Italy, 3-9 May 2006, 8-12 June 2009, and 16-21 June 2011

Lecturer of EECS 223 on Stochastic Systems: Estimation and Control, at University of California at Berkeley, USA, spring 1999

Invited lecturer of the courses: Filtering, data analysis and optimization of uncertain systems, Politecnico di Milano, Italy, September 28-30, 2009; 1st HYCON (Hybrid Control: Taming Heterogeneity and Complexity of Networked Embedded Systems) Ph.D. school on Hybrid Systems, Siena, Italy, July 19-22, 2005; Filtering and estimation methods for stochastic systems, Politecnico di Milano, Italy, November 23-25, 2005; Hybrid Systems: A Formal Paradigm for Safety Critical Embedded Systems, University of Patras, Greece, September 22-24, 2004; CIRA (Centro Interuniversitario di Ricerca in Automatica) graduate summer school on Analysis and Control of Hybrid Systems, Bertinoro, Italy, July 17-19, 2003; Innovative methods of data analysis: Estimation and filtering, Politecnico di Milano, Italy, April – May, 2002

Undergraduate Courses

Lecturer of the courses:

Fundamentals of Automatic Control (from 2002-03 to 2011-12), project course on System Identification (2003-2004), and Automatica 1 (from 2005-06 to 2009-10)

Politecnico di Milano, Italy

Automatic Control (2002-2003, 2003-2004) and Stochastic Processes (2004-05, 2005-06, 2006-07)

Università degli Studi di Brescia, Italy

Professional Activities

Associate Editor of the IEEE Transactions on Automatic Control, starting from 2009

Associate Editor of the IEEE Transactions on Control Systems Technology, starting from 2009

Associate Editor of Nonlinear Analysis: Hybrid Systems, starting from 2011

Discussion Editor of the European Journal of Control, starting from 2007

Member of the IEEE Control Systems Society Conference Editorial Board, starting from 2007

Member of the IFAC Technical Committee on Stochastic Systems, 2003 – 2008, and of the IFAC Technical Committee on Discrete Event and Hybrid Systems starting from 2008

Member of the Program Committee of the International Workshop Hybrid Systems: Computation and Control (HSCC 2002, 2006, 2007, and 2008); IFAC Conference on the Analysis and Design of Hybrid Systems (ADHS 2006 and 2012); IEEE International Symposium on Intelligent Control (ISIC 2004 and 2005); IEEE Conference on Automation Science and Engineering (IEEE CASE 2008); 18th IFAC Symposium on Automatic Control in Aerospace (ACA 2010); Mediterranean Conference on Control and Automation (MED 2011 and 2012); IFAC World Congress 2011

Evaluator of FP6 IST Proposals on Embedded Systems (2003)

Co-organizer of the 2nd Workshop on Formal Methods for Aerospace (FMA@CDC'2010) at the 49th IEEE Conference on Decision and Control, Atlanta, USA, December 14, 2010

Co-organizer of the invited session A learning approach to identification and control, 15th IFAC World Congress on Automatic Control, Barcelona, Spain, July 2002

Reviewer for, among others, Automatica, European Journal of Control, IEEE Control Systems Magazine, IEEE Transactions on Automatic Control, IEEE Transactions on Intelligent Transportation Systems, International Journal of Adaptive Control and Signal Processing, Journal of Complexity

Awards

Outstanding reviewer of the IEEE Transactions on Automatic Control (2005)

Outstanding reviewer of Automatica (2004, 2005, and 2006)

List of Publications

Maria Prandini

Journal Publications

1. M. Prandini, V. Putta, J. Hu. Air traffic complexity in future Air Traffic Management systems. *Journal of Aerospace Management*, special issue associated to the INO 2010 Workshop. To appear.
2. M. Prandini, L. Piroddi, S. Puechmorel, S.L. Brzdilov. Toward air traffic complexity assessment in new generation air traffic management systems. *IEEE Transactions on Intelligent Transportation Systems*, vol. 12(3):809-818, 2011
3. J. Lygeros and M. Prandini. Stochastic hybrid systems: a powerful framework for complex, large scale applications. *European Journal of Control*, introductory paper to the special issue on Stochastic hybrid systems, vol. 16(6):583-594, 2010
4. A. Abate, J.P. Katoen, J. Lygeros, M. Prandini. Approximate model checking of stochastic hybrid systems. *European Journal of Control*, special issue on Stochastic hybrid systems, vol. 16(6): 624-641, 2010
5. M. Prandini, V. Putta, J. Hu. A probabilistic measure of air traffic complexity in three-dimensional airspace. *International Journal of Adaptive Control and Signal Processing*, special issue on Air Traffic Management: Challenges and opportunities for advanced control, vol. 24(10): 813829, 2010
6. M.C. Campi, S. Garatti, M. Prandini. The scenario approach for systems and control design. *Annual Reviews in Control*, vol. 33(2): 149-157, 2009
7. M. Prandini and J. Hu. Application of reachability analysis for stochastic hybrid systems to aircraft conflict prediction. *IEEE Transactions on Automatic Control*, vol. 54 (4): 913-917, 2009

