

Curriculum Vitae

Lorenzo Mario Fagiano

Politecnico di Milano
Dip. Elettronica, Informazione
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Education

Ph.D., Information and Systems Engineering, Politecnico di Torino, Italy Thesis: <i>Control of Tethered Airfoils for High-Altitude Wind Energy Generation</i> Advisors: Prof. Mario Milanese, Prof. Massimo Canale	01/06 - 02/09
M.Sc. Automotive Engineering, Politecnico di Torino, Italy	09/02 - 10/04
B.Sc. Automotive Engineering, Politecnico di Torino, Italy	09/99 - 07/02

Work experience

Associate Professor of Control Systems Department of Electronics, Information and Bioengineering Politecnico di Milano, Milano, Italy	since 9/16
Scientist, Senior Scientist Department of Power Products and Sensors ABB Switzerland Ltd., Corporate Research, Baden-Dättwil, Switzerland	10/13 - 8/16
Post-doc researcher, Senior researcher (Oberassistent) Automatic Control Laboratory ETH Zürich, Switzerland	09/12 - 09/13
Visiting researcher Dept. of Mechanical Engineering University of California, Santa Barbara, CA	09/10 - 12/12
Post-doc researcher Dept. of Control and Computer Engineering Politecnico di Torino, Italy	02/09 - 08/10
Short-term research contract Dept. of Control and Computer Engineering Politecnico di Torino, Italy	10/05 - 12/05
Research and development engineer - vehicle dynamics & control Permanent contract Fiat Research Center, Orbassano, Italy	01/05 - 09/05

Awards and qualifications

Italian qualification for full professorship, section 09/G1 (Automatica)	2014
Italian qualification for associate professorship, section 09/G1 (Automatica)	2014
Best reviewer acknowledgment, <i>Automatica</i>	2013
<i>IEEE Transactions on Control Systems Technology</i> outstanding paper award for the paper “High altitude wind energy generation using controlled power kites”.	2011
ENI Award “Debut in Research” prize, awarded by ENI for the best two Italian Ph.D. theses defended in 2009 in the fields of hydrocarbons’ combustion efficiency, renewable energies, and environment protection	2010
Maffezzoni prize, awarded by Politecnico di Milano to the best Italian Ph.D. thesis defended in 2009 in the field of automatic control and applications	2010
Best reviewer acknowledgment, <i>IEEE Transactions on Automatic Control</i>	2010
Scientific performance prize, awarded by Politecnico di Torino, Italy, on the basis of research performance, ranked 8 th over more than 600 Ph.D. students in all engineering and architecture fields	2008

Participation to research projects and acquisition of research funds

Research projects at ABB Switzerland, Corporate Research

Research and development projects in the areas of renewable energies and power systems. Role: Project leader. Projects’ cost data not disclosed due to confidentiality reasons. 10/13 - 8/16

Research funds acquired in competitive calls with anonymous review process

Swiss National Science Foundation – Ambizione grant
“Experimental Assessment of Airborne Wind Energy”. Total contribution: CHF 447,720.00; role: Principal Investigator. ETH Zurich

Grant acquired, resigned due to start of permanent position at ABB Corporate Research

EU FP7 Marie Curie Intra-European Fellowship
“Advanced Control Approaches for Airborne Wind Energy Technologies”. Total contribution: € 192,622.20; role: Principal Investigator (Marie Curie researcher). ETH Zurich

Grant acquired, resigned due to start of permanent position at ABB Corporate Research

California Energy Commission – Energy Innovation Small Grant (EISG)
“Autonomous flexible wings for high-altitude wind energy generation”. Total contribution: \$ 95,000.00; role: Principal Investigator
University of California, Santa Barbara, CA

12/11 - 11/12

EU FP7 Marie Curie International Outgoing Fellowship
“Innovative Control, Identification and Estimation Methodologies for Sustainable Energy Technologies”. Total contribution: € 247,027.90; role: Principal Investigator (Marie Curie researcher). UC Santa Barbara, ETH Zurich and Politecnico di Torino

