

# Curriculum Vitae

## Francesco Vasca

Full Professor of Automatic Control  
Department of Engineering, University of Sannio  
Piazza Roma 21, 82100 Benevento, Italy  
Tel: +39 0824 30 55 08, Fax: +39 0824 32 52 46  
email: [vasca@unisannio.it](mailto:vasca@unisannio.it), URL: <http://www.francescovasca.net>

## Biosketch

**Francesco Vasca** was born in 1967 in Giugliano (Napoli, Italy). In 1991 he received the “laurea degree” cum laude in Electronic Engineering from the University of Napoli Federico II. In 1995 he received the Ph.D. in Automatic Control from the same academic institution and in the same year he has been appointed as Assistant Professor at the Department of Engineering of the University of Sannio (Benevento, Italy). In 1999 he was appointed as Assistant Professor at the Department of Computer Science and Automation of the University of Napoli Federico II. In 2000 he was Associate Professor at the Department of Engineering of the University of Sannio where since 2015 he is Full Professor of Automatic Control.

Since 1995 he developed his research and teaching activities at the Department of Engineering of the University of Sannio, where he taught courses in the areas of Automatic Control. In the same areas he taught courses at the University of Napoli Federico II and the Second University of Napoli. From 2005 till 2010 he has been President for the master degree curriculum in Automatic Control at the University of Sannio. At the same university, from 2004 till 2013 he has been a member of the board for the Ph.D degree in Information Engineering; from 2013 till 2015 he has been a member elected of the Academic Senate and since 2017 he is a member elected of the Research Program Committee of the Department of Engineering.

His research interests include the analysis and control of switched and networked dynamic systems with applications to power electronics, railway control, automotive control, and social networks. Since 2000 he has been tutor for 17 Ph.D. students, supervisor for 33 young researchers involved with temporary contracts on research projects, supervisor for 35 master degree laurea students. From 2002 till 2018 he has been a member of the research projects evaluation board for the Italian Minister of Research.

Since 2000 he has been scientific responsible of the local research units for 3 european projects, 5 national research projects under competitive competi-

tions, and 5 regional research projects. He has been the scientific responsible for several research contacts with industrial research centers such as Hitachi Rail, FCA, SITAEL. He collaborates with researchers of several international institutions and, in particular, with the University of Groningen (The Netherlands). In 1997 he has been visiting scientist at the Massachusetts Institute of Technology (Boston) thanks to a Fulbright research grant.

He is author of more than 150 scientific publications presented in books, international journals and conferences. At 2021 his publications have received more than 2800 citations, corresponding to an h-index equal to 25 (Scopus source). He has been reviewer for 15 international journals, a member of the Programme Committees for several international conferences, *Workshop Chair* for the European Control Conference 2021 (Rotterdam, The Netherlands), a member of the organizing committee and *Finance Chair* for the European Control Conference (Napoli, Italy. 25-28 June 2019) with more than 900 participants coming from all over the world. He has been a member for Ph.D. Theses Committees at academic institutions in Sweden, France and Spain. From 2008 till 2014 he has been Associate Editor for the IEEE Transactions on Control Systems Technology. Since 2017 he is Associate Editor for Automatica. Since 1994 he is a member of IEEE Control System Society and IEEE Power Electronics Society, with Senior Member grade since 2012. He is holder of 2 patents and founding member of 2 academic spin-off company.

He is a founding member of Eupolis (the social-political school of the Diocese of Aversa), a member of the Observatory for poverties and resources at Caritas Aversa, a member of Azione Cattolica Italiana (since 1976) and a member of the organizing committee of “Engineers free and strong”, a course organized in collaboration with the Ordine Ingegneri Benevento and CIVES (laboratory of common good at the Diocese of Benevento).

### Academic positions

- 2015** – (November 16th) Permanent position as Full Professor of Automatic Control at the University of Sannio, Benevento, Italy.
- 2003** – (July 3rd) Permanent position as Associate Professor of Automatic Control at the University of Sannio, Benevento, Italy.
- 2000** – (July 1st) Temporary position as Associate Professor at the University of Sannio, Italy.

- 1999** – (October 1st) Assistant Professor at the University of Napoli Federico II, Italy.
- 1995** – (December 27th) Assistant Professor at the University of Sannio, Italy.

### Academic awards

- 2016–18** – In the list of possible member of the national committee for scientific qualification of full professors of Automatic Control.
- 2014** – Scientific national qualifications of full professor in Automatic Control, in Power Systems Engineering, in Electrical Systems.

### Education

- 1995** – (October 27th) Ph.D. in Automatic Control at the University of Napoli Federico II, Italy. Thesis title: “Analysis and modern control techniques for periodically time varying systems”.
- 1991** – (July 5th) 5 years “Laurea” (M.Sc.) in Electronics Engineering at the University of Napoli Federico II. Final overall mark 110/110 cum laude (1st class with honours).
- 1985** – Diploma di Maturità (A levels), Liceo Scientifico L. B. Alberti, Minturno, Latina. Final overall mark 60/60.

