

CONTACT
INFORMATIONS

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PERSONAL
INFORMATIONS

Date of Birth: 23 May 1984
 Gender: Female
 Citizenship: Italian
 Civil status: Married

CURRENT
POSITION

Post Doc in MAT/05 "Modelli matematici per la dinamica dei veicoli"
 (1/06/2012-till 06/2014), Tutor: Roberto Giambó.

EDUCATION AND
DEGREES

Ph.D. in "Information Science and Complex Systems" (30/01/2009-21/02/2012),
 School of Advanced Studies, University of Camerino, Italy.
 Thesis: "Fault Diagnosis Techniques for Linear Sampled Data Systems and a
 Class of Nonlinear Systems".
 Advisors: Prof. Maria Letizia Corradini, Prof. Roberto Giambó.

Master of Science in Mathematics and Applications (7/10/2008),
 University of Camerino, Italy.
 Mark: 110/110 cum laude.
 Thesis: "Dinamica dei modelli cosmologici con sorgente di campo scalare".
 Advisor: Prof. Roberto Giambó.

Bachelor of Science in Mathematics and Applications, (4/10/2006)
 University of Camerino, Italy.
 Mark: 110/110 cum laude.
 Thesis: "Il problema di Dirichlet per l'equazione di Laplace".
 Advisor: Prof.ssa Cristina Giannotti.

High School Diploma, (5/07/2003)
 Liceo Scientifico "Leonardo da Vinci", Civitanova Marche, Italy.
 Mark: 100/100.

SCHOLARSHIPS
AND AWARDS

10–12/2010. UNICAM grant for a period of visiting research in non eu-countries.
 2003–2007. UNICAM merit scholarship for best students of the Univ. of Camerino.
 2003–2007. UNICAM merit scholarship for the best students of Science Faculty.

LANGUAGE SKILLS

Italian: mother tongue.
 English: fluent.
 French: basic.

LANGUAGE
CERTIFICATIONS

PET, Cambridge ESOL certification. Passed on March, 2001.
 FCE, Cambridge ESOL certification. Passed with grade B on March, 2002.

TEACHING

- A.Y. 2013-2014 *Teaching assistant* for “Teoria del Controllo” at University of Camerino (9 hours of frontal lessons).
- A.Y. 2013-2014 *Professor on contract* for “Didattica della Matematica” at University of Macerata.
- A.Y. 2013-2014 *Exam committee member* for “Fondamenti della matematica”, University of Macerata.
- A.Y. 2012-2013 *Teaching assistant* for “Analisi Matematica 2” at University of Camerino (15 hours of exercises).
- A.Y. 2011-2012 *Teaching tutor* for “Analisi Matematica 2” at University of Camerino (6 hours of exercises).
- A.Y. 2011-2012 *Teaching assistant* for “Analisi Matematica 2” at University of Camerino (9 hours of exercises).
- A.Y. 2010-2011 *Exam committee member* for “Didattica della matematica” and “Fondamenti della matematica” at University of Macerata.

SOCIAL SKILLS AND COMPETENCES

- Ph.D. student representative within the School of Science and Technology Council for the academic years 2010/2011-2011/2012.
- Student representative for University classes 32 e 45/s at University of Camerino from 2005 to 2008.
- Student representative of Science and Technology Faculty at University of Camerino from 2005 to 2008.

ORGANIZATIONAL SKILLS AND COMPETENCES

- Organization of a series of talks titled “Curiosando nella scienza: pillole di ricerca” at the University of Camerino (November 2011-January 2012).

COMPUTER SKILLS AND COMPETENCES

- Good knowledge of Microsoft and Linux operative systems (Ubuntu).
- Good knowledge of C, Fortran 90, Java, MATLAB, Mathematica.
- Good knowledge of GIMP, Inkscape, IPE, Adobe Photoshop, Adobe Illustrator, Pinnacle.
- Basics of Pro/ENGINEER wildfire 4.0, HyperMesh.

SUMMER SCHOOLS, COURSES

- 2010, Oct. 15–Dec. 12, Ph.D. course on *Geometric Approach in Control Systems*. Prof. Andrea Serrani. The Ohio State University, Columbus, OH.
- 2009, July 13–18, Scuola di dottorato Sidra “Antonio Ruberti”. Bertinoro, FC, Italy.
- 2009, June 22–26, Dobbiaco summer school: ODEs with Discontinuous Right-Hand Side: Theory and Applications. Dobbiaco, BZ, Italy.
- 2009, April 1–23, Ph.D. course on *Nonlinear Control Systems*. Prof. Fabio Celani. University of Sapienza, Roma, Italy.

VISITING

Sept. 2010 - April 2011, Visiting scholar at The Ohio State University, Department of Electrical Engineering, Columbus, Ohio. Advisor: Prof. Andrea Serrani.

TALKS

- 2013 Sept. 16, Convegno Annuale dei Docenti e Ricercatori Italiani in Automatica (SIDRA 2013), Palermo, Italia.
- 2012 June 22, The 7th IFAC Symposium on Robust Control Design (ROCOND 2012), Aalborg, Denmark.
- 2011 Dec. 15, The 50th IEEE Conference on Decision and Control and European Control Conference, Orlando, FL.
- 2011 Dec. 15, The 50th IEEE Conference on Decision and Control and European Control Conference, Orlando, FL.
- 2011 Nov. 23, University of Camerino, Camerino, Italy.
- 2011 Nov. 18, European Advanced Control and Diagnosis Workshop, Budapest, Hungary.
- 2011 June 22, Mediterranean Conference on Control and Automation, Corfu, Greece.
- 2011 Jan. 11, Scuola di Scienze e Tecnologie, University of Camerino, IT.
- 2010 Oct. 27, The Ohio State University, Columbus, OH.
- 2009 Oct. 19, Advanced Control and Diagnosis Conference, Zielona Góra, PL.

