ANDREA CRISTOFARO

Personal identifying data

Born in Rome, Italy on 26/12/1981. Italian nationality.

Education

PhD Diploma - 2010

PhD degree in Information Science and Complex Systems, School of Science and Technology, University of Camerino, Italy.

Thesis: “Some constrained control problems with application in industrial engineering”. Advisors: Prof. Fabio Giannoni, Prof. Maria Letizia Corradini.

Master Diploma - 2005

Master degree in Mathematics, Department of Mathematics “Guido Castelnuovo”, Sapienza University of Rome, Italy.

Thesis: “Existence of solutions to elliptic problems with natural growth terms”. Advisor: Prof. Lucio Boccardo. Final mark: Summa cum laude.

Current position

March 2016-**, School of Science and Technology, University of Camerino, Italy, **Assistant Professor** of System and Control Theory

Past academic positions

August 2015-February 2016, Department of Engineering Cybernetics, Norwegian University of Science and Technology NTNU, and AMOS Centre of Excellence, Norway - **Adjunct Associate Professor and Post-doctoral fellow**

April 2014-July 2015, Department of Engineering Cybernetics, Norwegian University of Science and Technology NTNU, and AMOS Centre of Excellence, Norway - **Post-doc researcher** (ERCIM Allain Bensoussan fellowship - ABCDE project, EU-FP7 Marie Curie Actions)

April 2011-March 2014, School of Science and Technology, University of Camerino, Italy - **Post-doc researcher** (co-funding PICCHIO S.R.L.)

May 2010-October 2010, e-Motion team, INRIA Rhone-Alpes, Grenoble, France - **Post-doc researcher** (EU FP7 project “s-Fly”, grant n. 231855)

March 2008-March 2010, School Of Science and Technology, University of Camerino, Italy - **PhD student** in Control Systems

October 2007-March 2009, Department of Economics and Business, LUISS University, Rome - **Teaching assistant** in Quantitative Methods

November 2005-October 2007, Department of Mathematics "Guido Castelnuovo", Sapienza University of Rome, Italy - **PhD Student** in Differential Equations

Research topics

Systems and Control Theory:
Constrained and Robust Control, Optimization, Fault Detection, Fault Tolerant Control, Estimation and Identification, Control Allocation, Nonlinear Systems, Distributed Control of PDEs.

Control Applications:
Fault Detection/Isolation in Wind Energy Conversion Systems, Sensorless Control of Permanent Magnet Synchronous Motors, Icing Detection for Aerodynamical Systems, Population Dynamics.

Robotics:
Simultaneous Localization and Mapping (SLAM), Optimal Motion Planning with Field-of-View Constraints, Visual-servo Control, Visual/Inertial Observability.

Competences

Functional Analysis and Differential Equations:
Sobolev Spaces, Vectorial Convex Analysis and Multidimensional Calculus of Variations, Geometric Measure Theory, Elliptic and Evolution PDEs, Homogenization and Composite Materials, Gamma-convergence.

Constrained and Robust Control:
Linear Matrix Inequalities, Lyapunov Methods, Sliding-mode Control, Null Controllable Regions, Invariant Subsets, Anti-windup Schemes.

Estimation and Identification:
Unknown Input Observers, Extended Kalman Filter, Extended Information Filter, Sliding-mode Observers, Parameter Estimation using Algebraic Geometry Tools.

Control Allocation:
Pseudo-inverse Methods, Direct Allocation Methods, Control Reconfiguration, Virtual Constraints, Dynamic Allocation.

Miscellanea:
Pontryagin Maximum Principle, Descriptor Systems, Matrix Theory and Advanced Linear Algebra, Sampled-data Systems, Linear and quadratic programming

Practical and Computer Skills

Simulation and Programming:
Matlab/Simulink, Wolfram Mathematica, C, Visual Basic, LS-Dyna.

Computer Aided Design:
Altair Hypermesh, Creo Elements (ProE), AutoCAD, Adobe Illustrator.

Teaching experience

2015/2017 Teacher of Optimal Control, Master Degree Course in Mathematics, University of Camerino, Italy.

2015/2017 Teacher of Linear Algebra, Degree Course in Computer Science, University of Camerino, Italy.