8. A. Abate, M. Prandini, J. Lygeros, S. Sastry. Probabilistic reachability and safety for controlled discrete time stochastic hybrid systems. *Automatica*, vol. 44 (11): 2724-2734, 2008
9. J. Hu, M. Prandini, C. Tomlin. Conjugate Points in Formation Constrained Optimal Multi-Agent Coordination: A Case Study. *SIAM Journal on Control and Optimization*, vol. 45 (6): 2119-2137, 2007
10. J. Hu, M. Prandini, S. Sastry. Aircraft conflict prediction in presence of a spatially correlated wind field. *IEEE Transactions on Intelligent Transportation Systems*, vol. 6 (3): 326-340, 2005
11. M.C. Campi, J.P. Hespanha, M. Prandini. Cautious hierarchical switching control of stochastic linear systems. *International Journal of Adaptive Control and Signal Processing*, special issue "New approaches to adaptive control", 18 (4): 319-333, 2004
12. R. Leonardi, P. Migliorati, M. Prandini. Semantic indexing of soccer audio-visual sequences: a multimodal approach based on controlled Markov chains. *IEEE Transactions on Circuits and Systems for Video Technology*, 14 (5): 634-643, 2004
13. J. Hu, M. Prandini, S. Sastry. Optimal coordinated motions for multiple agents moving on a plane. *SIAM Journal on Control and Optimization*, 42 (2): 637-668, 2003
14. M.C. Campi, M. Prandini. Randomized algorithms for the synthesis of cautious adaptive controllers. *Systems & Control Letters*, 49: 21-36, 2003
15. J. Hu, M. Prandini, S. Sastry. Optimal Coordinated Maneuvers for Three Dimensional Aircraft Conflict Resolution. *AIAA Journal of Guidance, Control and Dynamics*, vol. 25 (5): 888-900, 2002
16. M. Prandini, M.C. Campi. Adaptive LQG control of input-output systems - A cost-biased approach. *SIAM Journal on Control and Optimization*, 39 (5): 1499-1519, 2001
17. M. Prandini, J. Hu, J. Lygeros, S. Sastry. A probabilistic approach to aircraft conflict detection. *IEEE Transactions on Intelligent Transportation Systems*. Special issue on Air Traffic Control - Part I, 1 (4): 199-220, 2000
18. M. Prandini, M.C. Campi. A new recursive identification algorithm for singularity free adaptive control. *Systems & Control Letters*, 34 (4): 177-183, 1998
19. M. Prandini, S. Bittanti, M.C. Campi. A penalized identification criterion for securing controllability in adaptive control. *Journal of Mathematical Systems, Estimation, and Control*, 8 (4): 1-19, 1998
20. M. Prandini, M.C. Campi, R. Leonardi. Optimal delay estimation and performance evaluation in blind equalization. *International Journal of Adaptive Control and Signal Processing*, 11: 621-640, 1997

Edited Volume Publications

1. J. Lygeros, M. Prandini. Stochastic hybrid systems. In *The HYCON Handbook of Hybrid Systems Control: Theory, Tools, Applications*, pp. 249-278, Cambridge University Press, 2009
2. A. Abate, M. Prandini, J. Lygeros, S. Sastry. Approximation of General Stochastic Hybrid Systems by Switching Diffusions with Random Hybrid Jumps. In *Hybrid Systems: Computation and Control*, Lecture Notes in Computer Science vol. 4981:598-601, Springer-Verlag, 2008
3. S. Bittanti, M.C. Campi, M. Prandini. How many experiments are needed to adapt? In *Modeling, Estimation and Control. Festschrift in Honor of Giorgio Picci on the Occasion of his Sixty-Fifth Birthday*, LNCIS series, vol. 364: 7-17, Springer Verlag, 2007