09/10 - 08/13

Participation to other research projects

Regione Piemonte, Italy “KiteNav: Power kites for naval propulsion” Role: post-doc researcher, technical manager, Politecnico di Torino, Italy	2007 - 2010
Regione Piemonte, Italy “KiteGen: high-altitude wind energy generation” Role: researcher, Ph.D. student, Politecnico di Torino, Italy	2008 - 2009
Regione Piemonte, Italy “Control of power kites for wind energy generation” Role: researcher, Ph.D. student, Politecnico di Torino, Italy	2006 - 2008
Italian Ministry of University and Research “Advanced control and identification techniques for innovative applications” Role: Ph.D. student, Politecnico di Torino, Italy	2006 - 2008
Italian Ministry of University and Research “Control of advanced transmission, suspension, steering and braking systems for vehicle dynamics” Role: Ph.D. student, Politecnico di Torino, Italy	2005 - 2007

Short-term research contracts and visiting positions

Short-term contract for the EU FP7 research project “KitVes” Modelway S.r.l., Torino, Italy	09/09
Short-term contract for the activity “Control of kites for energy generation” Politecnico di Torino, Italy	07/08 - 09/08
Visiting scholar, Dept. of Electrical Engineering, OPTEC center Katholieke Universiteit Leuven, Belgium	10/07 - 12/07

Appointments as examiner in Ph.D. defense committees

- Marcelo De Lellis Costa de Oliveira, Federal University of Santa Catarina, Brazil. “Airborne Wind Energy with Tethered Wings: Modeling, Analysis and Control”. To be defended on: 30-09-2016
- Dr. Marko Tanaskovic, ETH Zürich. “Application of Set Membership Identification to Controller Design”. Examination date: 24-11-2015
- Farzad Noorian, University of Sydney, “Risk Management using Model Predictive Control”. Thesis submitted for examination on 31-08-2015, evaluation completed on 21-10-2015
- Dr. Aldo Zraggen, ETH Zürich. “Automatic Power Cycles for Airborne Wind Energy Generators”. Examination date: 06-10-2014
- Dr. Mariam Ahmed, Université de Grenoble (GIPSA-lab). “Control Optimization of Relaxation-cycle Electricity Generation Systems”. Examination date: 28-02-2014

Appointments as referee for the evaluation of research proposals

The specific proposal names are omitted due to confidentiality reasons. All of the evaluated proposals are concerned with topics related to control systems.

- Chilean National Science and Technology Commission: 1 proposal (2015)
- The Research Council of Norway: 1 proposal (2011)

Supervision of graduate and undergraduate student researchers

Graduated Ph.D students

- Dr. Marko Tanaskovic, ETH Zürich. Application of set membership identification to controller design, adaptive model predictive control, data-driven control design. (advisor: Prof. M. Morari).
- Dr. Aldo Zraggen, ETH Zürich. Autonomous operation, adaptation and real-time optimization of airborne wind energy generators. (advisor: Prof. M. Morari).
- Dr. Georg Schildbach, ETH Zürich. Scenario approach for uncertain convex programs with multiple chance constraints, stochastic MPC. (advisor: Prof. M. Morari).
- Dr. Valentino Razza, Politecnico di Torino. Fast model predictive control for vehicle stability, airborne wind energy for naval transportation. (advisor: Prof. M. Milanese).
- Dr. Maria C. Signorile, Politecnico di Torino. Use of direct virtual sensors for feedback control, design of model predictive control laws from models derived with set membership identification. (advisor: Prof. M. Canale).

