CURRICULUM VITAE MARTA CAPILUPPI

Personal Information

Surname: Capiluppi
Name: Marta
Date of birth: 3 July 1978
Nationality: Italian
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Current Position

From January 16th 2017 I am in the Administrative staff of the University of Verona, working as support to European and international grant writing and managing, inside the Project Unit of the Research Area.

Education and Professional experiences

1997-2003	Student at Alma Mater Studiorum – University of Bologna, Faculty of Engineering, Computer Science Engineering (5 years length), Specialization: Automatics and industrial automation systems
23 July 2003	Laurea degree in Computer Science Engineering Master thesis title: Architetture di controllo fault tolerant per sistemi distribuiti (Fault Tolerant Control Architectures for Distributed Systems), Tutor: Prof. Claudio Bonivento Grading: 93/100
20 November 2003	First position in the final ranking for open PhD positions, obtaining one of the three scholarships for the PhD school in Control System Engineering and Operational Research (3 years length)
December 2003	Professional Degree as Computer Science Engineer
January 2004 – December 2006	PhD Student in Control System Engineering and Operational Research within CASY (Centre for Research in Complex Automated Systems) – DEIS (Department of Electronics, Computer Science and Systems), University of Bologna under the supervision of Prof. Claudio Bonivento
January 2006 – March 2007	Scientific guest at Automatic Control Laboratory, ETH, Zurich under the supervision of Prof. Manfred Morari
29 May 2007	PhD in Control System Engineering and Operational Research, with the title of Doctor Europeus, obtained defending the thesis titled "Fault Tolerance in Large Scale Systems: Hybrid and Distributed Approaches", supervisors: Prof. Claudio Bonivento and Prof. Manfred Morari
15 June – 15 October 2007	Research Associate at Department of Computer Science Engineering (DII), University of Siena, within the European project HYCON, for the development of

	estimation methods for hybrid systems. Supervisor: Prof. Alberto Bemporad.
18 September 2007	Research Associate at Department of Computer Science Engineering (DII), University of Siena, with the research topic "Development of state estimation methods and fault detection for hybrid and large scale systems". Supervisor: Prof. Alberto Bemporad.
18 September 2008	Research association renewed at Department of Computer Science Engineering (DII), University of Siena
1 February 2009	Research Associate at Department of Computer Science (DI), University of Verona, with the research topic "Modelling of distributed control systems via stochastic hybrid systems". Supervisor: Prof. Roberto Segala.
1 February 2010	Research association renewed at Department of Computer Science (DI), University of Verona.
1 February 2011	Research association renewed at Department of Computer Science (DI), University of Verona.
1 February 2012	Research Associate at Department of Computer Science (DI), University of Verona, with the research topic " Application of World Automata to analysis of control algorithms for distributed robotic systems". Supervisor: Prof. Paolo Fiorini.
1 February 2012	Project Manager, Coordination Action EuRoSurge - European Robotic Surgery
1 February 2013	Research association renewed at Department of Computer Science (DI), University of Verona.
1 March 2014	Research Associate at Department of Computer Science (DI), University of Verona, with the research topic "Integration of methods for reasoning and artificial learning with control of a robot for surgical applications". Supervisor: Prof. Paolo Fiorini.
1 March 2015	Research Associate at Department of Computer Science (DI), University of Verona, with the research topic "Identification and support for the preparation of European funded proposals". Supervisors: Prof. Tiziano Villa, Prof. Paolo Fiorini.
15 March 2016	Research Associate at Department of Computer Science (DI), University of Verona, with the research topic "Identification and support for the preparation of European funded proposals and management of the European Project MURAB". Supervisor: Prof. Paolo Fiorini.
19 March 2016	PRINCE2 – Foundation certification for Project Management.
15 January 2017	Administrative staff of the University of Verona, working as support to European and international grant writing and managing

