

## **Vittorio Ferrari, Ph.D.**

Professor of Electronics  
at the University of Brescia, Italy

### **Affiliation and contact address:**

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### **ORCID ID:** [0000-0002-3949-9975](https://orcid.org/0000-0002-3949-9975)

### **General:**

- *Date and place of birth:* October 3, 1962; Milan, Italy.
- *Citizenship:* Italian

### **Education:**

- 1988: Laurea degree *cum laude* in Physics at the University of Milan, Italy.
- 1993: Research Doctorate (PhD) degree in Electronic Instrumentation at the University of Brescia, Italy.

### **Employment and positions:**

- 1988-1989: Postgraduate research scholar with Istituto Nazionale di Fisica Nucleare at the University of Pavia, Italy.
- 1993-2001: Assistant Professor with the Department of Electronics for Automation (DEA) at the University of Brescia.
- 1994: Visiting fellow at the HP Laboratories, Palo Alto, CA, USA.
- 2001-2006: Associate Professor of Electrical and Electronic Measurements with the DEA at the University of Brescia.
- 2006-present: Full Professor of Electronics with the DEA (DII since 2010) at the University of Brescia.
- 2017: Visiting Professor at the Institut Polytechnique de Grenoble, France.  
(July; December)

### **Research activity:**

- The research activity of Vittorio Ferrari deals with the design and characterization of sensors, microsystems, and the related signal-conditioning interface electronics.
- Present topics of interest include thick-film piezoelectric acoustic-wave devices and sensors, energy harvesting techniques and devices for autonomous and wearable sensors, MEMS and microsystems, passive resonant sensors with contactless interrogation, low-

noise electronic circuits for sensors, circuit interfaces and instrumentation for quartz-crystal microbalances and microresonator sensors, sensing systems for fluidics, microfluidics and biomedical applications.

▣ Since 1990, participation in national and international research projects on sensors and electronic instrumentation with both academic and industrial presence, often with coordination roles.

▣ From 1994 to 1996, involvement in the working group that in HP Laboratories started the activity on what lately became the IEEE 1451.2 *Standard for a Smart Transducer Interface for Sensors and Actuators*.

▣ Author of more than 200 publications in international peer-reviewed journals and conference proceedings, invited presentations, book chapters, edited books and journal issues, 6 patent applications (5 of which are under industrial exploitation).

▣ Recent and ongoing research collaborations with:

CERN – Geneva. / Danube University Krems. / Institute of Microelectronics A\*STAR - Singapore. / Johannes Kepler University - Linz. / Otto-von-Guericke Universität - Magdeburg. / Politecnico di Milano. / SPAWAR San Diego. / Universidad Politécnica de Catalunya (UPC). / Universidad Politécnica de Valencia (UPV). / Università di Catania. / VU University Amsterdam. / Vienna University of Technology (TUW) / Institut Polytechnique de Grenoble (INP).

▣ Selected funded projects based on competitive evaluations:

- Linz Center of Mechatronics (LCM), Austria, project K2-COMET center (2018-2021) on sensors for mechatronics,
- EU project PETRA II (2004-2007) on piezoelectric transducers and applications,
- MIUR-PRIN Italian projects (2009-2010) on nonlinear energy harvesting techniques for sensor applications (2011-2013) on energy harvesting from broadband vibrations,
- MISE Italian project (2011-2013) on ICT for territorial security,
- Regione Lombardia project (2018-2020) on sensor systems for indoor air quality monitoring,
- Regione Lombardia project (2006-2008) on smart kitchenware based on sensors.

▣ Selected funded collaborative research with companies:

Accent, Angelo Po Grandi Cucine, Beretta, Bialetti Industrie, Camozzi, CESI, COBO, CSMT, Entech, Finmek, Gefran, Hewlett Packard, Huawei, Intellimech, Logimec, Markos Mefar-Air Liquide, Meggit-Ferropem, Raccorderie Metalliche, ST-Microelectronics, Technobiochip, Tecnint HTE, Tenaris-Dalmine, Zinco Global.

## □ Teaching activity:

▣ Vittorio Ferrari has been teaching several university courses in the field of sensors, microsystems, electronics and measuring instrumentation, including class lectures, laboratory activities and project-based learning.