Undergraduate student researchers and M.Sc. thesis projects

- Eric Nguyen-Van, EPF Lausanne. Modeling and Control of Tethered Glider Systems. (M. Sc. Mechanical Engineering, intern and then M.Sc. thesis project at ABB Switzerland, Corporate Research).
- Alessandro Lauriola, Università di Modena e Reggio Emilia. Design of Innovative Mechatronic Systems for Renewable Energy Generation. (M. Sc. Mechatronic Engineering, intern at ABB Switzerland, Corporate Research).
- Mattia Furlan, Politecnico di Torino. Modeling and control of kites for high-altitude wind energy. (M. Sc. Aerospace Engineering, advisor: Prof. C. Novara).
- Khanh Huynh, University of California, Santa Barbara. Design of filtering algorithms for airborne wind energy generators. (B. Sc. Electrical Engineering, advisor: Prof. B. Bamieh).
- Rui Ma, Politecnico di Torino. Analysis and design of vehicle stability control systems using multiple actuators. (B. Sc. Automotive Engineering, advisor: Prof. M. Canale).
- Raffaele De Marco, Politecnico di Torino. Compensazione dei disturbi di coppia al volante in veicoli dotati di EPS. (M. Sc. Mechatronic Engineering, advisor: Prof. M. Canale).
- Valentino Razza, Politecnico di Torino. Tecniche predittive per il controllo di imbardata di autoveicoli: progetto e implementazione software in the loop. (M. Sc. Computer Engineering, advisor: Prof. M. Canale).
- Maria C. Signorile, Politecnico di Torino. Tecniche robuste per il controllo di stabilità di autoveicoli con l'utilizzo di sensori virtuali (M. Sc. Mechatronic Engineering, advisor: Prof. M. Canale).
- Pascal Pierli, Politecnico di Torino. Controllo di imbardata di autoveicoli con differenziale attivo (M. Sc. Electronic Engineering, advisor: Prof. M. Canale).

Teaching experience

Academic Year 2009/10 – Politecnico di Torino, Italy

Automatic control (Automotive Engineering), graduate course, teaching assistant;
 Principles of automatic control (Automotive Engineering), undergraduate course, teaching assistant;

Model predictive control, graduate course, lecturer;
Automatic control II (Electrical Engineering), undergraduate course, lecturer.

Academic Year 2008/09 – Politecnico di Torino, Italy

Model predictive control, graduate course, lecturer;
Automatic control II (Electrical Engineering), undergraduate course, lecturer.

Academic Year 2007/08 – Politecnico di Torino, Italy

Automatic control (Electronic Engineering), graduate course, teaching assistant;
Principles of automatic control (Electronic Engineering), undergraduate course, teaching assistant;
Principles of automatic control (Telecommunication Engineering), undergraduate course, teaching assistant;
Model predictive control, graduate course, teaching assistant;
Automatic control II (Electrical Engineering), undergraduate course, lecturer.

Academic Year 2006/07 – Politecnico di Torino, Italy

Automatic control (Computer Engineering), graduate course, teaching assistant;
Principles of automatic control (Electronic Engineering), undergraduate course, teaching assistant;
Model predictive control, graduate course, lecturer;
Automatic control II (Electrical Engineering), undergraduate course, teaching assistant.

Technology transfer experience

Co-founder of the company Kitenergy S.r.l., Torino, Italy, in the field of airborne wind energy.

Patents

- [P1] L. Fagiano, M. Milanese (inventors), “System for converting wind energy into electrical energy through the flight of power wing profiles tethered to the ground by cables of a fixed length, without passive phases, and with automatic adaptation to wind conditions”, WO/2012/127444
- [P2] M. Milanese, L. Fagiano, I. Gerlero (inventors), “Actuating systems for controlling the flight of a power wing profile for conversion of wind energy into electrical or mechanical energy”, WO/2011/121557

Technical association memberships and editorial activities

Associate Editor of the IEEE Transactions on Control Systems Technology, since 01/2015

Organizer and Guest Editor of the special section “To Tame the Wind: advanced control applications in wind energy”, together with Prof. Manfred Morari (ETH Zürich), Prof. Mario Rotea (UT Dallas), Dr. Greg Stewart (Honeywell Automation), IEEE Transactions on Control Systems Technology, July 2013 issue.

Co-organizer of the tutorial session “Systems and Control Aspects in Wind Energy”, held at the American Control Conference 2012, together with Prof. Lucy Pao (Univ. Colorado at Boulder).

Co-organizer of the invited session “Control of Airborne Wind Energy Systems”, held at the

European Control Conference 2013, together with Dr. Adrian Gambier (Fraunhofer IWES).