17 September 2018	Permanent Administrative staff of the University of Verona, working as support to European and international grant writing and managing

Research Activities

Robotics

My current research interest is in human-robot interaction. Such field starts from the study of human cognitive capacities with the aim of designing a robot able to interact and cooperate with them, by partly replicating their behaviour and partly learning how to react to the human decisions. The study of algorithms of cognitive control, perception and sensor fusion is at the basis of such theory. Human robot interaction techniques can be used in many different applications, ranging from surgical robots, to assistive and rehabilitation robots. My interests in this field are focused on the design of methods for improving the perception of robots for therapy and diagnosis, cognitive and physical rehabilitation, assistance, education and social interaction. Moreover, my interests in robotics also extend to application on mobile robots, drones, surgical robots.

Modelling of distributed hybrid systems

One of my main research topics is the realization of formal models for the description of distributed hybrid systems. A formal model is a mathematical model of a formal language, i.e. a language with a syntax and a semantics to describe a system. An example of a formal model is given by hybrid automata. They are not sufficient to describe dynamically changing systems, reconfiguring systems and distributed and hierarchical systems. The object of my recent research is the study of a formalism able to describe these characteristics. Many applications can be modelled by such automata, e.g. vehicles formations and biological models. During the C4C project, different applications of vehicles formations (land, aerial, underwater unmanned vehicles) have been represented with an extended model of hybrid automata, which I called World Automata, representing integration between the agents and their environment.

During the coordination action EuRoSurge I developed a hybrid model for surgical robots, integrating verification and architectural properties.

Fault Tolerant Systems

Fault tolerant control systems are control systems preventing fault consequences on production and people. These control systems automatic monitor and reconfigure the system itself in order to obtain a safe and robust process. In particular I am interested in the analysis of functional and structural aspects and in their use for system diagnosis and reconfiguration. I have applied such theories to waste-to-energy plants and water management plants.

Distributed Systems

Distributed systems consist of a set of nodes connected through a communication network to achieve a global functionality. My research interests in this topic are focused on the modelling of distributed systems and in the analysis of their functional aspects to build architectures for the supervision of this kind of systems.

Discrete Event and Hybrid Systems

I am interested in modelling and fault tolerant control of discrete event systems, i.e. systems whose state space is discrete (a finite/infinite cardinality set) and whose dynamic is event driven. I am also interested in fault detection and system identification issues for hybrid systems, i.e. systems where discrete and continuous dynamics interacts.

Decentralised State Estimation

I worked on the application of the state estimation methods presented in literature to spatially distributed (i.e. large scale) systems. This leads to the development of decentralised estimation procedures ended to decentralised control of the above cited systems.

Involvement in European projects

From the beginning of the Master thesis until March 2005 (end of project) I participated to the European Project IFATIS (Intelligent Fault Tolerant Control for Integrated Systems). In this framework I spent one week at the Centre de Recherche en Automatique de Nancy (CRAN), France, to test and implement on the real plant the theoretical and simulation results obtained by the research group of Bologna for the project. This work and the participation to the project lead to the publication of some free distribution deliverables and reports, together with articles in international conferences.

From June 2007 I am a member of the HYCON network (http://www.ist-hycon.org/), to which I contributed in the preparation of some final deliverables for the connected European project.

From September to December 2008 I collaborated to European Project WIDE – Decentralized and Wireless Control of Large-Scale Systems (http://www.wide.dii.unisi.it/), with initial documents and statement of research.

From February 2009 until the end of the project I collaborated to the European Project C4C – Coordination for Control of distributed systems (http://www.c4c-project.eu/): I took part to periodical meetings and related on my reasearch activity in the project, I was in the organization of the doctoral school internal to C4C (and the related periodical meeting) in October 2009. I took part to the final review meeting, in July 2011, with a presentation of Work Package 9, in which I was involved.