▣ For the academic year 2018/19 he is in charge of three courses within the University of Brescia:

- Fundamentals of Electronics and Instrumentation;
- Instrumentation Electronics, Sensors and Microsystems;
- Electronics and Sensorics in Healthcare and Wellness;

plus one additional course upon invitation from another Italian university.

▣ Supervisor and thesis director of more than 30 Master and PhD students in Italy and abroad (Uruguay, Brasil, Colombia) within international co-tutorship programmes.

▣ From 2010 to 2013, coordinator of the academic board of the PhD program in *Electronic Engineering, Sensors and Instrumentation* at the University of Brescia.

▣ From 2013 to 2016, coordinator of the academic board of the PhD program in *Information Engineering* at the University of Brescia (<http://drii.unibs.it/>).

▣ Occasionally involved in teaching courses on sensors and measuring instrumentation to professionals and engineers in industry.

▣ **Selected academic offices and responsibilities:**

▣ From 2012 to 2016, member of the Quality Assurance Committee of the University of Brescia.

▣ Since 2016, Rector's delegate for Research Quality Management and Postgraduate Studies at the University of Brescia.

▣ **Services and recognitions:**

▣ Invited member in the Technical Program Committee of prominent international conferences, including:

Euroensors / IEEE Sensors / Ph.D. Research in Microelectronics & Electronics – PRIME / Sensordevices / IEEE Int. Conf. on Sensors, Circuits and Instrumentation Systems – SSD SCI / Mechatronics / IEEE ISQED / IEEE-ISSNIP: Intelligent Sensors / EDERC / ECMS.

▣ Invited member of:

Editorial board of Sensors & Transducers journal; scientific committee of the EIA journal; editorial board of Sensors; editorial board of Journal of Sensors.

▣ Reviewer on a regular basis for the most prominent international journals and conferences on sensors and electronic instrumentation.

▣ Project evaluator for the Italian MIUR and other international Organizations, including:

Agence Nationale de la Recherche (ANR), France / Agencia Nacional de Promoción Científica y Tecnológica - FONCyT, Argentina / Research Foundation - Flanders (FWO), Belgium / Dutch Technology Foundation (STW), The Netherlands. / Netherlands Organisation for Scientific Research (NWO), The Netherlands.

▣ Affiliations and membership:

Institute of Electrical and Electronic Engineers - IEEE *Senior Member* / IEEE Instrumentation and Measurement Society / IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society / IEEE Sensors Council / Associazione Società Italiana di Elettronica - SIE / Associazione Gruppo Misure Elettriche ed Elettroniche - GMEE / Istituto Nazionale di Ottica (INO) in Consiglio Nazionale delle Ricerche - CNR / Istituto Nazionale di Fisica Nucleare - INFN.

▣ From 2008 to 2013, member of the scientific advisory board for the Institute for Integrated Sensor Systems at the Austrian Academy of Sciences.

▣ From 2012 to 2014, chairman of the scientific advisory committee of the EU FP7-FET project ZEROPOWER.

▣ From 2014 to 2017, elected Italian national coordinator of the research line on *Sensors, Microsystems and Instrumentation* and member of the governing board in the Associazione Gruppo Italiano di Elettronica (GE), now Società Italiana di Elettronica (SIE).

▣ Since 2018, elected member of the governing board of the Società Italiana di Elettronica (SIE).

▣ Since 2012, member of the steering committee of the Associazione Italiana Sensori e Microsistemi (AISEM).

▣ Since 2016, Member of the directing board in the Associazione Microelettronica Elettronica Semiconduttori (AMES-AEIT).

▣ Co-chair of the 17<sup>th</sup> AISEM Annual Conference in 2013 ([www.aisem2013.it](http://www.aisem2013.it)).

