

Curriculum of the scientific, didactic and professional activity of

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Personal Information

Biographical data

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Civil status: married

Children: two

Nationality: Italian

Current position and main appointments at Politecnico di Bari

- Since February 2015 she is an Associate Professor in Systems and Control Engineering at Politecnico di Bari, Italy, Department of Electrical and Information Engineering.
- In the period January 1999-February 2015 she was a tenured Assistant Professor in Systems and Control Engineering at Politecnico di Bari, Department of Electrical and Information Engineering.
- Since June 2017 she is Research Delegate of the Department of Electrical and Information Engineering at Politecnico di Bari.
- Since September 2016 she is the Students' Vice Warrantor of Politecnico di Bari.
- She has been Vice Chancellor for Research of Politecnico di Bari in 2012-2013 and Rector's delegate for research of Politecnico di Bari in 2009-2011.
- From October 2012 to March 2015 she was member elect of the Academic Senate of Politecnico di Bari for years 2012-2015.
- Since 2012 she is proposer and partner of the spinoff company of Politecnico di Bari "Innolab".
- Since April 2017 she is a member of the Joint Teaching-Student Committee of the Department of Electrical and Information Engineering Bari, at Politecnico di Bari.
- From March 2016 to March 2017 she is a member of the "Quality Commission" of Politecnico di Bari.
- Since July 2016 she is a member of the Scientific and Technical Committee of the Apulia Region Productive District on renewable energy and energy efficiency.

Qualifications

- Ph.D. in Electrotechnical Engineering 1999 (at Politecnico di Bari). PhD thesis: M. Dotoli, Recent Developments of the Fuzzy Control Methodology, PhD thesis in Electrotechnics Engineering of Politecnico di Bari, Bari, April 1999, tutor Prof. Ing. B. Maione.
- Professional Engineer Qualification 1996 (marks 140/140, at Politecnico di Bari).

- Laurea Degree in Electronic Engineering 1995 (marks 110/110 summa cum laude, at Politecnico di Bari): M. Dotoli, Elements of Arbitrariness in Fuzzy Control, Laurea Thesis in Electronics Engineering of Politecnico di Bari, Bari, July 1995, tutor Prof. Ing. B. Maione.
- Scientific Degree 1989 (marks 60/60, at the Scientific High School A. Scacchi of Bari).

Foreign languages

- English: written and spoken excellent. Scientific publications and communications at international conferences and schools in English. CAE (Certificate of Advanced English): marks A (max). TOEFL (Test Of English as a Foreign Language): marks 643/660.
- French: written and spoken excellent. Stage Erasmus in Paris at Paris 7 University (France). Visiting researcher at Université Paris 7 and Ecole Centrale de Lille.
- German: written and spoken good. Attendance of German language courses until Mittelstufe II level at a specialized school under agreement with Goethe Institut. ZD (Zertificat Deutsch): marks 271/275.
- Danish: written and spoken fundamental. Stay in Copenhagen at Danish Technical University during the Ph.D. scholarship. Attendance of Danish language courses at a specialized school in Denmark.

Education

She was visiting scholar at:

- Ecole Centrale de Lille, Lille (France), year 2012-2013, research group of Prof. S. Hammadi, on modeling and control of discrete event systems. Didactic activity for the PhD course “Logistique pour la Santé”, 60 hours lessons on “Modeling, Simulation and Optimization of Discrete Event Systems: Applications”;
- Rheinisch-Westfaelische Technische Hochschule Aachen (Germany), September 2000, research group of Prof. D. Graf von Kaiserlingk. Didactic activity for the “Soft Computing Summer School in Medicine” (ERUDIT – ESPRIT Program financed by the EC), 10 hours lessons on “Soft Computing”;
- University of Limerick (Ireland), 2000. Didactic activity for the “Coil Summer School” (COIL financed by the EC), 10 hours lessons on “Soft Computing”;
- Danish Technical University, Copenhagen (Denmark), June-October 1998, June-October 1999, research group of Prof. J. Jantzen on modeling and control of fuzzy systems. Didactic activity: 15 hours lessons in 1998-1999 and 8 hours lessons in 1997-1998 on “50370 Fuzzy Control and Neural Networks”;
- Université Paris 7, Paris (France), March-June 1995, research group of Prof. B. Bouchon Meunier, at the LAFORIA (Laboratoire Formes et Intelligence Artificielle) on modeling and control of fuzzy systems.

She attended the following higher education courses:

- in 2015 the 21 hours course on "Decentralized and Distributed Control" held within the International Graduate School of the European Embedded Control Institute at the Supelec - Paris Saclay (France);
- in 2011 the 34 hours summer school on "Control of Discrete-Event Systems: Automata and Petri Nets Perspectives" held at the University of Cagliari;
- in 2004 the 30 hours course “Modellistica e Controllo di Reti di Trasporto e di Telecomunicazione” held at the Doctorate School of the Automation Interuniversity Centre;

- in 2004 the 50 hours course “Dynamic Traffic Flow Modeling and Control”, held at the Technical University of Chrete (Greece) by Prof. M. Papageorgiou;
- in 2001 the 20 hours course “Modeling of Discrete-Event Dynamic Systems”, held by Prof. Alan A. Desrochers of Rensselaer Polytechnic Institute, Troy, New York USA, at Politecnico di Bari;
- in 2000 the 20 hours course “Introduction to Robot Dynamics and Control”, held by Prof. Alan A. Desrochers of Rensselaer Polytechnic Institute, Troy, New York USA, at Politecnico di Bari;
- in 1999 the 20 hours course “Petri Nets and Their Application to Manufacturing Systems: Modeling, Control, and Performance Analysis” held by Prof. Alan A. Desrochers of Rensselaer Polytechnic Institute, Troy, New York USA, at Politecnico di Bari;
- in 1999 the 40 hours course “International Summer School - Fuzzy Logic Control: Advances in Applications” in Delft, The Netherlands;
- in 1998 the 40 hours course “International Summer School - Fuzzy Logic Control: Advances in Methodology” in Ferrara, Italy;
- in 1997 the 40 hours course “La simulazione come strumento di analisi dei sistemi produttivi”, held at the research consortium CETMA (Brindisi) by Eng. A. Greco (Università di Lecce);
- in 1996 the 40 hours course “NATO Advanced Study Institute on Soft Computing and its Applications” in Antalya (Turkey);
- in 1996 the course “Fuzzy Control Course on Internet”, held by Prof. Jan Jantzen (Danish Technical University).

Didactic activity

Didactic activity in Italy

Official Teaching Appointments

She holds or held the courses:

- “Applications of Matlab” (3 CFU) by the PhD School of Politecnico di Bari (a.y. 2015-2016, 2016-2017, 2017-2018), course given in English language;
- “Applications of Matlab” (3 CFU) by the PhD School of Politecnico di Bari (a.y. 2014-2015);
- “Dynamical Systems Theory” (6 CFU) in Automation Engineering (5-years Laurea) of Politecnico di Bari in Bari (a.y. 2018-2019), course given in English language ;
- “Dynamical Systems Theory” (6 CFU) in Automation Engineering (5-years Laurea) of Politecnico di Bari in Bari (a.y. 2017-2018), course given in English language ;
- “Dynamical Systems Theory” (6 CFU) in Electrical Engineering (5-years Laurea) of Politecnico di Bari in Bari (a.y. 2017-2018, 2018-2019), course given in English language ;
- “Fundamentals of Automation” (12 CFU) in Electronics and Telecommunications Engineering (3-Years Laurea) at Politecnico di Bari in Bari (a.y. 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018, 2018-2019);
- “Control Systems” (6 CFU) in Engineering of Logistic Systems for the Agri-food (3-Years Laurea) at University of Foggia (a.y. 2015-2016, 2016-2017, 2017-2018);
- “Systems Analysis” (6 CFU) in Management Engineering (5-Years Laurea) at Politecnico di Bari in Bari (a.y. 2013-2014, 2014-2015, 2015-2016, 2016-2017);
- “Automatic Control I” (12 CFU) in Electrical Engineering (3-Years Laurea) at Politecnico di Bari in Bari (a.y. 2010-2011, 2011-2012);
- “Automatic Control I” (9 CFU) in Electrical Engineering (3-Years Laurea) at Politecnico di Bari in Bari (years 2003-2004, 2004-2005, 2005-2006, 2006-2007, 2007-2008, 2009-2010, 2012-2013);
- “Automatic Control” (9 CFU) in Electrical Engineering (3-Years Laurea) at Politecnico di Bari in Foggia (a.y. 2002-2003, 2003-2004, 2004-2005, 2005-2006, 2009-2010);
- “Nonlinear Control” (3 CFU) in Information Science Engineering (Specialistic Laurea) at Politecnico di Bari in Bari (a.y. 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011);
- “Nonlinear Control” (3 CFU) in Automation Engineering (Specialistic Laurea) at Politecnico di Bari in Bari (a.y. 2005-2006, 2006-2007, 2007-2008, 2008-2009, 2009-2010, 2010-2011);
- “Control Systems Analysis” (2.5 CFU) Master in “Technological Innovation in Mechatronics-MIMEC” of Politecnico di Bari in Bari (a.y. 2006-2007).

Didactic Activity as an Assistant to Other Courses

She developed the numerical and experimental laboratory of the following courses:

- in the years 2002-2003 and 2003-2004 Automatic Control for the Laurea Course in Electrical Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Maria Pia Fanti (about 20 hours/year);
- in the years 2002-2003 and 2003-2004 Automatic Control for the Laurea Course in Mechanical Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Maria Pia Fanti (about 20 hours/year);

- in the years 1998-1999, 1999-2000, 2000-2001 and 2001-2002 Automatic Control I for the Laurea Course in Electronic Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Bruno Maione (about 40 hours/year);
- in the years 1998-1999, 1999-2000, 2000-2001 and 2001-2002 Automatic Control II for the Laurea Course in Electronic Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Bruno Maione (about 40 hours/year);
- in the years 2000-2001 and 2001-2002 Automatic Control I for the Laurea Course in Computer Science Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Bruno Maione (about 40 hours/year);
- in the year 1999-2000 Systems Theory for the Laurea Course in Environmental Engineering of the second Engineering Faculty of Politecnico di Bari, held by Prof. Bruno Maione (about 20 hours/year);
- in the year 1999-2000 Automatic Control I for the Diploma Course in Electrical Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Maria Pia Fanti (about 10 hours/year).

Occasionally she developed the numerical and experimental laboratory of the following courses:

- in the years 1998-1999, 1999-2000, 2000-2001 and 2001-2002 Automatic Control for the Laurea Course in Mechanical Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Maria Pia Fanti;
- in the years 1998-1999, 1999-2000, 2000-2001 and 2001-2002 Digital Control for the Laurea Course in Electronic Engineering of the first Engineering Faculty of Politecnico di Bari, held by Prof. Biagio Turchiano.

Didactic activity abroad

Teaching activity abroad

She developed the following didactic activity in foreign Universities:

- a.y. 2012-2013, lectures on discrete event systems "Modélisation, Simulation et Optimisation de Systèmes à Événements Discrets: Applications à la Logistique Hospitalière" (60 hours), PhD course in "Logistique pour la Santé" at Ecole Centrale de Lille, Lille (France);
- September 2000, lectures on Soft Computing (10 hours) for the summer school "Coil Summer School", Cluster of Network of Excellence COIL funded by the European Commission, University of Limerick (Ireland);
- September 2000, lectures on Soft Computing (10 hours) for the summer school "Soft Computing Summer School in Medicine", Network of Excellence ERUDIT funded by the ESPRIT programme of the European Commission, Rheinisch-Westfaelische Technische Hochschule Aachen, Aachen (Germany);
- a.y. 1998-1999, exercise lectures (15 hours) and development of didactic notes for course "50370 Fuzzy Control and Neural Networks" held by Prof. J. Jantzen, Danish Technical University, Copenhagen (Denmark);
- a.y. 1997-1998, exercise lectures (8 hours) and development of didactic notes for course "50370 Fuzzy Control and Neural Networks" held by Prof. J. Jantzen, Danish Technical University, Copenhagen (Denmark).

Inclusion in program committees of international schools

She was member of the program committee of the following international schools:

- “Soft Computing Summer School in Medicine”, organized in September 2000 by the Network of Excellence ERUDIT, funded by the European Commission, held in Aachen, Germany. In the framework of the school she has held a cycle of lectures on Soft Computing;
- “Coil Summer School”, organized in September 2000 by the Cluster COIL, funded by the European Commission, held in Limerick, Ireland. In the framework of the school she has held a cycle of lectures on Soft Computing.

Participation to institutional competition commissions in Italy and Abroad

Participation to Habilitation juries abroad

In 2010 she was member with the role of examinateur of one Habilitation to Direct Research Jury at école Centrale of Lille, France.

Participation to PhD Thesis Committees in Italy and Abroad

In 2018 she was member with the role of examiner of a Ph.D. Thesis Committee at the University of Cagliari.

In 2017 she was a member of a of a Ph.D. Thesis Committee at the Norwegian University of Science and Technology (Norway).

In 2015 she has been President of a PhD Theses Committee at École Centrale of Lille, France.

In 2013 she has been member with the role of rapporteur of a PhD Theses Committee at Université Aix-Marseille, France.

In 2010 she has been member with the role of examiner of one PhD Thesis Committee at the Indian Institute of Technology of Roorkee, India.

In 2010 she has been member with the role of rapporteur of two PhD Theses Committees at École Centrale of Lille, France.

In 2007 she has been member with the role of examinateur of one PhD Thesis Committee at École Centrale of Lille, France.

Participation to PhD Admission Committees in Italy

In 2017 she was member of the Evaluation Commission for the admission examination to the Doctorate Course in Electrical and Information Engineering established at Politecnico di Bari (XXXIII cycle).

In 2011 she was replacement member of the Commission for the evaluation of candidates to the admission to the PhD course in “Organizational Development, Work and Innovation of Production Processes” – cycle XXVI.

In 2006 she has been a member of the Evaluation Commission for the admission examination to the Doctorate Course in Electrotechnical Engineering established at Politecnico di Bari (XXII cycle).

Services provided at Politecnico di Bari

Research services

Since June 2017 she is Research Delegate of the Department of Electrical and Information Engineering at Politecnico di Bari.

She has been Vice Chancellor for Research of Politecnico di Bari in 2012-2013

She has been Rector’s delegate for research of Politecnico di Bari in 2009-2011.

She is the scientific responsible for the Decision and Control Laboratory at the Department of Electrotechnical and Electronic Engineering of Polytechnic of Bari since 2012 (<http://dei.poliba.it/DEI-it/ricerca/decision-and-control.html>).

She was the technical responsible for the Automatic Control Laboratory at the Department of Electrotechnical and Electronic Engineering of Polytechnic of Bari from 2000 to 2011.

Didactic services

She is or was member of the Council of professors for the PhD in:

- Electrical Engineering and Information Science of Politecnico di Bari in 2012-2014 (cycles XXVII-XXXIV);
- Organizational Development, Work and Innovation of Production Processes of Politecnico di Bari in 2011 (XXVI cycle);
- Electrotechnical Engineering of Politecnico di Bari in the years 2002-2010 (cycles XVII to XXV);
- Information Engineering of Politecnico di Bari in the years 2001-2010 (cycles XVI to XXV).

From 2010 to 2013 she was the secretary of the Council of professors for the PhD in Information Engineering of Politecnico di Bari.

Since April 2017 she is a member of the Joint Teaching-Student Commission of the Department of Electrical and Information Engineering at Politecnico di Bari.

In 2014 she promoted, with Prof. A. Giua of University of Aix-Marseille (France) the Erasmus Agreement for students mobility between Politecnico di Bari and University of Aix-Marseille.

She has been the secretary of the Council of the Laurea Courses:

- in Information Science Engineering, later called Council of the Laurea Course in Information Science and Automation Engineering, in the a.y. 2000-2001, 2001-2002, 2002-2003;
- in Electronic Engineering, in the a.y. 1998-1999, 1999-2000.

She has been aggregate member of the Commission for State Exams for Engineers at Politecnico di Bari in the following sessions: first and second session of year 2009; first session of year 1999-2000.

She is a member since 2013 of the Commission for the coordination of the programmes of the courses in Electronics Engineering of Politecnico di Bari.

She was a member in 2009-2012 of the Commission for the coordination of the programmes of the courses in Electrical Engineering of Politecnico di Bari.

She was a member of the Commission for the Laurea courses in the Information Engineering area of Politecnico di Bari at the seat of Foggia.

She has been aggregate member of the Commission for the Orienteering Test for future Engineering students at Politecnico di Bari in the year 2003-2004.

She has been a member from 2001 to 2003 of the Commission for E-learning/Campus-one Projects, established by the Council of the Laurea Course in Information Science Engineering of Politecnico di Bari.

She has been a member from 2000 to 2001 of the Commission for the Exams of English Language, established by the Council of the Laurea Course in Information Science Engineering of Politecnico di Bari.

Organizational services

Since September 2016 she is Vice Guarantor for Students of the Politecnico di Bari.

Since March 2016 to March 2017 she was a member of the Quality Presidium of the Politecnico di Bari.

She was member elect of the Academic Senate of Politecnico di Bari from 2012 to 2015.

In the period may-september 2012 she was member of the Board of Directors of Politecnico di Bari.

She was an elected member of the Board of the I Faculty of Engineering of the Bari Polytechnic for the two triennial years 2006-2012.

In 2011 she was member designated by the Academic Senate of the University Commission for the revision of the Statute of Politecnico di Bari according to law 240/2010.

In 2018 she is a member of the Politecnico di Bari commission for the individual assessment of the overall teaching, research and management of professors and permanent researchers for the purpose of awarding the three-year salary class as required by art. 8 of the Law n. 240/2010 and by the D.P.R. n. 232/2011.

In 2010 he is a member designated by the Academic Senate of the Politecnico di Bari of the University Commission for the modification of the distribution regulation of the University Research Fund (FRA).

Since 2005-2013 she is the representative member for Politecnico di Bari of the directional committee of the Agency for Innovation and Internationalization of Enterprises, established in the framework of the Territorial Pact for the North-Bari-Ofanto territory.

In the years 2005-2006 she was a member of the orientation committee of the Specialistic Laurea Course in Automation Engineering of Politecnico di Bari.

In the years 2004-2006 she has been the reference for Politecnico di Bari for the relationships with the Brussels site of CRUI (Conference of the Rectors of Italian Universities).

In the years 2004-2013 she was the reference for Politecnico di Bari for the relationships with the Italian Foreign Commerce Institute.

In the years 2004-2013 she was the reference for Politecnico di Bari for the relationships with the Network for Increasing the Value of University Research.

In 2010 she was member of the Commission for the award of n.2 graduation theses grants to graduating students of Politecnico di Bari.

In 2008 she was member of the Commission for the tender award relative to the Framework Programme Agreement “Scientific Research – I Integrating Act” for the “Pilot Project for the Implementation of Equipment and Services Dedicated to Global Mobility in Technological Areas” and for the “Pilot Project for the Implementation of online services and Campus Card – Supply of services and smart cards”.

In 2008 she has been a member of the Voting Commission for the voting operations aimed at the formation of the Judging Commissions of the procedures for comparative evaluation for the recruitment of University Professor for group II 2007.

She has been replacement member of the Commission for the election of the representatives of the Observatory of Didactics at Politecnico di Bari in the year 2005-2006.

She was representative of the Ph.D. students (XI cycle) of the Doctorate Course in Electrotechnical Engineering established at Politecnico di Bari for the years 1996-1999.

Scientific activity

Research direction

She is the scientific responsible for the Decision and Control Laboratory at the Department of Electrotechnical and Electronic Engineering of Polytechnic of Bari since 2012 (<http://dei.poliba.it/DEI-it/ricerca/decision-and-control.html>). The main objectives of the Decision and Control Laboratory are: the promotion of the results of the scientific research obtained in collaboration with both Public and Private Partners on Regional, National, and International Levels in the field of Automation (09/G1), together with the advancement of technology transfer of these research results.