From October 2001 to September 2013 I have been Project Manager of the European Coordination Action EuRoSurge - European Robotic Surgery (http://www.eurosurge.eu/), in which I helped the coordinator Prof. Paolo Fiorini in managing and organising the project. The aim of EuRoSurge was the creation of a framework for robotic surgery. During my activity for the project, besides the technical achievements, I organised the kick-off meeting and project meetings, different workshops and contributed to deliverables, managing deadlines.

From 2014 I contribute to the preparation of project proposals for the Department of Computer Science, University of Verona, answering to Horizon 2020 calls and other European, international and national funding programs. Among the submitted proposal, the following projects have been funded:

MURAB – MRI and Ultrasound Robotic Assisted Biopsy (http://www.murabproject.eu/) started in January 2016. The project is coordinated by the University of Twente, I have been leader of the Dissemination Work Package and I managed the activities of the group of Verona in the work package related to Imaging and the integration with the other partners, until January 2017.

 ARS – Autonomous Robotic Surgery (https://cordis.europa.eu/project/rcn/211404_it.html) funded under the ERC 2016 Advanced Grant call, Started in October 2017. The PI is Prof. Paolo Fiorini and the project is carried on at the Department of Computer Science in the University of Verona. I collaborated to the proposal writing, ethical assessment, preparation of the grant documents, definition of dissemination and communication measures, preparation of the kick off workshop which took place in Verona in October (http://metropolis.scienze.univr.it/altair/events/workshop-roadmap-to-autonomous-robotic-surgery/).

SARAS - Smart Autonomous Robotic Assistant Surgeon, started in January 2018. I collaborated to the proposal writing, ethical assessment, preparation of the grant documents, definition of dissemination and communication measures, preparation of the kick off meeting, preparation of the initial management documents. I help the project manager and the project coordinator.

Computer Engineering for Industry 4.0 – Department of Excellence Project 2017. The project has been funded by the Italian Ministry of Education to award excellent departments: the Department of Computer Science of the University of Verona has been awarded 8 million euros for 5 years to design a new concept of education towards Industry 4.0. I collaborated to the project writing, by analyzing the local industry of the Triveneto region, defining technical skills needed for the new competences of the department, and defining technical objectives.

Scientific collaborations
- Reviewer for scientific conferences and journals at international level.
- Evaluator and reviewer for European Projects (FET, Robotics in H2020).
- Preparation of European, national, regional project proposals. Among others:
  - I wrote a proposal for a Marie Curie ITN on robotic surgery which was positively evaluated
  - a FET proposal on robotic assistance to Asperger children which was positively evaluated
  - a regional proposal for an innovation start-up related to technological assistance to elderly people, which was funded by the Region of Veneto
  - I collaborated to the preparation of a number of H2020 proposals on robotic surgery, an INTERREG proposal and other regional and national proposals.
- Chair and co-chair at international conferences.
- Component of Program Committee for the annual Workshop CRAS: Joint Workshop on New Technologies for Computer/Robot Assisted Surgery (https://www.cras-eu.org/).
- Component of Topic Groups: Healthcare, Education, Socially Intelligent Robotics and Societal Applications of the euRobotics AISBL. https://eu-robotics.net/index.html
- Organiser of schools, workshops and conferences at international level, such as:
  - 3rd Joint Workshop on Computer/Robot Assisted Surgey
  - Workshop on Advanced Technologies For Healthcare Robotics - http://metropolis.sci.univr.it/altair/athrworkshop/
  - 17th Euromicro Conference on Digital Systems Design and 40th Euromicro Conference on Software Engineering and Advanced Applications - http://esd.scienze.univr.it/dsd-seaa-2014/
  - 4th Joint Workshop on Computer/Robot Assisted Surgey
  - Workshop on Interdisciplinary Methods for Therapeutical and Diagnostic Human Robot Interaction, European Robotics Forum 2016, 21-23 March, Ljubljana, Slovenia
  - Workshop on Image Guided Robotic Surgery and Interventions, European Robotics Forum 2016, 21-23 March, Ljubljana, Slovenia
  - 1st Biannual Summer School on Control of Surgical Robots (COSUR 2016), 5-9 September 2016, Verona, Italy
  - 6th Joint Workshop on New Technologies for Computer/Robot Assisted Surgery, September 12-14, 2016, Pisa.
  - Workshop on Robotic surgery in the European researcher community, European Robotics Forum 2017, 22-24 March 2017, Edinburgh, UK.
  - Workshop: Roadmap to autonomous robotic surgery, 30-31 October 2017, Verona, Italy