- ▣ Co-chair of the Electric, Electronic and Electromechanical Engineering track and program committee member in European Conference on Modelling & Simulation 2014.
- ▣ Program chair of the 28<sup>th</sup> EUROSENSORS Conference 2014 ([www.euroensors2014.eu/](http://www.euroensors2014.eu/)).
- ▣ Coordinator of the 48<sup>th</sup> Annual Meeting of Associazione Gruppo Italiano di Elettronica (GE) 2016 (<http://ge2016.unibs.it/>).
- ▣ Chair together with H. Espinosa, A. Frangi and M. Pantano of the symposium “Micro and Nano Mechanics Systems” at the ESMC Conference 2018.
- ▣ Track chair for the topic “Energy Harvesting” at 32<sup>nd</sup> EUROSENSORS Conference 2018.
- ▣ Invited lecturer in national and international schools on the topic of sensors, energy harvesting, sensor electronics and instrumentation.
- ▣ Invited examiner and member of the evaluation panels of doctoral theses in Italy and abroad (Australia, Austria, France, Germany, Portugal, Spain, Suisse, Uruguay).
- ▣ Most recent invited and keynote presentations (international):
  - *Performances of Ferroelectric Printed Films in Sensors and Energy Harvesting*  
Invited presentation at the Ceramics Congress, CIMTEC-2014, Montecatini Terme, Italy, June 8-13, 2014.
  - *Techniques and Devices for Improved Energy Harvesting from Vibrations and Motion for Battery-less Sensors*  
Invited presentation at the 1st International Symposium on Energy Challenges and Mechanics, Aberdeen, Scotland UK, July 8-10, 2014.
  - *Energy Harvesting from Vibrations and Motion for Battery-less Sensors*  
Invited presentation at Journées Nationales sur la Récupération et le Stockage d'Énergie JNRSE'2015, Orsay, Paris FR, May 20-21, 2015.
  - *Sensors and Energy Harvesting based on Ferroelectric Printed Films*,  
Invited presentation at 40th International Microelectronics and Packaging IMAPS Poland 2016 Conference, Wałbrzych, PL, September 25-28, 2016.
  - *Sensors and Energy Harvesting for Untethered Transducers*  
Invited lecture, *Detecting Signals into the Noise - In Memoriam: Franco Manfredi*, Pavia, December 5, 2016.

#### ▣ Achievements and awards:

- ▣ Co-author of the book “*Applied Structural and Mechanical Vibrations: Theory, Methods and Measuring Instrumentation*”, P.L. Gatti, V. Ferrari, 1999, CRC Press.
- ▣ Co-author of 3 papers in the Highly Cited Papers in ISI-WoS ranking in the top 1% in Engineering.
- ▣ Co-author of 3 papers that in different times ranked in the Most Cited Papers of the journal *Sensors and Actuators A* (ISSN: 0924-4247).
- ▣ Co-author of 1 paper that in 2012 ranked in the Most Cited Papers of the journal *Smart Materials and Structures* (ISSN: 0964-1726).
- ▣ Outstanding Poster Presentation Award for “Autonomous Sensor Module Powered by Impact-Enhanced Energy Harvester from Broadband Low-Frequency Vibrations” at *TRANSDUCERS 2013-Euroensors XXVII*.
- ▣ Best Paper Award for “A Microfluidic Device with Embedded Capacitive Sensor for Fluid Discrimination and Characterization” at *SENSORDEVICES 2010*.
- ▣ Best Poster Award for “Piezoelectric Energy Harvesting From Von Karman Vortices” at *AISEM 2013*.

▣ Best Poster Award for “Piezoelectric Actuators for Microfluidic Acoustic-Wave Manipulation of In-Liquid Particles” at *SIE 2017*.

▣ Best Poster Award for “Electrical Tuning of the Resonant Frequency of a Piezoelectric Micromachined Acoustic Transducer” at *AISEM 2019*.

□ **Extended publication list:** [OpenBS archive](#)

□ **Selection of most significant publications from 2014 to present:**

▣ ***International Journals***

**RI-66** D. Zappa, S. Dalola, G. Faglia, E. Comini, M. Ferroni, C. Soldano, V. Ferrari, G. Sberveglieri,

Integration of ZnO and CuO nanowires into a thermoelectric module,  
*Beilstein J. Nanotechnol.*, **5**, (2014) 927–936. ISBN/ISSN: 2190-4286.

**RI-67** D. Picchi, D. Strazza, M. Demori, V. Ferrari, P. Poesio,

An Experimental Investigation and Two-Fluid Model Validation for Dilute Viscous Oil in Water Dispersed Pipe Flow,

*Experimental Thermal and Fluid Science*, **60**, (2015) 28–34. ISBN/ISSN: 0894-1777.