2015/2016 Teacher of Linear Systems, Master Degree Course in Engineering Cybernetics, Norwegian University of Science and Technology, Norway.

2013/2014 Teacher of Control Theory, Master Degree Course in Mathematics, University of Camerino, Italy.

2012/2013 Teacher of Linear Systems, Degree Course in Computer Science, University of Camerino, Italy.

2011/2012 Teacher of Linear Algebra, Degree Course in Computer Science, University of Camerino, Italy.

2011/2012 Teacher of Functional Analysis, Master Degree Course in Mathematics, University of Camerino, Italy.

2010/2011 Teacher of Linear Algebra, Degree Course in Computer Science, University of Camerino, Italy.

2008-2010 Teaching Assistant of Analysis 2, Degree Course in Mathematics, University of Camerino, Italy.

2007-2009 Teaching Assistant of Quantitative Methods, Degree Course in Economics and Business, LUISS University, Rome, Italy.

2006/2007 Teaching Assistant of Differential Calculus, Degree Course in Aerospace Engineering, Sapienza University of Rome, Italy.

Recently graduated students

University of Camerino, Italy

2017 F. Pezzuoli, Master thesis: “Development of a Wearable Device for Sign Language Translation”.

2017 L. Aquilanti, Master thesis: “Reaction-diffusion models for population dynamics in the presence of a climate shift: asymptotic analysis and control”.

Visiting periods

February 2016: LAAS CNRS Toulouse, Reference: Prof. Luca Zaccarian. Research subject: Adaptive output allocation.

January 2015: KIOS Centre for Intelligent Systems, University of Cyprus, Nicosia, Cyprus. Reference: Prof. Marios Polycarpou. Research subject: Fault Detection and Isolation for Nonlinear Systems

May 2014: Department of Electrical Engineering, University of Porto, Portugal. Reference: Prof. Pedro Aguiar. Research subject: Fault Tolerant Control of Unmanned Vehicles

October 2013-March 2014: Department of Information Engineering, University of Rome Tor Vergata, Italy. Reference: Dr. Sergio Galeani. Research subject: Optimal Control Allocation for Weakly Redundant Plants

October 2012-November 2012: Department of Engineering Cybernetics, NTNU, Trondheim, Norway. Reference: Prof. Tor Arne Johansen. Research subject: Robust Control Allocation

March 2012: Department of Engineering, University of Pisa, Italy. Reference: Prof. Antonio Bicchi. Research subject: Optimal Paths for Nonholonomic Robots with Vision Constraints

March 2009-June 2009: INRIA Rhone-Alpes, Grenoble, France. Reference: Dr. Agostino Martinelli. Research subject: Optimal Motion Planning for Mobile Robots

Spoken languages

- Italian: native
- English: fluent
- French: fluent
- German: basic
- Norwegian bokmål: basic

Industrial collaborations

2011: Design of Algorithms for Intelligent Control Biaxial Solar Trackers, ETA S.R.L., Ascoli Piceno, Italy and PICCHIO S.R.L., Ancarano (TE), Italy.

2012-2013: Project of an Hybrid Heat/Electric City-car, PICCHIO S.R.L., Ancarano (TE), Italy and Belumbury S.P.A., Rome, Italy.

Participation in projects

2010: EU FP7 project “s-Fly”, grant n. 231855: Swarm of Micro Flying Robots.

2012: UniCAM project “SCIROCCO”, FAR2012: Strategies for Characterization, Identification and Robust Control of Wind Energy Conversion Systems.

2014: Project “EKSOSYSTEM”: a Lower Extremity Eksoskeleton System, University of Camerino, Italy, University of Berkeley, California, USA and MES S.P.A., Rome, Italy

2015: Co-writing of the project “Detection and Estimation of Icing in Aerodynamical Systems using LPV Methods”, ABEL Individual Mobility of Researcher Call (ABEL-IM-2014B), NILS Science and Sustainability Programme.

2016: National Project (PRIN) “Smart Optimized Fault Tolerant WIND turbines”, University of Camerino, University of Ancona, University of Perugia and University of Salento.