4. A. Abate, S. Amin, M. Prandini, J. Lygeros, S. Sastry. Computational approaches to reachability analysis of stochastic hybrid systems. In *Hybrid Systems: Computation and Control*, Lecture Notes in Computer Science vol. 4416: 4-17, Springer-Verlag, 2007
5. M. Farina and M. Prandini. Hybrid models for gene regulatory networks: The case of lac operon in E. Coli. In *Hybrid Systems: Computation and Control*, Lecture Notes in Computer Science vol. 4416: 693-697, Springer-Verlag, 2007
6. M. Prandini, M.C. Campi, S. Garatti. Controller design through random sampling: An example. In *Advances in Control Theory and Applications* LNCIS series, vol. 353: 201-212, Springer Verlag, 2007
7. M. Prandini and J. Hu. Stochastic reachability: Theory and numerical approximation. In *Stochastic hybrid systems*, Automation and Control Engineering Series vol. 24: 107-138, Taylor & Francis Group/CRC Press, 2006
8. S. Amin, A. Abate, M. Prandini, J. Lygeros, S. Sastry. Reachability analysis for discrete time stochastic hybrid systems. *Hybrid Systems: Computation and Control*, Lecture Notes in Computer Science, vol. 3927: 49-63, Springer-Verlag, 2006
9. M. Prandini and J. Hu. A stochastic approximation method for reachability computations. In *Stochastic hybrid systems: theory and safety applications*, Lecture Notes in Control and Information Sciences, vol. 337: 107-139, Springer-Verlag, 2006
10. J. Hu, M. Prandini, K.H. Johansson, S. Sastry. Hybrid Geodesics as Optimal Solutions to the Collision-Free Motion Planning Problem. In *Hybrid Systems: Computation and Control*, Lecture Notes in Computer Science, vol. 2034: 305-318, Springer-Verlag, 2001

Theses

1. M. Prandini. Adaptive linear quadratic Gaussian control: optimality analysis and robust controller design. *Ph.D. Thesis*, Università degli Studi di Brescia, Italy, February 1998
2. R. Magni and M. Prandini. Endogenous currents in bones: measurements and modeling. *Laurea thesis*, Politecnico di Milano, Italy, February 1994 (in Italian)

Conference Publications

1. A. Abate and M. Prandini. Approximate abstractions of stochastic systems: a randomized method. In *50th IEEE Conference on Decision and Control and European Control Conference*, Orlando, USA, Dec. 2011.
2. A. Abate, J.P. Katoen, J. Lygeros, M. Prandini. A two-step scheme for approximate model checking of stochastic hybrid systems. In *IFAC World Congress*, Milano, Italy, August-September 2011.
3. M. Prandini, H. Blom, B. Bakker. Air traffic complexity and the interacting particle system method: An integrated approach for collision risk estimation. In *American Control Conference*, San Francisco, USA, June-July 2011.
4. M. Prandini, V. Putta, J. Hu. Air traffic complexity in advanced automated Air Traffic Management systems. In *INO workshop*, Eurocontrol Experimental Centre, Bretigny-sur-Orge, France, Dec. 2010
5. S.D. Bopardikar, A. Borri, J.P. Hespanha, M. Prandini, M.D. Di Benedetto. Randomized Sampling for Large Zero-Sum Games. In *49th Conference on Decision and Control*, Atlanta, USA, Dec. 2010. Accepted.