Co-organizer of the invited sessions “Control of Airborne Wind Energy Systems I” and “Control of Airborne Wind Energy Systems II”, together with Prof. Christopher Vermillion (Univ. North Carolina at Charlotte) and Prof. David Olinger (Worcester Polytechnic Institute). Session proposals currently under review for the 2016 American Control Conference.

Member of IEEE and IEEE Control Systems Society

Reviewer for international journals and conferences such as Automatica; Contr. Eng. Practice; IEEE Trans. on Automatic Control; IEEE Trans. on Control Systems Technology; IEEE Trans. on Industrial Electronics; Int. J. of Control, Automation and Systems; System and Control Letters; Int. J. of Robust and Nonlinear Control; Energy; Renewable Energy; American Control Conference; IEEE Conference on Decision and Control; IFAC World Congress

Invited talks at international conferences

- Semi-plenary speaker at the IFAC Conference on Nonlinear Model Predictive Control, Sevilla, Spain, 2015. Talk title: “Scenario and Adaptive Model Predictive Control of Uncertain Systems”
- Invited panelist in the Industry Session at the IFAC Conference on Nonlinear Model Predictive Control, Sevilla, Spain, 2015. Talk title: “Model Predictive Control in ABB”

Invited seminars

- University of Freiburg. IMTEK, Germany, August 2016
- University of Pavia, Italy, March 2015
- IMT Lucca, Italy, April 2014
- GIPSA-Lab, Grenoble, France, February 2014
- ABB Corporate Research, Baden, Switzerland, June 2013;
- Univ. of Stuttgart-Inst. for Systems Theory and Automatic Control, Germany, April 2013;
- ABB Corporate Research, Baden, Switzerland, February 2013;
- University of California at Santa Barbara, California, October 2012;
- University of Colorado at Boulder, Colorado, October 2011;
- National Renewable Energy Laboratory, Colorado, October 2011;
- ETH Zürich -Automatic Control Laboratory, Switzerland, June 2011;
- University of California at Berkeley, California, April 2011;
- ETH Zürich -Automatic Control Laboratory, Switzerland, March 2011;
- EPFL Lausanne, Switzerland, February 2011;
- University of California at Santa Barbara, California, October 2010;
- ETH Zürich -Automatic Control Laboratory, Switzerland, June 2010;
- Google Zurich, Switzerland, May 2010;
- TU Delft, The Netherlands, May 2010;
- University of Budapest, Hungary, August 2009;
- Katholieke Universiteit Leuven, Belgium, May 2009;
- Ghent University, Belgium, December 2007;
- Louvain La Neuve-CESAME, Belgium, December 2007;
- Katholieke Universiteit Leuven, Belgium, October 2007;

- University of Sannio, Italy, June 2007;
- University of Pavia, Italy, April 2007;

Oral presentations at international conferences

- American Control Conference (ACC) 2016, Boston, MA, 2016
- IEEE Conference on Decision and Control, Los Angeles, CA, 2014
- IFAC World Congress 2014, Cape Town, South Africa, 2014;
- Airborne Wind Energy Conference 2013, Berlin, Germany, 2013;
- 11th European Control Conference, Zürich, Switzerland, 2013;
- IEEE Conference on Decision and Control, Maui, Hawaii, 2012
- Airborne Wind Energy Conference 2012, Hampton, Virginia, 2012;
- American Control Conference 2012, Montreal, Canada, 2012;
- IEEE Conference on Decision and Control, Orlando, Florida, 2011;
- IEEE Multi-Conference on Systems and Control, Denver, Colorado, 2011;
- IEEE Conference on Decision and Control, Atlanta, Georgia, 2010;
- Airborne Wind Energy Conference 2010, Stanford, California, 2010;
- American Control Conference 2010, Baltimore, Maryland, 2010;
- International Conference on Renewable Energy: generation and applications (ICREGA 2010), Al Ain, United Arab Emirates, 2010;
- 10th European Control Conference, Budapest, Hungary, 2009;
- International Workshop on Assessment and Future Directions of NMPC, Pavia, Italy, 2008;
- 17th IFAC World Congress, Seoul, Korea, 2008;
- 9th European Control Conference, Kos, Grecia, 2007;
- International workshop “Nonlinear Model Predictive Control - Software and Applications”, Loughborough, UK, 2007.