2017: Project “Data-driven predictive models for the life cycle of Li-Ion batteries”, University of Camerino and ENEA (National Agency for new technologies, energy and sustainable development)

Scientific referee

Associate Editor for the international journals:

- International Journal of Control, Automation and Systems (Springer)
- Journal of Engineering (IET)
- IEEE Control System Society Conference Editorial Board

Served as reviewer for several scientific journals:

- International Journal of Control (Taylor & Francis)
- IEEE Transactions on Automatic Control (IEEE CSS)
- Systems & Control Letters (Elsevier)
- Automatica (Elsevier)
- IEEE Transactions on Control Systems Technology (IEEE CSS)
- IEEE Transactions on Robotics (IEEE RAS)
- International Journal of Robust and Nonlinear Control (Wiley)
- International Journal of Engineering Business Management (SAGE)
- Journal of Optimization Theory and Applications (Springer)

Served as reviewer for several international conferences:

- IEEE Conf. on Decision and Control CDC (2010-2015)
- American Control Conference (2011-2016)
- European Control Conference (2013-2016)
- IEEE Conf. on Robotics and Automation ICRA (2015

Non academic work experience

October 2007-March 2008: Data Analysis and Fundraising Software Development, ASSET Fundraising S.R.L., Rome, Italy

February 2008-May 2008: Teacher of Mathematics, Physics and Informatics, High School “I. Kant”, Rome, Italy

September 2009-December 2013: Rock Climbing and Mountaineering Instructor, Italian Alpine Club

2001-2006: Mathematics Consultant for BBCA Onlus (Biotechnology and Biological Control Agency), Rome, Italy

2002-2004: Co-Administration of ERASMUS Program Lab, Department of Mathematics, Sapienza University of Rome, Italy

December 2000-July 2001: Data Entry and Database Administration, ASSET Fundraising S.R.L., Rome, Italy

Courses

2012

Introduction to the professional use of the CAD software ProE

Introduction to the professional use of the software Hyperworks for FEM analysis and MESH

2011

Workshop dedicated to inspiring the excellence in the scientific research, organized by "CRUI Foundation, Italy”

2008

PhD Course “Nonlinear Systems”, Sapienza University of Rome

PhD Course “Optimal Control”, Sapienza University of Rome

PhD Course “Switching Systems”, Sapienza University of Rome

2007

PhD Course “Calculus of Variations”, Sapienza University of Rome

PhD Course “Liouville-type Equations”, Third University of Rome

2006

PhD Course “Phase Transitions”, Sapienza University of Rome

PhD Course “Fluid Mechanics”, Sapienza University of Rome

PhD Course “Numerical Methods for PDEs”, Sapienza University of Rome

PhD Course “Stochastic Methods for PDEs”, Sapienza University of Rome

PhD Course “Elliptic Operators and Topology”, Sapienza University of Rome

PhD Course “Analytical Methods for PDEs”, Sapienza University of Rome

Schools, Meetings and Workshops

2015

Oppdal Workshop of Centre for Autonomous Marine Operations and Systems (AMOS), Oppdal, Norway

2013

3rd Scientific Day of the School of Science and Technology, University of Camerino, Italy

2012

2nd Scientific Day of the School of Science and Technology, University of Camerino, Italy

2011

Research+Innovation= Presentation of Belumbury DANY City-car, University of Camerino, Italy

2010

s-Fly project integration week and workshop, ETH Zurich, Switzerland

2009

PhD School "SIDRA" in Constrained and Robust Control, Bertinoro, Italy

Dobbiaco Summer School, ODEs with discontinuous right-hand side – Theory and Applications, Dobbiaco, Italy

2008

PhD School "SIDRA" in Nonlinear dynamical systems, Bertinoro, Italy

2007

Fourth summer school in Analysis and Applied Mathematics, Rome, Italy

Quasiconvexity, quasiregularity and rigidity of gradients, Regensburg, Germany

2006

Variational methods in material science, Pisa, Italy

Third summer school in Analysis and Applied Mathematics, Rome, Italy

International conferences talks

- 56th IEEE Conference on Decision and Control, 12-15 December 2017, Melbourne, Australia
- 55th IEEE Conference on Decision and Control, 12-14 December 2016, Las Vegas, USA
- IFAC Conf. on Control Applications in Marine Systems, 13-16 September 2016, Trondheim, Norway