Activity of research coordination

She coordinated research collaborations with prestigious Italian and international Universities for the Decision and Control Laboratory:

- the research group guided by Prof. Carla Seatzu (University of Cagliari) for studies on modeling and control of transportation systems, and control and management of manufacturing systems. Such a collaboration led to the writing of more than ten scientific papers, to the organization of invited sessions at international congress and to the joint tutoring of a PhD student from the University of Cagliari, Eng. Graziana Cavone;
- the research group guided by Prof. Hammadi (École Centrale of Lille, France) to a study on control and operational management of manufacturing systems, which among other things led to the production of one scientific publication, the organization of several invited sessions at various international congresses, the participation in a PhD Thesis Committee and the attainment of the Habilitation à Diriger des Recherches at École Centrale of Lille and to the joint tutoring as a thesis co-tutor of two graduating students at Politecnico di Bari, who spent to this aim a research period of several months on these subjects at the École Centrale of Lille;
- research group led by Prof. Sergio Grammatico (Delft University of Technology, Netherlands) for the study of decision and control techniques for energy systems, which led to the organization of the workshop "Energy management for large-scale smart systems", 2015 IEEE Conference on Automation Science and Engineering, Gothenburg, Sweden and the joint organization as a guest editor (with N. Ciulli, Networks) of a special issue of 23 scientific papers and an editorial in the year 2017 in the journal "IEEE Transactions on Automation Science and Engineering "on" Automation and Optimization of Energy Systems ";
- the research group guided by Professor Alexander Fay (Hamburg Helmut Schmidt University, Germany) in the area of factory automation, which led to two scientific publications;
- research group led by Prof. Bengt Lennartson (Chalmers University, Sweden) for a study on scheduling techniques for automated manufacturing systems, which led to the joint tutoring of a student from the Polytechnic of Bari, who carried out a research period at Chalmers University and is currently PhD student;
- research group led by Prof. Samuel Jia (Tsinghua University, China) on discrete event systems, which led to the joint effort as co-chair of the 2017 IEEE Conference on Automation Science and Engineering, Xi'an, China and joint organization as guest editor (with S. Reveliotis, Georgiatech, USA) of a special issue with selected works of the conference on the international journal "IEEE Transactions on Automation Science and Engineering";

- research group led by Prof. Alessandra Parisio (Manchester University, UK) on energy systems, which led to the invitation of Prof. Parisio as visiting professor at the Decision and Control Laboratory of the Polytechnic of Bari (directed by Prof. Dotoli) where Prof. Parisio was visiting from March to July 2018 and the joint writing of publications (in submission);
- research group led by Prof. Alessandro Giua (Aix-Marseille Université AMU, France), which led to the activation of an Erasmus-AMU-Polytechnic Agreement in Bari and the supervision of 3 intern students of AMU at the Decision and Control Laboratory of the Polytechnic of Bari: S. Miled, internship "Innovative distributed control algorithms for smart energy systems", (2 months, 2017); O. Benabdillah, "Optimization and Performance Evaluation of Supply Chain" internship, (2 months, 2015); H. El Kadiri, internship "Modeling, Simulation and Performance Evaluation of Intermodal Transport Systems by Petri Nets", (2 months, 2015).
- research group led by Prof. Antoine Salvatore Tabbone (Université de Nancy, France), which led to the activation of a Double Degree agreement between the Master Degree in Computer Engineering of the DEI-Polytechnic of Bari and the Masters in "Méthodes Informatiques Appliquées à la Gestion des Entreprises (MIAGE) "and" Master Sciences de la Cognition et Applications (MSCA) "(agreement currently in the formalization phase).

Collaborations with national and international research groups

She collaborated with the following national and international research groups:

- research group led by Professor Marek Miskowicz (Crakow University of Science and Technology, Poland) in the area of the control of manufacturing systems;
- the research group guided by Prof. Zhou (New Jersey Institute of Technology di Newark, USA) to a study on control and management of distributed production systems, which among other things led to the production of several scientific publications;
- the research group guided by Prof. Jantzen (Institute of Automation of Danish Technical University of Copenhagen, Denmark) to a study on fuzzy regulators, which among other things led to the production of several scientific publications;
- the research group guided by Prof. Graf v. Keyserlingk (Institute of Anatomy of RWTH University Aachen, Germany) to a study on the application of Soft Computing techniques to medical diagnoses, which among other things led to the production of several scientific publications.
- the research group guided by Prof. Ukovich (University of Trieste) to a study on modeling the hospital system, a research on intermodal logistics with application to inter-port dynamics, as well as a study on the identification and the failure diagnosis of discrete event systems, which among other things led to the production of several scientific publications.

Research topics

The scientific activity addressed mainly the following fields of control and automation:

1. *Decision support, modeling, simulation, management and control of complex systems.* This activity involved the development of modeling, simulation, decision and control techniques in various application contexts (transport, production, health, energy) with particular applications to: urban and extra-urban mobility systems. [r5], [r7], [c38], [c42], [c48], [c49], [c56] mono- and inter-modal logistic systems [r6], [r8], [r15], [r17],

[r18], [r31], [r36], [r37], [c17], [c18], [c24], [c32], [c39], [c45], production systems [c47], [c52], healthcare systems [r26], [c44], networks of complex systems [r9], [c1], [c11], energy market [r23], [c37], [c58]. In these fields, numerous advanced algorithms and information and communication technologies (ICT) applications have been developed to analyze, predict, manage, and solve critical situations with minimal or reduced human intervention. Furthermore, a series of decision and control techniques have been defined to cope with the emerging needs of smart city energy systems [r1], [r12]. At strategic level, some analysis and decision tools have been defined to support the urban policy maker in determining the optimal action plans for long-term energy efficiency in the following areas: building [r10], [c27] and building grids sectors [c16], [c19], public street lighting sector [r4], [c10],[c12], [c15], [c26], integrated management of urban energy systems [r11], [c29], [c36], [c43]. At operational level, on the other hand, some solutions have been developed for the control and scheduling of the energy activities of smart energy users: the optimal planning of the energy activities of a smart home [c2], [c4], [c33], networks of smart homes [c3], [c13], [c22], management of the optimal charging of electric vehicles [c8], [c9].

2. *Modeling, Simulation, Identification and Fault Diagnosis of Industrial Discrete Event Systems.* With reference to the modeling subject, discrete event models were proposed to describe and control deadlock in transportation and warehouse systems in the manufacturing industry [r44], [c116], [c125], [c126], [c128], [c131]. As for simulation, several models were proposed at an operative model, based on discrete event systems and aimed at the performance evaluation of such systems [r51], [r52], [r56], [11], [c75], [c104], [c111], [c129]. In the identification field, the use of the Petri nets formalism was proposed to identify the model of a process that can be modelled as a discrete event system during its dynamical evolution on the basis of different levels of system knowledge [r32], [r33], [r41], [c82], [c91], [c93], [c94], [c100], [c101], [c103]. In the area of fault diagnosis, for these systems a diagnoser was proposed that, starting from knowledge of the Petri net model of the system and of its initial state, employs an algorithm based on integer linear programming to decide whether the system behaviour is normal or exhibits some possible faults [r35], [r38], [c50], [c78], [c88], [c89], [c90], [c143]. On this topic has been published a survey on the most recent control techniques for industrial systems [r14], [c31]. Finally, some studies on the analysis and optimization of lean production systems [r20], [r24], [c6], [c53], [c57], [c62] and inter- and multi-modal transportation systems [c7], [c34], [c40] have been published.
3. *Design, Optimization and Performance Evaluation of Supply Chains.* The research proposed a chain configuration strategy based on the specification of various hierarchical levels [r13], [r25], [r27], [r28], [r29], [r30], [r34], [r40], [r43], [r47], [r49], [r50], [r57], [13], [18], [c70], [c72], [c99], [c115], [c117], [c124], [c142], [c145]. The optimization is obtained solving some multi-objective problems with linear integer programming methods as well as with stochastic or fuzzy multi-objective optimization methods, also combined with the game-theory [r2], [r19], [r21], [r54], [c5], [c25], [c30], [c35], [c46], [c51], [c54], [c60], [c61], [c63], [c64], [c66], [c67], [c69], [c83], [c95], [c96], [c97], [c102], [c105], [c106], [c107], [c108], [c109], [c110], [c112], [c144]. Moreover, at the operative level several chain models were based on different high level formalisms belonging to the class of Petri nets and able to optimize and evaluate the performance of the supply chain [r39], [r42], [r48], [14], [15], [16], [c92], [c98], [c106], [c114]. Still, it has been published a work on agent-based modeling and control of critical situations [r16]. Finally, these classes of models have been extended to the management and optimization of hospitals and healthcare systems [c71], [c73], [c74], [c77], [c84], [c86], [c87].

4. *Modeling and Control of Transportation networks*. This activity refers both to urban vehicular traffic networks and extraurban transportation networks. As regards the urban traffic, on the one hand, a model was proposed to describe the urban traffic network and the control implemented by semaphoric plans. The discrete event and timed model is modular and is based on coloured Petri nets [r46], [c85], [c113], [c118]. On the other hand, the research modelled the traffic network as a discrete time system, taking into account real aspects of traffic, such as the type of vehicles and the presence of pedestrians [r45], [c121], [c123]. The model is embedded in a real time controller that solves an optimization problem based on the knowledge of suitable measurable inputs and on technical, physical and operative constraints. In addition, a system for the control of urban traffic based on the concept of bus-as-a-probe has been developed [r3], [c28]. Moreover the subject of extraurban transportation networks was addressed, with contributions on modeling, simulation and control of highways [c59], [c65], of container terminals for intermodal transport [r6], [r8], [r15], [r17], [r18], [r31], [r36], [r37], [c7], [c17], [c18], [c20], [c21], [c24], [c32], [c34], [c39], [c40], [c45], [c68], [c76], [c79], [c80], [c81], on the off line and real time train scheduling in railway networks [r6], [r8], [c38], [c41], [c48], [c49], [c56], as well as on the waste management in metropolitan areas [c14].
5. *Soft Computing Control Techniques*. This research activity addressed the development of innovative controllers based on soft computing techniques, particularly of *fuzzy control systems*, *fuzzy sliding mode* controllers [r53], [l7], [l9], [l10], [l11], [c120], [c122], [c127], [c130], [c135] and hybrid *fuzzy-evolutionary* control methodologies for industrial processes [r22], [l2], [c23], [c55]. On this topic, a survey on the most recent fuzzy control techniques has been published [l12], [l13], [c139]. Furthermore, recent developments on fuzzy control techniques have been studied [c140], [c141], [t1], [t2], and their applications to semaphoric control of road intersections [c119], and to the control of variable geometry turbine [c132], electric motors [c133], and industrial processes [c134], as well as the automation of data management in the medical field [c137], [c138]. Finally, the use of genetic algorithms for the automatic identification of dynamic systems with static nonlinearity was analyzed.

Supervision of research fellows, PhD students, and master students

Tutoring of PhD students

She is currently tutor of 1 PhD candidate:

- Eng. M. Seyed Hosseini, Ph.D. student in Electrical and Information Engineering, Politecnico di Bari, Italy, XXXIII cycle (a.y. 2017-2020), on "Distributed and Decentralized Scheduling and Control of Smart Electrical Energy Systems".

She has been tutor of 4 PhD students:

- Eng. G. Cavone, PhD in Electrical and Information Engineering, University of Cagliari, Italy ciclo XXX (a.y. 2014-2017, co-tutor with Prof. C. Seatzu); PhD thesis: "Advanced modeling and control of Intermodal Terminals and Railway systems".
- Eng. G. Ardito, Ph.D. in Mechanical and Management Engineering, Politecnico di Bari, Italy, XXX cycle (a.y. 2014-2017, co-tutor with Prof. N. Costantino); PhD thesis: " An Innovative Decision-making Approach for a Sustainable Building Design".
- Eng. R. Carli, Ph.D. in Electrical and Information Engineering, Politecnico di Bari, Italy XXVIII cycle (years 2013-2015); PhD thesis: "Decision and Control Techniques for Energy Management Systems in Smart Cities".

- Eng. N. Epicoco, Ph.D. in Electrical and Information Engineering, Politecnico di Bari, Italy XXVIII cycle (years 2013-2015); PhD thesis: "Decision and Control Tools for Sustainable Management of Logistics and Transportation Systems".

Tutoring of research fellows

She is or has been tutor of 5 post-doc or post-lauream research fellows in the sector of Automation at Politecnico di Bari:

- R. Carli, post-doc research fellow (sector ING-INF/04 – Automation), 24 months on: "Energy management solutions for building efficiency in the context of smart cities and metropolitan areas", Politecnico di Bari (years 2016-2018).
- N. Epicoco, post-doc research fellow (sector ING-INF/04 – Automation), 24 months on: "Decision and control tools for the energy efficiency in the context of smart cities and metropolitan areas", Politecnico di Bari (years 2016-2018).
- R. Pellegrino, post-doc research fellow (sector ING-INF/04 – Automation), 48 months on: "Performance indicators in the context of smart cities and metropolitan areas" (24 months), "Decision making techniques for the urban control center of smart cities" (12 months), and "Innovative techniques for the risk management and the automation of risk areas remediation" (12 months), Politecnico di Bari (years 2013-2018).
- G. Cavone, post-lauream research fellow (sector ING-INF/04 – Automation), 24 months on: "ICT tools for the sustainable management of intermodal transportation in smart cities" (12 months), "Decision support systems energy efficient buildings", Politecnico di Bari (years 2014-2018).
- S. Visconti, post-lauream research fellow (sector ING-INF/04 – Automation), 12 months on: "Performance indicators for Building Energy Management Systems", Politecnico di Bari (years 2017-2018).

She actively collaborated to the supervision of PhD students, as witnessed in particular by the numerous publications in collaboration with the following three PhD students:

- Eng. F. Sciancalepore, "Quantitative approaches to supplier selection in uncertain environments", PhD thesis in "Advanced Production Systems", Politecnico di Bari, 2011.
- Eng. G. Iacobellis, "Supply chain modeling and management by high level Petri nets", PhD thesis in "Information Engineering", Politecnico di Bari, 2009.
- Eng. A.M. Mangini, "Identification and Fault Detection of Discrete Event Systems using Petri nets and Integer Linear Programming", PhD Thesis in "Electrotecnics", Politecnico di Bari, 2008.

Tutoring of graduating students

She was tutor of 3 stagiaire students from abroad Universities:

- S. Miled, internship on: "Innovative distributed control algorithms for smart energy systems", University of Aix-Marseille, France (2 months, spring-summer 2017);
- O. Benabdillah, internship on: "Optimization and Performance Evaluation of Supply Chain", University of Aix-Marseille, France (2 months, spring-summer 2015);
- H. El Kadiri, internship on: "Modeling, Simulation and Performance Evaluation of Intermodal Transport Systems by Petri Nets", University of Aix-Marseille, France (2 months, spring-summer 2015).

In 2012-2013 she is the scientific tutor of Eng. Astrid Piconese for the development of a one year research project in collaboration between Politecnico di Bari and Ecole Centrale of Lille (France), titled “Management of discrete event logistics systems”, funded with a research scholarship by Politecnico di Bari.

In 2011 she was the scientific tutor of Eng. Giuliana Rotunno for the development of a one year technology transfer and research project in collaboration with OM Carrelli Elevatori SpA company located in Modugno (BA), titled “SMMARTT-development of an advanced warehouse model for the reduction of throughput”, funded by the Apulia Region in the framework of POR Puglia 2007 – 2013 Axis IV – Capitale Umano Ritorno al Futuro-Research Scholarships.

She has been the official co-tutor of more than 200 Master Theses at Politecnico di Bari, many of which have been developed in collaboration with co-tutors belonging to institutions and companies of the local regional territory, while three have been developed in collaboration with a co-tutor of a foreign University (École Centrale of Lille, France and Chalmers University, Svezia) and two with a foreign public institution (Bank of Luxembourg, Luxembourg).

In 2014-2015 she was the scientific tutor of students Antonio Palmieri and Annalisa Caradonna for the development of two laurea theses at the Bank of Luxembourg in collaboration between the bank and Politecnico di Bari, on the topic of “Decision techniques for the performance evaluation and selection of suppliers”, funded with a research stage by the Bank of Luxembourg.

She was the University tutor:

- in 2012-2013 for the training and education of Eng. Antonio Lavopa for the development of a six month project in collaboration with BOSCH SpA located in Bari on innovative automotive systems.
- in 2010-2011 for the training and education of Eng. Domenico Cappai, for the development of a six month project in collaboration with PRIMADONNA SpA located in Bitonto (BA), titled “Definition of the principles and ensuing design of an integrated logistic system”.
- in 2007-2008 for the training and education of Eng. Leonardo Pellicani, in the framework of the collaboration between Politecnico di Bari and the company located in Modugno (BA) MEL SYSTEM S.r.l for the Master in “Technological Innovation in Mechatronics-MIMEC” of Politecnico di Bari;
- in 2006-2007 for the training of Eng. Claudia Tortorelli, holding a degree earned at Politecnico di Bari, in the framework of an educational and orientation project with a company located in Bari;
- from July to December 2005 of Eng. Gianfranco Annecca for a post Laurea scholarship on semaphoric control of urban vehicular traffic, at the Department of Electrotechnical and Electronic Engineering of Polytechnic of Bari;
- in 2003-2004 for the training of Eng. Domenico Trisolini, holding a degree earned at Politecnico di Bari, in the framework of an educational and orientation project with a company located in Bari;
- in 2002-2003 for the training and education of the students Mauro Porcelli and Gianfranco Annecca, in the framework of the collaboration between Politecnico di Bari and the Municipality of Bari for designing modeling and control systems for urban traffic.

In 2002-2010 she is an official tutor of numerous students of the Unitary Council of the Information Science Engineering Class of Politecnico di Bari.

Bibliometric indices

The reported bibliometric situation refers to data available in Scopus on July 24th 2018 at <http://www.scopus.com/authid/detail.url?authorId=6603204493>

- Number of papers in Scopus: 153.
- Number of citations in Scopus: 1443.
- Number of citations in Google Scholar: 2371.
- H index in Scopus: 20.
- H index in Google Scholar: 25.
- First median overpass for full professor: YES. 40 international journal papers in the last 10 years (median value 17).
- Second median overpass for full professor: YES. 1438 citations in the last 15 years (median value 459).
- Third median overpass for full professor: YES. 20 H index Scopus in the last 15 years (median value 11).

Scientific recognitions

Achievement of:

- Full professor habilitation according to art. 16 of Italian Law n. 240/2010 for sector 09/G1 Automatica (year 2013, since october 2014).
- Associate professor habilitation according to art. 16 of Italian Law n. 240/2010 for sector 09/G1 Automatica (year 2012, since january 2014).

In the National Research Quality Evaluation:

- VQR 2011-2014 her 2 presented products obtained the maximum score (1,1);
- QR 2004-2010 her 3 presented products obtained the maximum score (1,1,1).

The following papers were nominated as “best paper finalist” as the best contributions of the corresponding conference proceedings:

- A. Piconese, T. Bourdeaud’Huy, M. Dotoli, S. Hammadi, A Revisited Model for the Real Time Traffic Management, ICORES 2014, 3rd International Conference on Operations Research and Enterprise Systems, Angers, France, March 6-8, 2014;
- M. Dotoli, F. Sciancalepore, N. Epicoco, M. Falagario, B. Turchiano, N. Costantino, A Periodic Event Scheduling Approach for Offline Timetable Optimization of Regional Railways , 10th IEEE International Conference on Networking, Sensing and Control (ICNSC2013), Paris, France, April 10-12, 2013;
- N. Costantino, M. Dotoli, M. Falagario, M.P. Fanti, A.M. Mangini, F. Sciancalepore, W. Ukovich, A Model for the Strategic Design of Distribution Networks, Proceedings of the 6th annual IEEE Conference on Automation Science and Engineering (CASE 2010), Toronto, Ontario, Canada, August 21-24, 2010.
- M. Dotoli, M. P. Fanti, An urban traffic network model via coloured timed Petri nets, Proceedings of WODES04 – the 7th IFAC Workshop on Discrete Event Systems, Reims, France, September 22-24, 2004. The work was selected for being published on Control Engineering Practice journal, where it was published in 2006: "M. Dotoli, M.P. Fanti, An Urban Traffic Network Model via Coloured Timed Petri Nets, Control Engineering Practice, Vol. 14, No.10, October 2006, pp. 1213-1229”.

