

Curriculum Vitae

MARIA PIA FANTI

Professore Ordinario, Responsabile del Laboratorio di Automazione e Controllo presso il Dipartimento di Ingegneria Elettrica e dell'Informazione, Politecnico di Bari (Italia)

IEEE fellow for contributions to modeling and control of discrete event systems

GENERAL CHAIR della conferenza internazionale IEEE International Conference on Systems, Man, and Cybernetics, Bari, 06 - 09 ottobre 2019.

Tema della conferenza: Industry 4.0.

POSIZIONI

Professore ordinario, Politecnico di Bari, Italia (da aprile 2012)

Professore associato, Politecnico di Bari, Italia (novembre 1998- aprile 2012)

Ricercatore, Politecnico di Bari, Italia (maggio 1990 - novembre 1998)

Assistente Ricercatore, Laboratorio di Automazione e Controllo, Politecnico di Bari, Italia (ottobre 1983)

Laurea in Ingegneria Elettronica, Università di Pisa, Pisa, 28 marzo 1983.

AREE DI RICERCA PRINCIPALI

Sistemi di automazione e controllo

Questa attività è iniziata nel 1983 durante il lavoro di ricerca presso il laboratorio di automazione e controllo. Vengono affrontati diversi problemi di controllo e modellazione relativi a sistemi di produzione, sistemi di veicoli guidati, sistemi di stoccaggio e recupero automatizzati, reti ferroviarie, reti di traffico.

Reti di Petri

Le reti di Petri sono il quadro principale utilizzato dal prof. Fanti per problemi di controllo e modellazione. Questo tema di ricerca è stato sviluppato in collaborazione con altri ricercatori italiani e mondiali.

Ricerca operativa e scienze gestionali

Nel corso degli ultimi 15 anni sono stati impiegati strumenti di ricerca operativa e sistemi di supporto decisionale per la gestione di sistemi reali: sistemi logistici, catene di fornitura, sistemi di trasporto intermodale, sistemi di trasporto intelligenti.

Consenso e ottimizzazione distribuita

Questa nuova area di ricerca è iniziata nel 2010, due studenti di dottorato hanno lavorato su questi argomenti.

PUBLICATIONS

281 papers: 85 journal papers, 11 capitoli di libri e 183 lavori presentati a conferenze internazionali.

Maria Pia Fanti è autrice di un libro per scopi didattici in italiano e curatore di un libro.

Indicatori bibliometrici:

H-index Scopus 25, citations 2537

H-index google Scholar 32, citations 4149

Progetti europei

- EU Adriatic-Ionian Programme INTERREG V-B “FUTURE 4.0 ManuFactUring educaTion and training governance model for IndUstry 4.0 in the Adriatic-Ionian aREa”, 2018-2019.
- EU H2020 “ELVITEN, Electrified L-category Vehicles Integrated into Transport and Electricity Networks”, 2017-2020.
- EU H2020 “AEOLIX, Architecture for EurOpean Logistics Information eXchange”, 2016-2019.
- EU H2020 “optiTruck, optimal fuel consumption with Predictive PowerTrain control and calibration for intelligent Truck”, 2016-2019.

- EU H2020 “NEMO, Hyper-Network for electroMobility”, 2016-2019.
- EU CIP-ICT-PSP-2013-7, COoperative loGISTICS for sustainable mobility of goods- CO-GISTICS. Jan 2014- June 2017.

Progetti nazionali:

- Smart Cities and Communities and Social Innovation Pilot, “Applications post Directive 2010/65 in Italian port realities of the Suite MIELE to support the Authority to optimize the interOperability in the intermodAlity of city-port flows- ASMARA” 2014-2017.
- PON 2007-2013 -“RES NOVAE - Reti, Edifici Strade: Nuovi Obiettivi Virtuosi per l’Ambiente e l’Energia” Regioni Obiettivo Convergenza Campania, Puglia, Calabria, Sicilia – Asse II, 2013-2015.
- PON “Mechatronic innovative safety systems (wired and wireless) for railway, aerospace and robotic applications (MASSIME)”, 2013-2015
- PON “LAMRECOR - Logistica Avanzata per la Mobilità di Persone e Merci: Modelli Matematici e Sperimentazioni per Nuovi Protocolli di Recapito della Corrispondenza”, 2013-2015.
- PRIN 2007 prot. 2007ZMVK5T “*Decision models for design and management of logistic networks characterized by high interoperability and information integration*”, September 22, 2007, September 22, 2000.
- PRIN 2005 prot. 2005092439 “*Analysis, optimization, and coordination of logistic and production systems*” September 2005, September 2007.
- “Medical applications for the next future (NEXMEDIA).” 2012-2014.
- “*Modelling and control of logistic systems characterized by high information integration*”, September 2008-September 2009, “Fondazione Caripuglia”.

Seminari a livello internazionale:

Lecture at the RPI Troy, USA, September 9, 1999, “Comparing Digraph and Petri Net Approaches to deadlock Avoidance in FMS”.

Lecture at the School of Electro-Mechanical Engineering, Xidian University, Xi’an, China, June 25, 2008: “Deadlock problems solved by graph theoretic approaches”

Lecture at the Fourth Spring School on ICT, economical and organizational issues for e-health integration in the enlarged Europe, Capo d’Istria, Slovenia, June 26-29, 2008 “Modelling by Petri nets: Basic concepts and applications to the hospital management”

Plenary speech at the 6th International Conference on Informatics in Control, Automation and Robotics, Milan, July 2-4, 2009: “Impact of the ICT on the management and performance of Intelligent Transportation Systems”.