- European Control Conference 2016, 29 June-1 July 2016, Aalborg, Denmark
- 54th IEEE Conference on Decision and Control, 15-18 December 2015, Osaka, Japan
- European Control Conference 2015, 15-17 July 2015, Linz, Austria
- American Control Conference 2015, 1-3 July 2015, Chicago IL, USA
- 53rd IEEE Conference on Decision and Control, 10-13 December 2014, Los Angeles CA, USA
- IFAC World Congress 2014, 25-29 August 2014, Cape Town, South Africa
- European Control Conference 2014, 24-27 June 2014, Strasbourg, France
- 52nd IEEE Conference on Decision and Control, 10-13 December 2013, Florence, Italy
- American Control Conference 2012, 27-29 June 2012, Montréal, Canada
- IFAC World Congress 2011, 28 August – 2 September 2011, Milano, Italy
- American Control Conference 2011, 29 June – 1 July 2011, San Francisco CA, USA
- Mediterranean Control Conference 2011, 20-23 June 2011, Corfu', Greece
- 49th IEEE Conference on Decision and Control, 15-17 December 2010, Atlanta GA, USA
- 8th European Workshop on Adv. Control and Diagnosis, 18-19 November 2010, Ferrara, Italy
- Conf. on Control and Fault-Tolerant Systems (Systol'10), 6-8 October 2010, Nice, France
- 48th IEEE Conference on Decision and Control, 16-18 December 2009, Shanghai, China
- European Control Conference 2009, 23-18 August 2009, Budapest, Hungary

Invited presentations

22nd February 2017, University of Trento, Italy. “Optimal path synthesis for differential-drive robots with limited field-of-view”.

4th February 2016, LAAS CNRS, Toulouse, France. “Fault-tolerant control allocation for overactuated systems: an UIO based architecture”

21st January 2015, KIOS Centre, University of Cyprus, Nicosia, Cyprus. “Fault-tolerant control allocation: application to icing detection and recovery in overactuated unmanned aerial vehicles”

23rd October 2014, CNR, Pisa, Italy. “Icing detection and protection for small unmanned aerial vehicles”

19th September 2014, Department of Electronics and Telecommunications, NTNU, Trondheim, Norway. “Icing detection for Unmanned Aerial Vehicles: Control Allocation and Fault-Tolerant Control”

21st May 2014, Department of Electrical Engineering, University of Porto, Portugal. “Input allocation and fault-tolerant control: application to icing diagnosis in UAVs”

7th May 2013, Department of Mathematics, University of Camerino, Italy. “Mathematical models for automation engineering and robotics”

19th March 2012, Department of Information Engineering, University of Rome Tor Vergata, Italy. Grasselli Symposium: “Robust control of multi-input periodic discrete-time systems with saturating actuators”

14th December 2011, Department of Mathematics, University of Camerino, Italy. “A tribute to linearity: from matrix algebra to dynamical systems stability”

Awards

2015: AuCC 2015 Best Poster Paper Award - High Commendation

List of Publications — Andrea Cristofaro

Journal papers

- M.L. Corradini, A. Cristofaro, F. Giannoni, On the Asymptotic Stabilization of Linear Unstable Systems with Bounded Controls, Far East Journal of Mathematical Science (ISSN: 0972-0871), 35, 2009, pp. 233-247.

- M.L. Corradini, A. Cristofaro, G. Orlando, Robust Stabilization on Multi Input Plants with Saturating Actuators, IEEE Transactions on Automatic Control, 55, 2010, pp. 419-425.

- M.L. Corradini, A. Cristofaro, F. Giannoni, Computation of null controllable regions for antistable linear systems subject to input saturation: an iterative approach, IET J. Control Theory and Applications, 2011, vol. 5 (5), pp. 744-749.

- M.L. Corradini, A. Cristofaro, R. Giambò, S. Pettinari, Design of robust fault detection filters for MIMO uncertain plants with quantised information, International Journal of Control, 85 (3), 2012, pp. 239-250.