6. Luigi Piroddi and Maria Prandini. A geometric approach to air traffic complexity evaluation for strategic trajectory management In *49th Conference on Decision and Control*, Atlanta, USA, Dec. 2010.
7. M. Prandini and M.C. Campi. Constrained control design via a simulation-based scenario approach. In *19th Int. Symposium on Mathematical Theory of Networks and Systems*, Budapest, Hungary, July 2010.
8. S. Bittanti, M.C. Campi, and M. Prandini. Adaptation and the effort needed to adapt. In *48th Conf. on Decision and Control*, Shanghai, China, Dec. 2009.
9. M. Prandini and J. Hu. A probabilistic approach to air traffic complexity evaluation. In *48th Conf. on Decision and Control*, Shanghai, China, Dec. 2009.
10. M. Prandini, L. Piroddi, J. Lygeros. A two-step approach to aircraft conflict resolution combining optimal deterministic design with Monte Carlo stochastic optimization. In *European Control Conference 2009*, Budapest, Hungary, August 23-26, 2009
11. I. Boniolo, S. Savaresi, M. Prandini, G. Borghi, B. Garavelli, S. Bittanti. Performance Analysis of a Digital Compass for the Heading Estimation in Nautical Application. In *5th IFAC Symposium on System Identification*, Saint-Malo, France, July 6-8, 2009.
12. A. Abate, M. Prandini, J. Lygeros, S. Sastry. An approximate dynamic programming approach to probabilistic reachability for stochastic hybrid systems. In *47th IEEE Conference on Decision and Control*, Cancun, Messico, 2008.
13. M. Prandini, J. Hu. Application of reachability analysis for stochastic hybrid systems to aircraft conflict prediction. In *47th IEEE Conference on Decision and Control*, Cancun, Messico, 2008.
14. M. Tanelli, M. Prandini, F. Codec, A. Moia, S.M. Savaresi. Analysing the interaction between braking control and speed estimation: the case of two-wheeled vehicles. In *47th IEEE Conference on Decision and Control*, Cancun, Messico, 2008.
15. M.C. Campi, S. Garatti, M. Prandini. The Scenario Approach for Systems and Control Design. In *17th IFAC World Congress*, Seoul, Korea, July 2008
16. M. Prandini and J. Hu. A numerical approximation scheme for reachability analysis of stochastic hybrid systems with state-dependent switchings. In *IEEE Conference on Decision and Control*, New Orleans, Louisiana, USA, Dec. 2007
17. M. Prandini and M.C. Campi. A new approach to controller design in presence of constraints. In *IEEE Conference on Decision and Control*, New Orleans, Louisiana, USA, Dec. 2007
18. A. Abate, S. Amin, M. Prandini, J. Lygeros, S. Sastry. Probabilistic Reachability and Safe Sets Computation for Discrete Time Stochastic Hybrid Systems. In *IEEE Conference on Decision and Control*, San Diego, USA, 2006
19. M. Prandini. A Self-Optimizing Switching Control Scheme for Uncertain ARMAX Systems. In *Joint CDC-ECC*, Seville, Spain, 2005
20. A. Danelli, M. Pozzi, P. Colaneri, A. De Marco, E. Musazzi, M. Prandini. Stabilization of high voltage transmission network in emergency conditions. In *40th International Universities Power Engineering Conference*, Cork, Ireland, 2005
21. M. Prandini. Adaptive stabilization of ARMAX systems via logic-based switching. In *20th IEEE International Symposium on Intelligent Control*, Cyprus, 2005
22. J. Hu, M. Prandini, C. Tomlin. Interesting conjugate points in formation constrained. In *American Control Conference*, Portland, Oregon, USA, 2005

23. M. Prandini. Piecewise affine systems identification: a learning theoretical approach. In *IEEE Conference on Decision and Control*, Paradise Island, Bahamas, 2004
24. J. Hu, M. Prandini, S. Sastry. Probabilistic safety analysis in three-dimensional aircraft flight. In *IEEE Conference on Decision and Control*, Maui, Hawaii, USA, 2003
25. J. Hu, M. Prandini. Aircraft conflict detection: a method for computing the probability of conflict based on Markov chain approximation. In *European Control Conference*, Cambridge, UK, 2003
26. M. Prandini, J.P. Hespanha, M.C. Campi. Hysteresis-based Switching Control of Stochastic Linear Systems. In *European Control Conference*, Cambridge, UK, 2003
27. R. Leonardi, P. Migliorati, M. Prandini. Semantic indexing of sport program sequences by audio-visual analysis. In *IEEE International Conference on Image Processing*, Barcelona, Spain, 2003
28. J. Hu, M. Prandini, S. Sastry. Aircraft conflict detection in presence of spatially correlated wind perturbations. In *AIAA Guidance, Navigation and Control Conference*, Austin, Texas, 2003
29. R. Leonardi, P. Migliorati, M. Prandini. A Markov chain model for semantic indexing of sport program sequences. In *International Workshop on Image Analysis for Multimedia Interactive Services*, London, UK, 2003
30. J. Lygeros, M. Prandini. Aircraft and Weather Models for Probabilistic Collision Avoidance in Air Traffic Control. In *IEEE Conference on Decision and Control*, Las Vegas, USA, 2002
31. R. Leonardi and P. Migliorati and M. Prandini. Modelling of visual features by Markov chains for sport content characterization. In *European Signal Processing Conference*, Toulouse, France, 2002
32. M.C. Campi, J.P. Hespanha, M. Prandini. Cautious hierarchical switching control of stochastic linear systems. In *Mathematical Theory of Networks and Systems Conference*, South Bend, Indiana, USA, 2002
33. J.P. Hespanha, M. Prandini. Optimal Pursuit under Partial Information. In *Mediterranean Conference on Control and Automation*, Lisbon, Portugal, 2002
34. M. Prandini. Switching Control of Stochastic Linear Systems: Stability and Performance Results. In *VI Congresso Nazionale della Società Italiana di Matematica Applicata e Industriale*, Chia Laguna, Cagliari, Italy, 2002
35. M. Prandini, M.C. Campi. Logic-based switching for the stabilization of stochastic systems in presence of unmodeled dynamics. In *IEEE Conference on Decision and Control*, Orlando, FL, USA, 2001
36. J.P. Hespanha, M. Prandini. Nash equilibria in partial-information games on Markov chains. In *IEEE Conference on Decision and Control*, Orlando, FL, USA, 2001
37. M. Prandini, J.P. Hespanha, G.J. Pappas. Greedy control for hybrid pursuit-evasion games. In *European Control Conference*, Porto, Portugal, 2001
38. J. Hu, M. Prandini, A. Nilim, S. Sastry. Three dimensional coordinated maneuvers for aircraft conflict avoidance. In *AIAA Guidance, Navigation and Control Conference*, Montreal, Canada, 2001
39. S. Bittanti, M.C. Campi, M. Prandini. Penalized identification for self-tuning control: an overview. In *IFAC Workshop on Adaptation and Learning in Control and Signal Processing*, Como, Italy, 2001

