

Education

- Ph.D. in *Electrical Eng., Telecommunications and Computer Science*, University of Bologna, Italy, 2007.
- M.S. in *Electrical Engineering* (summa cum laude), University of Bologna, Italy, 2002.

Present positions

2018-Today *Associate Professor* of Electronics and Embedded Systems, Department of Industrial Engineering (DII), University of Trento.

Past positions

- 2013-2018 *Assistant Professor* of Electronics and Embedded Systems, Department of Industrial Engineering (DII), University of Trento.
- 2010-2013 *Assistant Professor* of Electronics, Department of Electrical Engineering and Computer Science (DISI), University of Trento.
- 2007-2010 *Research fellow*, Department of Electronic, Computer Science and Systems (DEIS), University of Bologna.
- 2005, 2007 *Visiting researcher*, ETH Zurich, Switzerland

Professional experience

- *Consulting Professor at STMicroelectronics* in 2016.
- *Consulting Professor at the Faculty of Electrical Engineering (FER), University of Zagreb, (Croatia)*.
- *Consulting Professor at the University of Bologna, (Italy) since 2010*.
- *Consulting Professor at TIM Italia (former Telecom Italia) in 2008, 2013-2015*.

Supervision of Graduate Students and Postdoctoral Fellows

2006-Today 16 Postdocs, 11 PhD students, more than 45 Master Thesis students on Energy Harvesting. Microsystem control and smart sensing, on wake-up radio systems, and bio-electric-systems.

Teaching Activities

- 2010-present. Teaching of *Embedded systems*, University of Trento, Italy
- 2010-2013. Teaching of *Hardware software co-design*, University of Trento, Italy
- 2010-2011. Teaching of *Digital Architectures for Signal processing*, University of Trento, Italy
2013. Teaching at the School on Body Area Network – “Energy Harvesting techniques”, EPFL, CH

Institutional Responsibilities

- 2010-2014 Graduate Students Advisor, University of Trento, Italy
- 2013-2014 Ph.D. Students Advisor, University of Trento, Italy
- 2010-2014. Member of the International PhD school on ICT, University of Trento, Italy
- 2010-2014. Member of the International PhD school on Mechatronics, University of Trento, Italy

Commissions of Trust

- 2020 *Independent Expert Evaluator* for Piemonte Region start-up call (FinPiemonte)
- 2014, 2019 *Independent Expert Evaluator* for the European H2020 calls
- 2015-2019 *Independent Expert Evaluator* for Kazakhstan National Projects “EXPO 2017's Asthana”
- 2015 *Independent Expert Evaluator* for The Croatian Science Foundation (HRZZ), peer review for Croatian National Projects on embedded electronic systems

- 2015 *Independent Expert Evaluator* for Czech Science Foundation, peer review for Czech National Projects on electronic systems and energy harvesting.
- 2013 *Ph.D. dissertation committee member*, University of Zagreb, Croatia
- 2010-2014 Scientific Advisory Board of KissMyBike srl, Startup on IoT device and services, Italy
- 2008-Today Reviewer for several Journal: Microelectronics J. (since 2008), IEEE-TIE (since 2010), ACM-TECS, IEEE-Very Large Scale Integration Systems (since 2010), IEEE-TPELS (since 2011), IEEE-TC (since 2010), ACM-TOSN (since 2009), IEEE-TII (since 2011), IEEE-TIM (2009).

Affiliations

- INSTM - Consorzio Interuniversitario Nazionale per la Scienza e Tecnologia dei Materiali. (since 2018)
- INFN Sezione Trento - Istituto Nazionale di Fisica Nucleare (since 2019)
- TIFPA Trento Institute for Fundamental Physics and Applications (since 2019)

Memberships of Scientific and Professional Societies

- Member, Research Network “EIT - European Institute of Innovation & Technology” (since 2010)
- Member, Research Network “EMSIG : EMbedded Systems Special Interest Group.” (since 2012)
- Founding member of the Italian Association of Tenured-track Assistant Professors (since 2010)
- Member of SIE - Associazione Società Italiana di Elettronica
- Senior Member of IEEE (since 2016)
- Member of the IEEE Circuit & Systems, Solid State Circuits and Computer Societies. (since 2014)
- Member ACM (since 2014)

Entrepreneurship

- 2015 Co-founder of MyPower srl, a startup company that promotes solutions for Electrical Energy Efficiency using Smart Metering, Artificial Intelligence and Gamification.
- 2015 Member of the Advisory Board of “KissMyByke s.r.l.” a startup company which develops anti-theft systems for bikes based on innovative ICT technologies.
- 2009 Co-founder of WISPES srl, a company that develops solutions for Environmental Monitoring, Precision Agriculture and Home Automation based on Wireless Sensor Networks and distributed embedded systems. Devices can operate unattended for years through energy harvesting technology.