- A. Cristofaro, On the existence of maximal contractive sets for multi input linear systems, ASME Journal of Dynamic Systems, Measurement and Control, 135 (3), 2013.

- M.L. Corradini, A. Cristofaro, G. Orlando, S. Pettinari, Sliding-mode control of multi input periodic systems with saturation constraints, International Journal of Control, 86 (7), 2013, pp. 1240-1247.

- M.L. Corradini, A. Cristofaro, G. Orlando, Sliding-mode control of discrete-time linear plants with input saturation: application to a twin-rotor system, International Journal of Control, 87 (8), 2014, pp. 1523-1535.

- A. Cristofaro, T.A. Johansen, Fault tolerant control allocation using unknown input observers, Automatica, 50 (7), 2014, pp. 1891-1897.

- A. Cristofaro, S. Pettinari, Fault accommodation for multi-input linear sampled-data systems, International Journal of Adaptive Control and Signal Processing, 29 (7), 2014, pp.835-854.

- P. Salaris, A. Cristofaro, L. Pallottino, A. Bicchi, Epsilon-optimal synthesis for vehicles with vertically bounded Field-of-View, IEEE Transactions on Automatic Control, 2015, 60 (5), 2015, pp. 1204-1218.

- P. Salaris, A. Cristofaro, L. Pallottino, Epsilon-optimal synthesis for nonholonomic vehicles with limited Field-of-View sensors, IEEE Transactions on Robotics, 31 (6), 2015, pp. 1404-1418.

- T.A. Johansen, T. Perez, A. Cristofaro, Ship Collision Avoidance and COLREGS Compliance Using Simulation-Based Control Behavior Selection With Predictive Hazard Assessment, IEEE Trans. on Intelligent Transportation Systems, 17 (12), 2016, pp. 3407-3422.

- A. Cristofaro, Uncertain parameter estimation for a class of nonlinear systems using a polynomial representation of outputs, J. of the Franklin Institute, 353 (17), 2016, pp. 4652-4666.

- A. Cristofaro, P. Salaris, L. Pallottino, F. Giannoni, A. Bicchi, On the minimum-time control problem for differential drive robots with bearing constraints, J. of Optimization Theory and Applications, 173(3), 2017, pp. 967-993.

- A. Cristofaro, T.A. Johansen, A.P. Aguiar, Icing Detection and Identification for Unmanned Aerial Vehicles using Nested Multiple Models, International Journal of Adaptive Control and Signal Processing, 2017

- M.L. Corradini, A. Cristofaro, Robust Detection and Reconstruction of State and Sensor Attacks for Cyber-Physical Systems, IET Control Theory and Applications, 2017

- D. Rotondo, A. Cristofaro, T.A. Johansen, F. Nejjari, V. Puig, State estimation and decoupling of unknown inputs in uncertain LPV systems using interval observers, International J. of Control, 2017

- D. Rotondo, A. Cristofaro, T.A. Johansen, Fault tolerant control of uncertain dynamical systems using interval virtual actuators, International J. of Robust and Nonlinear Control, 2017.

- A. Cristofaro, M. Polycarpou, T.A. Johansen, Fault-tolerant control allocation for overactuated nonlinear systems, Asian J. of Control, 2017.

- D. Rotondo, A. Cristofaro, T.A. Johansen, F. Nejjari, V. Puig, Diagnosis of icing and actuator faults in UAVs using LPV unknown input observers, Journal of Intelligent and Robotic Systems, 2017.

- D. Corona, A. Cristofaro. Optimality principles and decomposition of tracking controllers for weakly dual redundant systems, Optimal Control Applications & Methods, 2018.

- A. Cristofaro, S. Galeani, S. Onori, L. Zaccarian. A switched and scheduled design for model recovery anti-windup of linear plants, European Journal of Control, 2018.

- M. L. Corradini, A. Cristofaro. Nonsingular terminal sliding-mode control of nonlinear planar systems with global fixed-time stability guarantees, Automatica, 2018.

- L. Colombo, M.L. Corradini, A. Cristofaro, G. Ippoliti, G. Orlando. An embedded strategy for online identification of PMSM parameters and sensorless control, IEEE Trans. on Control Systems Technology, 2018.