In 2012 she was elevated to Senior Member of the international IEEE association (the Institute of Electrical and Electronics Engineers).

Her biography is included in the publications “Who’s Who in the World”, “Who’s Who in Science and Engineering”, “Who’s Who of Emerging Leaders”, “Outstanding Scientists of the 21st Century”, “Leading Scientists of the World”.

She was the recipient of the following scholarships:

- in 1999 of a “Training and Mobility of Researchers” grant of the TMR programme of the European Commission to attend the “International Summer School - Fuzzy Logic Control: Advances in Applications” in Delft, the Netherlands;
- in 1998 of a “Training and Mobility of Researchers” grant of the TMR programme of the European Commission to attend the “International Summer School - Fuzzy Logic Control: Advances in Methodology” in Ferrara, Italy;
- in 1997-1998 of a scholarship for the completion of her PhD studies at the Danish Technical University, in the framework of the programme ERUDIT, the European Network of Excellence for Fuzzy Logic and Uncertainty Modeling in Information Technology, supported by the European Commission DG III Industry-Esprit Programme;
- in 1996 of a NATO Scholarship for the attendance to the “NATO Advanced Study Institute on Soft Computing and its Applications” in Antalya (Turkey);
- in 1995 of a three-years Ph.D. scholarship in Electrotechnical Engineering at Politecnico di Bari (classification: first);
- in 1995 of an ERASMUS programme scholarship for the year 1994-95, for having obtained, as a student of Politecnico di Bari, the best results of the year; in particular, the scholarship was received at the Paris 7 University in Paris, as a stagier at LAFORIA (Laboratoire Formes et Intelligence Artificielle), where she prepared her Master Thesis on fuzzy logic, under the tutoring of Prof. B. Bouchon-Meunier.

Editorial activity

Since 2016 she is Editor in chief of the international newsletter “IEEE Systems Man and Cybernetics Society eNewsletter”.

For the term 2016-2018 she is an Associate Editor of the international journal “IEEE Transactions on Systems Man and Cybernetics: Systems”.

For the term 2016-2018 she is an Associate Editor of the international journal “IEEE Transactions on Control Systems Technology”.

For the term 2015-2018 she is an Associate Editor of the international journal “IEEE Robotics and Automation Letters”.

For the terms 2012-2016 and 2018-2020 she is an Associate Editor of the international journal “IEEE Transactions on Automation Science and Engineering”.

She is member of the editorial board of the international journals:

- “International Journal of Automation and Control”;
- “International Journal of Control Engineering and Technology”;
- “International Journal of Discrete Event Control Systems”;
- “International Journal of Systems Signal Control and Engineering Application”;
- “The Mediterranean Journal of Measurement and Control”.

She is guest editor (with S. Reveliotis e Q.-S. Jia) of the upcoming (in 2018) special issue of the international journal “IEEE Transactions on Automation Science and Engineering” on “Best papers of the IEEE Conference on Automation Science and Engineering”.

She is guest editor (with S. Grammatico and N. Ciulli) of a special issue published in 2017 of the international journal “IEEE Transactions on Automation Science and Engineering” on “Automation and Optimization of Energy Systems”.

She is guest editor (with M.P. Fanti) of the international volume “Dependable Control of Discrete Systems”, in IFAC Proceedings Volumes, Elsevier, 2010, ISBN 978-3-902661-44-9.

She is guest editor (with M.P. Fanti, J.-M. Faure, and J. Zaytoon) of a special issue published in 2010-2011 of the international journal “Control Engineering Practice” on “Dependable Control of Discrete Systems”.

She is author or co-author of 218 printed publications, including (see the publication list at the end of this document):

- 1 book in Italian;
- 53 papers on international journals;
- 4 papers on national journals;
- 13 chapters of international books;
- 141 papers in the proceedings of international conferences;
- 4 papers in the proceedings of national conferences;
- 1 PhD thesis;
- 1 Laurea degree thesis.

Moreover, she produced numerous theoretical, exercise and numeric laboratory didactical lecture notes for the following courses: Fundamentals of Automatic Control, Automatic Control Systems, Non Linear Control, Systems Analysis, Dynamic Systems Theory, MATLAB Applications, and Control Systems in in numerous Laurea courses of Politecnico di Bari, available at:

<http://ftp-dee.poliba.it:8000/Dotoli/>,
<http://climeg.poliba.it/course/view.php?id=178>,
<http://climeg.poliba.it/course/view.php?id=225>,
<http://climeg.poliba.it/course/view.php?id=242>,
<http://climeg.poliba.it/course/view.php?id=249>,
<http://e-learning.poliba.it/course/view.php?id=74>.

She is since 2017 Vice Chair for Social Media of the Technical Committee on Discrete and Hybrid Event Systems of the International Federation of Automatic Control (member since 2011).

She is a member since 2017 of the Technical Committee on Smart Cities of the International Federation of Automatic Control.

She is a member since 2016 of the Technical Committee on Transportation Systems of the International Federation of Automatic Control.

She is a member since 2007 of the IEEE Systems Man and Cybernetics Society Technical Committee on Discrete Event Systems.

She is a member since 2005 of the IEEE Control Systems Society Technical Committee on Discrete Event Systems.

She is a member since 2015 of the “Workshop Oversight Committee” of the IEEE Robotics and Automation Society.

She is a member since 2014 of the “Industrial Automated Systems and Control” subcommittee of the Technical Committee on Factory Automation of the IEEE Industrial Electronic Society.

Invited talks

International invited talks

- M. Dotoli, “Using Petri nets to model logistics and transportation systems”, invited talk at the workshop “Applications of discrete event systems”, at the 23rd IEEE International Conference on Emerging Technologies and Factory Automation (IEEE ETFA 2018), 0.5 hours, September 4, 2018;

- M. Dotoli, “Multi Criteria Decision Making Techniques: Deterministic and Fuzzy Approaches”, invited talk at the 4th Summer School on Fuzzy Logic and Applications - SFLA 2018, 2 hours, Bari, June 28, 2018;
- M. Dotoli, “Decentralized and Distributed Optimization for Energy Scheduling of Interconnected Smart Homes”, invited lectures at the Summer School on Energy Management and fuel cell systems, 8 hours, July 4-6, 2017, Université de technologie de Belfort-Montbéliard, Belfort (Francia);
- M. Dotoli, “A Survey on Petri Nets Models for Logistics and Transportation Systems”, invited talk at the Osaka University, Graduate School of Engineering, 2 hours, December 15, 2015;
- M. Dotoli, “A survey on Petri nets models for logistics and transportation systems”, invited talk at the workshop “Petri nets applications”, at the 11th IEEE International Conference on Automation Science and Engineering (IEEE CASE 2015), 1 hour, August 24, 2015;
- M. Dotoli: “Fuzzy Logic and Control for Medical Applications”, invited lectures at the “Soft Computing Summer School in Medicine”, Network of Excellence ERUDIT, funded by the ESPRIT program of the European Commission, 10 hours, September 18-22, 2000, Rheinisch-Westfaelische Technische Hochschule, Aachen, Germania;
- M. Dotoli, “A Fuzzy Control Course on the Internet”, invited lectures at the Summer School of COIL-Cluster of Excellence Networks funded by the European Commission, 10 h, August 28 – September 3, 2000.

National invited talks

- M. Dotoli, “L’automatica: una scienza per uno sviluppo sostenibile e sicuro”, October 15, 2018, Bari, Workshop on electric vehicles ACI-Bari-BAT.
- M. Dotoli, “Veicoli elettrici: Le tendenze attuali dei sistemi di gestione e controllo”, May 24, 2018, Bari, Workshop on electric vehicles ACI-Bari-BAT.
- M. Dotoli, “Le tendenze attuali nell’applicazione di automatica e telematica per i sistemi di trasporto intelligente”, 71st conference on traffic and circulation, ACI, June 13, 2017, Roma.
- M. Dotoli, “Best practice dal territorio: Efficienza energetica negli edifici pubblici”, November 16, 2016, Conversano (BA), Panel discussion on the public building energy efficiency.
- M. Dotoli, “Indicatori di smart mobility”, September 19, 2014, Bari, 1st Workshop of the LivingLabs Semina project for managing and monitoring the sustainable mobility in the city of Bari.
- M. Dotoli, “La progettazione dell’Urban Control Center di una Smart City per il monitoraggio e la gestione energetico-ambientale della città”, March 27, 2014, Napoli, Smart City Med Napoli 2014.
- M. Dotoli, “Gli Indicatori Urbani per la Misurazione delle Performance e il Supporto alle Attività Decisionali e di Programmazione della Smart City”, December 2-3, 2013, Bari, Green City Energy Bari 2013.
- M. Dotoli, “Tecniche ICT per l’Ottimizzazione Sostenibile del Trasporto Merci Intermodale: Applicazione a un Caso Studio di Terminal Ferro-Gomma della Città di Bari”, December 2-3, 2013, Bari, Green City Energy Bari 2013.
- M. Dotoli, “Il Benessere Equo e Sostenibile fra Urban Control Center e supporto alle attività decisionali e di programmazione di una smart city”, November 29, 2013, CNEL, Roma, Workshop Ideas and Projects for the development of Urbes and Smart City 2013, ISTAT.

- M. Dotoli, “Le nuove tecnologie dell’informazione e comunicazione per la mobilità intelligente e sostenibile”, May 13, 2013, Bari, Workshop on the conscious use of vehicles ACI-Bari-BAT.
- M. Dotoli, “Il Robot, un aiuto per te”, February 23, 2013, Bari, Regional Congress on rare diseases.
- M. Dotoli, “Sistemi ICT per l’Ottimizzazione del Trasporto Comodale”, November 12, 2012, Bari, Green City Energy Med Bari 2012 - Forum on the development of the Smart City in the Mediterranean Area.

Coordination of research projects

Coordination of international projects

- 2012-2013 research project in collaboration between Politecnico di Bari and Ecole Centrale de Lille (France), on "Management of discrete event logistics systems", funded by Politecnico di Bari 13k€, 12 months, Scientific coordinator.
- 2012-2013 research project in collaboration between Politecnico di Bari and Ecole Centrale de Lille (France), on "Management of discrete event logistics systems", funded by Politecnico di Bari 13k€, 12 months, Scientific coordinator. The project has been funded on the basis of a competitive announcement of the European Commission considering a peer-reviewing.
- 2000-2001, ERUDIT, European Network of Excellence for Uncertainty Techniques, funded by the European Commission, ESPRIT Programme of the 5th framework programme, 500 k€, 24 months, Steering Committee Member. The project has been funded on the basis of a competitive announcement of the European Commission considering a peer-reviewing.
- 1998-1999, ERUDIT, European Network of Excellence for Fuzzy Logic and Uncertainty Modeling in Information Technology, funded by the European Commission, ESPRIT Programme of the 5th framework programme, 580 k€, 24 months, Steering Committee Member. The project has been funded on the basis of a competitive announcement of the European Commission considering a peer-reviewing.

Coordination of national projects

November 2012-October 2015 Scientific Coordinator of the “Urban Control Center” of Partner Politecnico di Bari funded by MIUR (Italian Ministry of Education, University, and Research) in the framework “PON Ricerca e Competitività 2007-2013 Smart Cities and Communities - RES NOVAE - Networks, Building, Roads, New Virtuous Objectives for Environment and Energy” about 620 k€, 36 months, in collaboration with the companies: Tera SRL, e-distribuzione and IBM, and Municipality of Bari. The project has been funded on the basis of a competitive announcement of the MIUR considering a peer-reviewing.

Coordination of regional projects

- 2016-2018, project UCCSM-An Urban Control Center for monitoring the energetic flows of Apulian municipalities, funded by the Apulia Region call for “Regional Technological Clusters for innovation”, about 2200k€ (about 490k€ Politecnico di Bari), 24 months, Scientific Coordinator of partner Politecnico di Bari, in collaboration with the companies SIM-NT, TERA SRL, and e-Distribuzione;
- 2013-2014, project “SEMINA-Advanced systems for Smart Mobility in Agile Urban Networks”, funded by the Puglia Region under Apulian Living Labs call, 130 k€, 12

months, Scientific Coordinator, in collaboration with the companies PLANETEK and M&CNIL, and the Municipality of Bari.

- 2012-2014, project "MIND-MINe Detection", funded by the Puglia Region under regional partnerships call, 145k€, 18 months, Scientific Coordinator, in collaboration with the companies Le Gemme SpA, NEP Srl, Cavalera Sistemi Srl.
- 2011 research and technology transfer project with the OM Carrelli Elevatori SpA company located in Modugno (BA), titles "SMMARTT- development of an advanced warehouse model for the reduction of throughput", funded by the Apulia Region in the framework of Ritorno al Futuro programme- POR Puglia 2007 – 2013 Asse IV – Capitale Umano, 19 k€, 12 months, as coordinator.

Coordination of University research projects

- 2016, research project "Techniques for monitoring, control, and managing of energy flows in the metropolitan Smart City" funded by the University Research Fund (ex 60%) of Politecnico di Bari, 1 k€, 12 months, scientific coordinator.
- 2012, research project "Decision Support Systems for the sustainable management of logistics and mono-, multi-, inter-, and co-modal transportation systems" funded by the University Research Fund (ex 60%) of Politecnico di Bari, 3.6 k€, 12 months, scientific coordinator.
- 2011, research project "Distribution Systems Design under Uncertainty", funded by the University Research Fund (ex 60%) of Politecnico di Bari, 1 k€, 12 months, scientific coordinator.
- 2008, research project "Research voucher for the making of free of charge consulting actions to SMEs in the framework of Made in Italy" entitled "SPAI (Supply and Purchasing via Artificial Intelligence): support to decisions for purchasing management" funded by Politecnico di Bari in the framework of PON "Project NILO – Puglia Network of the ILOs of the state Universities of Puglia", 5 k€, 1 month, scientific coordinator.
- 2004, research project "Methodologies for Dynamic Control of Urban Traffic", funded by the University Research Fund (ex 60%) of Politecnico di Bari, 5 K€, as a coordinator;
- 1999, research project "Techniques for Intelligent Control of Nonlinear Processes", funded by the Young Researchers University Fund of Politecnico di Bari, 2.5 K€, as a coordinator.

Participation to research projects

Participation to International Research Projects

Beyond the already recalled projects she took part in the following international research programmes:

- in the years 1999–2002 she is the reference for action "C4 - education" of COIL, the Computational Intelligence and Learning Cluster funded by the European Commission;

Participation to National Research Projects

Beyond the already recalled projects she took part in the following national research programmes:

- 2018-2020, project "Processi Integrati e Connessi per l'Evoluzione Industriale nella PROduzione (PICO e PRO)" funded by MIUR – Announcement for Industrial Research and Sperimental Development Projects - PNR 2015-2020 (local coordinator

for Politecnico di Bari Prof. L. Tricarico, national coordinator “Centro Ricerche FIAT SpA”);

- 2010-2013, project “ERMES- Enhance Risk Management through Extended Sensor” research project, funded by the research and competitiveness PON (National Operative Programme) 2007/2013, Responsible Prof. Gianfranco Avitabile of Politecnico di Bari, call D.D. prot. 01/Ric. of 18/01/2010.
- 2010-2013, project “LAMRECOR – Advanced Logistics for the Mobility of people and freight: mathematical models and tests for new protocols of correspondance delivery” research project, funded by the research and competitiveness PON (National Operative Programme) 2007/2013, Responsible Prof. Mario Armenise of Politecnico di Bari, call D.D. prot. 01/Ric. of 18/01/2010.
- 2002-2005, project “SIDART – Integrated system for artistic goods diagnosis” research project, funded by the PON (National Operative Programme) 2002/2005 programme, Responsible Prof. Giuseppe Acciani of Politecnico di Bari (since 2002);
- 2000-2006, project “Heavy Duty - Project of Innovative System for Heavy-Duty engines” research project, funded by the PON (National Operative Programme) 2000/2006 programme “Scientific Research, Technological Development, Higher Education”, Responsible Prof. Bernardo Fortunato of Politecnico di Bari (since 2000);
- 2000-2006, project “LISAR – Intersectorial Scientific Laboratory of Automation and Robotics” research project, funded by the PON (National Operative Programme) 2000/2006 programme “Scientific Research, Technological Development, Higher Education”, Responsible Prof. Bruno Maione of Politecnico di Bari (since 2000).
- 2007-2009, project COFIN-PRIN ex MURST 40% project funded by the Italian Ministry of Scientific and Technological Research “Decision models for design and management of logistic networks characterized by high interoperability and information integration” (2007-2009, local coordinator Prof. M.P. Fanti, national coordinator Prof. R. Minciardi);
- 2005-2007, project COFIN-PRIN ex MURST 40% project funded by the Italian Ministry of Scientific and Technological Research “Analysis, optimization, and coordination of logistic and production systems” (2005-2007, local coordinator Prof. M.P. Fanti, national coordinator Prof. R. Minciardi);
- 2003-2005, project COFIN-PRIN ex MURST 40% project funded by the Italian Ministry of Scientific and Technological Research “Models for the optimization, control and coordination of distributed production systems” (2003-2005, local coordinator Prof. F. Nicolò, national coordinator Prof. R. Minciardi);
- 1999, project COFIN-PRIN ex MURST 40% project funded by the Italian Ministry of Scientific and Technological Research “System control with autonomous agents” (1999, local coordinator Prof. B. Maione, national coordinator Prof. F. Nicolò);
- 1997-1998, project COFIN-PRIN ex MURST 40% project funded by the Italian Ministry of Scientific and Technological Research “Autocoordination of autonomous agents” (1997-1998, local coordinator Prof. B. Maione, national coordinator Prof. F. Nicolò);
- 1996, project COFIN-PRIN ex MURST 40% project funded by the Italian Ministry of Scientific and Technological Research “Integrated management of autonomous production agents” (1996, local coordinator Prof. B. Maione, national coordinator Prof. F. Nicolò).

Participation to regional research project

Beyond the already recalled projects she took part in the following regional research programmes:

- 2008-2009, project “Modeling and control of logistic systems with high information integration”, funded by Fondazione Caripuglia, coordinator Prof. Maria Pia Fanti, Politecnico di Bari;
- 2006 explorative project for scientific research “Realization of an Automated Online Testbed for Failure Diagnosis in the Production of Oleodynamic Cylinders of Various Sizes”-C.I.P. PE_010, scientific coordinator Prof. Andrea Dadone, Politecnico di Bari;
- 2004, PRAI-Puglia (Bioparco) project, in the framework of the Innovation Actions Programme of the Puglia Region – Programme for the innovation and improvement of the industry-research relationship by way of biotechnologies in the Puglia region P.I.R.P. – Innovation Actions FESR2000-2006.

Participation to University research projects

Beyond the already recalled projects she took part in the following University research programmes:

- 2001, research project “Multi-agent control”, funded by the University Research Fund (ex 60%) of Politecnico di Bari (coordinator Prof. B. Maione).
- 1999, research project “Modeling and control of hybrid systems: theory and applications”, funded by the University Research Fund (ex 60%) of Politecnico di Bari (coordinator Prof. B. Maione);
- 1997, research project “Modeling and control of hybrid systems” (coordinator Prof. B. Maione), funded by the University Research Fund (ex 60%) of Politecnico di Bari.

Responsibility of research studies and collaborations with public and private stakeholders

Responsibility of research studies with foreign stakeholders

2014-2015: Coordinator of the scientific research "Research on Suppliers Selection in Tenders for Public Procurement" assigned by the Banque Centrale du Luxembourg (BCL) on the application of decision making techniques to the public procurement tenders, 12 months.

The research was about the study and application of decision making techniques to the optimal selection of suppliers in public procurement tenders.

The research took place in 6 phases: 1. bibliographic research; 2. Analysis of the Analytical Hierarchy Process (AHP), Preference Organization Ranking METHoD for Enrichment of Evaluations (PROMETHEE), Multi-Attribute Utility Theory (MAUT); 3. analysis of the methods used by BCL and called BCL1 and BCL2 techniques; 4. analysis of the differences between the aforementioned methods; 5. application to case studies provided by BCL; 6. conclusions: advantages and limitations of the different methods.