## Teaching activities

### Academic courses

- “Modeling and Control of Power Electronics Systems” (6 credits), “Laurea Magistrale” (LM, master degree) in Electronic Engineering for Automatic Control and Telecommunications, University of Sannio (academic year 16/17, 17/18, 18/19, 19/20, 20/21, 21/22).
- “Multiagent Systems” (9 credits), LM Computer Engineering (a.y. 19/20, 20/21, 21/22).

- “Process Control” (9 credits), LM Computer Engineering (a.y. 16/17, 17/18, 18/19).
- “Advanced Control and Applications” (6 credits), LM in Electronic Engineering for Automatic Control and Telecommunications, University of Sannio (a.y. 16/17).
- “Modeling and Control of Power Electronics Systems” (9 credits), LM in Electronic Engineering for Automatic Control and Telecommunications, University of Sannio (a.y. 10/11, 11/12, 12/13, 13/14, 14/15, 15/16).
- “Discrete Systems” (9 credits), LM Computer Engineering (a.y. 10/11, 11/12, 12/13, 13/14, 14/15, 15/16).
- “Automatic Control” (7 credits), “Laurea” (L) in Information Engineering, University of Sannio (a.y. 04/05, 05/06, 06/07, 07/08, 08/09, 09/10).
- “Modeling and Control of Power Electronics Systems” (4 credits), “Laurea Specialistica” (LS, master degree) in Automatic Control, University of Sannio (a.y. 04/05, 05/06, 06/07, 07/08, 08/09, 09/10).
- “Systems Identification” (4 credits), LS in Automatic Control, University of Sannio (a.y. 04/05, 05/06, 06/07, 07/08, 08/09, 09/10).
- “Automatic Control II” (3 credits), LS in Energetic Engineering, University of Sannio (a.y. 07/08, 08/09, 09/10).
- “Control Engineering Technology” (4 credits), L in Information Engineering, University of Sannio (a.y. 03/04).
- “Digital Control” (6 credits), L in Information Engineering, University of Sannio (a.y. 01/02, 02/03, 03/04).
- “Process Control”, L in Information Engineering, University of Sannio (a.y. 98/99, 99/00, 00/01, 01/02, 02/03).
- “Power Electronics”, L in Information Engineering, University of Sannio (a.y. 94/95, 95/96, 00/01, 01/02, 02/03).
- “Process Control”, L in Electronic Engineering, Second University of Napoli (a.y. 99/00, 00/01).

### **Member of laurea degree committees and tutoring for laurea theses**

- 2015–21** President of 11 Committees for laurea degree exams at the University of Sannio (1/2021, 3/2020, 2/2019, 1/2018, 1/2017, 2/2016, 1/2015).
- 2008–21** Member of 47 Committees for laurea degree exams at the University of Sannio (1/2021, 1/2020, 2/2019, 3/2017, 5/2016, 4/2015, 4/2014, 5/2013, 4/2012, 4/2011, 6/2010, 3/2009, 5/2008).
- 2008–20** Tutor for 35 laurea magistralis degree theses at the University of Sannio (2/2021, 3/2020, 3/2019, 2/2018, 4/2017, 3/2016, 1/2015, 1/2014, 4/2013, 2/2012, 5/2011, 1/2010, 2/2009, 2/2008).
- 2009–12** Tutor for 6 laurea degree theses at the University of Sannio ((1/2012, 2/2011, 1/2010, 2/2009)).

### **Responsibility for high level education projects**

- 2003–04** – “Experts for hybrid electric vehicles”, supported by Italian Minister of Research (PON 2000–2006), University of Sannio in collaboration with Centro Ricerche FIAT.
- 2002–03** – “VIR”, supported by Italian Minister of Research (PON 2000–2006), University of Sannio.

## **Research activities**

### **International scientific production**

- 1992–2021** Francesco Vasca published his first scientific paper at an international conference in 1992. Since then he has published more than 150 publications as books, papers in international journals, chapters in books, papers at international conferences. At 2021 his publications have received more than 2800 citations, corresponding to an h-index equal to 25 (Scopus source). A complete list of publications is attached to the curriculum vitae.