Monographies

- M.L. Corradini, A. Cristofaro, F. Giannoni, G. Orlando, Control Systems with Saturating Inputs: Analysis Tools and Advanced Design, Lecture Notes in Control and Information Sciences, 2012, Springer.

Book chapters

- F. Conte, A. Cristofaro, A. Renzaglia, A. Martinelli, Cooperative Localization and SLAM Based on the Extended Information Filter, in Multi-Robot Systems: Trends and Development, 2011, pp. 149-170, InTech.

Conference papers

- M. L. Corradini, A. Cristofaro, G. Orlando, On the Robust Stabilization of Discrete-Time SISO Plants with Saturating Actuators, Proc. of the 47th IEEE Conference on Decision and Control CDC2008, Cancun, Mexico.

- M. L. Corradini, A. Cristofaro, F. Giannoni, Asymptotic Stabilization of Planar Unstable Linear Systems by a finite number of Saturating Actuators, Proceedings of European Control Conference ECC2009, Budapest, Hungary.

- M. L. Corradini, A. Cristofaro, F. Giannoni, Sharp Estimates on the Region of Attraction of Planar Linear Systems with Bounded Controls, Proc. of the 48th IEEE Conference on Decision and Control CDC2009, Shanghai, China.

- M. L. Corradini, A. Cristofaro, R. Giambò, S. Pettinari, Robust fault detection

filters for a class of MIMO uncertain sample-data systems, Proceedings of Conference on Control and Fault-tolerant Systems 2010 SYSTOL'10, Nice, France.

- A. Cristofaro, A. Martinelli, Optimal Trajectories for Multi Robot Localization, 49th IEEE Conference on Decision and Control 2010, Atlanta, GA.

- A. Cristofaro, A. Renzaglia, A. Martinelli, Distributed Information Filters for MAV Cooperative Localization, 10th International Symposium on Distributed Autonomous Robotic Systems DARS2010, Lausanne, Switzerland.

- M.L. Corradini, A. Cristofaro, R. Giambò, S. Pettinari, Design of robust fault detection filters for plants with quantized information, 8th European Workshop on Advanced Control and Diagnosis ACD2010, Ferrara, Italy.

- A. Cristofaro, A. Martinelli, 3D cooperative localization and mapping: observability analysis, Proceedings of the American Control Conference 2011, San Francisco, CA.

- M.L. Corradini, A. Cristofaro, G. Orlando, Sliding mode control of periodic discrete-time linear systems with saturating actuators and input disturbances, IFAC World Congress 2011, Milano, Italy.

- M.L. Corradini, A. Cristofaro, F. Giannoni, An iterative approach for the description of null controllable regions of discrete-time linear systems with saturating inputs, Mediterranean control conference 2011 MED2011, Corfu', Greece.

- A. Cristofaro, S. Pettinari, Stepwise fault accommodation for hybrid quantized control systems, Proc. of the Mediterranean control conference 2011 MED2011, Corfu', Greece.

- M.L. Corradini, A. Cristofaro, G. Orlando, Stabilization of discrete-time linear systems with saturating actuators using sliding modes: application to a twin-rotor system, IEEE Conf. on decision and control CDC2011, Orlando, FL.

- M.L. Corradini, A. Cristofaro, R. Giambò, S. Pettinari, A Lyapunov-based diagnosis signal for fault detection in sampled-data control systems, IEEE Conf. on decision and control CDC2011, Orlando, FL.

- A. Cristofaro, S. Pettinari, Abrupt fault accommodation for sampled-data control systems, 9th European Workshop on Advanced Control and Diagnosis ACD2011, Budapest, Hungary.

- M.L. Corradini, A. Cristofaro, S. Pettinari, Design of robust fault detection filters for linear descriptor systems using sliding mode observers, 7th IFAC

Symposium on Robust Control Design, Aalborg, Denmark, 2012.