The Procurement section of BCL, after a period of testing, began to apply the AHP methodology suggested by the studies carried out at that time with the research group and at the moment does not foresee any changes.

Responsibility of research studies with Italian stakeholders

2016-2017: Coordinator of the scientific research on the re-engineering of the logistics and production processes at the Dreamproject SpA, Barletta (Italy), 12 months, 40k€.

The consulting activities were aimed at:

- analyzing the company processes and the management methods adopted;

- defining adequate dynamic models to simulate and evaluate the performance of business processes;
- analyzing and comparing the simulation models of the company system with the current situation of the company;
- using simulation models developed as a tool to support decision-making phases.

The consultancy was organized according to the following activities:

OR1. Business auditing, analysis and coding of business processes

OR2. Identification of the state of the art of technology

OR3. Analysis of company gaps

OR4. Support to the definition of company requirements (to-be)

The final results of the consultancy were several company models represented with activity diagrams using the Unified Modeling Language (UML) or with Petri nets using both classical and colored Petri nets, as well as an analysis of criticalities by the Genba Shikumi decision-making technique, a classic method of lean manufacturing.

2012-2013: Coordinator of the scientific research on the development of decision support systems for the automation of an intermodal logistic terminal at the GTS (General Transport Service) S.p.A., Bari (Italy), 24 months, 24k€, financed as part of the project "Integrated and digital logistics supply chain", Apulia Region call for the provision of "Aid for the dissemination of information and communication technologies in SME networks".

The consultancy focused on the implementation and development of innovative and customized IT solutions to support the monitoring and management of the main business operational variables. In particular, the action was aimed at allowing an integrated management of information, so as to optimize resources and planning and execution activities of the intermodal transport of the load units (ITUs or Intermodal Transport Units), providing IT tools to support the activities logistics in order to achieve an optimal organizational and management cost-effectiveness.

The consultancy was organized according to the following activities:

- Activity 0: Auditing of "G.T.S. - General Transport Service S.p.A. "company, Bari;
- Activity 1: Analysis and coding of business processes (as-is);
- Activity 2: Identification of the state of the art technology;
- Activity 3: Analysis of the gaps;
- Activity 4: Support to the definition of company requirements (to-be);
- Activity 5: Implementation of new business processes (to-be).

The final results of the consultancy were different company models represented with activity diagrams using the Unified Modeling Language (UML) or with Petri nets using both classical models and hybrid Petri nets, as well as an analysis of criticalities made through the decision-making technique Genba Shikumi, a classic method of lean manufacturing.

Collaborations with Italian stakeholders

She collaborated with the following authorities and enterprises of the territory:

- Tera srl, a SME developing ICT solutions for the research projects UCCSM and RES NOVAE;
- SIM NT srl, a SME developing ICT solutions for the research project UCCSM;
- IBM, word leader company in the computers industry, in the research project RES NOVAE for the realization of an urban control center for the energy management of Smart Cities;
- Enel distribution, the largest electricity operator in Italy and Europe's second listed utility for installed capacity, for the research project RES NOVAE on the definition of energy scheduling techniques in the smart home;

- Planetek in Bari, a company Italian leader in ICT for the use of geo-localized data, for a research project on the management and automation of urban mobility of passengers;
- Tangari S.r.l., located in Corato (BA), a company producing handicrafts and sacred furnishings that is leader in Italy, for a research project on the management and automation of the internal company logistics;
- South Eastern Railways and Car Services S.r.l., the major Italian public regional railway network, research project on the optimization of train scheduling off line and in real time;
- Divella S.p.A. located in Rutigliano (BA), a food production company that is world leader in the area of pasta production, for a research project on the management and automation of warehouse logistics;
- Cannillo S.r.l. located in Corato (BA), a company active in the area of food products commerce, for a research project on integrated logistics as a support to the purchasing, distribution and re-purchasing activities, in the framework of the cold chain;
- Primadonna S.p.A. located in Bitonto (BA), a shoe production company that is world leader in the sector of low cost fashion shoe production, for a research project on the implementation of an automated warehouse;
- OM Carrelli Elevatori S.p.A. located in Modugno (BA), a metalmechanic company that is world leader in the forklift trucks production sector, for a research project on analysis and optimization of enterprise logistics;
- the Bari General Hospital for a study on modeling, management and optimization techniques of the flows of patients, drugs as well as doctor and nursing staff, which among other things led to the co-tutoring of several graduating students of Politecnico di Bari;
- the Department of Environment and Urban Mobility of the Municipality of Bari for a study on traffic regulation techniques in congested urban areas by semaphoric elements, which among other things led to the co-tutoring of several graduating students of Politecnico di Bari;
- Ferrovie dello Stato (State Railways, seat of Bari) to a preliminary study on modeling and managing the railway traffic, which among other things led to the co-tutoring of one graduating student of Politecnico di Bari;
- Bosch-Elasis of Bari to a study on modeling and controlling a turbocharged Diesel engine, which among other things led to the co-tutoring of one graduating student of Politecnico di Bari;
- the Fiat Research Centre of Bari to a study on modeling and controlling injection for a Diesel engine, which among other things led to the co-tutoring of several graduating students of Politecnico di Bari and to the participation to a POR research project of the Italian Region Apulia;
- Pirelli Cables SpA of Giovinazzo (Bari) to a study for industry automation, which among other things led to the production of one scientific paper and to the co-tutoring of one graduating student of Politecnico di Bari;
- companies Edilportale (Bari) and Rotice (Manfredonia, Foggia) to a study for the estimate and management of transaction costs, which among other things led to the presentation of a research project to the Italian Region Apulia;
- Eltag enterprise (Bari) to a study for the application of RFID technologies for the control and management of vehicle fleets, which among other things led to the presentation of a POR research project to the Italian Region Apulia;
- ITIA (Institute of Industrial Technologies and Automation)-CNR of Milan to a study for the automation of flexible manufacturing systems.

Organization of international and national scientific events

Organization responsibilities

Publicity chair of the following international conferences:

- SMC2020, 2020 annual IEEE Conference on Systems, Man, and Cybernetics, Toronto, Canada, October 2020;
- CASE2019, 2019 annual IEEE Conference on Automation Science and Engineering, Vancouver, Canada, August 2019;
- CODIT'18, 5th IEEE International Conference on Control, Decision and Information Technologies, Thessaloniki, Greece, April 10-13, 2018.

Track chair of the following international conferences:

- ETFA2018, 23rd annual IEEE Conference on Emerging Technology and Factory Automation, Torino, Italy, September 2018 (chair of track 4 - Automated Manufacturing Systems);
- WODES2018, 14th International Workshop on Discrete Event Systems (WODES 2018), Sorrento, Italy, May-June 2018 (chair of the track Demonstrator Papers).

Member of the Awards Committee of international conference:

- CASE2018, 2018 annual IEEE Conference on Automation Science and Engineering, Munich, Germany, August 2018;

Program co-chair of the international conference:

- CASE2017, 2017 annual IEEE Conference on Automation Science and Engineering, Xi'an, Cina, August 2017.

Workshop and tutorial chair of the international conference:

- 2015 annual IEEE Conference on Automation Science and Engineering (CASE 2015), Gothenburg, Sweden, August 2015.

Special session cochair of the international conference:

- 2013 18th annual IEEE Conference on Emerging Technology and Factory Automation (ETFAC 2013), Cagliari, Italy, September 2013.

Special Session Chair and member of the National Organizational Committee of the international congress:

- WHCM'2010, the IEEE Workshop on Health Care Management, Venice, Italy, February 2010.

Chair of the National Organizational Committee of the international congress:

- 2009 2nd IFAC Workshop on Dependable Control of Discrete Systems, Bari, Italy, June 2009.

Member of the scientific committee 2018 of the award "Fabrizio Flacco Young Author Best Paper Award" of the Italian chapter of the IEEE Robotics and Automation Society.

Member of the National Organizing Committee of the national congress:

- Automatica.it 2016, National Congress of the Italian Researchers in Automatic Control, Rome, Italy, September 2016.

Member of the National Organizing Committee of the national congress:

- Automatica.it 2015, National Congress of the Italian Researchers in Automatic Control, Bari, Italy, September 2015.

Coordinator of the Technical and Organizational Secretariat of the National Symposium "Biotechnologies, Research and Development: institutions and enterprises design the future" organized in 2004 by Politecnico di Bari.

Membership to international program committees and editorial activity at conferences

She is or was Associate Editor for the following 14 international conferences:

1. SMC2018, 2020 annual IEEE Conference on Systems, Man, and Cybernetics, Miyazaki, Japan, October 2020;
2. CASE2018, 2018 annual IEEE Conference on Automation Science and Engineering, Munich, Germany, August 2018;
3. ECC 2018, 16th European Control Conference, June 12-15, 2018, Limassol, Cyprus;
4. CTS 2018, 15th IFAC Symposium on Control in Transportation Systems, June 6-8, 2018, Savona, Italy;
5. CASE2017, 2017 annual IEEE Conference on Automation Science and Engineering, Xi'an, Cina, August 2017;
6. IFAC 2017 World Congress, July 9-14, 2017, Toulouse, France;
7. CTS 2016, 14th IFAC Symposium on Control in Transportation Systems, May 18-20, 2016, Istanbul, Turkey;
8. CASE2016, 2016 annual IEEE Conference on Automation Science and Engineering, Forth Worth, USA, August 2016;
9. ECC 2016, 15th European Control Conference, June 29-July 1, 2016, Aalborg, Denmark;
10. CASE2015, 2015 annual IEEE Conference on Automation Science and Engineering, Gothenburg, Sweden, August 2015;
11. ICRA2015, 2015 IEEE International conference on Robotics and Automation (ICRA 2015), May 26-30, 2015, Seattle, USA.
12. ECC 2015, 14th European Control Conference, July 15-17, 2015, Linz, Austria.
13. ICRA2014, 2014 IEEE International conference on Robotics and Automation (ICRA 2014), May 31 - June 7, 2014, Hong Kong, China.
14. ECC 2014, 13th European Control Conference, June 24-27, 2014, Strasbourg, France.

She is or was member of the International Program Committee of the following 76 international Conferences and Symposia:

1. 5th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS 2019), Heraklion, Greece, 3-5 May 2019;
2. 12th International Conference Modeling & Simulation (MOSIM 2018), Toulouse, France, June 2018;
3. 22nd International Conference on System Theory, Control and Computing (ICSTCC 2018), Sinaia, Romania, October 10-12, 2018.
4. 14th International Workshop on Discrete Event Systems (WODES 2018), Sorrento, Italy, May-June 2018;
5. 7th International Conference on Smart Cities, Systems, Devices and Technologies (SMART 2018), Barcelona, Spain, 22-26 June 2018;
6. INCOM 2018, The 2018 IFAC Symposium on Information Control in Manufacturing (INCOM 2018), Bergamo, Italy, June 11-13 2018;
7. 4th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS 2018), Funchal, Portugal, 16-18 March 2018;
8. 2017 IEEE International Conference on Systems Man and Cybernetics, Banff, Canada, October 2011;
9. 2017 IFAC World Congress, Toulouse, France, 9-14 July 2017;
10. 2017 2017 IEEE International Conference on Service Operations and Logistics and Informatics (SOLI 2017), Bari, Italy, 18-20 September 2016;
11. 2017 22nd annual IEEE Conference on Emerging Technology and Factory Automation (ETFFA 2017), Lymassol, Cyprus, 12-15 September 2017;

12. 2017 IEEE International Conference on Networking, Sensing and Control (ICNSC), Calabria, Italy, May 16-18, 2017;
13. 6th International Conference on Smart Cities, Systems, Devices and Technologies (SMART 2017), Venezia, Italy, 25-29 June 2017;
14. 2017 4th International Conference on Control, Decision and Information Technologies (CoDIT'17), Barcelona, Spain, April 5-7, 2017;
15. 3rd International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS 2017), Porto, Portugal, 23-24 April 2017;
16. ICCAT'2017, 2017 International Conference on Computer Applications & Technology, Cairo, Egypt, January 2017;
17. 11th International Conference Modeling & Simulation (MOSIM 2016), Montreal, Canada, August 2016;
18. 2016 21th annual IEEE Conference on Emerging Technology and Factory Automation (ETFAs 2016), Berlin, Germany, 6-9 September 2016;
19. 2nd International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS 2016), Rome, Italy, 23-24 April 2016;
20. 5th International Conference on Smart Cities, Systems, Devices and Technologies (SMART 2016), Valencia, Spain, 12-26 May 2016;
21. 14th IFAC Symposium on Control in Transportation Systems (CTS 2016), Istanbul, Turkey, 18-20 May 2016;
22. 13th International Workshop on Discrete Event Systems (WODES 2016), Xi'an, Cina, May-June 2016;
23. 2016 8th IFAC Conference on Manufacturing Modelling, Management and Control, Troyes, France, June 2016;
24. ICCAT'2015, 2015 International Conference on Computer Applications & Technology, Rome, Italy, November 2015;
25. 2015 International Conference on Knowledge Management and Information Sharing (KMIS 2015), Lisboa, Portugal, October 2015;
26. 2015 20th annual IEEE Conference on Emerging Technology and Factory Automation (ETFAs 2015), Luxembourg, September 2015;
27. 5th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS 2015), Atlanta, USA, October 2015;
28. 2015 5th IFAC Workshop on Dependable Control of Discrete Systems, Guadalajara, Mexico, May 2015;
29. INCOM 2015, The 2015 IFAC Symposium on Information Control in Manufacturing (INCOM 2015), Ottawa, Canada, May 11-13 2015;
30. INISTA 2015, 2015 International Symposium on INnovations in Intelligent SysTems and Applications, September 2-4, 2015, Madrid, Spain;
31. ICAAM 2015, 2015 International Conference on Control Automation&Applied Mechanics, July 26-28, 2015, Istanbul, Turkey;
32. CIE45, 2015 International Conference on Computers&Industrial Engineering, October 28-30, 2015, Metz, France;
33. 10th International Conference Modeling & Simulation (MOSIM 2014), Nancy, France, November 2014;
34. 12th International Workshop on Discrete Event Systems (WODES 2014), Paris-Cachan, France, May 2014;
35. 2014 International Conference on Knowledge Management and Information Sharing (KMIS 2014), Rome Italy, October 2014;
36. 2014 19th annual IEEE Conference on Emerging Technology and Factory Automation (ETFAs 2014), Barcelona, Spain, September 2014;

37. 2013 3rd IFAC International Conference on Intelligent Control and Automation Science (ICONS 2013), Chengdu, Cina, September 2013;
38. 2013 18th annual IEEE Conference on Emerging Technology and Factory Automation (ETFA 2013), Cagliari, Italy, September 2013;
39. 2013 International Conference on Knowledge Management and Information Sharing (KMIS 2013), Vilamoura, Portugal, September 2013;
40. 2013 4th IFAC Workshop on Dependable Control of Discrete Systems, York, UK, September 2013;
41. 2013 IEEE Symposium on Computational Intelligence in Control and Automation (CICA2013), Singapore, April 2013;
42. 2012 International Conference on Fuzzy Theory and Its Applications (iFUZZY 2012), Taichung, Taiwan, November 16-18, 2012;
43. 2012 IEEE Conference on Control, Systems and Industrial Informatics (ICCSII2012), Bandung, Indonesia, September 2012;
44. 2012 International Conference on Knowledge Management and Information Sharing (KMIS 2012), Barcelona, Spain, October 2012;
45. 2012 17th annual IEEE Conference on Emerging Technology and Factory Automation (ETFA 2012), Cracovia, Poland, September 2012;
46. 2012 8th International Conference on Intelligent Computing (ICIC2012), Huangshan, Cina, August 2012;
47. 2012 2nd International Conference on Electric Information and Control Engineering (ICEICE2012), Lushan, China, April 2012;
48. 2012 IEEE International Conference on Networking, Sensing and Control (ICNSC), Beijing, China, April 11-14, 2012;
49. 11th International Workshop on Discrete Event Systems (WODES 2012), Guadalajara, Mexico, October 3-5, 2012;
50. 9th International Conference Modeling & Simulation (MOSIM 2012), Bordeaux, France, June 2012;
51. 2011 IEEE International Conference on Systems Man and Cybernetics, Anchorage, USA, October 2011;
52. 2011 International Conference on Knowledge Management and Information Sharing (KMIS 2011), Paris, France, October 2011;
53. 2011 16th annual IEEE Conference on Emerging Technology and Factory Automation (ETFA 2011), Toulouse, France, September 2011;
54. 2011 7th International Conference on Intelligent Computing (ICIC2011), Zhengzhou, China, August 2011;
55. 2011 3rd IFAC Workshop on Dependable Control of Discrete Systems, Saarbruecken, Germany, June 2011;
56. 2011 IEEE Symposium on Computational Intelligence in Control and Automation (CICA2011), Paris, France, April 2011;
57. 2010 International Conference on Knowledge Management and Information Sharing (KMIS 2010), Valencia, Spain, October 2010;
58. 2010 IEEE International Conference on Systems Man and Cybernetics, Istanbul, Turkey, October 2010;
59. 6th annual IEEE Conference on Automation Science and Engineering (CASE 2010), Toronto, Canada, August 2010;
60. 2010 IEEE International Conference on Mechatronics and Automation (ICMA 2010), Xi'an, China, August 2010;
61. 2009 International Conference on Knowledge Management and Information Sharing (KMIS 2009), Madeira, Portugal, October 2009;

62. 2009 International Conference on Intelligent Computing (ICIC2009), Ulsan, Korea, September 2009;
63. 2009 IEEE Symposium on Computational Intelligence in Control and Automation (CICA2009), Nashville, USA, March-April 2009;
64. LT'09, the International Workshop on Logistics and Transportation 2009, Sousse, Tunisia, March 2009;
65. 9th International Conference on Intelligent Systems Design and Applications (ISDA 2009), Pisa, Italy, December 2009.
66. 2008 IEEE International Conference on Systems Man and Cybernetics, Singapore, October 2008;
67. First International Workshop on Nonlinear Dynamics and Synchronization (INDS'08), July 2008, Klagenfurt, Austria;
68. Workshop on Petri Nets and Agile Manufacturing – Satellite workshop of ATPN'08 and ACS'D'08 – (Xi'an, China), June 2008;
69. 2007 IEEE International Conference on Systems Man and Cybernetics, Montréal, Canada, October 2007;
70. 2007 International Conference on Intelligent Computing, Qingdao, China, August 2007;
71. LT'07, the International Workshop on Logistics and Transportation 2007, Sousse, Tunisia, November 2007;
72. 2006 IEEE International Conference on Systems Man and Cybernetics, Taipei, Taiwan, October 2006;
73. LT'06, the International Workshop on Logistics and Transportation 2006, Hammamet, Tunisia, May 2006;
74. ESIT'2000, the European Symposium on Intelligent Techniques, Aachen, Germany, September 2000;
75. EUFIT'99, the European Congress on Intelligent Techniques and Soft Computing, Aachen Germany, September 1999;
76. ESIT'99, the European Symposium on Intelligent Techniques, Creta, Greece, June 1999.

She was member of the Program Committee of the national congress:

- Automatica.it 2016, Convegno Nazionale dei Ricercatori di Automatica, Rome, Italy, Settembre 2016.