Technical skills

Computer skills. OS: MS Windows, Software: MS Office, Openoffice, Solidworks, AutoCAD, excellent skills with Matlab[®] and Simulink[®]

Experimental activities. Experience with electrical motors, drives, positioning and inertial sensors, real-time machines and rapid prototyping systems (dSpace[®] and xPC Target[®] products), for an example of completed project see

http://lorenzofagiano.altervista.org/movies/EISG_UCSB_auto_wing.mp4

Languages

Italian: mother tongue

English: fluent

German: basic

Complete publication list

Manuscripts submitted to international peer-reviewed journals

- [J43] L. Fagiano, E. Nguyen-Van, F. Rager, S. Schnez, C. Ohler, “A Small-Scale Prototype to Study the Take-Off of Tethered Rigid Aircrafts for Airborne Wind Energy”, *IEEE/ASME Transactions on Mechatronics*, under review

- [J42] L. Fagiano, E. Nguyen-Van, F. Rager, S. Schnez, C. Ohler, “Autonomous Take-Off and Flight of a Tethered Aircraft for Airborne Wind Energy”, *IEEE Transactions on Control Systems Technology*, under review
- [J41] L. Fagiano, S. Schnez, “On the Take-off of Airborne Wind Energy Systems Based on Rigid Wings”, *Renewable Energy*, under review

Papers published or in press in international peer-reviewed journals

- [J40] M. Tanaskovic, L. Fagiano, C. Novara, M. Morari, “Data-driven control of nonlinear systems: an on-line direct approach”, *Automatica*, vol. 75, pp. 1-10 2017
- [J39] L. Fagiano, C. Novara, “Learning a nonlinear controller from data: theory, computation and experimental results”, *IEEE Transactions on Automatic Control*, vol. 61, n. 7, pp. 1854-1868 2016
- [J38] A. Zraggen, L. Fagiano, M. Morari, “Automatic Retraction and Full Cycle Operation for a Class of Airborne Wind Energy Generators”, *IEEE Transactions on Control Systems Technology*, vol. 24, n. 2, pp. 594-608 2016
- [J37] L. Fagiano, R. Gati, “On the Order Reduction of the Radiative Heat Transfer Model for the Simulation of Plasma Arcs in Switchgear Devices”, *Journal of Quantitative Spectroscopy and Radiative Transfer*, vol. 169, pp. 58-78 2016
- [J36] L. Fagiano, T. Marks, “Design of a small-scale prototype for research in airborne wind energy”, *IEEE/ASME Transactions on Mechatronics*, vol. 20, n. 1, pp. 166-177 2015
- [J35] A. Zraggen, L. Fagiano, M. Morari, “Real-time Optimization and Adaptation of the Crosswind Flight of Tethered Wings for Airborne Wind Energy”, *IEEE Transactions on Control Systems Technology*, vol. 23, n. 2, pp. 434-448 2015
- [J34] A. Jain, G. Schildbach, L. Fagiano, M. Morari, “On the Design and Tuning of Linear Model Predictive Control for Wind Turbines”, *Renewable Energy*, vol. 80, pp. 664-673 2015
- [J33] G. Schildbach, L. Fagiano, C. Frei, M. Morari, “The Scenario Approach for Stochastic Model Predictive Control with Bounds on Closed-Loop Constraint Violations”, *Automatica*, vol. 50, n. 12, pp. 3009-3018 2014
- [J32] M. Tanaskovic, L. Fagiano, M. Morari, “On the optimal worst-case experiment design for constrained linear systems”, *Automatica*, vol. 50, n. 12, pp. 3291-3298 2014
- [J31] M. Tanaskovic, L. Fagiano, R. Smith, M. Morari, “Adaptive receding horizon control for constrained MIMO systems”, *Automatica*, vol. 50, n. 12, pp. 3019-3029 2014
- [J30] M. Canale, L. Fagiano, C. Novara, “A DVS-MHE Approach to Vehicle Side-Slip Angle Estimation”, *IEEE Transactions on Control Systems Technology*, vol. 22, n. 5, pp. 2048-2055 2014
- [J29] L. Fagiano, A. Zraggen, M. Morari, M. Khammash, “Automatic crosswind flight of tethered wings for airborne wind energy: modeling, control design and experimental results”, *IEEE Transactions on Control Syst. Technology*, vol. 22, n. 4, pp. 1433-1447 2014
- [J28] L. Fagiano, K. Huynh, B. Bamieh, M. Khammash, “On sensor fusion for airborne wind energy systems”, *IEEE Transactions on Control Syst. Technology*, vol. 22, n. 3, pp. 930-943 2014
- [J27] M. Canale, L. Fagiano, M.C. Signorile, “Nonlinear Model Predictive Control from data: a Set Membership approach”, *Int. J. of Robust and Nonlinear Control*, vol. 24, n. 1, pp. 123-129 2014
- [J26] L. Fagiano, A. Teel, “Generalized terminal state constraint for model predictive control”, *Automatica*, vol. 49, n. 9, pp. 2622-2631 2013
- [J25] G. Schildbach, L. Fagiano, M. Morari, “Randomized solutions to convex programs with multiple chance constraints”, *SIAM Journal on Optimization*, vol. 23, n. 4, pp. 2479-2501 2013
- [J24] G.C. Calafiore, L. Fagiano, “Stochastic Model Predictive Control of LPV Systems via Scenario Optimization”, *Automatica*, vol. 49, n. 6, pp. 1861-1866 2013