## Editing and reviewing

- 2017–22** Associate Editor for *Automatica*.
- 2008–14** Associate Editor for *IEEE Transactions on Control Systems Technology*.
- 1996–22** Reviewer for the following international journals: *IEEE Access* (2018); *IEEE Transactions on Control of Network Systems* (2015); *IEEE Transactions on Control Systems Technology* (1996, 2006, 2007, 2009, 2010, 2011, 2013, 2016, 2017, 2021); *IEEE Transactions on Circuits and Systems* (2002, 2003, 2005); *IEEE Transactions on Automatic Control* (1998, 2002, 2008, 2009, 2013, 2014, 2015, 2016, 2021); *Automatica* (2003, 2005, 2007, 2008, 2010, 2011); *Systems and Control Letters* (2012, 2015); *International Journal of Robust and Nonlinear Control* (2010); *Mathematics of Control, Signals, and Systems* (2010); *International Journal of Bifurcation and Chaos* (2010); *International Journal of Circuits Theory and Applications* (2015, 2016); *International Journal of Control* (2006, 2007); *Control Engineering Practice* (2001, 2009); *European Journal of Control* (2005); *IET Control Theory and Applications* (2007); *International Journal on Mechatronics* (2005); *IEEE Transactions on Power Electronics* (1997, 2003, 2006, 2007, 2008, 2009, 2011); *IEEE Transactions on Industrial Electronics* (2009, 2011, 2016); *Simulation Modelling Practice and Theory* (2009, 2010); *IEEE Transactions on Computer Aided Design* (2009); *IMA Journal of Mathematical Control and Information* (2012).
- 2000–22** Participation to Programme Committees of international events: European Control Conference (2021, Rotterdam); European Control Conference (2019, Napoli); International Congress Decent Work, Equity and Inclusion (Padova 2017); SIDRA meeting of the Italian researchers in Automatic Control (Milan, 2017; Rome, 2016; Bari, 2015); IFAC Joint conference 5th Symposium on System Structure and Control and 11th Workshop on Time-Delay Systems (Grenoble, 2013); IFAC Workshop on Engine and Powertrain Control, Simulation and Modeling (Rueil-Malmaison, 2012); IEEE CSS Workshop The Future of Control in Transportation Systems (Benevento, 2010); ANIPLA Workshop on Intelligent Manufacturing (Napoli, 2009); International Conference on Robot Communication and Coordination (2007, 2008); Informal Workshop on Automotive Clutch Control (Benevento, 2006);

IEEE Power Electronics Specialists Conference (St. Louis, 1997; Fukuoka, 1998; Charleston, 1999; Galway, 2000; Aachen, 2004); International Power Electronics Conference (Hong Kong, 1999); Applied Power Electronics Conference (New Orleans, 2000); IFAC Symposium on Advances in Automotive Control (Salerno, 2004).

### Organization of scientific events

- 2021** – Promoter and organizer of the workshop “Using Matlab for social networks analysis”, European Conference on Social Networks, Napoli, Italy, 6-10 September 2021.
- Workshop Chair for the European Control Conference 2021 (Rotterdam, The Netherlands).
- 2019** – Member of the Organizing Committee and Finance Chair of the international conference European Control Conference, Naples, 25–28 June 2019.
- Organizer of the national scientific meeting on “Social networks and emerging behaviors”, in collaboration with prof. Franco Garofalo of the University of Napoli Federico II, Naples, 4 February 2019.
- Promoter and organizer of the course “Engineers free and strong”, in collaboration with the Ordine degli Ingegneri di Benevento and CIVES laboratory of common good of the Diocese of Benevento (Benevento).
- 2017** – Organizer of the Symposium “Social Network Analysis and Inclusive Policies” within the International Congress Decent Work, Equity and Inclusion (Padova).
- 2016** – Organizer of the meeting “Reti di comunità, comunità in rete”, (Benevento).
- 2014** – Organizer of the IEEE Mediterranean Control Conference Tutorial Session “New Modeling and Control Challenges Inspired by Switched Electronic Systems: Intriguing Applications for Averaging, Model Predictive Control and Complementarity” (Palermo).
- 2012** – Operative responsible for the organization of the workshop “Automatica.it 2012”, SIDRA meeting of the Italian researchers in Automatic Control (Benevento).

- 2010** – Operative responsible for the organization of the “IEEE International Workshop on The Future of Control in Transportation Systems” (Benevento).
- 2009** – Operative responsible for the organization of the ANIPLA meeting “Intelligent Manufacturing” (Napoli).
  - Organizer of the IEEE Conference on Decisions and Control Invited Session “Switched Electronic Systems” (Shanghai, China).

### **Scientific responsibility of the local research unit within European projects**

- 2004–07** – “SICONOS”, V European Framework, Consorzio Ricerche Benevento.
  - “TOKEN for GRACE”, Marie Curie action, University of Sannio.
- 2001–03** – “SUVA – SURplus VALUE hybrid”, V European Framework, CREATE subcontracting of Research Center of FIAT.