Invited sessions organization

She has been the organizer of the following 13 invited sessions of international Conferences and Symposia:

1. “Innovative Decision and Control Approaches for Smart Factories and Supply Chains”, 2018 annual IEEE Conference on Automation Science and Engineering (CASE 2018), Munich, Germany, 20-24 August 2018;
2. “Planning, scheduling, and coordination of logistics and transportation systems”, 15th IFAC Symposium on Control in Transportation Systems (CTS 2018), Savona, Italy, 6-8 June 2018;
3. “Planning, scheduling, coordination, and allocation of resources in logistics and transportation systems”, 2017 IEEE International Conference on Service Operations and Logistics and Informatics (SOLI 2017), Bari, Italy, 18-20 September 2017;
4. “Automation and Optimization for Energy Systems”, 2017 IEEE International Conference on Networking, Sensing and Control (ICNSC2017), Calabria, Italy, May 16-18, 2017;

5. “Discrete event process mining/identification”, WODES’2014, 12th IFAC International Workshop on Discrete Event Systems, Paris-Cachan, France, May, 2014;
6. “Control, State Estimation, and Diagnosis of Discrete Event Systems”, IEEE CDC’2013, Conference on Decision and Control, Firenze, Italy, December 2013;
7. “Petri Nets: Theory and Applications” IEEE CASE’2011, Conference on Automation Science and Engineering, Trieste, Italy, August 2011;
8. “Design and Control of Discrete Event and Hybrid Systems” IEEE SMC’2008, International Conference on Systems, Man and Cybernetics, Singapore, October 2008;
9. “Petri Nets for Modeling and Control” ANIPLA’2006, International Congress on Methodologies for Emerging Technologies in Automation, Rome, Italy, November 2006;
10. “Supply Chain Modeling and Management” CESA’2006, Multiconference on “Computational Engineering in Systems Applications”, Pechino, China, October 2006;
11. “Scheduling and Transportation Systems” CESA’2006, Multiconference on “Computational Engineering in Systems Applications”, Pechino, China, October 2006.
12. “Supply chain Management” LT’06, the International Workshop on Logistics and Transportation 2006, Hammamet, Tunisia, May 2006;
13. “Distance Learning: a hands-on lesson in Fuzzy Control” EUFIT’99, European Congress on Fuzzy and Intelligent Technologies, ELITE Foundation, Aachen, Germany, September 1999.

Workshops organization

She has been the organizer of the following workshops of international Conferences and Symposia:

- “Petri nets applications”, 2015 annual IEEE Conference on Automation Science and Engineering (CASE 2015), Gothenburg, Svezia, Agosto 2015 (in collaboration with Prof. Carla Seatzu);
- “Energy management for large-scale smart systems”, 2015 annual IEEE Conference on Automation Science and Engineering (CASE 2015), Gothenburg, Svezia, Agosto 2015 (in collaboration with Dr. Sergio Grammatico).

Publication list

She is author or co-author of 218 printed publications, listed in the sequel, including:

- 1 book in Italian;
- 53 papers on international journals;
- 4 papers on national journals;
- 13 chapters of international books;
- 141 papers in the proceedings of international conferences;
- 4 papers in the proceedings of national conferences;
- 1 PhD thesis;
- 1 Laurea degree thesis.

She has also been presenter of numerous of these publications at international conferences.

Moreover, about 10% of these publications were coauthored in collaboration with authors affiliated to Universities or organizations located outside Italy.

Books

[b1] M. Dotoli, M. P. Fanti, MATLAB – Guida al laboratorio di automatica, 448 pp., CittàStudi Edizioni, Grugliasco (TO), ISBN 978-88-251-7325-3, 2008.

Papers on International Journals

- [r1] R. Carli, M. Dotoli, R. Pellegrino, Multi-criteria Decision-Making for Sustainable Metropolitan Cities Assessment, *Journal of Environmental Management*, to appear, doi: 10.1016/j.jenvman.2018.07.07.
- [r2] M. Dotoli, N. Epicoco, Integrated Network Design of Agile Resource-Efficient Supply Chains under Uncertainty, *IEEE Transactions on Systems, Man and Cybernetics: Systems*, 15 pp., to appear, doi: 10.1109/TSMC.2018.2854620.
- [r3] R. Carli, M. Dotoli, N. Epicoco, Monitoring Traffic Congestion in Urban Areas through Probe Vehicles: A Case Study Analysis, 4 pp., *Internet Technology Letters*, to appear, doi: 10.1002/itl2.5.
- [r4] R. Carli, M. Dotoli, R. Pellegrino, A decision-making tool for energy efficiency optimization of street lighting, *Computers&Operations Research*, Special Issue on “Optimization challenges in the evolution of energy networks to smart grids”, Vol. 96, pp. 223-235, 2018, doi: 10.1016/j.cor.2017.11.016.
- [r5] G. Cavone, M. Dotoli, C. Seatzu A Survey on Petri Nets Models for Freight Logistics and Transportation Systems, *IEEE Transactions on Intelligent Transportation Systems*, Vol. 19, No. 6, pp. 1795-1813, doi: 10.1109/TITS.2017.2737788.
- [r6] G. Cavone, M. Dotoli, N. Epicoco, C. Seatzu, Intermodal Terminal Planning by Petri Nets and Data Envelopment Analysis, *Control Engineering Practice*, Vol. 69, pp. 9–22, 2017, doi: 10.1016/j.conengprac.2017.08.007.
- [r7] M. Dotoli, H. Zgaya, C. Russo, S. Hammadi, A Multi-Agent Advanced Traveler Information System for Optimal Trip Planning in a Co-Modal Framework, *IEEE Transactions on Intelligent Transportation Systems*, Vol. 18, No. 9, pp. 2397-2412, Sept. 2017, doi: 10.1109/TITS.2016.2645278.
- [r8] G. Cavone, M. Dotoli, N. Epicoco, C. Seatzu, A Decision Making Procedure for Robust Train Rescheduling based on Mixed Integer Linear Programming and Data Envelopment Analysis, *Applied Mathematical Modeling*, Vol. 52, pp. 255-273, 2017, doi: 10.1016/j.apm.2017.07.030.
- [r9] R. Carli, M. Dotoli, A distributed control algorithm for waterfilling of networked control systems via consensus, *IEEE Control Systems Letters*, Vol. 1, No. 2, pp. 334-339, 2017, doi: 10.1109/LCSYS.2017.2716190.
- [r10] R. Carli, M. Dotoli, R. Pellegrino, L. Ranieri, A decision making technique to optimize a building stock energy efficiency, *IEEE Transactions on Systems Man and Cybernetics: Systems*, 2017, Vol. 47, No. 5, pp. 794-807, doi: 10.1109/TSMC.2016.2521836.
- [r11] R. Carli, M. Dotoli, R. Pellegrino, A Hierarchical Decision Making Strategy for the Energy Management of Smart Cities, *IEEE Transactions on Automation Science and Engineering*, Vol. 14, No. 2, pp. 505-523, 2017, doi: 10.1109/TASE.2016.2593101.
- [r12] M. Dotoli, S. Grammatico, N. Ciulli, Guest Editorial: Special Issue on Automation and Optimization for Energy Systems, *IEEE Transactions on Automation Science and Engineering*, Vol. 14, No. 2, pp. 410-413, 2017, doi: 10.1109/TASE.2017.2670758.
- [r13] M. Dotoli, N. Epicoco, M. Falagario, A Fuzzy Technique for Supply Chain Network Design with Quantity Discounts, *International Journal of Production Research*, Special Issue on “IFAC MIM-INCOM Conferences”, Vol. 55, No. 7, pp. 1862-1884, 2017, doi: 10.1080/00207543.2016.1178408.
- [r14] M. Dotoli, A. Fay, M. Miśkiewicz, C. Seatzu, Advanced Control in Factory Automation: a Survey, *International Journal of Production Research*, Special Issue on “IFAC MIM-INCOM Conferences”, Vol. 55, No. 5, pp. 1243-1259, 2017, doi: 10.1080/00207543.2016.1173259.
- [r15] M. Dotoli, N. Epicoco, M. Falagario, C. Seatzu, B. Turchiano, A Decision Support System for Optimizing Operations at Intermodal Rail-Road Terminals, *IEEE Transactions on Systems*

- Man and Cybernetics: Systems, Vol. 47, No. 3, pp. 487-501, 2017, doi: 10.1109/TSMC.2015.2506540.
- [r16] S. Ben Othman, H. Zgaya, M. Dotoli, S. Hammadi, An Agent-Based Decision Support System for Resources' Scheduling in Emergency Supply Chains, *Control Engineering Practice*, Vol. 59, No. 2, pp. 27 – 43, 2017, doi: 10.1016/j.conengprac.2016.11.014.
- [r17] M. Dotoli, N. Epicoco, M. Falagario, G. Cavone, A timed Petri nets model for performance evaluation of intermodal freight transport terminals, *IEEE Transactions on Automation Science and Engineering*, Vol. 13, No. 2, pp. 842 – 857, 2016, doi: 10.1109/TASE.2015.2404438.
- [r18] G. Cavone, M. Dotoli, C. Seatzu, Management of Intermodal Freight Terminals by First-Order Hybrid Petri Nets, *IEEE Robotics and Automation Letters*, Vol. 1, No.1, pp. 2-9, 2016, doi: 10.1109/LRA.2015.2502905.
- [r19] M. Dotoli, N. Epicoco, M. Falagario, F. Sciancalepore, A stochastic cross-efficiency Data Envelopment Analysis approach for supplier selection under uncertainty, *International Transactions in Operational Research*, Vol. 23, No. 4, pp. 725-748, 2016, doi: 10.1111/itor.12155.
- [r20] M. Dotoli, N. Epicoco, M. Falagario, N. Costantino, B. Turchiano, An integrated approach for warehouse analysis and optimization: A case study, *Computers in Industry*, Vol. 70, No. 1, pp. 56–69, 2015, doi: 10.1016/j.compind.2014.12.004.
- [r21] M. Dotoli, N. Epicoco, M. Falagario, F. Sciancalepore, A cross-efficiency fuzzy Data Envelopment Analysis technique for performance evaluation of decision making units under uncertainty, *Computers and Industrial Engineering*, Vol. 79, No. 1, pp. 103–114, 2015, doi: 10.1016/j.cie.2014.10.026.
- [r22] V. Bevilacqua, M. Dotoli, M. M. Foglia, F. Acciani, G. Tattoli, M. Valori, Artificial Neural Networks for Feedback Control of a Human Elbow Hydraulic Prosthesis, *Neurocomputing*, Vol. 137, pp. 3-11, 2014, special section on papers of ICIC 2012, Huangshan, China, July 25-29, 2012, doi: 10.1016/j.neucom.2013.05.066.
- [r23] M. Dotoli, N. Epicoco, M. Falagario, F. Sciancalepore, N. Costantino, A Nash Equilibrium Simulation Model for the Competitiveness Evaluation of the Auction Based Day Ahead Electricity Market, *Computers in Industry*, Vol. 65, pp. 774-785, 2014, doi: 10.1016/j.compind.2014.02.014.
- [r24] M. Dotoli, M. P. Fanti, G. Iacobellis, G. Rotunno, An Integrated Technique for the Internal Logistics Analysis and Management in Discrete Manufacturing Systems, *the International Journal of Computer Integrated Manufacturing*, Vol. 27, No. 2, pp. 165-180, 2014, doi: 10.1080/0951192X.2013.802370.
- [r25] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A. M. Mangini, F. Sciancalepore, W. Ukovich, A Hierarchical Optimization Technique for the Strategic Design of Distribution Networks, *Computers & Industrial Engineering*, Vol. 6, No. 4, pp. 849–864, 2013, doi: 10.1016/j.cie.2013.09.009.
- [r26] M. P. Fanti, A. M. Mangini, M. Dotoli, W. Ukovich, A Three Level Strategy for the Design and Performance Evaluation of Hospital Departments, *IEEE Transactions on Systems Man and Cybernetics part A*, Vol. 43, No. 4, pp. 742-756, 2013, doi: 10.1109/TSMCA.2012.2217319.
- [r27] N. Costantino, M. Dotoli, M. Falagario, F. Sciancalepore, Balancing the additional costs of purchasing and the vendor set dimension to reduce public procurement costs, *Journal of Purchasing and Supply Management*, Vol. 18, No. 3, pp. 189-198, 2012, doi: 10.1016/j.pursup.2012.08.001.
- [r28] V. Bevilacqua, N. Costantino, M. Dotoli, M. Falagario, F. Sciancalepore, Strategic design and multi-objective optimization of distribution networks based on genetic algorithms,

- International Journal of Computer Integrated Manufacturing, Vol. 25, No. 12, pp. 1139-1150, 2012, doi: 10.1080/0951192X.2012.684719.
- [r29] M. Dotoli, M. Falagario, A hierarchical model for optimal supplier selection in multiple sourcing contexts, International Journal of Production Research, Vol. 50, No. 11, pp. 2953-2967, 2012, doi: 10.1080/00207543.2011.578167.
- [r30] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A. M. Mangini, A model for supply management of agile manufacturing supply chains, International Journal of Production Economics, Vol. 135, No. 1, pp. 451-457, 2012, doi: 10.1016/j.ijpe.2011.08.021.
- [r31] V. Boschian, M. Dotoli, M. P. Fanti, G. Iacobellis, W. Ukovich, A Metamodelling Approach to the Management of Intermodal Transportation Networks, IEEE Transactions on Automation Science and Engineering, Vol. 8, No. 3, pp. 457-469, 2011, doi: 10.1109/TASE.2010.2090870.
- [r32] J.-M. Faure, M.P. Fanti, M. Dotoli, J. Zaytoon, Preface, Special Section: DCDS'09 – The 2nd IFAC Workshop on Dependable Control of Discrete Systems in Bari, Italy, 10th-12th June, 2009, Control Engineering Practice, Vol. 19, No. 9, pp. 927-928, 2011, doi: 10.1016/j.conengprac.2011.07.007.
- [r33] M. Dotoli, M. P. Fanti, A. M. Mangini, W. Ukovich, Identification of the Unobservable Behaviour of Industrial Automation Systems by Petri Nets, Control Engineering Practice, Vol. 19, No. 9, pp. 958-966, 2011, doi: 10.1016/j.conengprac.2010.09.004.
- [r34] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, Using Fuzzy Decision Making for Supplier Selection in Public Procurement, Journal of Public Procurement, Vol. 11, No. 3, pp. 404-428, 2011, doi: 10.1108/JOPP-11-03-2011-B005.
- [r35] M. Dotoli, M. P. Fanti, A.M. Mangini, A Fault Monitor for Automated Manufacturing Systems Using a Hybrid Petri Nets Formalism, Transactions of the Institute of Measurement and Control, Vol. 33, No. 1, pp. 149-167, 2011, doi: 10.1177/0142331208095677.
- [r36] V. Boschian, M. Dotoli, M. P. Fanti, G. Iacobellis, W. Ukovich, A metamodelling approach for performance evaluation of intermodal transportation networks, European Transport \ Trasporti Europei Journal, Special Issue on EWGT'2009, the 2009 European Working Group on Transportation Meeting, Vol. 46, pp. 100-113, 2010, ISSN 18253997.
- [r37] M. Dotoli, M. P. Fanti, A. M. Mangini, G. Stecco, W. Ukovich, The Impact of ICT on Intermodal Transportation Systems: a Modelling Approach by Petri Nets, Control Engineering Practice, Vol. 18, No.8, pp. 893-903, 2010, doi: 10.1016/j.conengprac.2010.03.013 .
- [r38] M. Dotoli, M. P. Fanti, A.M. Mangini, W. Ukovich, On-line Fault Detection in Discrete Event Systems by Petri Nets and Integer Linear Programming, Automatica, brief paper, Vol. 45, No. 11, pp. 2665-2672, 2009, doi: 10.1016/j.automatica.2009.07.021.
- [r39] M. Dotoli, M. P. Fanti, G. Iacobellis, A.M. Mangini, A First Order Hybrid Petri Net Model for Supply Chain Management, IEEE Transactions on Automation Science and Engineering, Vol. 6, No. 4, pp. 744-758, 2009, doi: 10.1109/TASE.2009.2021362.
- [r40] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, G. Iacobellis, A Decision Support System Framework for Purchasing Management in Supply Chains, Special Issue on Purchasing Orientation, Journal of Business and Industrial Marketing, Vol. 24, No. 3/4, pp. 278-290, 2009, doi: 10.1108/08858620910939822.
- [r41] M. Dotoli, M. P. Fanti, A.M. Mangini, Real Time Identification of Discrete Event Systems using Petri Nets, Automatica, Vol. 44, No. 5, pp. 1209-1219, 2008, doi: 10.1016/j.automatica.2007.10.014.
- [r42] M. Dotoli, M.P. Fanti, A. Giua, C. Seatzu, First-order hybrid Petri nets. An application to distributed manufacturing systems, Nonlinear Analysis: Hybrid Systems, Vol. 2, No. 2, pp. 408-430, 2008, doi: 10.1016/j.nahs.2006.05.005.

- [r43] M. Dotoli, M.P. Fanti, A.M. Mangini, Fuzzy Multi-Objective Optimization for Network Design of Integrated e-Supply Chains, *International Journal of Computer Integrated Manufacturing*, Vol. 20, No. 6, pp. 588-601, 2007, doi: 10.1080/09511920601079397.
- [r44] M. Dotoli, M.P. Fanti, Deadlock Detection and Avoidance Strategies for Automated Storage and Retrieval Systems, *IEEE Transactions on Systems Man and Cybernetics, part C*, Vol. 37, No. 4, pp. 541-552, 2007, doi: 10.1109/TSMCC.2007.897690.
- [r45] M. Dotoli, M.P. Fanti, C. Meloni, A Signal Timing Plan Formulation for Urban Traffic Control, *Control Engineering Practice*, Vol. 14, No. 11, pp. 1297-1311, 2006, doi: 10.1016/j.conengprac.2005.06.013.
- [r46] M. Dotoli, M.P. Fanti, An Urban Traffic Network Model via Coloured Timed Petri Nets, *Control Engineering Practice*, Vol. 14, No. 10, pp. 1213-1229, 2006, doi: 10.1016/j.conengprac.2006.02.005.
- [r47] N. Costantino, M. Dotoli, M. Falagario, M.P. Fanti, G. Iacobellis, Evaluating the Total Costs of Purchasing via Probabilistic and Fuzzy Reasoning, *Fuzzy Economic Review*, Vol. 11, No.1, pp. 69-92, 2006, ISSN (print) 1136-0593 · ISSN (online) 2445-4192 .
- [r48] M. Dotoli, M.P. Fanti, A Generalized Stochastic Petri Net Model for Supply Chain Management, *The Mediterranean Journal of Measurement and Control*, Vol. 2, No. 1, pp. 1-11, 2006, ISSN 1743-9310.
- [r49] M. Dotoli, M.P. Fanti, C. Meloni, M.C. Zhou, Design and Optimization of Integrated E-Supply Chain for Agile and Environmentally Conscious Manufacturing, *IEEE Transactions on Systems Man and Cybernetics, part A*, Vol. 36, No. 1, pp. 62-75, 2006, doi: 10.1109/TSMCA.2005.859189.
- [r50] M. Dotoli, M.P. Fanti, C. Meloni, M.C. Zhou, A Multi-Level Approach for Network Design of Integrated Supply Chains, *International Journal of Production Research*, Vol. 43, No. 20, pp. 4267-4287, 2005, doi: 10.1080/00207540500142316.
- [r51] M. Dotoli, M.P. Fanti, A Coloured Petri Net Model for Automated Storage and Retrieval Systems Serviced by Rail-Guided Vehicles: a Control Perspective, *International Journal of Computer Integrated Manufacturing*, Vol.18, No. 2-3, pp. 122-136, 2005, doi: 10.1080/0951192052000288233.
- [r52] M. Dotoli, M.P. Fanti, Coloured Timed Petri Net Model for Real Time Control of AGV Systems, *International Journal of Production Research*, Vol. 42, No. 9/1, pp. 1787-1814, 2004, doi: 10.1080/00207540410001661364.
- [r53] M. Dotoli, Fuzzy Sliding Mode Control with Piecewise Linear Switching Manifold, *Asian Journal of Control*, Vol. 5, No. 4, pp. 528-542, 2003, doi: 10.1111/j.1934-6093.2003.tb00170.x.

Papers on National Journals

- [r54] N. Costantino, N. Carbonara, M. Dotoli, M. Falagario, F. Sciancalepore, “La valutazione incrociata dei fornitori in condizioni di incertezza con il metodo della Data Envelopment Analysis”, *Logistica Management*, no. 220, pp. 79-85, 2011.
- [r55] N. Costantino, M. Dotoli, “Uno strumento per incrementare il patrimonio dei nostri Atenei”, In “Speciale Proprietà Intellettuale”, *Il Giornale dell’Ingegnere*, Vol. 57, No. 20/21, p. 9, 2009.
- [r56] M. Dotoli, M.P. Fanti, G. Iacobellis, Un modello per la valutazione delle prestazioni delle catene di produzione basato sulle reti di Petri colorate, *Automazione e Strumentazione*, Vol. 55, No. 5, pp. 106-114, 2007.
- [r57] M. Dotoli, M.P. Fanti, A.M. Mangini, C. Meloni, Una procedura gerarchica per il progetto dei sistemi di produzione distribuiti, *Automazione e Strumentazione*, Vol. 53, No. 6, pp. 98-108, 2006.