Teaching activity

- Tutor for the class of Automatic Control LA for the Corso di Laurea in Ingegneria Informatica (2004/05), Università di Bologna.
- Tutor for the class of Automatic Control LB for the Corso di Laurea in Ingegneria Informatica (2004/05), Università di Bologna.
- Teaching assistant in the class of Digital Control Systems (2004/05), Università di Bologna.
- Tutor for the class of Automatic Control LA for the Corso di Laurea in Ingegneria Elettronica (2005/06), Università di Bologna.
- Tutor for the class of Digital Control, Facoltà di Ingegneria, Università di Siena (a.a. 2007/08).
- Professor for the class of Computer Science, Corso di Laurea in Biotecnologie, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università di Verona (2010/11).
- Professor for the class of Computer Science, Corso di Laurea in Biotecnologie, Facoltà di Scienze Matematiche, Fisiche e Naturali, Università di Verona (2012/13).
- Professor for the class Laboratory for the design of embedded systems, Corso di Laurea in Informatica, Università di Verona (2014/15).
- Teacher for the "Basic course in European Projects writing", 23 and 26 May 2016, Sede dell'Ordine degli Ingegneri di Verona.
- Co-supervisor for a number of graduating students (tesi triennali/specialistiche)
- Tutor for Altair lab of stages for graduating students.
- Tutor for Altair lab of stages for high-school students.
- Teacher for the class in Grant Writing and European Proposals, 16 and 22 November 2016, Doctoral school in Natural Science and Engineering, University of Verona.

Participation to Schools and Courses Post-lauream

October 2003	"Doctorate school on Lyapunov Techniques for Control of Dynamical Systems (Part I)" - Prof. Blanchini - Politecnico di Milano, Italy.
March/April 2004	"Doctorate School on Nonlinear Control" - Prof. Alberto Isidori, Ing. Lorenzo Marconi - CASY-DEIS - Facoltà di Ingegneria - Università di Bologna, Italy.
April 2004	"Introduzione ai problemi di ottimizzazione combinatoria" (Combinatorial Optimization course) - Prof. Paolo Toth, Prof. Silvano Martello - DEIS - Facoltà di Ingegneria - Università di Bologna, Italy.
May 2004	"Struttura dei modelli multivariabili e loro realizzazione; modelli ad errore nelle variabili e schemi di stima" (System Identification course) - Prof. Roberto Guidorzi, Prof. Umberto Soverini, Ing. Roberto Diversi - DEIS - Facoltà di Ingegneria - Università di Bologna, Italy.
May 2004	"Port Hamiltonian systems. Modelling and Control of Non Linear Systems" - Prof. Claudio Melchiorri, Dr. Alessandro Macchelli - CASY-DEIS - Facoltà di Ingegneria - Università di Bologna, Italy.
May/June 2004	"Modelling and Control of Discrete Event Systems" - Prof. Stéphane Lafortune (EECS - University of Michigan), Dr. Andrea Paoli - CASY-DEIS - Facoltà di Ingegneria - Università di Bologna, Italy.