Research activities

I have always worked in top research groups and I have been an independent scientist and educator for 10 years when I moved to University of Trento as an Assistant Professor. My research interests are on computing systems architecture with special emphasis on low-power applications and embedded systems. I am also active in the design of energy-efficient ambient intelligence systems, sensors and sensor networks. I lead a research group with 6 staff members (Post-docs and PhDs) in university of Trento (UNITN).

With my collaborators, I made several contributions to the field of runtime power management, as well as integrated micro-sensors and energy-neutral, autonomous distributed sensing systems. On these topics, I coauthored more than **190** peer-reviewed papers. I strongly believe in collaborative, multi-disciplinary research: my scientific career has an extensive track record of international cooperation with top institutions like ETHZ, EPFL, U. Southampton, Tyndall Inst., Imperial College, University of Zagreb, Georgia Tech U.

Impact of the scientific contributions

- **Energy Harvesting technologies.** I have been one of the early contributors in this area, with some pioneering works since 2006, now with hundreds of citations. The work was not only focused on hardware methods for energy conversion from unregulated power source, but also in the first research on real-time scheduling in platforms with energy harvesters.
- **Energy efficient digital architectures.** I developed techniques for reducing the power consumption in low resources embedded systems for wireless sensor networks. I pioneered the first research investigation about streaming voice over wireless Zigbee channels in an energy efficient manner.
- **Environmentally powered distributed sensing systems.** In this area, I developed high-efficiency wireless sensor nodes in various application domains from augmented reality to e-health. My work inspired several

industrial prototypes, a patent jointly submitted with the biggest Italian telco company, and a start-up: MyPower Ltd (UK) www.my-power.it (as a co-founder).

Impact of publications

- **H-index** = 43 (Extracted on July 1st 2020, from Google Scholar)

Evidence of inspiring researchers

Several of my former graduate students won several international prizes or grants. Among these:

- **Maurizio Rossi**, won a 2-years post-doc position funded by Autonomous Province of Trento (Italy).
- **Parian Golchin** and **Brook Belay** won two research grants from IEEE Smart City Initiative.
- **Clemente Villani**, won the first prize as best master thesis at the Italian Innovation Design contest 2015.
- **Pietro Tosato**, won the Texas Instruments Innovation Challenge (TIIC) 2016, design contest for graduates.
- **Luca Tessaro**, won 2018 IEEE-ABB master thesis award on New Challenges for Energy and Industry

Fundraising and collaborative project (selected).

1. IoT Proto Lab, ERASMUS+ initiative (Principal Investigatore, 100K€) 2019
2. *Embedded hardware technologies for IoT*. EIT-Digital (eit.europa.eu), (coordinator 100K€) 2017
2. FP7-ICT-2013.6.2 - n.609000 - *GreenDataNet* 4,3M€ (Head of Unit with my research team 353K€) 2013
3. *EnerViS - Energy Autonomous Low Power Vision*. Trento research agency (coordinator, 150K€) 2012
4. FP7-ICT-2009.3.5 - n. 257916 - *GENESI project* 3M€ (Work package leader 254K€) 2010
5. FP7-2010-NMP-ENV-ENERGY-ICT-EeB - n. 260162 - *3ENCULT* 6,7M€ (WP leader 370K€) 2010
6. ENIAC-JU n. 120214 - END – Models and Methods for Energy-Aware Design (Participant 300K€) 2010
7. FP7-ICT-2007.3.3 - n. 214373 - *ARTISTDesign - Network of Excellence* (Participant) 2010-2013
8. FP7-ICT-2007-2 - n. 224053 - *CoNET - Network of Excellence* (Participant) 2011-2012
9. FP7-ICT-2007.3.1 - n.216537 - *REALITY* - (Participant) 2009