**RI-68** D. Alghisi, M. Ferrari, V. Ferrari,

Battery-Less Noncontact Temperature Measurement System Powered by Energy Harvesting from Intentional Human Action,

*IET Circuits, Devices & Systems*, **9**, 2, (2015) 96–104. ISBN/ISSN: Print 1751-858X; Online 1751-8598.

**RI-69** B. Andò, S. Baglio, A. R. Bulsara, V. Marletta, V. Ferrari, M. Ferrari,

A Low-Cost Snap-Through Buckling Inkjet Printed Device for Vibrational Energy Harvesting,

*IEEE Sensors Journal*, **15**, 6, (2015) 3209 - 3220. ISBN/ISSN: 1530-437X.

**RI-70** H. Campanella, M. Narducci, J. Soon, S. Merugu, M. Ferrari, V. Ferrari, N. Singh,

Multi-sensitive temperature sensor platforms using aluminum nitride MEMS resonators,

*J. Micromech. Microeng.*, **25**, (2015) 115016 (12pp). ISBN/ISSN: 0960-1317 (print); 1361-6439 (online).

**RI-71** D. Alghisi, S. Dalola, M. Ferrari, V. Ferrari,

Triaxial Ball-Impact Piezoelectric Converter for Autonomous Sensors Exploiting Energy Harvesting from Vibrations and Human Motion,

*Sensors and Actuators A*, **233**, (2015) 569–581. ISBN/ISSN: 0924-4247.

**RI-72** M. Farran, D. Modotto, S. Boscolo, A. Locatelli, A.D. Capobianco, M. Midrio, V. Ferrari,

Compact Printed Parasitic Arrays for WLAN Applications,

*IEEE Antennas and Wireless Propagation Letters*, **15**, (2016) 918 - 921. ISBN/ISSN: 1536-1225.

**RI-73** M. Farran, S. Boscolo, A. Locatelli, A.D. Capobianco, M. Midrio, V. Ferrari, D. Modotto,

Compact quasi-Yagi antenna with folded dipole fed by tapered integrated balun,

*Electron. Lett.*, **52**, 10 (2016) 789-790. ISBN/ISSN: 0013-5194.

**RI-74** M. Baù, M. Ferrari, V. Ferrari,

Analysis and Validation of Contactless Time-Gated Interrogation Technique for Quartz Resonator Sensors,

*Sensors*, **17**, (2017) 1264. ISBN/ISSN: 1424-8220.

**RI-75** D. Alghisi, V. Ferrari, M. Ferrari, F. Touati, D. Crescini, A.B. Mnaouer,

A new nano-power trigger circuit for battery-less power management electronics in energy harvesting systems,

*Sensors and Actuators A*, **263**, (2017) 305–316. ISBN/ISSN: 0924-4247.

**RI-76** D. Alghisi, V. Ferrari, M. Ferrari, D. Crescini, F. Touati, A.B. Mnaouer, Single- and multi-source battery-less power management circuits for piezoelectric energy harvesting systems,

*Sensors and Actuators A*, **264**, (2017) 234–246. ISBN/ISSN: 0924-4247.

**RI-77** M. Demori, M. Ferrari, A. Bonzanini, P. Poesio, V. Ferrari, Autonomous Sensors Powered by Energy Harvesting from von Karman Vortices in Airflow,

*Sensors*, **17**, (2017) 2100. ISBN/ISSN: 1424-8220. **Open Access**

**RI-78** R. Marco-Hernández, M. Baù, M. Ferrari, V. Ferrari, F. Pedersen, L. Søyby, A low-noise charge amplifier for the ELENA trajectory, orbit and intensity measurement system,

*IEEE Trans. on Nucl. Sci.*, **64**, 9, (2017) 2465-2473. ISBN/ISSN: 0018-9499.

**RI-79** M. Farran, S. Boscolo, A. Locatelli, A. D. Capobianco, M. Midrio, V. Ferrari, D. Modotto,

High-gain printed monopole arrays with low-complexity corporate-feed network,

*IET Microwaves, Antennas & Propagation*, **11**, 11, (2017), 1616 – 1621. ISBN/ISSN: Print ISSN 1751-8725, Online ISSN 1751-8733.