### **Scientific responsibility for research projects supported by public institutions**

- 2021–23** – “Borgo 4.0, H-mobility”, Regione Campania, scientific responsible for the unit of the University of Sannio in collaboration with TEST scarl.
  - “Borgo 4.0, E-mobility”, Regione Campania, scientific responsible for the unit of the University of Sannio in collaboration with TEST scarl.
- 2018–22** – “PFP. Progetti Formativi Personalizzati con Budget Educativi”, Bando Adolescenza, Con i Bambini, in collaboration with “Rete dell’Economia Sociale Internazionale”.
  - “I Piccoli Comuni del Welcome”, Iniziativa Immigrazione 2017, Fondazione Con il SUD, in collaboration with Cooperativa Sociale “Il Melograno” Onlus.
- 2014–17** – “DATTILO - NEMBO, innovative embedded systems for railway applications”, research project founded by the Italian Minister of Research, in collaboration with TEST scarl, scientific responsible for the unit of the University of Sannio.

- 2011–15** – “VERO: Virtual Engineering for Railway and automotive”, Regione Campania, scientific responsible for the unit of the University of Sannio in collaboration with TEST scarl.
- “SFERE”, research project founded by the Italian Minister of Research within the call “PON 2007-13”, scientific responsible for the unit of the University of Sannio.
- “INSIST - Innovative Technologies for Transportation systems”, Regione Campania, scientific responsible for the unit of the University of Sannio.
- 2010–14** – “POSTRAIN”, research project founded by the Italian Minister of Economic Development, responsible for the unit of the University of Sannio.
- 2010–12** – “Modeling and development of a prototype to enhance conventional vehicles with hybrid features”, research project founded by the Italian Minister of Research within the call “PRIN 2008”, scientific responsible for the unit of the University of Sannio.

#### **Scientific responsibility of research projects supported by industries**

- 2018–20** – “Modeling and energetic optimization for onboard power electronic systems in small satellites”, research contract between SITAEL (Mola, Bari) and University of Sannio.
- 2012–13** – “Modeling of clutch transmissibility”, research contract between FIAT (Napoli) and University of Sannio.
- 2011–12** – “Vehicle sizing optimization based on dynamic modeling and simulation”, research contract between Analdobreda (Napoli) and University of Sannio.
- “Dual clutch modeling and control for hardware in the loop testing of engine control units”, research contract between FIAT Powertrain (Napoli) and University of Sannio.
- 2009–10** – “Synchronization of parallel connected inverters”, research contract between Analdobreda (Napoli) and University of Sannio.
- 2007–08** – “Torque transmissibility modeling for automotive dry clutch”, research contract between ELASIS (Napoli) and University of Sannio.

- “Hardware in the loop for electronic converters control in power systems”, research contract between Ansaldo Sistemi Industriali (Genova) and University of Sannio.
- 2006–08**
  - “Real time simulation for power electronic systems in railway locomotives”, research contract between AnsaldoBreda (Napoli) and University of Sannio.
  - “Scheduling of complex manufacturing plants via simulation techniques”, research contract between Centro Sviluppo Materiali (Roma) and University of Sannio.
- 2004–06**
  - “Modeling manufacturing systems for plant simulation”, research contract between Europea Microfusioni Aerospaziali (Morra de’ Sanctis, Avellino) and University of Sannio.
  - “Techniques and information technologies for the simulation of complex industrial plants”, research contract between Centro Sviluppo Materiali (Roma) and University of Sannio.
- 2004–05**
  - “Dead-time voltage disturbance compensations in coltage source inverters”, research contract between AnsaldoBreda (Napoli) and University of Sannio.
  - “Simulation techniques for engine production plant”, research contract between Fabbrica Motori Automobilistici (Pratola Serra, Avellino) and University of Sannio.
- 2003–04**
  - “ABS control techniques”, research contract between ELASIS (Pomigliano, Napoli) and University of Sannio.
  - “Simulation techniques for automotive FMEA analysis”, research contract between ELASIS (Pomigliano, Napoli) and CREATE.
  - “Robot design for wind tunnel pressure measurement”, research contract between Aerosoft/Ferrari (Napoli/Maranello) and University of Sannio.
- 2002–03**
  - “Engagement control for automated manual transmissions ”, research contract between ELASIS (Pomigliano, Napoli) and University of Sannio.
- 2001–02**
  - “Control strategies for energy management in hybrid electric vehicles”, research contract between Centro Ricerche FIAT (Orbasano, Torino) and University of Sannio.

- 2000–01** – “Auxiliary power unit control in series hybrid vehicles”, research contract between Centro Ricerche FIAT (Orbassano, Torino) and University of Sannio.

### **Participation to spin-off companies**

- 2019–22** – Founding member of the spin-off company of the University of Sannio “Nesyt. Networks, Systems, Technologies”.
- 2004–10** – Founding member of the spin-off company of the University of Sannio “Mosaico Monitoraggio Integrato”.

### **Patents**

- 2014** Italian patent “Estimation and compensation of the temperature and slip speed effects on the transmitted torque in automated dry clutch transmissions with position control”, n. TO2014A000487.
- 2011** Italian patent “Smart LED Supply”, n. BN2011A000012, submitted 22 December 2011, accepted 13 March 2015.