JOURNAL PAPERS

1. M. L. Corradini, A. Cristofaro, R. Giambò and S. Pettinari. Design of robust fault detection filters for MIMO uncertain plants with quantized information. *International Journal of Control*, vol. 85, no. 3, pp. 239–250, March 2012.
2. S. Boria, S. Pettinari and F. Giannoni. Theoretical analysis on the collapse mechanisms of thin-walled composite tubes. *Composite Structures*, vol. 103, No. 0, pp. 43–49, September 2013.
3. M.L. Corradini, A. Cristofaro, G. Orlando, S. Pettinari. Robust control of multi-input periodic discrete-time systems with saturating. *International Journal of Control*, vol. 86, no. 7, pp. 1240-1247, June 2013.
4. S. Boria, S. Pettinari. Energy absorbed by composite conical structures in axial crushing. *Accepted by Advanced Composites Letters*, February 2013.

INTERNATIONAL CONFERENCE PAPERS

1. M. L. Corradini, G. Ippoliti, G. Orlando, S. Pettinari. Robust Control of Hybrid Plants in the Presence of Quantization Errors. *Proc. IEEE International Conference on Control and Automation*, pp.234-239, Christchurch, New Zealand, 2009.
2. M. L. Corradini, R. Giambò, S. Pettinari. Design of robust fault detection filters for plant with quantized information, *Proc. Advanced Control and Diagnosis*, Zielona Góra, Poland, 2009.
3. M. L. Corradini, A. Cristofaro, R. Giambò, S. Pettinari. Robust Fault Detection Filters for a Class of MIMO Uncertain Sampled-Data Systems. *Proc. Conference on Control and Fault-Tolerant Systems (SysTol'10)*, pp. 341-346, Nice, France, 2010.
4. M. L. Corradini, A. Cristofaro, R. Giambò, S. Pettinari. Design of robust fault detection filters for plants with quantized information. *Proc. Advanced Control and Diagnosis*, pp. 40-45, Ferrara, Italia, 2010.
5. A. Cristofaro, S. Pettinari. Stepwise fault accommodation for hybrid quantized control systems. *Proc. Mediterranean Conference on Control and Automation*, pp. 785–790, Corfu, Greece, 2011.
6. M. L. Corradini, A. Monteriù, G. Orlando and S. Pettinari. An Actuator Failure Tolerant Robust Control Approach for an Underwater Remotely Operated Vehicle. *Proc. CDC and ECC*, Orlando, Florida, 2011.

7. M.L. Corradini, A. Cristofaro, R. Giambò and S. Pettinari. A Lyapunov-based diagnosis signal for fault detection robust tracking problem of a class of sampled-data systems. *Proc. CDC and ECC*, Orlando, Florida, 2011.
8. M.L. Corradini, G. Ippoliti, G. Orlando, S. Pettinari. Speed Estimation and Fault Detection for PMSM via Quasi Sliding Modes. *Proc. IFAC World Conference*, pp.6142-6147, Milano, Italia, 2011.
9. A. Cristofaro, S. Pettinari. Abrupt Fault Accommodation for sampled-data control systems. *Proc. European Advanced Control and Diagnosis Workshop*, Budapest, Hungary, 2011.
10. A. Cristofaro, S. Pettinari. Hybrid control design for fault accommodation in sampled-data systems. *Proc. 2012 American Control Conference*, Montreal, Canada, 2012.
11. S. Pettinari, M. L. Corradini, A. Serrani. Detection of Scramjet Unstart in a Hypersonic Vehicle Model. *Proc. 2012 American Control Conference*, Montreal, Canada, 2012.
12. M. L. Corradini, A. Cristofaro, S. Pettinari. Design of Robust Fault Detection Filters for Linear Descriptor Systems Using Sliding-Mode Observers. *Proc. IFAC Symposium on Robust Control Design*, Aalborg, Denmark, 2012.
13. M. L. Corradini, A. Cristofaro, S. Pettinari. Robust FDI filters and fault sensitivity analysis in continuous-time descriptor systems. *Proc. of the 51st CDC*, Maui, Hawaii, 2012.
14. S. Boria, S. Pettinari. Mathematical and numerical approach for a crashworthy problem. *Proc. of the 5th Int. Conf. on Comp. Methods for Coupled Problems in Sc. and Eng. (COUPLED PROBLEMS 2013)*, Ibiza, Spain, 17-19 June 2013.
15. M.L. Corradini, R. Giambó, S. Pettinari. FO sliding surface for the robust control of integer-order LTI plants. *Accepted by the 19th IFAC World Congress*, Cape Town, South Africa, 24-29 August 2014.
16. M. L. Corradini, A. Cristofaro, S. Pettinari. Diagnosis and accommodation of faults affecting the PMSG in variable-speed sensorless wind turbines - A deterministic approach. *Accepted by the 13th European Control Conference (ECC)*, Strasbourg, France, 25-27 June 2014.
17. S. Pettinari, M. L. Corradini. Fault Tolerant Control Allocation for Fractional-Order Systems. *Accepted by the 13th European Control Conference (ECC)*, Strasbourg, France, 25-27 June 2014.

REVIEWER FOR

- Some International Journal like Journal of the Franklin Institute, Automatica, IEEE Transactions on Control Systems Technology.
- Several Conferences like CDC 2010-2011-2012-2013, ACC 2014, IFAC World Congress 2011-2014, SySTol 2013, IFAC NOLCOS 2010, ACD 2010.