- A. Cristofaro, S. Pettinari, Hybrid control design for fault accommodation in sampled-data systems, Proceedings of the American Control Conference 2012, Montreal, Canada
- M.L. Corradini, A. Cristofaro, S. Pettinari, Robust FDI and fault sensitivity analysis filters for continuous-time descriptor systems, IEEE Conf. on decision and control CDC2012, Maui, Hawaii.
- P. Salaris, A. Cristofaro, L. Pallottino, A. Bicchi, Shortest paths for wheeled robots with limited Field-Of-View: introducing the vertical constraint, IEEE Conf. on Decision and Control CDC2013, Florence, Italy.
- A. Cristofaro, T.A. Johansen, Fault-tolerant control allocation: an unknown input observer based approach with constrained output fault directions, IEEE Conf. on Decision and Control CDC2013, Florence, Italy.
- M.L. Corradini, A. Cristofaro, S. Pettinari, Diagnosis and accommodation of faults affecting the PMSG in variable-speed sensorless wind turbines: a deterministic approach, European Control Conference 2014, Strasbourg, France.
- M.L. Corradini, A. Cristofaro, A robust speed-tracking controller for sensorless Permanent Magnet Synchronous Motors with uncertain parameters, IFAC World Congress 2014, Cape Town, South Africa.
- A. Cristofaro, Robust tracking control for a class of perturbed and uncertain reaction-diffusion equations, IFAC World Congress 2014, Cape Town, South Africa.
- A. Cristofaro, T.A. Johansen, Fault-tolerant control allocation with actuator dynamics: finite-time control reconfiguration, IEEE Conf. on Decision and Control 2014, Los Angeles, USA.
- A. Cristofaro, P. Salaris, L. Pallottino, F. Giannoni, A. Bicchi, On time-optimal trajectories for differential-drive vehicles with Field-of-View constraints, IEEE Conf. on Decision and Control 2014, Los Angeles, USA.
- A. Cristofaro, S. Galeani, Output invisible control allocation with steady-state input optimization for weakly redundant plants, IEEE Conf. on Decision and Control 2014, Los Angeles, USA.
- A. Cristofaro, T.A. Johansen, An unknown input observer approach to icing detection for unmanned aerial vehicles with linearize longitudinal motion, American Control Conference 2015

- M.L. Corradini, A. Cristofaro, Fault-tolerant dynamic control allocation for permanent magnet synchronous motors, American Control Conference 2015

- A. Cristofaro, T.A. Johansen, P. Aguiar, Icing detection and identification for unmanned aerial vehicles: multiple model adaptive estimation, European Control Conference 2015

- T.A. Johansen, A. Cristofaro, K.L. Sørensen, J.M. Hansen, T.I. Fossen, On estimation of wind velocity, angle-of-attack and sideslip angle of small UAVs using standard sensors, IEEE Conf. on Unmanned Aerial Systems, 2015

- D. Rotondo, A. Cristofaro, V. Puig, F. Nejjari, T.A. Johansen, Icing detection in unmanned aerial vehicles with longitudinal motion using an LPV unknown input observer, IEEE Multi Conf. on Systems and Control, 2015

- M. Seron, M. M., T.A. Johansen, T. A., J. De Dona, A. Cristofaro, Detection and estimation of icing in unmanned aerial vehicles using a bank of unknown input observers. In Australian Control Conference 2015.

- A. Cristofaro, M. Polycarpou, T.A. Johansen, Fault diagnosis and fault-tolerant control allocation for a class of nonlinear systems with redundant inputs, IEEE Conf. on Decision and Control, 2015, Osaka, Japan.

- D. Corona, A. Cristofaro, Some remarks on optimal output regulation for weakly dual redundant plants, Proc. of the Mediterranean control conference 2016 MED2016, Athens, Greece.

- A. Cristofaro, Tracking control for a class of rotationally invariant evolution PDEs, European Control Conference 2016, Aalborg, Denmark.

- A. Cristofaro, T.A. Johansen, An unknown input observer based control allocation scheme for icing diagnosis and accommodation in overactuated UAVs, European Control Conference 2016, Aalborg, Denmark.

- M.L. Corradini, A. Cristofaro, S. Pettinari, A model-based robust icing detection and estimation scheme for wind turbines, European Control Conference 2016, Aalborg, Denmark.