Major Collaborations

- Prof. Vedran Bilas, Wakeup Radio and Energy Harvesting, Univ. of Zagreb (HR), Vedran.Bilas@fer.hr
- Prof. Brandon Lucia, Transient Computing, Carnegie Mellon University (USA), blucia@andrew.cmu.edu
- Prof. David Atienza, Energy harvesting and compressive sensing EPFL (CH), david.atienza@epfl.ch
- Prof. Luca Benini, Ultralow power devices, ETH Zurich (CH), lbenini@iis.ee.ethz.ch
- Prof. Leandro Lorenzelli, Microbial Fuel Cells, Fondazione Bruno Kessler (IT), lorenzel@fbk.eu
- Prof. Chiara Petrioli, Energy autonomous WSN, Università La Sapienza (IT), petrioli@di.uniroma1.it
- Prof. Geoff Merrett, Energy harvesting, University of Southampton (UK), gvm@ecs.soton.ac.uk
- Prof. Carlotta Guiducci, Sensing and circuits for energy harvesting, EPFL (CH), carlotta.guiducci@epfl.ch
- Prof. Mary Ann Weitnauer, Energy radio management, Georgia Tech (US), weitnauer@ece.gatech.edu
- Dr. Emanuel Popovici, Energy Harvesting, University College Cork (IE), e.popovici@ucc.ie
- Dr. David Boyle, Low power management of circuits, Imperial College (UK), david.boyle@imperial.ac.uk

Andrea Del Prete

Employment History

- Jan 2019 - Present **Assistant Professor**, *working on EU H2020 project "MemMo"*, Industrial Engineering Department, University of Trento.
Via Sommarive 9, Trento, Italy
- Jan 2018 - Dec 2018 **Research Scientist**, *working on Athena robot under ERC grant "ContAct"*, Advanced Motion Department, Max-Planck-Institute for Intelligent Systems.
Max-Planck-Ring, 4, Tuebingen, Germany
- Jan 2014 - Dec 2017 **Post-Doc**, *working on HRP-2 robot for EU project "Koroibot" and ANR project "Entract"*, Team "Gepetto", LAAS-CNRS.
7, avenue du Colonel Roche, 31400 Toulouse Cedex 4, France
- Jan-Dec 2013 **Post-Doc**, *working on iCub robot for EU project "CoDyCo"*, Department "iCub Facility", Istituto Italiano di Tecnologia (IIT), Genova, Italy.
- Oct-Nov 2011 **Teaching Assistant**, *University of Genova, Italy.*
I gave laboratory lessons for the course of "Natural and Artificial Intelligent Systems"
- Jan-Dec 2009 **Software engineer**, *2nd Faculty of the University of Bologna and software house Net-Agree, Cesena, Italy.*
Technology transfer project (grant Spinner) for re-engineering a data-intensive web application
- Sep 2006 - Dec 2008 **Private lesson teacher**, *Cesena, Italy.*
During my master I gave private lessons of math and computer science to undergraduate students

Education

- Jan 2010 - Dec 2012 **PhD student**, *"Control of Contact Forces using Whole-Body Force and Tactile Sensors: Theory and Implementation on the iCub Humanoid Robot"*, Department of "Robotics, Brain and Cognitive Sciences", Istituto Italiano di Tecnologia (IIT), Genova, Italy.
Defense date: 23/04/2013.
- Jan 2007 - Mar 2009 **Master Degree**, *Computer Engineering*, 2nd Faculty of the University of Bologna, Italy, *110/110 with honors.*
- Sep 2003 - Jan 2007 **Bachelor Degree**, *Computer Engineering*, 2nd Faculty of the University of Bologna, Italy, *110/110 with honors.*

Sep 1998 - Jun 2003 **High school diploma**, *Industrial Technical Institute*, Cesena, Italy, 100/100.

Scientific Activities

Workshop Organization

- D. Kanoulas, I. Havoutis, M. Fallon, **A. Del Prete**, E. Yoshida, "Perception and Planning for Legged Robot Locomotion in Challenging Domains", full-day workshop at ICRA 2017, Singapore.
- **A. Del Prete**, A. Herzog, R. Tedrake, "Robust Optimization-Based Planning and Control for Legged Robots", full-day workshop at ICRA 2016, Stockholm, Sweden.
- **A. Del Prete**, L. Sentis, "Torque-Controlled Humanoids", full-day workshop at Humanoids 2013, Atlanta, Georgia, USA.