Plenary speech at the IEEE SOSE 2012 7th International Conference on Systems of Systems, Genoa July 16-19 2012: “New Consensus Protocols for Agent Networks with Discrete Time Dynamics and Distributed Task Assignment”

Lecture “Modelling, simulation and control by discrete event system approaches: research projects and application fields” Automated Production Research Laboratory, Ecole Normale Superieure de Cachan, 16 November 2012.

Lecture “Fault Detection by Labeled Petri Nets in Centralized and Distributed Approaches” presso la School of Electro-Mechanical Engineering, Xidian University, Xi’an, China, November 21, 2014.

Lecture “Quantized Consensus Algorithm for Distributed Task Assignment: Results and Applications” presso la School of Electro-Mechanical Engineering, Xidian University, Xi’an, China, November 20, 2014.

Lecture “Fault Detection by Labeled Petri Nets in Centralized and Distributed Approaches” Automated Production Research Laboratory, Ecole Normale Superieure de Cachan, December 3, 2015.

Lecture “Consensus Algorithms and Distributed Optimization” Automated Production Research Laboratory, Novi Sad (Serbia), March 15, 2017.

Premi

IBM Theses Award, 1984

2008 IEEE SMC Most Active Technical Committee Award of the SMC Society, as the chair of the TC on Discrete Event Systems.

2008 IEEE SMC Best Associate Editor Award for the “Outstanding contributions as Associate Editor of the IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans”.

ATTIVITÀ EDITORIALE IN RIVISTE INTERNAZIONALI

- 2013 – oggi *Editor* of the “IEEE Transactions on Automation Science and Engineering”.
- present *Associate editor* of the “IEEE Transactions on Systems, Man and Cybernetics: Systems”.

- 2004 - 2015 *Associate editor* of the “IEEE Transactions on Systems, Man and Cybernetics: Part A. Systems and Humans
- 2005 – 2012 *Associate editor* of the “IEEE Transactions on Automation Science and Engineering”.
- 2004 *Guest editor* of the "Special Issue on Deadlock Resolution in Computer Integrated Systems" IEEE Transactions on Systems, Man and Cybernetics: Part A. Systems and Humans, vol. 14, no. 1, pp. 80-92, January 2004.
- *Editor* with M. Zhou of the book “*Deadlock Resolution in Computer-Integrated Systems*”, Marcel Dekker Inc., New York, NY 2004.
- 2007 – 2013 *Associate editor* of the Int. J. “Enterprise Information Systems” Taylor & Francis Group.
- 2011 *Editor* of the special issue on Health Care Management and Optimization. IEEE Transactions on Systems, Man and Cybernetics: Part A.
- 2011 *Editor* of special issue “Advances in Discrete Event Systems for Automation” for the IEEE Transactions On Automation Science And Engineering.
- *Associate editor* of the Int. J. “The Mediterranean Journal of Measurement and Control”
- Member of the editorial board of “*International Journal of Automation and Control*” (IJAAC).

ORGANIZZAZIONE DI CONFERENZE INTERNAZIONALI

1. General Chair of the 2nd IFAC Workshop on Dependable Control of Discrete Bari (Italy), 2009.
2. Co-Chair del THE THIRD INTERNATIONAL WORKSHOP ON INTELLIGENT VEHICLE, 2009.
3. Program Co-Chair of the 2009 IEEE Conference on Automation Science and Engineering, Bangalore, India.
4. Program Co-Chair of the 2009 IEEE Conference on System, Man, and Cybernetics, 2009.
5. General Chair of the IEEE Workshop on Health Care Management, 2010.
6. General Chair of the 2011 IEEE Conference on Automation Science and Engineering.
7. Program co-chair of Codit'16, Control, Decision, and Information technologies.
8. General Chair of SOLI 2017 IEEE International Conference on Service Operations and Logistics, and Informatics.
9. Program Co-Chair IEEE ICNSC 2017
10. Program Co-Chair, CoDIT'17
11. Member of the Steering committee of CASE 2017, 2018
12. Co-Chair CoDIT'18, 5th 2018 International Conference on Control, Decision and Information Technologies.

MEMBRO DI COMITATI TECNICI

- Chair of the IEEE Italy Section Chapter of Control System Society
- Founder and Chair of the IEEE Italy Section – Systems, Man, and Cybernetics Society Chapter
- Co-chair of the *Technical committee* on Discrete Event Systems of IEEE Systems, Man, and Cybernetics Society.
- 2009-2011, Member of the BoG of the IEEE System, Man, and Cybernetics Society.
- 2012-2013 Vice Chair of the IEEE Italy Section
- Chair of the Technical Committee on Automation in Logistics of the IEEE Robotics and Automation Society
- 2013-2018 Member at large of the BoG of the IEEE System, Man, and Cybernetics Society.
- 2018-2020 Member of the Administrative committee of the IEEE Robotics and Automation Society
- Member of the IFAC Technical Committees TC 1.3 on Discrete Event and Hybrid Systems.
- 2013-2016 Member of the scientific committee of the Italian Federation of Automatic Control

TRASFERIMENTO TECNOLOGICO

FONDATORE E PRESIDENTE dello Spin Off AutoLogS s.r.l.- Automation in Logistics and Service Systems, MARZO 2013.