40. J.P. Hespanha, M. Prandini, S. Sastry. Probabilistic Pursuit-Evasion Games: A one-step Nash Approach. In *IEEE Conference on Decision and Control*, Sydney, Australia, 2000
41. M. Prandini, M.C. Campi. A self-optimizing adaptive LQG control scheme for input-output systems. In *IEEE Conference on Decision and Control*, Sydney, Australia, 2000
42. J. Hu, M. Prandini, S. Sastry. Optimal maneuver for multiple aircraft conflict resolution: a braid point of view. In *IEEE Conference on Decision and Control*, Sydney, Australia, 2000
43. M. Prandini, L. Bardella. Identification of a Constitutive Model for Epoxy Resins. In *XIII Convegno Italiano di Meccanica Computazionale*, Brescia, Italy, 2000
44. M.C. Campi, P. Fogazzi, F. Genna, M. Prandini. Identification of a Model for the Stress-Strain Behavior of the Periodontal Ligament. In *XIII Convegno Italiano di Meccanica Computazionale*, Brescia, Italy 2000
45. J. Hu, J. Lygeros, M. Prandini, S. Sastry. A probabilistic framework for highway safety analysis. In *IEEE Conference on Decision and Control*, Phoenix, AZ, USA, 1999
46. M. Prandini, J. Lygeros, A. Nilim, S. Sastry. Randomized algorithms for probabilistic aircraft conflict detection. In *IEEE Conference on Decision and Control*, Phoenix, AZ, USA, 1999
47. J. Hu, J. Lygeros, M. Prandini, S. Sastry. Aircraft conflict detection and resolution using Brownian motion. In *IEEE Conference on Decision and Control*, Phoenix, AZ, USA, 1999
48. M. Prandini, J. Lygeros, A. Nilim, S. Sastry. A probabilistic framework for aircraft conflict detection. In *AIAA Guidance, Navigation and Control Conference*, Portland, OR, USA, 1999
49. M. Prandini, S. Bittanti, M.C. Campi. The stabilizability issue in least squares estimation: a penalized approach. In *Mathematical Theory of Networks and Systems Conference*, Padova, Italy, 1998
50. M.C. Campi, M. Prandini. Randomized algorithms for the synthesis of adaptive controllers. In *Mathematical Theory of Networks and Systems Conference*, Padova, Italy, 1998
51. M. Prandini, M.C. Campi. Adaptive pole placement by means of a simple, singularity free, identification algorithm. In *IEEE Conference on Decision and Control*, San Diego, CA, USA, 1997
52. S. Bittanti, M.C. Campi, M. Prandini. Self-tuning control based on penalized least squares identification techniques. In *IEEE Conference on Decision and Control*, Kobe, Japan, 1996
53. M. Prandini, M.C. Campi, R. Leonardi. A new algorithm for the automatic search of the best delay in blind equalization. In *IEEE Digital Signal Processing Workshop*, Loen, Norway, 1996
54. M. Prandini, M.C. Campi, R. Leonardi. New results on the evaluation of equalizers performance. In *IEEE Digital Signal Processing Workshop*, Loen, Norway, 1996

Patents

1. S.M. Savaresi, I. Boniolo, M. Prandini, S. Bittanti, G. Borghi, B. Garavelli. Metodo e dispositivo per determinare automaticamente un corretto angolo di rotta di un veicolo. Italian patent MI2008A001107, 18 June 2008.