School Organization

- O. Stasse, **A. Del Prete**, M. Bennewitz, "The German-French Winter-School on Humanoid and Legged Robots", 5-7 December 2016, Toulouse

Editorial Activities

- Associate Editor for IEEE Robotics and Automation Letters (RA-L), since 2020
- Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2017
- Associate Editor for IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2016

Invited Talks

- Jun 2019 **RSS 2019, Freiburg**, *Workshop "Numerical Optimization for Online Multi-Contact Motion Planning and Control"*, "Balancing on Visco-Elastic Contacts".
- May 2019 **University of Stuttgart**, *AI colloquium series*, "Motion Control for Legged Robots: Robustness, Viability and Hardware Design".
- Dec 2018 **HLR 2018, Munich**, *French-German Conference on Humanoid and Legged Robots*, "Multi-Contact Balancing: Capturability and Elastic Contacts".
- Jun 2017 **ICRA 2017, Singapore**, *Workshop "Disaster Response Robots: Design Principles and Control for Effective Mobility and Manipulation"*, "Robust Optimization-Based Robotics".
- Jun 2017 **ICRA 2017, Singapore**, *Workshop "Robust Perception, Planning, and Control for Legged Robot Locomotion in Challenging Domains"*, "Robust Optimization and Motion Memory for Reliable Robotics".
- Dec 2016 **LIRMM, Montpellier**, "*Robust Optimization for Robust Robotics*".
- Dec 2016 **German-French Conference on Humanoid and Legged Robots, Toulouse**, "*Robustness to Joint-Torque Tracking Errors in Task-Space Inverse Dynamics*".

- Nov 2016 **Workshop IMT-LAAS, Toulouse**, *“Current challenges in motion generation for legged robots”*.
- Jun 2016 **ICRA 2016, Stockholm**, *Workshop “Robust Optimization-Based Planning and Control for Legged Robots”*, *“Robustness to Joint-Torque Tracking Errors in Task-Space Inverse Dynamics”*.
- Jul 2015 **RSS 2015, Rome**, *Workshop “Towards a unifying framework for whole-body and manipulation control”*, *“Robust Inverse Dynamics and Prioritized Optimal Control”*.
- Nov 2014 **Humanoids 2014, Madrid**, *Workshop “Redundancy, inequalities, and the mathematical tools to address them”*, *“Hierarchy of Tasks: towards Real-Time Inverse Dynamics and Optimal Control”*.
- Sep 2014 **IROS 2014, Chicago**, *Workshop “Whole-Body Control for Robots in the Real World”*, *“Joint-Torque Control with Electric Motors and Harmonic Drives”*.
- Sep 2014 **IROS 2014, Chicago**, *Workshop “Real-time Motion Generation and Control — Constraint-based Robot Programming”*, *“Hierarchy of Tasks: towards Real-Time Inverse Dynamics and Optimal Control”*.
- Oct 2013 **Humanoids 2013, Atlanta**, *Workshop “Torque-Controlled Humanoids”*, *“Motion-Force Control & Prioritized Optimal Control”*.
- Sep 2013 **LAAS, Toulouse**, *“Motion-Force Control of Humanoid Robots”*.
- May 2013 **ETH, Zurich**, *“Motion-Force Control of Legged Robots”*.
- May 2013 **ICRA 2013, Karlsruhe**, *Workshop “Whole-body Compliant Dynamical Contacts for Humanoid Robotics”*, *“Motion-Force Control of Humanoid Robots”*.
- May 2013 **ICRA 2013, Karlsruhe**, *Workshop “Developments of Simulation Tools for Robotics & Biomechanics”*, *“Software Tools for Dynamics, Simulation, Identification, Estimation and Control the Open-Source iCub Project”*.

Miscellaneous

- Participation to European projects: RoboSkin (2010-2012, I had responsibility for the preparation of the final project demonstration), CoDyCo (2013), Koroibot (2014), Memmo (2018-Present).
- Reviewer for main robotics journals and conferences, including: IEEE Transaction on Robotics, Autonomous Robots, Robotics and Autonomous Systems, International Journal of Humanoid Robotics, ICRA, IROS, Humanoids.

PhD Students

- Luca Olivieri, UniTN, 2019-2022
- Gianluigi Grandesso, UniTN, co-supervision at 50% with Patrick Wensing, 2019-2022
- Ahmad Gazar, MPI, co-supervision at 50% with Ludovic Righetti, 2019-2022

- Thomas Flayols, LAAS-CNRS, co-supervision at 50% with Olivier Stasse, 2015-2018
- Nirmal Giftsun, LAAS-CNRS, co-supervision at 50% with Florent Lamiraux, 2016-2017