### **Tutoring of Ph.D. students**

- 2022–25** – Trisha Srivastava, “Opinion dynamics”, XXXVII cycle.
- 2019–22** – Salvatore Sagnelli, “Modeling and power management for batteries in LEO satellites”.
- 2018–21** – Carmela Bernardo, “Social networks and opinion dynamics”.
- Domenico Natella, “Optimization for hybrid electric vehicles”, in collaboration with FCA.
- 2014–19** – Antonio Della Gatta, “Control Strategies in Modern Automotive Vehicles with Dry Clutches”.
- Domenico Tangredi, “Opinion Dynamics Models Emerging from Social Aggregations Interactions”.
- 2012–16** – Elisa Mostacciuolo, “Averaged Models for Switched Systems with Differential Algebraic Equations”, in collaboration with University of Kaiserslautern, Germany.

- 2010–15** – Claudio Cervone, “Modeling and Control for Dual Dry Clutch Automotive Transmissions”, in collaboration with FIAT, Italy.
- 2010–14** – Valerio Mariani, “Synchronization of electrical networks via droop control”, in collaboration with Aalborg University, Denmark.
- 2009–13** – Carmen Pedicini, “Averaging for Switched Systems”, in collaboration with University of Kaiserslautern, Germany.
- Valentina Sessa, “Complementarity for Limit Cycle Estimation”, in collaboration with INRIA, France.
- 2008–12** – Silvio Baccari, “Photo-electro-thermal Model Predictive Control for Light Emitting Diodes”.
- 2007–11** – Gianluca Angelone, “Steady-state Analysis for Switched Electronic Systems Through Complementarity”, in collaboration with ABB Corporate Research Center, Sweden.
- 2004–07** – Roberto Frasca, “Modeling and Simulation of Switched Electrical Networks: a Complementarity Systems Approach”, supported by the European project SICONOS, in collaboration with University of Eindhoven, The Netherlands.
- 2003–06** – Maria Carmela De Gennaro, “Decentralized Formation Control for Multi-Agent Systems”, in collaboration with University of Pennsylvania.
- Vladimiro Vacca, “Quality of Service Control for Real-Time Task Scheduling in Space Avionics”, supported by the company Carlo Gavazzi Space (Milano, Italy), in collaboration with European Space Agency, The Netherlands.
- 2002–05** – Osvaldo Barbarisi, “Energy Management and State of Charge Estimator for Hybrid Electric Vehicles”, supported by the European project SUVA, in collaboration with Ohio State University, USA.
- 2001–04** – Luigi Iannelli, “Averaging through Dithering for Nonsmooth Systems”, in collaboration with University of Napoli Federico II and Royal Institute of Technology, Sweden.

## Tutoring of research grants and postdocs (by ending dates)

- 2022** – Dora Ricci, “Data analysis for graph models of social networks”, December 2019 – November 2023, post-laurea scholarship.
- 2021** – Silvio Baccari, “Design and numerical simulation for the control and optimization of mechatronic subsystems in transportation vehicles”, March 2021 - February 2023 (and also September 2018 – February 2021, June 2014 – May 2017, April 2012 – March 2013, April 2008 – March 2009), post-doc.
- 2019** – Ilaria Marotta, “Data analysis and modeling for social networks”, April 2019 – September 2019, post-doc.
- 2018** – Domenico Natella, “Control systems for innovative vehicles”, March 2018 – August 2018, post-laurea scholarship.
  - Antonietta Riccardo, “Data analysis for multiagent models of social networks”, July 2015 – October 2018, post-laurea scholarship.
  - Valentina Sessa, “Modeling and control of hybrid systems”, November 2017–September 2018, post-doc.
  - Elisa Mostacciolo, “Modeling, analysis and simulation for switched dynamic systems”, September 2016 – August 2018, post-doc.
- 2016** – Giuseppe Capuano, “Study of vehicles automatic communication strategies for the territorial risk”, July 2015 – June 2016, post-laurea scholarship.
  - Giovanni Antonio Forte, “Data collection and analysis for the construction of dynamic models emerging from the interaction of social organizations”, April 2015 – March 2016, post-doc.
- 2015** – Fatima Cicchiello, “Software simulators for railway systems”, May 2015 – November 2015, research contract.
  - Gianluca Angelone, “Control and optimization techniques for transmission systems of advanced vehicles”, November 2012 – October 2015, post-doc.
  - Giovanni Palmieri, “Virtual engineering for railway and automotive”, February 2015 – July 2015, research contract.
  - Angelo Dello Russo, “Study of control systems for transportation vehicles”, September 2014 – March 2015, post-laurea scholarship.