**RI-80** F. Cerini, M. Ferrari, V. Ferrari, A. Russo, M. Azpeitia Urquia, R. Ardito, B. De Masi, R. I. P. Sedmik,

Electro-Mechanical Modelling and Experimental Characterization of a High-Aspect-Ratio Electrostatic-Capacitive MEMS Device,

*Sensors and Actuators A*, **266**, (2017) 219–231. ISBN/ISSN: 0924-4247.

**RI-81** V. Ferrari,

Distortion-free probes of electric field,

*Nature Electronics – News & Views article*, **1**, (2018) 10–11. ISBN/ISSN: 2520-1131.

**RI-82** M. Demori, M. Baù, M. Ferrari, V. Ferrari,

Electronic technique and circuit topology for accurate distance-independent contactless readout of passive LC sensors,

*Int. J. Electron. Commun. (AEÜ)*, **92** (2018) 82–85. ISBN/ISSN: 1434-8411.

**RI-83** M. Demori, M. Baù, M. Ferrari, V. Ferrari,

Interrogation Techniques and Interface Circuits for Coil-Coupled Passive Sensors,

*Micromachines*, **9**, 9 (2018) 449. ISBN/ISSN: 2072-666X.

#### ▣ **International Conference Proceedings**

**CI-117** D. Alghisi, M. Baù, M. Ferrari, V. Ferrari,

Multi-Frequency Nonlinear Converter Array for Energy Harvesting in Autonomous Sensors, *Proceedings of the First National Conference on Sensors*, Rome, Italy, 15-17 February, 2012, Lecture Notes In Electrical Engineering, Vol.162, 2014, 239-244. ISBN/ISSN: 978-146143859-5.

**CI-118** S. Dalola, G. Faglia, E. Comini, M. Ferroni, C. Soldano, D. Zappa, V. Ferrari, G. Sberveglieri,

Investigation of Seebeck Effect in ZnO Nanowires for Micropower Generation in Autonomous Sensor Systems,

*Proceedings of the First National Conference on Sensors*, Rome, Italy, 15-17 February, 2012, Lecture Notes In Electrical Engineering, Springer International Publishing, Vol. 162, 2014, 245-250. ISBN/ISSN: 978-146143859-5.

**CI-119** M. Demori, V. Ferrari, P. Poesio, D. Strazza, R. Pedrazzani, G. Mazzoleni, N. Steimberg,

Microfluidic Capacitive Sensors for Noncontact Particle Detection in a Microchannel,

*Proceedings of the First National Conference on Sensors*, Rome, Italy, 15-17 February, 2012, Lecture Notes In Electrical Engineering, Springer International Publishing, Vol. 162, 2014, 315-320. ISBN/ISSN: 978-146143859-5.

**CI-120** M. Baù, M. Ferrari, V. Ferrari, D. Marioli, E. Tonoli, Contactless Electromagnetic Interrogation of Quartz Crystal Resonator Sensors, *Proceedings of the First National Conference on Sensors*, Rome, Italy, 15-17 February, 2012, Lecture Notes In Electrical Engineering, Springer International Publishing, Vol. 162, 2014, 439-444. ISBN/ISSN: 978-146143859-5.

**CI-121** S. Dalola, G. Faglia, E. Comini, M. Ferroni, C. Soldano, D. Zappa, V. Ferrari, G. Sberveglieri, Investigation of Seebeck Effect in Metal Oxide Nanowires for Powering Autonomous Microsystems,

*Sensors and Microsystems, Proceedings of 17<sup>th</sup> National Conference AISEM*, Brescia, Italy, 5-7 February, 2013, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol. 268, 2014, 3-7. ISBN: 978-3-319-00683-3; e-ISBN: 978-3-319-00684-0.

**CI-122** M. Demori, V. Ferrari, P. Poesio, R. Pedrazzani, N. Steimberg, G. Mazzoleni, Microfluidic Sensor for Noncontact Detection of Cell Flow in a Microchannel, *Sensors and Microsystems, Proceedings of 17<sup>th</sup> National Conference AISEM*, Brescia, Italy, 5-7 February, 2013, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol. 268, 2014, 29-33. ISBN: 978-3-319-00683-3; e-ISBN: 978-3-319-00684-0.