Chapters of International Books

- [11] M. P. Cabasino, M. Dotoli, C. Seatzu, Modeling Manufacturing Systems with Place/Transition Nets and Timed Petri Nets, in “Formal Methods in Manufacturing, Series on Industrial Information Technology”, CRC Press/Taylor and Francis, Javier Campos, Carla Seatzu and Xiaolan Xie (Editors), pp. 3-28, 2014, ISBN 978-1-4665-6156-4, doi: 10.1201/b16529-3.
- [12] V. Bevilacqua, M. Dotoli, M. M. Foglia, F. Acciani, G. Tattoli, M. Valori, Using Artificial Neural Networks for Closed Loop Control of a Hydraulic Prosthesis for a Human Elbow, D.-S. Huang, Y. Gan, P. Gupta, M.M. Gromiha (Eds.): ICIC 2012, Communications in Computer and Information Science 304, pp. 475–480, 2012. Springer-Verlag Berlin Heidelberg 2012, ISBN 978-3-642-31836-8, doi: 10.1007/978-3-642-31837-5.
- [13] V. Bevilacqua, M. Dotoli, M. Falagario, F. Sciancalepore, Dario D’Ambruoso, S. Saladino, R. Scaramuzzi, A Multi-objective Genetic Optimization Technique for the Strategic Design of Distribution Networks, D.-S. Huang et al. (Eds.): ICIC 2011, Lecture Notes on Artificial Intelligence 6839, pp. 243–250, 2011. Springer-Verlag Berlin Heidelberg 2011, ISBN Online ISBN 978-3-642-25944-9, doi: Online ISBN978-3-642-25944-9.
- [14] M. Dotoli, M. P. Fanti, A. M. Mangini, Operational Management of Supply Chains: a Hybrid Petri Net Approach, “Supply Chain, The Way to Flat Organisation”, In-Teh, Y. Huo and F. Jia Eds., pp. 137-162, 2008, ISBN 978-953-7619-35-0, doi: 10.5772/6657.
- [15] M. Dotoli, M. P. Fanti, A. Giua, C. Seatzu, Modelling Systems by Hybrid Petri Nets: an Application to Supply Chains, in “Petri Net, Theory and Application”, Vedran Kordic Ed. AustriaARS Publishing, I-Tech Education and Publishing, Vienna, pp. 91-112, 2008, ISBN 978-3-902613-12-7, doi: 10.5772/5314.
- [16] M. Dotoli, M.P. Fanti, C. Meloni, M.C. Zhou, Service Computing for Design and re-Configuration of Integrated e-Supply Chains, Robin Qiu Ed., Enterprise Service Computing: From Concept to Deployment, Idea Group Publishing, Hershey, PA, USA, R. G. Qiu Ed., ISBN 1-59904-181-2, pp. 322-354, 2006, doi: 10.4018/978-1-59904-180-3.ch013.
- [17] M. Dotoli, B. Turchiano, Piecewise Linear Fuzzy Sliding Mode Control, Lecture Notes in Computer Science Vol. 2955, Springer Verlag, pp. 89-96, 2006, ISBN 3-540-31019-3, ISSN 0302-9743, doi: 10.1007/10983652_12.
- [18] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, G. Iacobellis, Modelling Transaction Costs in Purchasing via Probabilistic and Fuzzy Reasoning, Proceedings of SIGEF 2005, 12th Congress of the International Association for Fuzzy Set Management and Economy, Bahia Blanca, Argentina, 26-28 October 2005, pp. 629-646, ISBN 987-1171-25-0.
- [19] M. Dotoli, P. Lino, B. Maione, D. Naso, B. Turchiano, Genetic Optimization of Fuzzy Sliding Mode Controllers: an experimental study, in “Soft Computing Applications”, Bonarini A., Masulli F., Pasi G. eds., Physica Verlag, 2003, ISBN 3-7908-1544-6, doi: 10.1007/978-3-7908-1768-3_17.
- [110] M. Dotoli, B. Maione, D. Naso, Fuzzy Sliding Mode Controllers Synthesis Through Genetic Optimization, in “Advances in Computational Intelligence and Learning: Methods and Applications”, Zimmermann H-J., Tselentis G., van Someren M., Dounias G. eds., International Series in Intelligent Technologies, vol 18, pp. 331-341, Springer, Dordrecht, 2002, ISBN 978-94-010-3872-0, doi: 10.1007/978-94-010-0324-7_23.
- [111] M. Dotoli, B. Maione, D. Naso, Evolutionary Techniques for Tuning Fuzzy Sliding Mode Controllers, in “Advances in fuzzy systems and intelligent technologies”, R. Parenti, F. Masulli and G. Pasi, eds., pp. 254-264, 2000, Shaker Publishing, Maastricht, ISBN 90-423-0105-8.
- [112] M. Dotoli, J. Jantzen, Fuzzy Control Tutorial, in R. Roy, T. Furuhashi, P.K. Chawdhry, (Eds.), ‘Advances in Soft Computing: Engineering Design and Manufacturing’, Springer Verlag, ISBN 978-1-852-33062-0, pp. 605-607, 1999.

- [I13] J. Jantzen, M. Dotoli, A Fuzzy Control Course on the Internet, in R. Roy, P.K. Chawdhry, R.K. Pant (Eds.) ‘Soft Computing in Engineering Design and Manufacturing’, ISBN 978-3-540-76214-0, Springer Verlag, pp. 122-130, 1998.

International Conferences

- [c1] R. Carli, M. Dotoli, Distributed Control for Waterfilling of Networked Control Systems with Coupling Constraints, IEEE CDC2018 (Conference on Decision and Control), Miami Beach, Florida, USA, December 17-19, 2018.
- [c2] S.M. Hosseini, R. Carli, M. Dotoli, “Model Predictive Control for Real-Time Residential Energy Scheduling under Uncertainties”, IEEE SMC 2018, 2018 IEEE Conference on Systems, Man and Cybernetics, Miyazaki, Japan, October 7-10, 2018.
- [c3] R. Carli, M. Dotoli, “A Decentralized Control Strategy for the Energy Management of Smart Homes with Renewable Energy Exchange”, IEEE CCTA2018, Copenhagen, Danimarca, August 21-24 2018.
- [c4] R. Carli, M. Dotoli, N. Epicoco “Cost-Optimal Energy Scheduling of a Smart Home Under Uncertainty”, IEEE CCTA2018, Copenhagen, Danimarca, August 21-24 2018.
- [c5] G. Cavone, M. Dotoli, N. Epicoco, D. Morelli, C. Seatzu, “A Game-theoretical Design Technique for Multi-stage Supply Chains under Uncertainty”, IEEE CASE 2018, Munich, Germany, August 20-24, 2018.
- [c6] G. Cavone, M. Dotoli, N. Epicoco, M. Franceschelli, C. Seatzu, Hybrid Petri Nets to Redesign Low-Automated Production Processes: the Case Study of a Sardinian Bakery, WODES 2018, 14th IFAC Workshop on Discrete Event Systems, May 30-June 1 2018, Sorrento, Italy.
- [c7] G. Cavone, M. Dotoli, N. Epicoco, C. Seatzu, Efficient Resource Planning of Intermodal Terminals under Uncertainty, CTS 2018, 15th IFAC Symposium on Control in Transportation Systems, June 6-8 2018, Savona, Italy.
- [c8] R. Carli, M. Dotoli, “A Distributed Control Algorithm for Optimal Charging of Electric Vehicle Fleets with Congestion Management”, CTS 2018, 15th IFAC Symposium on Control in Transportation Systems, June 6-8 2018, Savona, Italy.
- [c9] R. Carli, M. Dotoli, “A Decentralized Control Strategy for Optimal Charging of Electric Vehicle Fleets with Congestion Management”, IEEE SOLI 2017, Bari, Italy, September 18-20, 2017.
- [c10] R. Carli, M. Dotoli, “A decentralized control strategy for energy retrofit planning of large-scale street lighting systems using dynamic programming”, IEEE CASE 2017, Xi’an, China, August 20-23, 2017.
- [c11] R. Carli, M. Dotoli, “Using the distributed proximal alternating direction method of multipliers for smart grid monitoring”, IEEE CASE 2017, Xi’an, China, August 20-23, 2017.
- [c12] R. Carli, M. Dotoli, E. Cianci, An optimization tool for energy efficiency of street lighting systems in smart cities, IFAC 2017 World Congress, Toulouse, France, July 9-14, 2017.
- [c13] R. Carli, M. Dotoli, Cooperative Distributed Control for the Energy Scheduling of Smart Homes with Shared Energy Storage and Renewable Energy Source, IFAC 2017 World Congress, Toulouse, France, July 9-14, 2017.
- [c14] M. Dotoli, N. Epicoco, A Vehicle Routing Technique for Hazardous Waste Collection, IFAC 2017 World Congress, Toulouse, France, July 9-14, 2017.
- [c15] R. Carli, M. Dotoli, Bi-Level Programming for the Energy Retrofit Planning of Street Lighting Systems, IEEE ICNSC 2017, Calabria, Italy, May, 2017.
- [c16] R. Carli, M. Dotoli, R. Garramone, A. Andria, A.M.L. Lanzolla, An average consensus approach for the optimal allocation of a shared renewable energy source, IEEE SMC2016, 2016 IEEE Conference on Systems, Man and Cybernetics, Budapest, Hungary, October 9-12, 2016.

- [c17] M. Dotoli, N. Epicoco, A Technique for the Optimal Management of Containers' Drayage at Intermodal Freight Terminals, IEEE SMC2016, 2016 IEEE Conference on Systems, Man and Cybernetics, Budapest, Hungary, October 9-12, 2016.
- [c18] M. Dotoli, N. Epicoco, M. Falagario, A Technique for the Efficient Multimodal Transport Planning under Multiple Conflicting Objectives and Uncertainty, European Control Conference ECC2016, Aalborg, Denmark, June 29-July 1, 2016.
- [c19] R. Carli, M. Dotoli, A. Andria, A.M.L. Lanzolla Bi-Level Programming for the Strategic Energy Management of a Smart City, IEEE EESMS2016 (Workshop on Environmental, Energy and Structural Monitoring Systems), Bari, Italy, June 13-14, 2016.
- [c20] G. Cavone, M. Dotoli, C. Seatzu, Resource Planning of Intermodal Terminals using Timed Petri Nets, WODES16 – the 13th International Workshop on Discrete Event Systems, Xi'an, China, May 30-June 1, 2016, China.
- [c21] G. Cavone, M. Dotoli, C. Seatzu, Management of Intermodal Freight Terminals by First Order Hybrid Petri Nets, IEEE International Conference on Robotics and Automation ICRA2016, Stockholm, Sweden, May 16-21, 2016.
- [c22] R. Carli, M. Dotoli, A Decentralized Resource Allocation Approach For Sharing Renewable Energy among Interconnected Smart Homes, IEEE CDC2015 (Conference on Decision and Control), Osaka, Japan, December 15-18, 2015.
- [c23] V. Bevilacqua, L. Carnimeo, P. Guccione, G. Mastronardi, A.E. Uva, M. Fiorentino, G. Monno, F. Marino, M. Dotoli, N. Costantino, M. Dassisti, N. Carbonara, A multimodal system for nonverbal human feature recognition in emotional framework, 3rd ACM Workshop on Emotions and Personality in Personalized Systems, EMPIRE 2015, Vienna, Austria, pp. 19-24.
- [c24] M. Dotoli, N. Epicoco, C. Seatzu, An improved technique for train load planning at intermodal rail-road terminals, IEEE ETFA2015 (Conference on Emerging Technologies in Factory Automation), Luxembourg City, Luxembourg, September 8-11, 2015.
- [c25] M. Dotoli, N. Epicoco, M. Falagario, An integrated approach for supplier selection and order allocation under uncertainty in agile supply chains with make-to-order production, IEEE ETFA2015 (Conference on Emerging Technologies in Factory Automation), Luxembourg City, Luxembourg, September 8-11, 2015.
- [c26] R. Carli, M. Dotoli, R. Pellegrino, ICT and optimization for the energy management of smart cities: The street lighting decision panel, IEEE ETFA2015 (Conference on Emerging Technologies in Factory Automation), Luxembourg City, Luxembourg, September 8-11, 2015.
- [c27] R. Carli, M. Dotoli, R. Pellegrino, L. Ranieri, Using multi-objective optimization for the integrated energy efficiency improvement of a smart city public buildings' portfolio, IEEE CASE2015 (Conference on Automation Science and Engineering), Gothenburg, Sweden, August 24-28, 2015.
- [c28] R. Carli, M. Dotoli, N. Epicoco, B. Angelico, A. Vinciullo, Automated Evaluation of Urban Traffic Congestion Using Bus as a Probe, IEEE CASE2015 (Conference on Automation Science and Engineering), Gothenburg, Sweden, August 24-28, 2015.
- [c29] R. Carli, V. Albino, M. Dotoli, G. Mummolo, M. Savino, A dashboard and decision support tool for the energy governance of smart cities, IEEE EESMS2015 (Workshop on Environmental, Energy and Structural Monitoring Systems), Trento, Italy, July 9-10, 2015.
- [c30] M. Dotoli, N. Epicoco, M. Falagario, A Technique for Supply Chain Network Design under Uncertainty using Cross-Efficiency Fuzzy Data Envelopment Analysis, Proceedings of INCOM 2015 – 15th IFAC Symposium on Information Control Problems in Manufacturing, Ottawa, Canada, 11-13 May 2015.

- [c31] M. Dotoli, A. Fay, M. Miśkowicz, C. Seatzu, A survey on advanced control approaches in factory automation, Proceedings of INCOM 2015 – 15th IFAC Symposium on Information Control Problems in Manufacturing, Ottawa, Canada, 11-13 May 2015.
- [c32] M. Dotoli, N. Epicoco, M. Falagario, B. Angelico, A. Vinciullo, A Two-Step Optimization Model for the Pre- and End-Haulage of Containers at Intermodal Freight Terminals, European Control Conference ECC2015, Linz, Austria, July 15-17.
- [c33] R. Carli, M. Dotoli, Energy Scheduling of a Smart Home under Nonlinear Pricing, 53rd IEEE CDC (Conference on Decision and Control), Los Angeles, USA, December 15-17, 2014.
- [c34] M. Dotoli, N. Epicoco, M. Falagario, G. Cavone, B. Turchiano: Simulation and Performance Evaluation of an Intermodal Terminal using Petri Nets, 2014 International Conference on Control, Decision and Information Technologies, Metz, France, November 3-5, 2014.
- [c35] M. Dotoli, N. Epicoco, M. Falagario, F. Sciancalepore, Supplier evaluation and selection under uncertainty via an integrated model using cross-efficiency Data Envelopment Analysis and Monte Carlo simulation, 19th IEEE International Conference on Emerging Technologies and Factory Automation (ETFa 2014), Barcelona, Spain, September 16-19, 2014.
- [c36] R. Carli, P. Deidda, M. Dotoli, R. Pellegrino, An urban control center for the energy governance of a smart city, 19th IEEE International Conference on Emerging Technologies and Factory Automation (ETFa 2014), Barcelona, Spain, September 16-19, 2014.
- [c37] M. Dotoli, N. Epicoco, M. Falagario, F. Sciancalepore, B. Turchiano, Simulation and evaluation of the auction based day ahead energy market via a Nash equilibrium model and zonal pricing, 22nd Mediterranean Conference on Control and Automation MED2014, Palermo, Italy, June 16-19, 2014.
- [c38] M. Dotoli, N. Epicoco, M. Falagario, B. Turchiano, G. Cavone, A. Convertini, A Decision Support System for Real-Time Rescheduling of Railways, European Control Conference ECC2014, Strasbourg, France, June 24-27, 2014.
- [c39] M. Dotoli, N. Epicoco, M. Falagario, C. Seatzu, B. Turchiano, Optimization of Intermodal Rail-Road Freight Transport Terminals, IEEE International Conference on Robotics and Automation ICRA2014, Hong Kong, China, May 31-June 5, 2014.
- [c40] M. Dotoli, N. Epicoco, M. Falagario, G. Cavone, A Timed Petri Nets Model for Intermodal Freight Transport Terminals, WODES14 – the 12th International Workshop on Discrete Event Systems, Paris-Cachan, France, May 14-16, 2014.
- [c41] A. Piconese, T. Bourdeaud'Huy, M. Dotoli, S. Hammadi, A Revisited Model for the Real Time Traffic Management, ICORES 2014, 3rd International Conference on Operations Research and Enterprise Systems, Angers, France, March 6-8, 2014.
- [c42] M. Dotoli, S. Hammadi, K. Jeribi, C. Russo, H. Zgaya, A Multi-Agent Decision Support System for Optimization of Co-Modal Transportation Route Planning Services, 52nd IEEE CDC (Conference on Decision and Control), Florence, Italy, December 10-13, 2013.
- [c43] R. Carli, M. Dotoli, R. Pellegrino, L. Ranieri, Measuring and Managing the Smartness of Cities: a Framework for Classifying Performance Indicators, 2013 IEEE Conference on Systems, Man and Cybernetics (SMC 2013), Manchester, United Kingdom, October 13-16, 2013.
- [c44] M. Dotoli, N. Epicoco, M. Falagario, F. Sciancalepore, N. Costantino, Using cross-efficiency fuzzy Data Envelopment Analysis for healthcare facilities performance evaluation under uncertainty, 2013 IEEE Conference on Systems, Man and Cybernetics (SMC 2013), Manchester, United Kingdom, October 13-16, 2013.
- [c45] M. Dotoli, N. Epicoco, M. Falagario, D. Palma, B. Turchiano, A Train Load Planning Optimization Model for Intermodal Freight Transport Terminals: A Case Study, 2013 IEEE Conference on Systems, Man and Cybernetics (SMC 2013), Manchester, United Kingdom, October 13-16, 2013.