- Antonella Grande, “Study of real time simulation techniques for nonlinear dynamical systems”, February 2014 – February 2015, post-laurea scholarship.
  - Gennaro Pica, “Modelling, analysis and simulation for nonlinear complex systems”, April 2013 – January 2015, post-laurea scholarship.
- 2014**
- Paolo Rubino, “Technical and scientific management of research activities for testing strategies of electronic control units”, September 2014 – December 2014, research contract.
  - Valerio Mariani, “Analysis of switched nonlinear systems for the energy optimization in transportation vehicles”, March 2014 – November 2014, post-doc.
  - Giovanni Palmieri, “Advanced control techniques for energy management”, November 2013 – October 2014, post-doc.
  - Maurizio Zoppi, “Control and optimization for traction systems of advanced vehicles”, November 2011 – March 2014, post-laurea scholarship.
  - Antonella Costanzo, “Training on the job for the study of control strategies for switched systems”, June 2013 – June 2014, post-laurea scholarship.
  - Valentina Sessa, “Switched models for power converters”, March 2013 – June 2014, post-doc.
  - Carmen Pedicini, “Modeling and control for nonlinear dynamical systems”, March 2013 – February 2014, post-doc.
- 2011**
- Gabriella Reale, “Design and implementation of an hardware in the loop experimental setup”, January 2009 – December 2011, post-laurea scholarship.
- 2010**
- Roberto Frasca, “Advanced control strategies for power converters”, January 2008 – December 2010, post-doc.
  - Carmine Di Pietro, “HIL systems for automotive control”, January 2009 – December 2010, post-laurea scholarship.
- 2009**
- Osvaldo Brabarisi, “Dynamic models for automotive batteries”, June 2005 – December 2009, post-doc.
  - Mario Marra, “Simulation of manufacturing processes”, June 2007 – December 2009, post-laurea scholarship.

- Giulio Cammeo, “Design and implementation of an hardware in the loop experimental setup”, June 2006 – December 2009, post-laurea scholarship.
- 2008**
  - Vladimiro Vacca, “Dry clutch modeling and control”, June 2006 – December 2008, post-doc.
  - Maria Carmela De Gennaro, “Study of multi-agent models”, June 2006 – December 2008, post-doc.
  - Maurizio Tagliatela-Scafati, “Finite element models for steel processes”, June 2005 – December 2008, post-laurea scholarship.
  - Immacolata Tagliamonte, “Winemaking processes and UML models”, June 2004 – May 2008, post-laurea scholarship.
- 2007**
  - Diego Castiello, “Finite element models for steel processes”, June 2006 – May 2007, post-laurea scholarship.

### **Research visits and talks at international institutions/events**

- 2021**
  - 6 September, Napoli, Italy, speaker at the workshop “Using Matlab for social networks analysis”, European Conference on Social Networks.
- 2019**
  - 11–13 December, IEEE Conference on Decision and Control, Nice, France, conference attendance and presentation of a scientific paper.
- 2018**
  - 24–28 June, University of Groningen, Groningen, The Netherlands, research visit and seminar entitled “Opinion dynamics: consensus and PWQ stability”.
  - 27–30 May, IEEE International Symposium on Circuits and systems, Florence, Italy, conference attendance and presentation of a scientific paper.
- 2017**
  - 5–7 October, International Congress Decent Work, Equity and Inclusion, Padova, organization of the symposium “Social Network Analysis and Inclusive Policies” and seminar entitled “Coopetition, cooperosity and regression to the mean”.
  - 9–14 July, IFAC World Congress, Toulouse, France, conference attendance and presentation of a scientific paper.

- 2016** – 27 June–1 July, European Control Conference, Aalborg, Denmark, conference attendance, participation as speaker to the pre-conference Workshop “Optimization and Control for Tomorrow’s Power Systems”, and presentation of a paper.
- 14–15 March, Social Work Day 2016, University of Pisa, Italy, workshop attendance and seminar “Models for the community construction between coepetition and cooperosity”.
- 2014** – 15–17 December, 53rd Conference on Decision and Control, Los Angeles, California, conference attendance and presentation of a paper.
- 16–19 June, IEEE Mediterranean Control Conference, Palermo, Italy, conference attendance and presentation of a paper.
- 2013** – 10–13 December, 52nd IEEE Conference on Decision and Control, Florence, Italy, conference attendance and presentation of two papers.
- 15–18 April, Dogus University, Istanbul, Turkey, research visit and seminar “Complementarity Models for Power Converters”.
- 2012** – 23-28 September, University of Kaiserslautern, Kaiserslautern, Germany, research visit and seminar “Dry Clutch Torque Transmissibility Model”.
- 2011** – 20–23 June, 19th Mediterranean Conference on Control and Automation, Corfu, Greece, conference attendance and presentation of two papers.
- 2010** – 20–23 June, Cairo University, Cairo, Egypt, research visit and seminar “A New Perspective for Modeling Switched Electronic Systems: A Complementarity Framework”.
- 2009** – 16–18 December, 48th IEEE Conference on Decision and Control, Shangai, China, conference attendance and presentation of a paper.
- 1–3 December, Universitat Politècnica de Catalunya, Barcelona, Spain, research visit and seminar “Complementarity Modeling and Analysis of Switched Electronic Systems”.
- 23–26 August, European Control Conference, Budapest, Hungary, conference attendance and presentation of a paper.