- M.L. Corradini, A. Cristofaro, R. Giambò, F. Giannoni, S. Pettinari, Concurrent synchronization of neural networks via excitatory-only coupling with different topologies, European Control Conference 2016, Aalborg, Denmark.

- A. Wenz, T.A. Johansen, A. Cristofaro, Combining model-free and model-

based Angle of Attack estimation for small fixed-wing UAVs using a standard sensor suite, IEEE Conf. on Unmanned Aerial Systems, 2016.

- G. Ippoliti, G. Orlando, L. Colombo, M. L. Corradini, A. Cristofaro, A DSP-based robust sensorless speed control for PMSMs, IEEE Industrial Electronics Conference 2016.

- D. Rotondo, A. Cristofaro, T.A. Johansen, F. Nejjari, V. Puig, Detection of icing and actuators faults in the longitudinal dynamics of small UAVs using an LPV proportional integral unknown input Observer, Conference on Control and Fault-tolerant Systems 2016 SYSTOL'16.

- T.A. Johansen, A. Cristofaro, T. Perez, Ship Collision Avoidance Using Scenario-Based Model Predictive Control, IFAC Conference on Control Applications on Marine Systems, 2016.

- M.L. Corradini, A. Cristofaro, A nonlinear fault-tolerant thruster allocation architecture for underwater remotely operated vehicles, IFAC Conference on Control Applications on Marine Systems, 2016.

- A. Cristofaro, M. Sassano, Design of unknown input observers for nonlinear systems with full and partial information, IEEE Conf. on Decision and Control, 2016.

- A. Cristofaro, L. Zaccarian, An adaptive pseudo-inverse method for the fault-tolerant output allocation in linear observers with redundant sensors, IEEE Conf. on Decision and Control, 2016.

- D. Rotondo, V. Hassani, A. Cristofaro, A multiple model architecture for the adaptive estimation of discrete-time LPV systems, American Control Conference, 2017.

- D. Corona, A. Cristofaro, D. Rotondo, Optimizing Output Regulation for a Class of Underactuated LPV Systems, Med. Conference on Control and Applications, 2017.

- D. Rotondo, A. Cristofaro, K. Gryte, T.A. Johansen, LPV model reference control for fixed-wing UAVs, IFAC World Congress, 2017.

- D. Rotondo, A. Cristofaro, V. Hassani, T.A. Johansen, Icing diagnosis in unmanned aerial vehicles using an LPV multiple model estimator, IFAC World Congress, 2017.

- D. Corona, A. Cristofaro, M.L. Corradini, Optimal Output Regulation for Underactuated Systems with Quasiperiodic References, IFAC World Congress, 2017.

- M.L. Corradini, A. Cristofaro, A Sliding-Mode Scheme for Monitoring Malicious Attacks in Cyber-Physical Systems, IFAC World Congress, 2017.

- A. Cristofaro, C. Possieri,Nonlinear Parameter Estimation Using Polynomials and Resultants - Application to Electrical Drives, IFAC World Congress, 2017.

- A. Cristofaro, M. Sassano, The Disturbance Decoupling Problem for Hybrid Systems with State-Driven Jumps, IFAC World Congress, 2017.

- A. Cristofaro, S. Galeani, and A. Serrani, Output invisible control allocation with asymptotic optimization for nonlinear systems in normal form, IEEE Conf. on Decision and Control, 2017.

- A. Cristofaro, L. Zaccarian, Unbiased observer synthesis using dynamic output allocation for discrete-time linear plants with redundant sensors, IEEE Conf. on Decision and Control, 2017.

- M.L. Corradini, A. Cristofaro, S. Galeani. A Saturated Dynamic Input Allocation Policy for Preventing Undetectable Attacks in Cyber-Physical Systems, European Control Conference, 2018.

- A. Cristofaro, C. Possieri, M. Sassano. Linear-Quadratic Optimal Control for Hybrid Systems with State–driven Jumps, European Control Conference, 2018.

- A. Cristofaro, R. Giambò, F. Giannoni. Lyapunov Stability Results for the Parabolic p-Laplace Equation, European Control Conference, 2018.

INDICI BIBLIOMETRICI:

Scopus: 315 citazioni, H-index 9
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