Co-supervisor of MSc Thesis

- Jonas Koenemann, LAAS-CNRS, co-supervisor with Nicolas Mansard and Olivier Stasse, "Whole Body Model Predictive Control on HRP-2 using MuJoCo", 2014
- Silvio Traversaro, IIT, co-supervisor at 50% with Francesco Nori, "On-line inertial parameter estimation with confidence bounds: theory and implementation on the iCub robot", 2013
- Andrea Ceroni, IIT, co-supervisor at 50% with Lorenzo Natale, "Learning to grasp by exploiting tactile feedback: Reinforcement Learning applied to iCub robot", 2013
- Shashank Govindaraj, IIT, co-supervisor at 50% with Lorenzo Natale, "Development of the Iterative Linear Quadratic Gaussian Stochastic Optimal Control for the iCub", 2013

Languages

Italian Native speaker
English Fluent
French Good

INFORMAZIONI PERSONALI **David Macii**

PROFESSIONALE

- 2015 – 2020 **Professore associato in misure elettriche ed elettroniche**
Università degli Studi di Trento – Dipartimento di Ingegneria Industriale
- 2005 – 2015 **Ricercatore in misure elettriche ed elettroniche**
Università degli Studi di Trento – Dipartimento di Ingegneria e Scienza dell’Informazione (fino al 2012) e Dipartimento di Ingegneria Industriale (dal 2012).
- 2003 – 2005 **Borsista ed assegnista di ricerca**
Università degli Studi di Trento – Dipartimento di Informatica e Telecomunicazioni.

ISTRUZIONE E FORMAZIONE

- 2004-2005 **Master of Advanced Studies in Embedded System Design**
Advanced Learning and Research Institute (ALARI) - Università della Svizzera Italiana, Lugano, Svizzera
- 2000-2003 **Dottorato di Ricerca in Ingegneria dell’Informazione**
Dip. Ingegneria Elettronica e dell’informazione, Università degli Studi di Perugia, Italia
- 1993-2000 **Laurea in Ingegneria Elettronica**
Università degli Studi di Perugia, Italia

ESPERIENZA ALL'ESTERO

- 2009-2010 **Fulbright Research Scholar**
Berkeley Wireless Research Center (BWRC), University of California, Berkeley, USA.
- 2002-2003 **Erasmus-Socrates visiting Ph.D. student**
Dep. of Electronic Network and Computer Engineering, University of Westminster, Londra, Regno Unito
- 2000 **FPGA Designer**
Tirocinio presso il Centro Aerospaziale Tedesco DLR, Oberpfaffenhofen, Germania.

COMPETENZE PERSONALI

Lingua madre Italiano

Altre lingue	COMPRESIONE		PARLATO		PRODUZIONE SCRITTA
	Ascolto	Lettura	Interazione	Produzione orale	
Inglese	C1	C2	C1	C1	C2
Certificate of Advanced English (CAE) – London, 2002.					
Tedesco	A1	A2	A1	A2	A1

Attività di ricerca Tecniche di elaborazione numerica dei segnali per sistemi di misura. Localizzazione di robot indoor. Stima di grandezze elettriche in smart grid. Sincronizzazione di sistemi distribuiti. Progettazione e caratterizzazione di sistemi embedded.

- Relazioni ad invito**
- Giugno 2017 – “Distributed synchronous measurement systems for smart grids: opportunities and challenges,” Keynote speech nel corso della seconda “International Conference on Measurement Instrumentation and Electronics” (ICMIE), Praga, Repubblica Ceca.
 - Settembre 2016 – “Energy management systems in the context of smart cities,” Invited Talk nel corso del Workshop “Engineering trends and business opportunities for smart cities” (Asso2016-TN) promoted by Assolinge – Association of Italian Engineers Abroad, Trento, Italia.
 - Maggio 2016 – “Time Synchronization for Distributed Measurement and Control Systems,” Tutorial nel corso della IEEE International Instrumentation and Measurement Technology Conference, Taipei, Taiwan.
 - Dicembre 2014 – “Performance of Synchrophasor Estimation Algorithms” Invited Talk nel corso del Workshop “Synchrophasor Estimation Processes for Phasor Measurement Units: algorithms and metrological characterization”, EPFL, Losanna, Svizzera.

Competenze professionali Ottima conoscenza dei linguaggi di programmazione Matlab, Labview, C, VHDL, Latex. Ottima conoscenza di Office e di vari altri pacchetti professionali.