- [J23] C. Novara, L. Fagiano, M. Milanese, “Direct feedback control design for nonlinear systems”, *Automatica*, vol. 49, n. 4, pp. 849-860 2013
- [J22] G.C. Calafiore, L. Fagiano, “Robust Model Predictive Control via Scenario Optimization”, *IEEE Transactions on Automatic Control*, vol. 58, n. 1, pp. 219-224 2013
- [J21] L. Fagiano, C. Novara, “A combined Moving Horizon and Direct Virtual Sensor approach for constrained nonlinear estimation”, *Automatica*, vol. 49, n. 1, pp. 193-199 2013
- [J20] M. Canale, L. Fagiano, M.C. Signorile, “Design of Robust Predictive Control Laws Using Set Membership Identified Models”, *Asian Journal of Control*, vol. 15, n. 6, pp. 1714-1722 2013
- [J19] L. Fagiano, M. Khammash, “Simulation of stochastic systems via polynomial chaos expansions and convex optimization”, *Physical Reviews E*, vol. 86, n. 3, 036702, 2012
- [J18] L. Fagiano, M. Milanese, V. Razza, M. Bonansone, “High-Altitude Wind Energy for Sustainable Marine Transportation”, *IEEE Transactions on Intelligent Transportation Systems*, vol. 13, n. 2, pp. 781 – 791 2012
- [J17] M. Canale, L. Fagiano, M.C. Signorile, “A model predictive control approach to vehicle yaw control using identified models”. *Proceedings of the Institution of mechanical engineers. Part D, Journal of Automobile Engineering*, vol. 226 n. 5, pp. 577-590 2012
- [J16] M. Canale, L. Fagiano, F. Ruiz, M.C. Signorile, “Vehicle stability control using direct virtual sensors”, *Vehicle Systems Dynamics*, vol. 50 n. 4, pp. 597-618 2012
- [J15] L. Fagiano, M. Canale, M. Milanese, “Set Membership approximation of discontinuous Nonlinear Model Predictive Control laws”, *Automatica*, vol. 48, pp. 191-197 2012
- [J14] L. Fagiano, M. Milanese, D. Piga, “Optimization of Airborne Wind Energy generators”, *Int. J. of Robust and Nonlinear Control*, vol. 22, n. 18, pp. 2055-2083 2012
- [J13] M. Canale, L. Fagiano, M. Milanese, C. Novara, “Set Membership approximations of predictive control laws: the tradeoff between accuracy and complexity”, *IET Control Theory & Applications*, vol. 12, n. 4, pp. 2907-292 2010
- [J12] M. Canale, L. Fagiano, M. Milanese, “Efficient Model Predictive Control for Nonlinear Systems via Function Approximation Techniques”, *IEEE Transactions on Automatic Control*, vol. 55, n. 8, pp. 1911-1916 2010
- [J11] M. Canale, L. Fagiano, V. Razza, “Approximate NMPC for vehicle stability: Design, implementation and SIL testing”, *Control Engineering Practice*, vol. 18, n. 6, pp. 630-639 2010
- [J10] M. Canale, L. Fagiano, M. Milanese, “High altitude wind energy generation using controlled power kites”, *IEEE Transactions on Control Systems Technology*, vol. 18, n. 2, pp. 279-293 2010
- [J9] L. Fagiano, M. Milanese, D. Piga, “High-altitude wind power generation”, *IEEE Transactions on Energy Conversion*, vol. 25, n. 1, pp. 168-180 2010
- [J8] M. Canale, L. Fagiano, “Comparing Rear Wheel Steering and Rear Active Differential Approaches to vehicle yaw control”, *Vehicle Systems Dynamics*, vol. 48, n. 5, pp. 529-546 2010
- [J7] M. Canale, L. Fagiano, A. Ferrara, C. Vecchio, “Comparing Internal Model Control and Sliding Mode Approaches for Vehicle Yaw Control”, *IEEE Transactions on Intelligent Transportation Systems*, vol. 10, n. 1, pp. 31-41 2009
- [J6] M. Canale, L. Fagiano, M. Milanese, “KiteGen: a revolution in wind energy generation”, *Energy*, vol. 34, n. 3, pp. 355-361 2009
- [J5] M. Canale, L. Fagiano, M. Milanese, “Set Membership approximation theory for fast implementation of Model Predictive Control laws”, *Automatica*, vol. 45, n. 1, pp. 45-54 2009
- [J4] M. Canale, L. Fagiano, A. Ferrara, C. Vecchio, “Vehicle Yaw Control via Second Order Sliding Mode Technique”, *IEEE Transactions on Industrial Electronics*, vol. 55, n. 11, pp. 3908-3916 2008
- [J3] M. Canale, L. Fagiano, “Stability control of 4WS vehicles using robust IMC techniques”, *Vehicle System Dynamics*, vol. 46, n. 11, pp. 991-1011 2008