June 2004	"Introduzione all'approccio geometrico" (<u>Geometric approach course</u>) - Prof. Giovanni Marro - DEIS - Facoltà di Ingegneria - Università di Bologna, Italy.
July 2004	<u>National PhD school CIRA 2004</u>: Corso "Modellistica e Controllo di reti di trasporto e di telecomunicazione" (<u>Transportation and Communication Networks Control and Modelling course</u>) - Centro Interuniversitario per le Ricerche in Automatica (CIRA) - Bertinoro (FO), Italy.
July 2004	<u>National PhD school CIRA 2004</u>: Corso "Diagnostica e Controllo tollerante ai guasti di sistemi dinamici" (<u>Diagnosis and Fault Tolerant Control of Dynamic Systems course</u>) - Centro Interuniversitario per le Ricerche in Automatica (CIRA) - Bertinoro (FO), Italy.
February 2005	"I percorsi di recupero energetico dei rifiuti a valle della raccolta differenziata" (<u>Waste Recovery Systems and New Technologies school</u>) - Politecnico di Milano, Italy.
March 2005	"<u>Randomized Algorithms for Analysis and Control of Uncertain Systems</u>" - Prof. Roberto Tempo - Escuela Superior de Ingenieros, Universidad de Sevilla, Spain.
July 2005	<u>National PhD school CIRA 2005</u>: Corso "Reti Autoorganizzanti, Controllo e Sincronizzazione in Fenomeni Emergenti da Dinamiche Nonlineari" (<u>Chaotic and Nonlinear Systems course</u>) - Centro Interuniversitario per le Ricerche in Automatica (CIRA) - Bertinoro (FO), Italy.
July 2005	<u>First HYCON PhD School on Hybrid Systems</u>, Siena, Italy.
July 2007	<u>Second HYCON PhD School on Hybrid Systems</u>, Siena, Italy.
26 November 2013	Course on "Horizon 2020: the new research and innovation framework" - APRE (Agenzia per la Promozione della Ricerca Europea) - Università degli Studi di Verona, Italia.
27-31 May 2014	Master course on European projects writing 2014-2020 - Eurogiovani - Bologna, Italia.
18 May 2015	Course "Horizon2020: proposal submitted 2014 and evaluation" - CReMPE - Azienda Ospedaliera Universitaria Integrata Verona, Italia.
March 2016	PRINCE2 – Foundation course with final examination and certification.
17 November 2016	Course on "Business plan in Horizon 2020" - APRE (Agenzia per la Promozione della Ricerca Europea) - Università degli Studi di Verona, Italia
20 June 2017	Seminario privacy e sicurezza informatica, Università di Verona.
28 September 2017	Seminario sulla valutazione, Università di Verona.
27-28 November 2018	UGOV-CO – Gestione contabile avanzata. Cineca. Università di Verona

Personal participation to conferences

<u>International Conferences</u>
- ACD Workshop 2004, November 2004, Karlsruhe, Germany
- 16th IFAC World Congress, July 2005, Prague, Czech Republic
- ECC-CDC 2005, December 2005, Seville, Spain
- HSCC'07, April 2007, Pisa, Italy
- European Robotics Forum 2012, 5-7 March, Odense, Denmark
- ADHS 12, Eindhoven, The Netherlands, June 6-8, 2012
- GandALF 2012, 6-8 September, Naples, Italy

- 3rd Workshop on Hybrid Autonomous Systems (HAS), 17 March 2013, Rome, Italy
- The Hamlyn Symposium of Medical Robotics 2013, 22-25 June, London, UK
- ECC 2013, 17-19 July, Zurich, Switzerland
- CRAS 2013, 11-13 September, Verona, Italia
- SysTol 2013, 9-11 October, Nice, France
- European Robotics Forum 2014, 12-14 March 2014, Rovereto, Italy
- The Hamlyn Symposium of Medical Robotics 2014, 12-15 July, London, UK
- CRAS 2014, 14-15 October, Genova, Italia
- The Hamlyn Symposium of Medical Robotics 2015, 20-23 June, London, UK
- European Robotics Forum 2016, 21-23 March 2016, Ljubljana, Slovenia
- European Robotics Forum 2017, 22-24 March 2017, Edinburgh, UK
- European Robotics Forum 2018, 13-15 March 2018, Tampere, Finland