Patente di guida A e B

PUBBLICAZIONI

- Capitoli di libro**
- [1]. L. Rizzon, F. Moro, R. Passerone, D. Macii, D. Fontanelli, P. Nazemzadeh, M. Corrà, L. Palopoli, D. Praticchizzo, “c-Walker: A Cyber-Physical System for Ambient Assisted Living” in *Applications in Electronics Pervading Industry, Environment and Society* (APPLEPIES 2014), A. De Gloria ed., Series: *Lecture Notes in Electrical Engineering*, pp. 75-82, Springer-Verlag, Berlin-Heidelberg, 2016. ISBN: 978-3-319-20226-6, online ISBN: 978-3-319-20227-3.
 - [2]. M. Aggravi, A. Colombo, D. Fontanelli, A. Giannitrapani, D. Macii, F. Moro, P. Nazemzadeh, L. Palopoli, R. Passerone, D. Praticchizzo, T. Rizano, L. Rizzon, S. Scheggi, “A Smart Walking Assistant for Safe Navigation in Complex Indoor Environments,” in *Ambient Assisted Living* (Italian Forum 2014), B. Andò P. Siciliano V. Marletta, A. Monteriù eds., Series: *Biosystems & Biorobotics*, pp. 487-497, Springer-Verlag, Berlin-Heidelberg, 2015. ISBN: 978-3-319-18373-2, online ISBN: 978-3-319-18374-9.
 - [3]. F.C. Alegria, A. Moschitta, D. Macii, P. Carbone, “Histogram-based Techniques for ADC Testing,” in *Data Converters Design, Modeling and Testing*, Springer-Verlag, Berlin-Heidelberg, 2014. ISBN: 978-3-642-39654-0, online ISBN: 978-3-642-39655-7.
- Articoli su riviste internazionali**
- [4]. F. Bernardini, A. Buffi, D. Fontanelli, D. Macii, V. Magnago, M. Marracci, A. Motroni, P. Nepa, B. Tellini, “Robot-Based Indoor Positioning of UHF-RFID Tags: The SAR Method With Multiple Trajectories,” in *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, ISSN: 0018-9456, vol. 70, pp. 1-15, Art. no. 8001415, 2021.
 - [5]. D. Macii, D. Fontanelli, G. Barchi, “A Distribution System State Estimator Based on an Extended Kalman Filter Enhanced with a Prior Evaluation of Power Injections at Unmonitored Buses,” *ENERGIES*, vol. 13, no. 6054, Nov. 2020.
 - [6]. V. Magnago, L. Palopoli, A. Buffi, B. Tellini, A. Motroni, P. Nepa, D. Macii and D. Fontanelli, “Ranging-Free UHF-RFID Robot Positioning Through Phase Measurements of Passive Tags,” in *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, ISSN: 0018-9456, vol. 69, no. 5, pp. 2408-2418, May 2020.
 - [7]. D. Macii and D. Petri, “Rapid Voltage Change Detection: Limits of the IEC Standard Approach and Possible Solutions,” in *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, ISSN: 0018-9456, vol. 69, no. 2, pp. 382-392, Feb. 2020.
 - [8]. V. Magnago, L. Palopoli, R. Passerone, D. Fontanelli and D. Macii, “Effective Landmark Placement for Robot Indoor Localization with Position Uncertainty Constraints,” *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, ISSN: 0018-9456, vol. 68, no. 11, pp. 4443-4455, Nov. 2019.
 - [9]. M. Luiso, D. Macii, P. Tosato, D. Brunelli, D. Gallo, C. Landi, “A Low-Voltage Measurement Testbed for Metrological Characterization of Algorithms for Phasor Measurement Units,” in *IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT*, ISSN: 0018-9456, vol. 67, no. 10, pp. 2420-2433, Oct. 2018.
 - [10]. D. Macii and M. Hueller, “2016 faculty course development award: application-oriented IM teaching based on