- [c46] M. Dassisti, M. Dotoli, D. Chen, Interoperability Analysis: General Concepts for an Axiomatic Approach, 18th IEEE International Conference on Emerging Technologies and Factory Automation (ETF A 2013), Cagliari, Italy, September 10-13, 2013.
- [c47] M. Dotoli, N. Epicoco, M. Falagario, N. Costantino, A Lean Warehousing Integrated Approach: A Case Study, 18th IEEE International Conference on Emerging Technologies and Factory Automation (ETF A 2013), Cagliari, Italy, September 10-13, 2013.
- [c48] M. Dotoli, N. Epicoco, M. Falagario, A. Piconese, F. Sciancalepore, B. Turchiano, “A real time traffic management model for regional railway networks under disturbances”, 9th annual IEEE Conference on Automation Science and Engineering (CASE 2013), Madison, USA, August 17-21, 2013.
- [c49] M. Dotoli, F. Sciancalepore, N. Epicoco, M. Falagario, B. Turchiano, N. Costantino, A Periodic Event Scheduling Approach for Offline Timetable Optimization of Regional Railways , 10th IEEE International Conference on Networking, Sensing and Control (ICNSC2013), Paris, France, April 10-12, 2013.
- [c50] M. Cabasino, M. Dotoli, C. Seatzu, Marking Estimation of Fuzzy Petri Nets, Proceedings of the 17th IEEE International Conference on Emerging Technologies and Factory Automation (ETF A 2012), Krakow, Poland, September 17-21, 2012.
- [c51] N. Costantino, M. Dotoli, N. Epicoco, M. Falagario, F.Sciancalepore, A cross efficiency fuzzy Data Envelopment Analysis technique for supplier evaluation under uncertainty, Proceedings of the 17th IEEE International Conference on Emerging Technologies and Factory Automation (ETF A 2012), Krakow, Poland, September 17-21, 2012.
- [c52] M. Dassisti, M. Dotoli, N. Epicoco, M. Falagario, Internal Logistics Enterprise Integration by Automated Storage and Retrieval Systems: A Case Study of Reengineering, Proceedings of the 7th International Workshop on Enterprise Integration, Interoperability and Networking (EI2N'2012), Part of the OnTheMove 2012 Federated Conferences and Workshops, September 12-13, 2012, Rome, Italy.
- [c53] M. Dotoli, M.P. Fanti, G. Iacobellis, G. Rotunno, A Lean Manufacturing Strategy using Value Stream Mapping, the Unified Modeling Language, and Discrete Event Simulation, Proceedings of the 8th annual IEEE Conference on Automation Science and Engineering (CASE 2012), Seoul, Korea, August 20-24, 2012.
- [c54] N. Costantino, M. Dotoli, N. Epicoco, M. Falagario, F.Sciancalepore, A novel fuzzy Data Envelopment Analysis methodology for performance evaluation in a two-stage supply chain, Proceedings of the 8th annual IEEE Conference on Automation Science and Engineering (CASE 2012), Seoul, Korea, August 20-24, 2012.
- [c55] Vitoantonio Bevilacqua, Mariagrazia Dotoli, Mario Massimo Foglia, Francesco Acciani, Giacomo Tattoli, Marcello Valori, Using Artificial Neural Networks for Closed Loop Control of a Hydraulic Prosthesis for a Human Elbow, ICIC 2012, Huangshan, China, July 25-29, 2012.
- [c56] N. Costantino, M. Dotoli, N. Epicoco, M. Falagario, F.Sciancalepore, B. Turchiano, An Offline Timetable Scheduling Technique for Railways Service Level Optimization: A Case Study, Proceedings of the SIET 2012 Conference, Bari, Italy, June 28-30 2012.
- [c57] M. Dotoli, G. Petruzzelli, B. Turchiano, A Lean Warehousing Approach Using Unified Modelling Language and Value Stream Mapping: A Case Study, Proceedings of MOSIM 2012 – 9th International Conference on Modeling, Optimization and Simulation, Bordeaux, France, 6-8 June 2012.
- [c58] N. Costantino, M. Dotoli, N. Epicoco, M. Falagario, F.Sciancalepore, A Nash Equilibrium Simulation Model of the Auction Based Day Ahead Electricity Generation Market, Proceedings of MOSIM 2012 – 9th International Conference on Modeling, Optimization and Simulation, Bordeaux, France, 6-8 June 2012.

- [c59] M. Dotoli, Freeway Traffic Control via Route Guidance: An Approach Based on a First Order Hybrid Petri Nets Model, Proceedings of ADHS 2012 – 4th IFAC Conference on Analysis and Design of Hybrid Systems, Eindhoven, The Netherlands, 6-8 June 2012, ISBN: 978-3-902823-00-7, pp. 350-355.
- [c60] N. Costantino, M. Dotoli, M. Falagario, F. Sciancalepore, Fuzzy Network Design of Sustainable Supply Chains, Proceedings of INCOM 2012 – 14th IFAC Symposium on Information Control Problems in Manufacturing, Bucharest, Romania, 23-25 May 2012, pp. 1284-1289, ISBN: 978-3-902661-98-2.
- [c61] N. Costantino, M. Dotoli, M. Falagario, F. Sciancalepore, A Model Using Data Envelopment Analysis for the Cross Evaluation of Suppliers under Uncertainty, Proceedings of the International Conference on Knowledge Management and Information Sharing (KMIS 2011), Paris, France, October 26-29, 2011.
- [c62] M. Dotoli, M.P. Fanti, G. Rotunno, W. Ukovich, A Lean Manufacturing Procedure using Value Stream Mapping and the Analytic Hierarchy Process, Proceedings of the 2011 IEEE Conference on Systems, Man and Cybernetics (IEEE SMC 2011), Anchorage, USA, October 9-12, 2011.
- [c63] V. Bevilacqua, M. Dotoli, M. Falagario, F. Sciancalepore, D. D'Ambruso, S. Saladino, R. Scaramuzzi, A multi-objective genetic optimization technique for the strategic configuration of distribution networks, Proceedings of the International Conference on Intelligent Computing (ICIC 2011), Zhengzhou, China, August 11-14, 2011.
- [c64] N. Costantino, M. Dotoli, M. Falagario, M.P. Fanti, A.M. Mangini, F. Sciancalepore, W. Ukovich, A Fuzzy Programming Approach for the Strategic Design of Distribution Networks, Proceedings of the 7th annual IEEE Conference on Automation Science and Engineering (CASE 2011), Trieste, Italy, August 24-27, 2011.
- [c65] M. Dotoli, M.P. Fanti, G. Iacobellis, A Freeway Traffic Control Model by First Order Hybrid Petri Nets, Proceedings of the 7th annual IEEE Conference on Automation Science and Engineering (CASE 2011), Trieste, Italy, August 24-27, 2011 (presented by M. Dotoli).
- [c66] N. Costantino, M. Dotoli, M. Falagario, M.P. Fanti, A.M. Mangini, F. Sciancalepore, Supplier Selection in the Public Procurement Sector via a Data Envelopment Analysis Approach, Proceedings of the 19th annual IEEE Mediterranean Conference on Control and Automation (MED 2011), Corfu, Greece, June 23-25, 2011.
- [c67] M. Dotoli, M. Falagario, A hierarchical vendor selection optimization technique for multiple sourcing, Proceedings of KMIS2010 – the International Conference on Knowledge Management and Information Sharing, Valencia, Spain, October 25- 28, 2010.
- [c68] V. Boschian, M. Dotoli, M.P. Fanti, G. Iacobellis, W. Ukovich, A Metamodeling Technique for Managing Intermodal Transportation Networks, Proceedings of the 2010 IEEE Conference on Systems, Man and Cybernetics (SMC 2010), Istanbul, Turkey, October 10-13, 2010.
- [c69] M. Dotoli, M. Falagario, A.M. Mangini, F. Sciancalepore, A novel formulation of the DEA model for application to supplier selection, Proceedings of ETFA2010 – the 15th IEEE International Conference on Emerging Technologies and Factory Automation, Bilbao, Spain, September 13- 16, 2010.
- [c70] N. Costantino, M. Dotoli, M. Falagario, M.P. Fanti, A.M. Mangini, F. Sciancalepore, W. Ukovich, A Model for the Strategic Design of Distribution Networks, Proceedings of the 6th annual IEEE Conference on Automation Science and Engineering (CASE 2010), Toronto, Ontario, Canada, August 21-24, 2010.
- [c71] N. Costantino, M. Dotoli, M. Falagario, M.P. Fanti, A.M. Mangini, F. Sciancalepore, W. Ukovich, Optimal design of distribution networks: an application to the hospital drug distribution system, Proceedings of ORAHS2010 – the 36th Conference on Operational Research Applied to Health Services, Genoa, Italy, July 18- 23, 2010.

- [c72] N. Costantino, M. Dotoli, M. Falagario, M.P. Fanti, A.M. Mangini, F. Sciancalepore, Network design and optimization of sustainable supply chains with reverse flows, Proceedings of SEEP2010, the 4th International Conference on Sustainable Energy & Environmental Protection, Bari, Italy, June 29/July 02, 2010.
- [c73] M. Dotoli, M. P. Fanti, G. Iacobellis, L. Martino, A. M. Moretti, W. Ukovich, Modeling and Management of a Hospital Department via Petri Nets, Proceedings of WHCM 2010: IEEE Workshop on Health Care Management, Venice, Italy, 18-20 February 2010, 6 pp (presented by M. Dotoli).
- [c74] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A. M. Mangini, F. Sciancalepore, W. Ukovich, A Model for the Optimal Design of the Hospital Drug Distribution System, Proceedings of WHCM 2010: IEEE Workshop on Health Care Management, Venice, Italy, 18-20 February 2010, 6 pp.
- [c75] M. Dotoli, M. P. Fanti, G. Iacobellis, G. Stecco, W. Ukovich, Performance Analysis and Management of an Automated Distribution Center, Proceedings of IECON 2009, the 35th Annual Conference of the IEEE Industrial Electronics Society, Porto, Portugal, 3-5 November 2009.
- [c76] V. Boschian, M. Dotoli, M. P. Fanti, G. Iacobellis, W. Ukovich, Metamodelling of Intermodal Transportation Networks: A Case Study, Proceedings of EWGT'2009, the 2009 13th European Working Group on Transportation Meeting, Padua, Italy, 23-25 September 2009.
- [c77] M. Dotoli, M. P. Fanti, A. M. Mangini, W. Ukovich, A Continuous Petri Net Model for the Management and Design of Emergency Cardiology Departments, Proceedings of ADHS'2009, 3rd IFAC Conference on Analysis and Design of Hybrid Systems, Zaragoza, Spain, September 16-18 2009.
- [c78] M. Dotoli, M. P. Fanti, A. M. Mangini, W. Ukovich, On-Line Fault Diagnosis in a Petri Net Framework, Proceedings of IEEE CASE'2009, the 2009 IEEE International Conference on Automation Science and Engineering, Bangalore, India, 22-25 August 2009.
- [c79] M. Dotoli, M. P. Fanti, A. M. Mangini, G. Stecco, W. Ukovich, The Impact of ICT on an Intermodal Transportation System: An Analysis by Petri Nets, Proceedings of IEEE CASE'2009, the 2009 IEEE International Conference on Automation Science and Engineering, Bangalore, India, 22-25 August 2009.
- [c80] V. Boschian, M. Dotoli, M. P. Fanti, G. Iacobellis, W. Ukovich, A Metamodelling Approach to the Management of Intermodal Transportation Networks, Proceedings of IVC & ITS 2009, the 3rd International Workshop on Intelligent Vehicle Controls & Intelligent Transportation Systems, in conjunction with the 6th International Conference on Informatics in Control, Automation and Robotics - ICINCO 2009, Milan, Italy, July 4-5 2009.
- [c81] R. Danielis, M. Dotoli, M. P. Fanti, A. M. Mangini, R. Pesenti, G. Stecco, W. Ukovich, Integrating ICT into Logistics Intermodal Systems: a Petri Net Model of the Trieste Port, Proceedings of the European Control Conference 2009, Budapest, Hungary, 23-26 August 2009, pp. 4769-4774 (presented by M. Dotoli).
- [c82] M. Dotoli, M. P. Fanti, A.M. Mangini, W. Ukovich, Identification of DES unobservable behaviour by Petri nets, Proceedings of DCDS'2009, the 2nd IFAC Workshop on Dependable Control of Discrete Systems, Bari, Italy, 10-12 June 2009.
- [c83] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A. M. Mangini, Optimal Design of a Manufacturing Supply Chain, Proceedings of the 16th International Annual EurOMA Conference – European Operations Management Association, Göteborg, Sweden, 14-17 June 2009.
- [c84] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A. M. Mangini, Design and Optimization of a Hospital Drug Distribution System, Proceedings of IPSERA 2009, 18th Annual

Conference of the International Purchasing & Supply Education & Research Association, Oestrich-Winkel, Germany, 5-8 April 2009.

- [c85] M. Dotoli, M. P. Fanti, G. Iacobellis, An Urban Traffic Network Model by First Order Hybrid Petri Nets, Proceedings of IEEE SMC'2008, the 2008 IEEE International Conference on Systems, Man and Cybernetics, Singapore, 12-15 October 2008, pp. 1929-1934.
- [c86] M. Dotoli, M. P. Fanti, A.M. Mangini, W. Ukovich, A Model to Describe the Hospital Drug Distribution System via Hybrid Petri Nets, Proceedings of EMSS08, the 20th European Modeling and Simulation Symposium, Briatico, Italy, 17-19 September 2008.
- [c87] M. Dotoli, M. P. Fanti, A.M. Mangini, W. Ukovich, Modelling and Design of Hospital Departments by Timed Continuous Petri Nets, Proceedings of MAS08, the International Workshop on Modeling and Applied Simulation, Briatico, Italy, 17-19 September 2008.
- [c88] M. Dotoli, M. P. Fanti, A.M. Mangini, Fault Monitoring of Automated Manufacturing Systems by First Order Hybrid Petri Nets, Proceedings of IEEE CASE'2008, the 2008 IEEE International Conference on Automation Science and Engineering, Washington D.C., USA, 23-26 August 2008.
- [c89] M. Dotoli, M. P. Fanti, A.M. Mangini, Fault Detection of Discrete Event Systems Using Petri Nets and Integer Linear Programming, Proceedings of IFAC'08, the 17th IFAC World Congress, Seoul, Korea, 6-11 July 2008.
- [c90] M. Dotoli, M. P. Fanti, A.M. Mangini, Fault Monitoring of Discrete Event Systems by First Order Hybrid Petri Nets, Proceedings of the 2008 Workshop on Petri Nets and Agile Manufacturing, Xi'an, China, 24 June 2008.
- [c91] M. Dotoli, M. P. Fanti, A.M. Mangini, W. Ukovich, On-Line Identification of Petri Nets with Unobservable Transitions, Proceedings of WODES08 – the 9th International Workshop on Discrete Event Systems, Göteborg, Sweden, May 28-30, 2008.
- [c92] M. Dotoli, M. P. Fanti, A.M. Mangini, Comparing Management Policies for Supply Chains via a Hybrid Petri Net Model, Proceedings of IEEE SMC'2007, the 2007 IEEE International Conference on Systems, Man and Cybernetics, Montréal, Canada, 7-10 October 2007.
- [c93] M. Dotoli, M. P. Fanti, A.M. Mangini, On Line Identification of Discrete Event Systems via Petri Nets: an Application to Monitor Specification, Proceedings of IEEE CASE'2007, the 2007 IEEE International Conference on Automation Science and Engineering, Scottsdale, Arizona, 22-25 September 2007.
- [c94] M. Dotoli, M. P. Fanti, A.M. Mangini, Real Time Identification of Discrete Event Systems by Petri Nets, Proceedings of DCDS'2007, the 1st IFAC Workshop on Dependable Control of Discrete Systems, Paris, France, 13-15 June 2007.
- [c95] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A general framework for vendor rating in the public procurement sector, Proceedings of GITM 2007, 8th Annual Global Information Technology Management World Conference, Naples, Italy, 17-19 June 2007.
- [c96] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, G. Iacobellis, The Paradox of Competition in a Public Tender, Proceedings of IPSERA 2007, 16th Annual Conference of the International Purchasing & Supply Education & Research Association, Bath, United Kingdom, 1-4 April 2007.
- [c97] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, Fuzzy Logic Based Vendor Selection for the Public Procurement Sector: a Case Study, Proceedings of SIGEF 2006, 13th Congress of the International Association for Fuzzy Set Management and Economy, Hammamet, Tunisia, 30 November – 2 December 2006.
- [c98] M. Dotoli, M. P. Fanti, G. Iacobellis, A Model to Evaluate Supply Chain Performances via Coloured Petri Nets, Proceedings of the 50th ANIPLA Conference Methodologies for Emerging Technologies in Automation, Rome, Italy, 13-15 November 2006.
- [c99] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A Decision Support System for Purchasing Management in Supply Chains, Proceedings of the 50th ANIPLA Conference

Methodologies for Emerging Technologies in Automation, Rome, Italy, 13-15 November 2006.

- [c100] M. Dotoli, M. P. Fanti, A. M. Mangini, On-Line Identification of Discrete Event Systems: a Case Study, Proceedings of the 2006 IEEE International Conference on Automation Science and Engineering, Shanghai, China, October 8-10 2006, pp. 405-410.
- [c101] M. Dotoli, M. P. Fanti, A. M. Mangini, On-Line Identification of Discrete Event Systems by Interpreted Petri Nets, Proceedings of the 2006 IEEE International Conference on Systems, Man and Cybernetics, Taipei, Taiwan, October 8-11 2006, pp. 3040-3045.
- [c102] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A Simulation Model for Transaction Costs in Purchasing, Selected papers of the 11th IFPSM (International Federation of Purchasing and Supply Management) Summer School – New Results in Purchasing and Supply Research, held in Salzburg, Austria, 2005, printed in Budapest, Hungary, ISBN 963 210 544 3, pp.35-48.
- [c103] M. Dotoli, M. P. Fanti, A. M. Mangini, An Optimization Approach for Identification of Petri Nets, Proceedings of WODES06 – the 8th IFAC Workshop on Discrete Event Systems, Ann Harbor, Michigan, USA, July 10-12 2006, pp. 332-337 (presented by M. Dotoli).
- [c104] M. Dotoli, M. P. Fanti, A. M. Mangini, Modelling Distributed Manufacturing Systems via First Order Hybrid Petri Nets, Proceedings of the 2nd IFAC Conference on Analysis and Design of Hybrid Systems (ADHS06), Alghero, Italy, June 7-9 2006, pp. 44-48.
- [c105] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, R. Pellegrino, An Evaluation Model for Total Costs of Purchasing in the Construction Industry Using Probabilistic and Fuzzy Theories, Proceedings of GITM 2006, 7th Annual Global Information Technology Management World Conference, Orlando, USA, 11-13 June 2006, pp 147-150.
- [c106] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, G. Iacobellis, A Petri Net Based Decision Support System for Purchasing Management in Supply Chains, in “Information Control Problems in Manufacturing 2006 - A Proceedings volume from the 12th IFAC/IFIP/IFORS/IEEE/IMS Triennial International Symposium INCOM06, St Etienne, France, 17-19 May 2006, 3-volume set, containing 362 carefully reviewed and selected papers edited by A. Dolgui, G. Morel, C. Pereira, ISBN: 978-0-08-044654-7, ISBN10: 0-08-044654-X, Book/Paperback, Imprint: Elsevier Science, Oxford, UK, Publication Date: 18 December 2006, Vol. 2, pp. 629-634 (presented by M. Dotoli).
- [c107] M. Dotoli, M. P. Fanti, G. Iacobellis, Evaluation of Supply Chain Performance at the Operational Level: a Case Study, Proceedings of the 2006 International Workshop on Logistics & Transportation, Hammamet, Tunisia, April 30 – May 2 2006, pp. 224-229 (presented by M. Dotoli).
- [c108] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, A Fuzzy Model for Vendor Rating with Risk Assessment, Proceedings of the 2006 International Workshop on Logistics & Transportation, Hammamet, Tunisia, April 30 – May 2 2006, pp. 212-217.
- [c109] M. Ciavotta, M. Dotoli, M.P. Fanti, C. Meloni, S. Hammadi, S. Koubaa, Genetic Algorithms for Setup Coordination in Consecutive Stages of a Supply Chain, Proceedings of the 2006 International Workshop on Logistics & Transportation, Hammamet, Tunisia, April 30 - May 2 2006, pp. 218-223 (presented by M. Dotoli).
- [c110] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, G. Iacobellis, A Probabilistic Model for Total Cost of Purchasing, Proceedings of IPSERA 2006, the 15th Annual Conference of the International Purchasing & Supply Education & Research Association, San Diego, SA, 6-8 April 2006.
- [c111] M. Dotoli, M. P. Fanti, A Generalized Stochastic Petri Net Model for Management of Distributed Manufacturing Systems, Proceedings of the 44th IEEE Conference on Decision and Control and European Control Conference ECC 2005, pp. 2125-2130, Seville, Spain, 12-15 December 2005.