- [J2] M. Canale, L. Fagiano, M. Milanese, “Power kites for wind energy generation”, *IEEE Control Systems Magazine*, vol. 27, no. 6, pp. 25-38 2007
- [J1] M. Canale, L. Fagiano, M. Milanese, P. Borodani, “Robust vehicle yaw control using an active differential and IMC techniques”, *Control Engineering Practice*, vol. 15, no. 8, pp. 923-941 2007

Book chapters

- [B3] L. Fagiano, E. Nguyen-Van, S. Schnez, “Linear Take-Off and Landing of a Rigid Aircraft for Airborne Wind Energy Extraction”, In: *R. Schmehl (Ed.): Airborne Wind Energy, Advances in Technology Development and Research*, Springer, 2017 2017
- [B2] L. Fagiano, A. Zraggen, M. Morari, “On Modeling, Filtering and Automatic Control of Flexible Tethered Wings for Airborne Wind Energy”, In: *U. Ahrens et al. (Eds.): Airborne Wind Energy*, Springer, September 2013 2013
- [B1] M. Canale, L. Fagiano, M. Milanese, “Fast Nonlinear Model Predictive Control via Set Membership approximation: an overview”, In: *L. Magni et al. (Eds.): Nonlinear Model Predictive Control - Towards New Challenging Applications*, LNCIS 384, pp. 461-470. Springer 2009