- industrial electronics and instrumentation at the University of Trento," in IEEE INSTRUMENTATION AND MEASUREMENT MAGAZINE, ISSN:1094-6969, vol. 21, no. 5, pp. 20-26, Oct. 2018.
- [11]. M. Andreetto, M. Pacher, D. Macii, L. Palopoli, D. Fontanelli, "A Distributed Strategy for Target Tracking and Rendezvous Using UAVs Relying on Visual Information Only," ELECTRONICS, ISSN: 2079-9292, vol. 7, no. 10, Oct. 2018.
- [12]. P. Tosato, D. Macii, M. Luiso, D. Brunelli, D. Gallo and C. Landi, "A Tuned Lightweight Estimation Algorithm for Low-Cost Phasor Measurement Units," in IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, ISSN: 0018-9456, vol. 67, no. 5, pp. 1047-1057, 2018.
- [13]. P. Nazemzadeh, D. Fontanelli, D. Macii, L. Palopoli, "Indoor Localization of Mobile Robots through QR Code Detection and Dead Reckoning Data Fusion," IEEE/ASME TRANSACTIONS ON MECHATRONICS, ISSN: 1083-4435, vol. 22, no. 12, pp. 2588-2599, Dec. 2017.
- [14]. M. Rizzi, S. Rinaldi, P. Ferrari, A. Flammini, D. Fontanelli and D. Macii, "Enhancing Accuracy and Robustness of Frequency Transfer Using Synchronous Ethernet and Multiple Network Paths," IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, ISSN: 0018-9456, vol. 65, no. 8, pp. 1926-1936, Aug. 2016.
- [15]. D. Macii, D. Fontanelli, G. Barchi and D. Petri, "Impact of Acquisition Wideband Noise on Synchrophasor Measurements: A Design Perspective," IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, ISSN: 0018-9456, vol. 65, no. 10, pp. 2244-2253, Oct. 2016.
- [16]. P. Nazemzadeh, F. Moro, D. Fontanelli, D. Macii, L. Palopoli, "Indoor Positioning of a Robotic Walking Assistant for Large Public Environments," IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, ISSN: 0018-9456, vol. 64, no. 11, pp. 2965-2976, Nov. 2015.
- [17]. D. Fontanelli, D. Macii, T. Rizano, "A fast and low-cost vision-based line tracking measurement system for robotic vehicles," ACTA IMEKO, ISSN: 2221-870X, vol. 4, no. 2, pp. 90-99, Jun. 2015.
- [18]. G. Barchi, D. Fontanelli, D. Macii, D. Petri, "On the Accuracy of Phasor Angle Measurements in Power Networks," IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, ISSN: 0018-9456, vol. 64, no. 5, pp. 1129 – 1139, May 2015.
- [19]. D. Macii, S. Dalpez, R. Passerone, M. Corrà, M. Avancini, L. Benciolini, "A safety instrumented system for rolling stocks: Methodology, design process and safety analysis," MEASUREMENT, ELSEVIER SCIENCE, ISSN: 0263-2241, vol. 67, pp. 164-176, May 2015.
- [20]. L. Palopoli, A. Argyros, J. Birchbauer, A. Colombo, D. Fontanelli, A. Legay, A. Garulli, A. Giannitrapani, D. Macii, F. Moro, P. Nazemzadeh, P. Padeleris, R. Passerone, G. Poier, D. Prattichizzo, T. Rizano, L. Rizzon, S. Scheggi, S. Sedwards, "Navigation assistance and guidance of older adults across complex public spaces: the DALi approach," INTELLIGENT SERVICE ROBOTICS, Springer Berlin Heidelberg, ISSN: 1861-2776, vol. 8, no. 2, pp 77-92, Apr. 2015.
- [21]. D. Petri, D. Fontanelli, D. Macii, "A Frequency Domain Algorithm for Dynamic Synchrophasor and Frequency Estimation," IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, ISSN: 0018-9456, vol. 63, no. 10, pp. 2330-2340, Oct. 2014.
- [22]. A. Colombo, D. Fontanelli, D. Macii, L. Palopoli, "Flexible Indoor Localization and Tracking Based on a Wearable Platform and Sensor Data Fusion," IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, ISSN: 0018-9456, vol. 63, no. 4, pp. 864 – 876, Apr. 2014.
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- Ruolo: Coordinatore - Tipologia: mobilità internazionale - Durata: 12 mesi
- 2015 **BT-life - Analisi e valutazione comparative delle prestazioni di moduli wireless Bluetooth per applicazioni di telemedicina, nell'ambito del progetto LifeGate**
 Ruolo: Responsabile - Tipologia: ricerca industriale - Durata: 6 mesi
- 2015 **ACANTO - A CyberphysicAI social NeTwOrk using robot friends**
 Ruolo: partecipante - Tipologia: progetto europeo di ricerca - Durata: 42 mesi
- 2013 **GreenDataNet - Data Centers in an Energy-Efficient and Environmentally Friendly Internet**
 Ruolo: partecipante - Tipologia: progetto europeo di ricerca - Durata: 36 mesi
- 2005 **Event Recorder**
 Ruolo: Responsabile - Tipologia: ricerca industriale - Durata: 15 mesi
- 2011 **DALI - Devices for Assisted Living**
 Ruolo: partecipante - Tipologia: progetto europeo di ricerca - Durata: 36 mesi
- 2010 **Methodologies and Measurement Techniques for spatio-temporal localization in wireless sensor networks**
 Ruolo: responsabile di unità - Tipologia: progetto di ricerca nazionale (PRIN) - Durata: 24 mesi
- 2009 **MOBY-DIC - Model-based synthesis of digital electronic circuits for embedded control**
 Ruolo: partecipante - Tipologia: progetto europeo di ricerca - Durata: 36 mesi
- 2008 **CHAT - Control of Heterogeneous Automation System**
 Ruolo: partecipante - Tipologia: progetto europeo di ricerca - Durata: 36 mesi
- 2008 **ACUBE - Un Sistema Avanzato di Monitoraggio per il Supporto delle Residenze Assistite**
 Ruolo: partecipante - Tipologia: progetto di ricerca PAT - Durata: 48 mesi
- 2007 **TRITON: Trentino Research & Innovation for Tunnel monitoring**
 Ruolo: partecipante - Tipologia: progetto di ricerca PAT - Durata: 36 mesi
- 2006 **Algorithms and low-power architectures for intelligent video sensors**
 Ruolo: partecipante - Tipologia: progetto di ricerca nazionale (PRIN) - Durata: 24 mesi
- 2004 **Methodologies and innovative processes for quality management**
 Ruolo: partecipante - Tipologia: progetto di ricerca nazionale (PRIN) - Durata: 24 mesi