National Conferences
- Convegno nazionale CIRA 2003, September 2003, Modena, Italia
- Convegno nazionale CIRA 2004, September 2004, Villasimius, Italia
- Convegno nazionale CIRA 2005, September 2005, Tropea, Italia
- Convegno nazionale CIRA 2006, September 2006, Milano, Italia
- Convegno nazionale SIDRA 2007, September 2007, Genova, Italia
- Convegno nazionale SIDRA 2009, September 2009, Siracusa, Italia

Seminars

- "A design approach to Fault Tolerant Control systems", CASY Research Surveys, 4 April 2005, Bologna, Italy.
- "A Functional Approach to Fault Tolerant Control Architectures for Distributed Systems", Automatic Control Laboratory, ETH Zurich, 26 October 2005.
- "Fault Tolerance in Large Scale Systems: New Issues and Distributed Approaches", ATP Bochum, Germany, 23 January 2007.
- "From Distributed to Hybrid Systems: open problems on large scale", Università di Siena, 23 April 2007.
- "New Issues on Fault Tolerance for Distributed and Hybrid Systems", CASY Research Surveys, 15 May 2007, Bologna, Italia.
- "Open issues in Modelling and Control of Distributed Systems", Department of Computer Science, Verona, 14 October 2008.
- Presenting Horizon 2020 calls in ICT for 2018-2019, University of Verona, 9 November 2017.
- Presenting Horizon 2020 calls in Energy and Environment, University of Verona, 23 November 2017.

Languages

Mother tongue: **Italian**

Other languages:

Self-assessment	**Understanding**		**Speaking**		**Writing**
European level [(*)]	Listening	Reading	Spoken interaction	Spoken production	

French (**)	Proficient user (C1)	Proficient user (C1)	Proficient user (C1)	Proficient user (C1)	Proficient user (C1)
English	Proficient user (C2)	Proficient user (C2)	Proficient user (C2)	Proficient user (C2)	Proficient user (C2)
German	Independent user (B1)	Independent user (B1)	Independent user (B1)	Independent user (B1)	Basic user (A1)

(*)Common European Framework of Reference (CEF) level

(**) Diplôme Approfondi de Langue Française C1

Prizes

- In 2001 I was one of the winners of "Wireless Innovation" prize by TIM (Italian Society for mobile phones): the prize was addressed to university students and asked to present a project for a new idea on the use of mobile phones.
- In 2006 I obtained a scholarship from the Marco Polo Program of the University of Bologna to partly fund my research staying at ETH Zurich.