Proceedings of international peer-reviewed conferences

- [C58] M. Tanaskovic, L. Fagiano, C. Novara, M. Morari “On-Line Direct Control Design for Nonlinear Systems”, *17th IFAC Symposium on System Identification, SYSID 2015*, Beijing, China, October 19-21 2015
- [C57] L. Fagiano, G. Schildbach, M. Tanaskovic, M. Morari, “Scenario and Adaptive Model Predictive Control of Uncertain Systems”, *5th IFAC Conference on Nonlinear Model Predictive Control*, Seville, Spain, September 17-20 2015
- [C56] L. Fagiano, C. Novara, “Learning a Nonlinear Controller from Data: Theory and Computation”, *53rd IEEE Conference on Decision and Control*, Los Angeles, CA, December 15-17 2014
- [C55] B. Galletti, M. Buffoni, H.J. Ferreau, L. Fagiano, M. Mercangoez, “Active Pitch Control of Tethered Wings for Airborne Wind Energy”, *53rd IEEE Conference on Decision and Control*, Los Angeles, CA, December 15-17 2014
- [C54] A. Zraggen, L. Fagiano, M. Morari, “On Modeling and Control of the Retraction Phase for Airborne Wind Energy Systems”, *53rd IEEE Conference on Decision and Control*, Los Angeles, CA, December 15-17 2014
- [C53] M. Tanaskovic, L. Fagiano, M. Morari, “Worst-Case Experiment Design for Constrained MISO Systems”, *53rd IEEE Conference on Decision and Control*, Los Angeles, CA, December 15-17 2014
- [C52] A. Zraggen, L. Fagiano, M. Morari, “Automatic Retraction Phase of Airborne Wind Energy Systems”, *19th IFAC World Congress*, Cape Town, South Africa, August 24-29 2014
- [C51] L. Fagiano, C. Novara, “Automatic Crosswind Flight of Tethered Wings for Airborne Wind Energy: A Direct Data-Driven Approach”, *19th IFAC World Congress*, Cape Town, South Africa, August 24-29 2014
- [C50] M. Tanaskovic, L. Minnetian, L. Fagiano, M. Morari, “Experimental Testing of an Adaptive Model Predictive Controller on a Quad-Tank System”, *13th European Control Conference*, Strasbourg, France, June 24-27 2014
- [C49] A. Zraggen, L. Fagiano, M. Morari, “On Real-Time Optimization and Adaptation of Airborne Wind Energy Generators”, *52nd IEEE Conference on Decision and Control*, Firenze, Italy, December 10-13 2013
- [C48] M. Tanaskovic, L. Fagiano, R. S. Smith, M. Morari, “Adaptive model predictive control for constrained MIMO systems”, *11th IFAC International Workshop on Adaptation and* 2013

- [C47] L. Fagiano, A. Zraggen, M. Morari, M. Khammash, “Automatic control of tethered wings for airborne wind energy: design and experimental results”, *European Control Conference 2013*, Zurich, Switzerland, July 17-19 2013
- [C46] M. Tanaskovic, L. Fagiano, R. S. Smith, P. J. Goulart, M. Morari, “Adaptive model predictive control for constrained linear systems”, *European Control Conference 2013*, Zurich, Switzerland, July 17-19 2013
- [C45] L. Fagiano, A. Zraggen, M. Morari, M. Khammash, “On control of tethered wings for airborne wind energy”, *American Control Conference 2013*, Washington DC, June 17-19 2013
- [C44] L. Fagiano, K. Huynh, B. Bamieh, M. Khammash, “Sensor fusion for airborne wind energy systems”, *American Control Conference 2013*, Washington DC, June 17-19 2013
- [C43] G. Calafiore, D. Lyons, L. Fagiano, “On mixed-integer random convex programs”. *Proc. of the 51st IEEE Conference on Decision and Control*, pp. 3508 – 3513, Maui, Hawaii, December 10-13 2012
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Io sottoscritto, Lorenzo Mario Fagiano, autorizzo al trattamento dei miei dati personali, secondo quanto previsto dal D.Lgs 196/03.