RICONOSCIMENTI E PREMI

- 2019, 2018, 2016, 2015, 2013 **Outstanding Reviewer**
 della rivista scientifica IEEE Transactions on Instrumentation and Measurement.
- 2016 **Faculty Course Development Award**
 Ricevuto dalla IEEE Instrumentation and Measurement Society per l'insegnamento "Industrial Electronics and Instrumentation" offerto nell'ambito della Laurea Magistrale in Ingegneria Meccatronica, Università di Trento.
- 2014 **IEEE Senior Member**
- 2011 **Best Academic Paper Award**
 In qualità di coautore dell'articolo "A Clock State Estimator for PTP Time Synchronization in Harsh Environmental Conditions" presentato nel corso della conferenza ISPCS 2011, Monaco di Baviera, Germania.
- 2006 **Best Paper Award**
 In qualità di coautore dell'articolo "Remote Didactic Laboratory 'G. Savastano': the Italian Experience for the E-learning at the Technical Universities in the Field of the Electrical and Electronic Measurements, Overview on Didactic Experiments" presentato nel corso della conferenza IMTC 2006, Sorrento, Italia.
- 2005 **Premio di Dottorato "Carlo Offelli"**
 Elargito dall'associazione nazionale "Gruppo Misure Elettriche ed Elettroniche" (GMEE).
- 2003 **Borsa di per attività di studio e ricerca all'estero**
 Elargita dal "Pio Collegio della Sapienza", Università di Perugia.
- 2003 **Best Student's paper Award**
 In qualità di autore dell'articolo "A Novel Approach for Testing and Improving the Static Accuracy of High

Performance Digital-to-Analog Converters” presentato nel corso del Workshop IMEKO IWADC 2003, Perugia, Italia.

ALTRE ATTIVITÀ ED INFORMAZIONI

- Dal 2020 ad oggi **Membro del comitato editoriale della rivista scientifica “Energies” edita da MDPI.**
- 2020 **Special Session Co-Chair dell’ IEEE International instrumentation and Measurement Technology Conference, Dubrovnick, Croazia.**
- Dal 2018 ad oggi **Editor della rivista scientifica “Measurement” edita da Elsevier.**
- Dal 2017 ad oggi **Abilitato a Professore Ordinario nel settore concorsuale 09/E4 – MISURE**
- Dal 2006 ad oggi **Revisore anonimo per numerose riviste scientifiche**
IEEE Transactions on Instrumentation and Measurement, IEEE Transactions on Power Delivery; IEEE Transactions on Power Systems; IEEE Transactions on Industrial Informatics; IEEE/ASME Transactions on Mechatronics; IEEE Transactions on Industrial Informatics IET Generation, Transmission & Distribution
- 2015 **Program Co-chair dell’ IEEE Workshop on Environmental, Energy and Structural Monitoring Systems (EESMS), Trento, Italia.**
- 2013 **General Co-chair dell’ IEEE Workshop on Environmental, Energy and Structural Monitoring Systems (EESMS), Trento, Italia.**
- 2012 **Program Chair dell’ International Summer School on Advanced School on ICT for Future Energy Systems, Trento, Italia.**
- 2012 **Work-in-Progress Co-chair dell’ IEEE International Symposium on Industrial Embedded Systems (SIES), Karlsruhe, Germania.**
- Dati personali **Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 “Codice in materia di protezione dei dati personali”.**

12/04/2021

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