Publications

<u>International Conferences proceedings</u>
- C. Bonivento, M. Capiluppi, L. Marconi, A. Paoli, "Distributed fault tolerant control of a two-tanks system". In proceedings of ACD Workshop 2004.
- C. Bonivento, M. Capiluppi, L. Marconi, A. Paoli, "An integrated design approach to multilevel Fault Tolerant Control of distributed systems". In proceedings of ACD Workshop 2004.
- C. Bonivento, M. Capiluppi, L. Marconi, A. Paoli, "An integrated design approach to multilevel Fault Tolerant Control of distributed systems". In proceedings of 16th IFAC World Congress, 2005.
- M. Capiluppi, A. Paoli, "Hierarchical design of distributed Fault Tolerant Control systems". In proceedings of ISIC-MED 2005.
- M. Capiluppi, A. Paoli, "Distributed fault tolerant control of the two-tanks system benchmark". In proceedings of ECC-CDC 2005.
- M. Capiluppi. Functional analysis of distributed systems using structural graphs. Poster session, Special CASY Workshop on "Advances in Control Theory and Applications", 2006.
- M. Capiluppi, M. Staroswiecki. From structural to functional models of complex systems. In proceedings of Safeprocess 2006.
- C. Bonivento, M. Capiluppi, L. Marconi, A. Paoli, C. Rossi. Reliability and Safety Evaluation for Fault Diagnosis in Distributed Systems. In proceedings of Safeprocess 2006.
- M. Capiluppi, M. Morari. Networks of Hybrid Systems: Connections Faults Modelling and Detection. In Proceedings of 10th International Conference on Hybrid Systems: Computation and Control, 2007.
- D. Bresolin, M. Capiluppi. A Game-Theoretic approach to Fault Diagnosis of Hybrid Systems. In Proceedings GandALF 2011, EPTCS 54, 2011, pp. 237-249.
- N. E. Marinica, M. Capiluppi, J. Rogge, R. Segala, R. K. Boel. Distributed Collision Avoidance for Autonomous Vehicles: World Automata Representation. 4th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS 12), Eindhoven, The Netherlands, June 6-8, 2012.
- D. Bresolin, M. Capiluppi. Fault Diagnosis of Hybrid Systems: an Onboard Camera Model. Proceedings of the 8th IFAC Symposium on Fault Detection, Supervision and Safety of Technical Processes (Safeprocess 2012), Mexico City, Mexico, August 29-31, 2012.
- M. Capiluppi, R. Segala. Modelling Implicit Communication in Multi-Agent Systems with Hybrid Input/Output Automata. Proceedings of the Third International Symposium on Games, Automata, Logics and Formal Verification (GandALF 2012), Naples, Italy - September 6th-8th, 2012, EPTCS 96, 2012, pp. 1-14.
- M. Capiluppi, R. Segala. World Automata: a compositional approach to model implicit communication in hierarchical Hybrid Systems. In Proceedings of 3rd Workshop on Hybrid Autonomous Systems (HAS), 17 March 2013, Roma, Italia, EPTCS 2013.
- M. Capiluppi, L. Schreiter, P.Fiorini, J. Raczkowsky and H. Woern. A Fault Analysis Procedure for Surgical Robotic Systems. In Proceedings of The Hamlyn Symposium of Medical Robotics 2013, 22-25 June, London, UK.
- M. Capiluppi, L. Schreiter, P. Fiorini, J. Raczkowsky, H. Woern. Modeling and Verification of a Robotic Surgical System using Hybrid Input/Output Automata. In Proceedings European Control Conference (ECC) 2013, 17-19 July, Zurich, Switzerland.

- E. De Momi, R. Perrone, L. Schreiter, J. Raczkowsky, F. Boriero, M. Capiluppi, P. Fiorini. EuRoSurge Workflow: From ontology to surgical task execution. In proceedings of the 3rd Joint Workshop on New Technologies for Computer/Robot Assisted Surgery (CRAS), 11-13 September 2013, Verona, Italia.
- D. Bresolin, M. Capiluppi. A framework for Fault Diagnosis of Hybrid Systems based on Predicate Abstractions. In Proceedings of the 2nd International Conference on Control and Fault-Tolerant Systems (SysTol), 9-11 October 2013, Nice, France.
- L. Schreiter, D. Bresolin, M. Capiluppi, J. Raczkowsky, P. Fiorini, H. Woern. Application of Contract-based verification techniques for Hybrid Automata to Surgical Robotic Systems. In Proceedings of the 13th European Control Conference (ECC), 24-27 June 2014, Strasbourg, France.
- R. Perrone, F. Nessi, E. De Momi, F. Boriero, M. Capiluppi, P. Fiorini, G. Ferrigno. Ontology-based modular architecture for surgical autonomous robots. In Proceedings of The Hamlyn Symposium of Medical Robotics 2014, 13-14 July 2014, London, UK.
- F. Boriero, M. Capiluppi, R. Muradore, P. Fiorini. Task Ontology Validation in Surgical Robotics. In proceedings of 4th Joint Workshop on New Technologies for Computer/Robot Assisted Surgery (CRAS), 14-15 October 2014, Genova, Italia.
- C. Tadiello, G. De Rossi, M. Capiluppi, R. Muradore, P. Fiorini. Teaching Physical Human-Robot Interaction to Computer Science Undergraduate Students. In proceedings of the 15th European Control Conference (ECC), Aalborg, Denmark, June 29 - July 1, 2016.
- F. Visentin, R. Muradore, M. Capiluppi, K, Suzuki, P. Fiorini. A Smart Skin Based Measurement System for Abnormality Identification in Soft Tissue Palpation. In Proceedings of The Hamlyn Symposium of Medical Robotics 2016, 25-28 June 2016, London, UK.
- F. Visentin, M. Capiluppi, K. Suzuki, P. Fiorini. Deformation Detection and Tracking on Continuous and Deformable Medical Tools. In Proceedings of The Hamlyn Symposium of Medical Robotics 2016, 25-28 June 2016, London, UK.
- M. De Piccoli, M. Capiluppi, P. Fiorini. A Shape similarity framework for brain fibers classification based on Frénet Frame. 6th Joint Workshop on New Technologies for Computer/Robot Assisted Surgery, September 12-14, 2016, Pisa, Italia.