- 2008**
  - 9–11 December, 47th IEEE Conference on Decision and Control, Cancun, Mexico, conference attendance and presentation of a paper.
  - 11–13 June, American Control Conference, Seattle, Washington, conference attendance and presentation of a paper.
- 2007**
  - 17–21 June, 38th IEEE Power Electronics Specialists Conference, Orlando, Florida, conference attendance and presentation of a paper.
- 2006**
  - 10–15 May, University of Pennsylvania, Philadelphia, Pennsylvania, research visit and seminar “Models and Synchronization for Multi-Agent Systems”.
  - 1–5 February, University of Eindhoven, The Netherlands, research visit and seminar “Modeling of Switched Electronic Systems”.
- 2005**
  - 12–15 December, 44th IEEE Conference on Decision and Control, Sevilla, Spain, conference attendance and presentation of a paper.
  - 3–8 July, 16th IFAC World Congress, Prague, Czech Republic, conference attendance and presentation of a paper.
  - 1–5 February, Ohio State University, Columbus, Ohio and University of Michigan, Ann Arbor, Michigan, research visits and seminar “Modeling of Automotive Dry Clutches”.
- 2004**
  - 14–17 December, 43rd IEEE Conference on Decision and Control, Paradise Islands, The Bahamas, conference attendance and presentation of two papers.
  - 28–30 September, University of Chalmers, Göteborg, Sweden, research visit.
  - 30 June–3 July, American Control Conference, Boston, Massachusetts, conference attendance and presentation of a paper.
  - 10–15 June, Royal Institute of Technology (KTH), Stoccolma, Sweden, research visit.
  - 20–25 June, 35th IEEE Power Electronics Specialists Conference, Aachen, Germany, conference attendance and presentation of a paper.
  - 19–23 April, IFAC Symposium on Advances in Automotive Controls, Salerno, Italy, conference attendance and seminar “Automotive NiMH Battery SOC Estimation via an Extended Kalman Filter”.

- 2003** – 1–4 September, European Control Conference, Cambridge, UK, conference attendance and presentation of two papers.
- 2002** – 21–26 July, 15th IFAC World Congress, Barcelona, Spain, conference attendance and presentation of three papers.
- 2001** – 4–7 December, 40th IEEE Conference on Decision and Control, Orlando, Florida, conference attendance and presentation of a paper.
- 2000** – 22–24 August, 5th Symposium on Advanced Vehicle Control, Ann Arbor, Michigan, conference attendance and presentation of a paper.
- 1999** – 12–16 July, IEEE International Symposium on Industrial Electronics, Bled, Slovenia, conference attendance and presentation of a paper.  
– 31 August–3 September, European Control Conference, Karlsruhe, Germany, conference attendance and presentation of a paper.
- 1998** – 19–22 July, 6th Workshop on Computer in Power Electronics, Como, Italy, conference attendance and presentation of a paper.
- 1997** – September–December, Massachusetts Institute of Technology, Cambridge, Massachusetts, appointed as visiting scientist supported by a CNR Fulbright research grant.  
– 23–26 June, 28th IEEE Power Electronics Specialists Conference, St. Louis, Missouri, conference attendance and presentation of two papers.
- 1996** – 23–27 June, 27th IEEE Power Electronics Specialists Conference, Baveno, Italy, conference attendance and presentation of a paper.
- 1995** – 18–22 June, 26th IEEE Power Electronics Specialists Conference, Atlanta, Georgia, conference attendance and presentation of a paper.
- 1994** – 14–16 December, 33rd IEEE Conference on Decision and Control, Lake Buena Vista, Florida, conference attendance and presentation of a paper.  
– 18 December, University of Central Florida, Orlando, Florida, research visit and seminar “Linear Quadratic Control of DC/DC Power Converters”.

- 1993** – 20–24 June, 24th IEEE Power Electronics Specialists Conference, Seattle, Washington, conference attendance and first presentation of a paper at an international conference.

## **Management, organization and institutional activities**

### **Responsibilities in faculty committees**

- 2022** – Delegate for the University of Sannio for the activities of Civil Service (D.Lgs. 06/03/2017 n. 40).
- 2017–22** – Member elected of the Research Committee of the Department of Engineering of the University of Sannio.
- 2013–15** – Member elected of the Academic Senate of the University of Sannio.
- 2004–13** – Member of the faculty board of the Ph.D. Curriculum in Information Engineering at the University of Sannio.
- 2005–10** – President of the “Laurea Specialistica” Curriculum in Automatic Control at University of Sannio, Benevento, Italy.
- 2002–04** – Member of the faculty board of the Ph.D. Curriculum in Mechanical Engineering at University of Salerno, Italy.
- 2001–02** – Member of the Engineering Faculty Teaching Board at the University of Sannio.