**CI-123** P. Colombi, A. Borgese, M. Ferrari, V. Ferrari, Dielectric Layers for MEMS Deposited at Room Temperature by HMDSO-PECVD, *Sensors and Microsystems, Proceedings of 17<sup>th</sup> National Conference AISEM*, Brescia, Italy, 5-7 February, 2013, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol. 268, 2014, 273-276. ISBN: 978-3-319-00683-3; e-ISBN: 978-3-319-00684-0.

**CI-124** F. Cerini, M. Baù, M. Ferrari, V. Ferrari, Impact-Enhanced Multi-beam Piezoelectric Converter for Energy Harvesting in Autonomous Sensors, *Sensors and Microsystems, Proceedings of 17<sup>th</sup> National Conference AISEM*, Brescia, Italy, 5-7 February, 2013, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol. 268, 2014, 377-381. ISBN: 978-3-319-00683-3; e-ISBN: 978-3-319-00684-0.

**CI-125** D. Alghisi, M. Baù, M. Ferrari, V. Ferrari, Nonlinear Multi-frequency Converter Array for Energy Harvesting from Broadband Low-Frequency Vibrations, *Sensors and Microsystems, Proceedings of 17<sup>th</sup> National Conference AISEM*, Brescia, Italy, 5-7 February, 2013, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol. 268, 2014, 393-396. ISBN: 978-3-319-00683-3; e-ISBN: 978-3-319-00684-0.

**CI-126** M. Demori, V. Ferrari, S. Farisè, P. Poesio, Piezoelectric Energy Harvesting from von Karman Vortices, *Sensors and Microsystems, Proceedings of 17<sup>th</sup> National Conference AISEM*, Brescia, Italy, 5-7 February, 2013, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol. 268, 2014, 417-421. ISBN: 978-3-319-00683-3; e-ISBN: 978-3-319-00684-0. **Recipient of the Poster Award**

**CI-127** M. Farran, M. Baù, D. Modotto, M. Ferrari, V. Ferrari, Design, simulation and testing of planar spiral coils for the time-gated interrogation of quartz resonator sensors, *Proceedings of the 28th European Conference on Modelling and Simulation – ECMS2014*, Brescia, Italy, 27 - 30 May, 2014, 147-152. ISBN/ISSN: 978-0-9564944-8-1.

**CI-128** G. Sberveglieri, V. Ferrari,

Editorial,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 1-2. ISBN/ISSN: 1877-7058.

**CI-129** M. Ferrari, M. Baù, V. Ferrari,

Resonant Piezo-layer (RPL) Sensors with Contactless Interrogation for Food Monitoring from Outside Sealed Packages,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 684-687. ISBN/ISSN: 1877-7058.

**CI-130** M. Demori, M. Ferrari, V. Ferrari, S. Farisè, P. Poesio,

Energy Harvesting from Von Karman Vortices in Airflow for Autonomous Sensors,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 775-778. ISBN/ISSN: 1877-7058.

**CI-131** F. Cerini, M. Ferrari, V. Ferrari, A. Russo, M. Azpeitia Urquia, R. Ardito, B. De Masi, A. Almasi, D. Iannuzzi, R.I.P. Sedmik,

Investigation of the Effects of Hydrodynamic and Parasitic Electrostatic Forces on the Dynamics of a High Aspect Ratio MEMS Accelerometer,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 827-830. ISBN/ISSN: 1877-7058.

**CI-132** M. Narducci, M. Ferrari, V. Ferrari, H. Campanella,

Aluminum Nitride SOI Lamb-wave Resonators towards Multi-frequency, Multi-sensitive Temperature Sensor Platform,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 1152-1155. ISBN/ISSN: 1877-7058.

**CI-133** G. Pellegrinelli, M. Baù, F. Cerini, S. Dalola, M. Ferrari, V. Ferrari,

Portable Energy-logger Circuit for the Experimental Evaluation of Energy Harvesting Solutions from Motion for Wearable Autonomous Sensors,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 1230-1233. ISBN/ISSN: 1877-7058.