- [c112] M. Dotoli, M. P. Fanti, A.M. Mangini, G. Tempone, Fuzzy Multi-Objective Optimization for Network Design of Logistic and Production Systems, Proceedings of the 2005 IEEE International Conference on Emerging Technologies and Factory Automation, Catania, Italy, 19-22 September 2005.
- [c113] M. Dotoli, M. P. Fanti, G. Iacobellis, Validation of an Urban Traffic Network Model using Colored Timed Petri Nets, Proceedings of the 2005 IEEE International Conference on Systems, Man and Cybernetics, Hawaii, USA, Vol. 2, pp. 1347-1352, 10-12 October 2005.
- [c114] M. Dotoli, M. P. Fanti, Modeling and Performance Evaluation of a Supply Chain via Petri Nets, Proceedings of the 2005 IMACS World Congress on Scientific Computation, Applied Mathematics and Simulation, Paris, France, 11-15 July 2005 (presented by M. Dotoli).
- [c115] M. Dotoli, M. P. Fanti, C. Meloni, M.C. Zhou, Network Design of Integrated e-Supply Chain for Agile Manufacturing, Proceedings of the 2005 IFAC World Congress, Prague, Czech Republic, 3-8 July 2005.
- [c116] M. Dotoli, M. P. Fanti, G. Iacobellis, Comparing Deadlock Detection and Avoidance Policies in Automated Storage and Retrieval Systems, Proceedings of the 2004 IEEE International Conference on Systems, Man and Cybernetics, The Hague, The Netherlands, Vol. 2, pp. 1607 - 1612, 10-13 October 2004 (presented by M. Dotoli).
- [c117] M. Dotoli, M. P. Fanti, C. Meloni, Candidate Selection for Network Design of Distributed Manufacturing Systems, Proceedings of the 2004 IEEE International Conference on Systems, Man and Cybernetics, The Hague, The Netherlands, Vol. 2, pp. 1613 - 1618, 10-13 October 2004.
- [c118] M. Dotoli, M. P. Fanti, An urban traffic network model via coloured timed Petri nets, Proceedings of WODES04 – the 7th IFAC Workshop on Discrete Event Systems, Reims, France, September 22-24, 2004.
- [c119] M. Dotoli, M. P. Fanti, Fuzzy adaptive traffic control: application to an isolated intersection, Proceedings of EUNITE2004 – the 4th European Symposium on Intelligent Technologies, Hybrid Systems and their Implementation on Smart Adaptive Systems, pp. 106-114, Aachen, Germany, 10-12 June 2004 (presented by M. Dotoli).
- [c120] C. Brunetti, M. Dotoli, Rule-Based Decoupled Fuzzy Sliding Mode Control for Inverted Pendulum Swing-up, IEEE-ISIE2004, the IEEE International Symposium on Industrial Electronics, Ajaccio, France, Vol. 1, pp. 495-500, 4-7 May 2004.
- [c121] M. Dotoli, M. P. Fanti, C. Meloni, Coordination and Real Time Optimization of Signal Timing Plans for Urban Traffic Control, ICNSC04 - the IEEE International Conference on Networking, Sensing and Control, Taipei, Taiwan, Vol. 2, pp. 1069-1074, 21-23 March 2004 (invited).
- [c122] M. Dotoli, P. Lino, B. Turchiano, A Decoupled Fuzzy Sliding Mode Approach to Swing-Up and Stabilize an Inverted Pendulum, the CSD03 - the 2nd IFAC Conference on Control Systems Design, Bratislava, Slovak Republic, September 2003.
- [c123] M. Dotoli, M.P. Fanti, C. Meloni, Real Time Optimization of Traffic Signal Control: Application to an Urban Area Isolated Intersection, the 2003 IEEE International Conference on Systems, Man and Cybernetics, Washington, USA, Vol. 4, pp. 3288-3295, 5-8 October 2003.
- [c124] M. Dotoli, M.P. Fanti, C. Meloni, A Decision Support System for Supply Chain Configuration, the 2003 IEEE International Conference on Systems, Man and Cybernetics, Washington, USA, Vol. 3, pp. 2667-2672, 5-8 October 2003.
- [c125] M. Dotoli, M.P. Fanti, Performance-Based Comparison of Control Policies for Automated Storage and Retrieval Systems Modelled by Coloured Petri Nets, the 2003 IEEE International Conference on Emerging Technologies and Factory Automation, Lisbon, Portugal, Vol. 1, pp. 299-306, 16-19 September 2003 (presented by M. Dotoli).

- [c126] M. Dotoli, M.P. Fanti, Performance of Two Real Time Control Strategies for AGV Systems: a Case Study, ECC03, the European Control Conference, United Kingdom, 2003.
- [c127] M. Dotoli, B. Turchiano, Fuzzy Gain Scheduling of Coupled PID Controllers for Stabilization of the Inverted Pendulum, Proceedings of EUNITE2003 – the 3rd European Symposium on Intelligent Technologies, Hybrid Systems and their Implementation on Smart Adaptive Systems, Oulu, Finland, pp.136-144, 10-12 July 2003 (presented by M. Dotoli).
- [c128] M. Dotoli, M.P. Fanti, A Control Strategy to Manage Automated Storage and Retrieval Systems Modeled by Colored Timed Petri Nets, Proceedings of CESA'2003, the Multiconference on Computational Engineering in Systems Applications, France, 9-11 July 2003.
- [c129] M. Dotoli, M. Gattagrisi, C.D. Pisani, B. Turchiano, Automatic Changeover of Unwinding Coils in Copper Wires Stranding Machines: a Case Study, Proceedings of IECON 2002 – the 28th Annual Conference of the IEEE Industrial Electronics Society, Spain, Vol. 3, pp. 2491 - 2496, 5-8 November 2002.
- [c130] M. Dotoli, P. Lino, B. Maione, D. Naso, B. Turchiano, A Tutorial on Genetic Optimization of Fuzzy Sliding Mode Controllers: Swinging up an Inverted Pendulum with Restricted Travel, Proceedings of EUNITE 2002 – the 2nd European Symposium on Intelligent Technologies, Hybrid Systems and their Implementation on Smart Adaptive Systems, Albufeira, Portugal, 19-21 September 2002 (presented by M. Dotoli).
- [c131] M. Dotoli, M.P. Fanti, Modeling of an AS/RS Serviced by Rail-Guided Vehicles with Colored Petri Nets: a Control Perspective, proceedings of IEEE-SMC2002, the IEEE International Conference on Systems, Man and Cybernetics, Hammamet, Tunisia, Vol. 3, pp. 6, 6-9 October 2002 (presented by M. Dotoli).
- [c132] M. Dotoli, P.Lino, Fuzzy Adaptive Control of a Variable Geometry Turbocharged Diesel Engine, proceedings of IEEE-ISIE2002, the IEEE International Symposium on Industrial Electronics, L'Aquila, Italy, Vol. 4., pp. 1295 -1300, 8-11 July 2002.
- [c133] F. Cupertino, M. Dotoli, V. Giordano, B. Maione, L. Salvatore, Fuzzy Control Experiments on DC Drives Using Various Inference Connectives, proceedings of FUZZ-IEEE 2002 – the 11th IEEE Conference on Fuzzy Systems, Honolulu, USA, Vol. 1, pp. 52-57, 12-17 May 2002 (presented by M. Dotoli).
- [c134] M. Dotoli, B. Maione, B. Turchiano, Fuzzy-Supervised PID Control: Experimental Results, Proceedings of EUNITE 2001 – the 1st European Symposium on Intelligent Technologies, Hybrid Systems and their Implementation on Smart Adaptive Systems, Tenerife, Spain, 13-14 December 2001 (presented by M. Dotoli).
- [c135] M. Dotoli, B. Maione, D. Naso, B. Turchiano, Fuzzy Sliding Mode Control for Inverted Pendulum Swing-up with Restricted Travel, proceedings of FUZZ-IEEE 2001 – the 10th IEEE Conference on Fuzzy Systems, Melbourne, Australia, Vol. 3, pp. 753-756, 2-5 December 2001.
- [c136] M. Dotoli, G. Maione, D. Naso, B. Turchiano, “Genetic Identification of Dynamical Systems with Static Nonlinearities”, proceedings of IEEE SMCia/01, Mountain Workshop on Soft Computing in Industrial Applications, Virginia Tech, Blacksburg, Virginia, pp. 65-70, 25-27 June 2001.
- [c137] M. Dotoli, H. Axer, G. Berks, D. Südfeld, G. Dounias, G. M. Panagi, G. Tselentis, A. Prescher, G.A. Krombach, D. Graf v. Keyserlingk and J. Jantzen, Teaching Soft Computing in Medicine: An Interdisciplinary Experiment, proceedings of the Joint 9th IFSA World Congress and 20th NAFIPS Int. Conf, pp.1979-1984, Vol.4, Vancouver, Canada, 25-28 July 2001.
- [c138] G. Berks, D. Graf v. Keyserlingk, J. Jantzen, M. Dotoli, H. Axer, Fuzzy Clustering - A Versatile Mean to Explore Medical Databases, proceedings of 'Esit 2000, the 3rd European

Symposium on Intelligent Techniques', Aachen, Germany, ISBN 3-89653-797-0, 14-15 September 2000.

- [c139] M. Dotoli, J. Jantzen, A Fuzzy Control Course on the TED Server, proceedings of 'Eufit 1999, the 7th European Congress on Fuzzy and Intelligent Technologies', ELITE Foundation, Aachen, Germany, 6 pp cd rom, ISBN 3-89653-808-X, 13-16 September 1999 (presented by M. Dotoli).
- [c140] M. Dotoli, Using Multi-Valued Logic Implications in a Mamdani-Type Fuzzy Controller, proceedings of 'Esit 1997, the European Symposium on Intelligent Techniques', Bari, Italy, 20-21 March 1997 (presented by M. Dotoli).
- [c141] B. Bouchon-Meunier, M. Dotoli, B. Maione, On the Choice of Membership Functions in a Mamdani-type Fuzzy Controller, proceedings of the 'First Online Workshop on Soft Computing', 1996, Nagoya, Japan.

National Conferences

- [c142] N. Costantino, M. Dotoli, M. Falagario, F. Sciancalepore, Un approccio fuzzy al progetto di una rete di distribuzione in condizioni di incertezza, "La conoscenza un decennio dopo Lisbona. Esperienze, prospettive e nuovi percorsi di sviluppo associati alle strategie della conoscenza. XXII Riunione scientifica AiIG", Proceedings of the 22nd AiIG (Associazione italiana di Ingegneria Gestionale) Riunione Scientifica Annuale, Genoa, Italy, 13-14 October 2011.
- [c143] M. Dotoli, M. P. Fanti, A. M. Mangini, Un Monitor dei Guasti nei Sistemi Produttivi Automatizzati Basato sulle Reti di Petri Ibride, Proceedings of Sicurezza nei Sistemi Complessi'2009, Bari, Italia, 14-16 Ottobre 2009.
- [c144] N. Costantino, M. Dotoli, M. Falagario, M. P. Fanti, G. Iacobellis, Stima del costo totale di acquisto nelle produzioni su commessa, "Reti, servizi e competitività delle imprese. Sistemi globali e sistemi locali per lo sviluppo. XVII Riunione scientifica AiIG", Proceedings of the 17th AiIG (Associazione italiana di Ingegneria Gestionale) Riunione Scientifica Annuale, Roma, Italy, 12-13 October 2006, Claudio Leporelli (ed.), Aracne editrice, ISBN 88-548-0789-3, 2006.
- [c145] M. Dotoli, M.P. Fanti, A.M. Mangini, C. Meloni, Una tecnica multi-livello per la configurazione dei sistemi di produzione distribuiti, Proceedings of the 49th ANIPLA National Conference on Automazione per lo Sviluppo e la Competitività nelle PMI, Napoli, Italy, 23-24 November 2005.

PhD Thesis

- [t1] M. Dotoli, Recenti Sviluppi della Metodologia di Controllo Fuzzy, Tesi di Dottorato di Ricerca in Ingegneria Elettrotecnica del Politecnico di Bari, Bari, Aprile 1999.

Laurea Thesis

- [t2] M. Dotoli, Elementi di Arbitrarietà nel Controllo Fuzzy, Tesi di Laurea in Ingegneria Elettronica del Politecnico di Bari, Bari, Luglio 1995.

Professional activity

Technology transfer activity

Since 2012 she is the founding partner of the spinoff company of Politecnico di Bari INNOLAB S.r.l. The services provided by the INNOLAB s.r.l. spin-off of Politecnico di Bari are consulting for technology transfer in the following areas: production processes optimization; company logistics optimization; human resource organization and compagnie reorganization (work organization, resources optimization); low interest/facilitated financing in the areas of public funding for industrial research and innovation at a regional, national, European Community level. The spin-off Innolab provides consulences for various SMEs of the Apulian Region in the above reported Automation topics.

Since July 2016 she is a member of the Scientific and Technical Committee of the Apulia Region Productive District on renewable energy and energy efficiency. The Scientifical and Technical Committee has as main mission the definition and periodic updating of the development program for the District, with the aim of supporting energy efficiency actions for the Apulian Region.

Since November 2014 she is member of the Regional Section in the National board of the environment managers of the Apulian Region.

Since 2013 she is a member of the Vehicle Traffic and Circulation Commission of Automobile Club of the Bari BAT Province.

Since March 2011 she is member of the Orientation Committee of ARTI Apulia (Regional agency for Technology and Innovation). The Orientation Committee has proactive and advisory functions on the strategic and programmatic choices of the Agency and identifies the sectors of interest for the development of technological innovation in Puglia. In particular, the Orientation Committee contributes to the identification of the strategic guidelines for the preparation of the Regional Plan of the Puglia Region for the Development of Research and Innovation and for the annual review of the same.

In 2017 she has been member of the work group created by Confindustria Bari and BAT on smart cities, with the mission of conducting a feasibility study for the redevelopment project of the south waterfront of the city of Bari.

In 2006 she was the coordinator of the workgroup established from the Agency for Innovation and Internationalization of Enterprises, established in the framework of the Territorial Pact for the North-Bari-Ofanto territory, with the aim of conducting a pilot action of technology transfer between the research University system and the local SME system. The pilot action aimed at facilitating the technology transfer process between the university research system and the local SME system through the analysis of the management and production processes of a manufacturing company located in the North Barese area, the COFRA of Barletta (BAT), by the research group coordinated by Prof. Dotoli and composed of industrial, managerial and electronic engineers.

Evaluation activity

Since october 2015 she is member of the Evaluation Committee of the School of Fine Arts of Bari, Italy.

Since many years she works as an expert in the evaluation of research and innovation projects for numerous regional, national and international bodies and institutions:

- since 2012 she was appointed expert by the Italian Ministry for Economic Development for the in-itinere evaluation of industrial innovation projects in the framework of the Industry 2015 Call.

- in 2012-2013 she was appointed expert by the Italian Ministry for Research for the ex-ante evaluation of the CNR (National Research Council) research projects in the framework of the call “Italian Flagship Project La Fabbrica del Futuro”.
- in 2009 she was appointed expert by the Italian Ministry for Economic Development for the evaluation of pre-competitive development projects in the framework of law 46/82 F.I.T. (Technological Innovation Fund).
- in 2009 she was appointed expert by the Italian Ministry for Education, University and Research for the evaluation of PRIN 2008 research projects of national interest in the area 09 – Industrial and information engineering presented for funding at the same Ministry (Minister Decree 4 December 2008 prot. n. 1407/Ric/2008).
- In 2003-2018 she is expert consultant for the European Commission in the framework of international projects evaluation under the European Union 6th and 7th Framework Programmes and Horizon2020 for the DG-Research and the DG-Information Society, for the Research Executive Area.
- In 2009-2010 she is expert consultant for the Research Promotion Foundation (RPF) of Cyprus founded by the Government of the Republic of Cyprus under the 2009-2010 RPF’s Framework Programme for Research, Technological Development and Innovation
- Since 2011 she is expert nominated by various Italian Regions (Puglia, Marche, Piemonte, Sardegna, Trentino Alto Adige) for the evaluation of research projects, development, and technological innovation.
- In 1999-2000 she has been expert consultant for CIRP (the Apulian Regional Inter-Universities Consortium) for the technical and scientific evaluation of research projects in the framework of the funds POP PUGLIA 94-99, Sottomisura 7.4.1.

Other activities

Activity of Commissioner in Public Tenders

- In 2015 she has been member of the Commission of public competition for the coverage of n. 1 position of Administrative Instructor for permanent contracts cat. D at the "Monte dei Poveri" Public Service of Rutigliano.
- In 2014 she was a member of the committee for the public selection of 3 ingeneers in the Apulia Hydraulic Authority.
- In 2010 she was a member of the Public Competition Commission for the coverage of no. 2 surveyors (cat. C) for an indefinite period and part-time at 50% at the Municipality of Rutigliano.
- In 2009 she was a member of the committee for the public tender called for by the Municipalità of Comune di Cassano delle Murge (BA) for the supply of equipment for a multimedia and praphic laboratory and for an audio-video production laboratory.

Activity of Coordinator of Safety for public organizations

In 2004 she has been Operations Director as Coordinator of Safety in the Executive Phase with regard to the Extraordinary Maintenance Works of the Covered Market of Viale Lazio at the San Paolo Quarter (Bari) as a trust professional of the Municipality of Bari – Department Public Constructions.

Activity of Consultant

- Since 2002 she is consultant as a trust professional for the Bari Tribunal, penal and civil sections, particularly for the Bari section and for the detached sections of Rutigliano and Putignano.

- Since 2001 she collaborates as a trust professional with the Professional Study Offices Avv. Chiaia Noya of Bari and Avv. Falagario of Bari.
- In 2000-2002 she collaborated as a trust professional with the Professional Study Office Eng. De Venuto and Associates of Bari.

Extra-University Didactic Activity

- In 2004 she held a cycle of 15 hours of lecture at the State Technical Industrial Institute Sen. Onofrio Januzzi of Andria (BA) in the framework of the course for continuing education of teachers “Advance software in a mathematical environment: Matlab”.
- In 2003-2004 she held a cycle of 56 hours of lecture at the location of Valenzano (BA) of the Fiat Research Center in the framework of the higher education course for “Highly qualified Researcher in mechatronics” funded by the PON program “Research, Technological Development, Higher Education” 2002-2006, law 593/2000 Art.12 Objective 1.
- In 1999-2000 she developed didactic activities at the State Technical Industrial Institute Sen. Onofrio Januzzi of Andria (BA) in the framework of the higher education and technical qualification (IFTS) course “High performance assembly automatic systems”, funded by the Italian Ministry for Education, University and Scientific Research.
- In 1996-2000 she developed didactic activities in the framework of Masters and specialization courses held at the CSEI Innovation Management Center of Bari.

Membership to professional organizations

- Since May 2011 she is included at n. 170 in the Register of the experts in technological innovation of the Italian Ministry for Economical Development, sectors “Automation and instrumentation” and “Computer Science” since May 11th 2009.
- Since February 2, 2012 she is included in the MIUR (Italian Ministry for Education, University and scientific Research) Register of the FAR (Fund for Supports to Research) experts defined by article 7, comma 1, of the July 27th 1999 Italian Law n.297.
- Since May 11, 2010 she is included in the Register of the experts evaluators of technological research and developments projects of ARTI (Regional Agency for Technology and Innovation) of Apulia Region, area 09 “Industrial and Computing Engineering”.
- Since May 13, 1997 she is included at n. 5342 in the Register of the Bari Province Order of Engineers.
- Since June 22, 2000 she is included at n. 1977 in the Register of the Technical Consultants of the Tribunal of Bari.
- She is member since 1996 (senior member since 2012) of the prominent international association IEEE (the Institute of Electrical and Electronics Engineers), and in particular of the Italian IEEE section, as well as of the IEEE societies Control Systems, Systems Man and Cybernetics and Robotics and Automation. She is vice-president of the IEEE central and southern section of the Systems, Man and Cybernetics society. She has been President of the IEEE Student Branch of Bari in the years 1996-1998.
- She is member since 2006 of the SIDRA association (Italian Society of Professors and Researchers in Automatic Control), earlier named CIRA (Interuniversity Research Center on Automatic Control). She was member of CIRA in the period 1996-2006..
- She is member since 2005 of CNIT (Italian National Interuniversity Consortium for Telecommunications).

Aware of penal sanctions, in the case of false declarations, training or use of false deeds, referred to in art. 76 of the D.P.R. 445/2000, the undersigned Mariagrazia Dotoli, born in Bari on 06/30/1971, residing in Via Vincenzo de Romita n. 22 CAP 70121 Bari, declares in accordance with articles 46 and 47 of the D.P.R. n. 445 of 28/12/2000 that the above is true and reserves the right to prove specific qualifications upon request by means of appropriate documentation. It also provides explicit formal consent to the processing of personal data, pursuant to Legislative Decree 196/2003.

Bari, 24th July 2018
Prof. Eng. Mariagrazia Dotoli