### **Evaluation for research positions, grants and projects**

- 2021** – President of the Committee for a competition of a Temporary Researcher B position at the Dipartimento di Ingegneria Informatica, Automatica e Gestionale “Antonio Ruberti” of the University La Sapienza, Rome.
- Member of the Committee for the PhD final exam in Industrial and Information Engineering at the University of Campania Luigi Vanvitelli.

- 2020** – Member of the Committee for the PhD final exam in Information Technology for Engineering at the University of Sannio.
- 2019** – Member of the Committee for a competition of Full Professor position at the Università Campus Biomedico, Rome.
- 2018** – President of the Committee for a competition of Associate Professor position at the Universitas Mercatorum, Rome.  
– Member of the Committee for the PhD final exam in Information Engineering at the Politecnico di Milano.
- 2017** – President of the Committee for the PhD final exam in Information Technology and Electrical Engineering at the University of Napoli Federico II.
- 2016** – Member of the Committee for the evaluation of “Research projects Starting Grant” at the University of Cassino.  
– President of the Committee for the Professional Engineering Degree, University of Sannio.
- 2002–15** – Member of the National Experts Committee for the Italian Minister of Research.
- 2015** – Member of the University Committees for the performance and quality evaluation of the research and teaching activities of the permanent staff (ys. 2011, 2012 and 2013).  
– Member of the Committee for the PhD final exam in Automatic Control at the University of Siena, Italy.
- 2011** – Member of the International Committee for the PhD defense “Commande Robuste de Générateurs Électrochimiques Hybrides”, Université de Grenoble, France.
- 2010** – Member of the International Committee for the PhD defense “Commande Prédicative par Modèle Unifiée de Groupes Motopropulseurs Complexes”, Université de Grenoble, France.  
– Member of the Committee for the PhD final exam in Power Electronics at the Second University of Napoli, Italy.  
– Reviewer for research projects submitted to the Swiss National Science Foundation (SNSF), Switzerland.

- Reviewer for research projects submitted to the Veneto Italian Region, within the call “POR CRO FESR 2007–3013”.
- 2009** – Member of the International Committee for the PhD defense “Design and Control of an Electric Energy Conditioning System for a PEM Type Fuel Cell”, Universitat Politècnica de Catalunya, Barcelona, Spain.
- 2008** – Member of the Committee for a competition of Assistant Professor position at the Second University of Napoli, Italy.
- 2007** – Member of the Committee for a competition of Assistant Professor position at the University of Calabria, Cosenza, Italy.
- 2006** – Member of the Committee for the PhD final exam in Automatic Control at University of Bologna, Italy.  
– President of the Committee for the Professional Engineer Degree, University of Sannio.
- 2005** – Evaluation of “PIA” research projects for the Italian Minister of Industry.
- 2004** – Opponent for the PhD Thesis “A Methodology for the Design of Cost Effective Hybrid and Fuel Cell Powertrains”, at University of Chalmers, Göteborg, Sweden.
- 2001** – Research projects evaluations for “Engineering and Physical Sciences Research Council”, United Kingdom.
- 2000** – Member of the Committee for a competition of Assistant Professor position at the Second University of Napoli, Italy.
- 1999** – Member of the Committee for the PhD final exam in Power Electronics at the Second University of Napoli, Italy.

### **Participation to technical and management committees**

- 2022** – Member of Scientific Committee of the “Fondazione di Comunità di Benevento”, as representative of the University of Sannio.
- 2019** – President of the Committee for the election of the Head of the Dipartimento di Ingegneria of the Università del Sannio for the period 2019/22.

- 2018–19** – Member of the Commettes for Teaching, Research and Ethics for the applciation of the “Piano per la Prevenzione della Corruzione e della Trasparenza” at the University of Sannio.
- 2018** – Member of the Committee for the Teaching Rule Book revision, University of Sannio.
- 2016** – Member of the University Committee for the Teaching Rule Book proposal, University of Sannio.
- 2006–13** – Responsible at the Engineering Faculty of the University of Sannio for the Rule Books and for the Students Training Programme.
- 2007–12** – Member of the Scientific Committee for the research company TEST, as representative of the University of Sannio.
- 2007–10** – Member of the Scientific Committee for the research consortium PROMOS, as representative of the University of Sannio.
- 2007** – President of the technical committee for the supervision of the realization of the high speed optic fiber data network at the University of Sannio.
- 2006–07** – Member of the Programme Committee for the project “Unicampania”, supported by the Italian Minister of Research, as representative of the University of Sannio.