**CI-134** D. Alghisi, M. Ferrari, V. Ferrari,

Trigger Circuits in Battery-less Multi-source Power Management Electronics for Piezoelectric Energy Harvesters,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 1286-1289. ISBN/ISSN: 1877-7058.

**CI-135** D. Alghisi, S. Dalola, M. Ferrari, V. Ferrari,

Ball-impact Piezoelectric Converter for Multi-degree-of-freedom Energy Harvesting from Broadband Low-frequency Vibrations in Autonomous Sensors,

*Proceedings of the Eurosensors XXVIII Conference*, Brescia, Italy, 7-10 September, 2014, in *Procedia Engineering*, 87, (2014) 1529-1532. ISBN/ISSN: 1877-7058.

**CI-136** M. Farran, D. Modotto, S. Boscolo, A. Locatelli, A.D. Capobianco, M. Midrio, V. Ferrari,

Microstrip-fed quasi-Yagi antennas for WLAN applications,

*Proceedings of the 44th European Microwave Association Conference*, Rome, Italy, 5-10 October, 2014, 1687-1690. ISBN/ISSN: 978-2-87487-034-7.

**CI-137** M. Ferrari, M. Baù, M. Pagnoni, V. Ferrari,

Compact DDS-Based System for Contactless Interrogation of Resonant Sensors Based on Time-Gated Technique,

*Proceedings of IEEE Sensors 2014 Conference*, Valencia, Spain, November 3-5, 2014, 907-910. E-ISBN: 978-1-4799-0161-6, Catalog number: CFP14SEN-USB.

**CI-138** M. Baù, M. Ferrari, V. Ferrari,

Portable Low-Power System for One-Lead ECG Monitoring and Datalogging,

*Proceedings of the Second National Conference on Sensors*, Rome, Italy, 19-21 February, 2014, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol. 319, 2015, 377-381. ISBN/ISSN: 978-3-319-09616-2.



- CI-139** D. Alghisi, M. Ferrari, V. Ferrari,  
Portable Wireless Distance Measurement System Powered by Intentional Human Action,  
*Proceedings of the Second National Conference on Sensors*, Rome, Italy, 19-21 February,  
2014, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol.  
319, 2015, 403-407. ISBN/ISSN: 978-3-319-09616-2.
- CI-140** B. Andò, S. Baglio, V. Marletta, E. Pergolizzi, V. Ferrari, M. Ferrari, A. Bulsara,  
Nonlinear snap-through-buckling devices for energy harvesting from vibrations,  
*Proceedings of the Second National Conference on Sensors*, Rome, Italy, 19-21 February,  
2014, Lecture Notes in Electrical Engineering, Springer International Publishing, Vol.  
319, 2015, 409-413. ISBN/ISSN: 978-3-319-09616-2.
- CI-141** M. Farran, S. Boscolo, D. Modotto, A. Locatelli, A.D. Capobianco, M. Midrio, V.  
Ferrari,  
High gain printed monopole arrays for wireless applications,  
*Proceedings of PIERS*, Prague, Czech Republic, 6-9 July, 2015, Vol. UNICO, 2015, 1156-  
1159. ISBN/ISSN: 978-1-934142-30-1.
- CI-142** L. Søby, M.E. Angoletta, R. Marco-Hernandez, J.C. Molendijk, F. Pedersen, J.  
Sanchez-Quesada, M. Baù, M. Ferrari, V. Ferrari,  
Elena Orbit and Schottky Measurement Systems,  
*Proceedings of the 6th International Particle Accelerator Conference IPAC'15*,  
Richmond, VA (USA), May 3-8, 2015, 1061-1064, MOPTY056. ISBN/ISSN: 978-3-  
95450-168-7.
- CI-143** M. Baù, M. Ferrari, V. Ferrari, L. Søby, R. Marco-Hernandez, F. Pedersen,  
Low-Noise Charge Preamplifier for Electrostatic Beam Position Monitoring Sensor at the  
ELENA Experiment,  
*Proceedings of the Eurosensors XXIX Conference*, Freiburg, Germany, September 6-9,  
2015, in *Procedia Engineering*, 120, (2015) 1229-1232. ISBN/ISSN: 1877-7058.
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