Journal Papers
- Davide Bresolin, Marta Capiluppi. A Game-Theoretic approach to Fault Diagnosis and Identification of Hybrid Systems. Theoretical Computer Science, Volume 493, 1 July 2013, Pages 15-29, ISSN 0304-3975, http://dx.doi.org/10.1016/j.tcs.2012.07.031.

Book Chapters
- Marta Capiluppi, Roberto Segala. Modeling Objects Moving in a Complex Environment with World Automata. In "Coordination Control of Distributed Systems", Editors: van Schuppen, Jan H., Villa, Tiziano. Lecture Notes in Control and Information Sciences, Volume 456, 2015-01-01, Pages 367-374, Springer International Publishing, ISBN 978-3-319-10406-5, http://dx.doi.org/10.1007/978-3-319-10407-2_42.

National Conferences proceedings
- M. Capiluppi, A. Paoli, "Controllo fault tolerant distribuito del sistema 2-tanks", Convegno nazionale CIRA 2004.
- M. Capiluppi, "Aspetti strutturali e funzionali nel controllo fault tolerant", Convegno nazionale CIRA 2005.

- M. Capiluppi, M. Morari. Fault Detection in Hybrid Systems. Poster session, Convegno CIRA 2006.
- M. Capiluppi, "The C4C Project: modeling and control for coordination of distributed systems", Convegno nazionale SIDRA 2009.

Some European Project deliverables
- C. Bonivento, M. Capiluppi, L. Marconi, A. Paoli, "System analysis and decomposition methods", IFATIS deliverable D6-3, 2003.
- M. Capiluppi, L. Marconi, A. Paoli, "Diagnosis and reconfiguration strategy for the 2-tanks pilot plant", IFATIS internal report, 2004.
- C. Bonivento, M. Capiluppi, L. Marconi, A. Paoli, "Report on the integrated design approach for the multilevel FTC system", IFATIS deliverable D6-4, 2004.
- C. Bonivento, M. Capiluppi, L. Marconi, A Paoli, "Report on WP6", IFATIS Internal report, 2005.
- C. Bonivento, M. Capiluppi, L. Marconi, A Paoli, "WP6 Final Report", IFATIS Internal report, 2005.
- Christophoros (Chris) Hadjicostis, D.A. (Bert) van Beek, Marta Capiluppi, Maria Halkidi, George Iosifidis, Iordanis Koutsopoulos, Jasen Markovski, J. (Koos) E. Rooda, Roberto Segala, Leandros Tassiulas, C4C Deliverable D-WP9-2, 15th May 2010.
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