

# MAURO SERPELLONI CV

## PERSONAL INFORMATION

Date of birth 01/11/1979

phone +390303715915

Italian nationality

Italian mother tongue

Other languages

Reading Exceptional (ESOL-Cambridge2006)

Writing Exceptional (ESOL-Cambridge2006)

Verbal skills Good (ESOL-Cambridge2006)

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Scopus Author ID: 24484046100

Scopus: Document 90; 663 citations; H-index 15.

ISI web: documents 73; 494 citations; H-index 14.

Google Scholar: documents 94; citations 914; H-index 18.



MAURO SERPELLONI received the Laurea degree (cum laude) in engineering and the title of PhD in Electronic Instrumentation at the University of Brescia, respectively in 2003 and 2007. In 2005 he has been Visiting Researcher at Escuela Politecnica Superior Castelldefels, Spain. From 2006 to 2010, he was Postdoctoral Researcher with the Department of Information Engineering, University of Brescia. In 2012 and 2013 he has been Invited Professor at the Université Pierre et Marie Curie, La Sorbonne, Paris. From 2010 to 2017, he was Assistant Professor. Since 2017 he is Associate Professor in the scientific sector ING-INF / 07 (Electrical and Electronic Measurements) with the Department of Information Engineering, University of Brescia. Since 2015, he is head of the aerosol-jet-printing laboratory of the University.

## TEACHING ACTIVITIES

He currently teaches university courses in the field of electric and electronic measurements, sensors, electronic systems and electronic measuring: Sensors and transducers biomechanical parameters; Laboratory of electronics and instrumentation; Sensors for Biosignals; Sensors and transducers; Microprocessor Based Instrumentation. He was supervisor of numerous master thesis and he is tutor of four PhD students in the PhD program of Technology for Health having strong interdisciplinary components in engineering, medicine and biology. He is a member of the committee in the PhD program of Technology for Health.

## RESEARCH ACTIVITIES

The scientific activity concerns the instrumentation and measurements, sensors and transducers for industrial and biomedical applications. His research interests include design, fabrication and test of sensors and electronics, bio-mechatronic systems, transmission without contact between sensors and conditioning electronics, signal processing from conventional sensors and MEMS. Among the research activities, the following topics are reported: inkjet printing technique; aerosol jet printing technique; wearable systems for the measurement of vital signs; contactless system for traditional resonant sensors and MEMS; telemetry system for resistive or capacitive sensors; autonomous sensors for measuring the temperature; algorithm for signal processing for wireless sensors; autonomous contactless sensors for measuring the deformation in total knee prosthesis; development of devices for power harvesting; wireless sensor for monitoring the pressure of the tongue on the palate and a glove with sensors for

measuring the flexion of the fingers for rehabilitation purposes. He is co-author of three patents. He has been working on projects for technology transfer from university to companies within the CSMT (Multisectorial and Technology Service Center) of Brescia.

## INTERNATIONAL COLLABORATIONS

- Integrated action Italy-Spain: scientific and technical cooperation with Escuela Politecnica Superior Castelldefels (Spain). Academic year 2004-2005.
- International Program on Mechatronic System for Rehabilitation: scientific and technical cooperation with ISIR Institut des Systèmes intelligents et de Robotique - UPMC the Université Pierre et Marie Curie, Paris (France). Academic year 2011-2012.
- 2014-2015 Scientific collaboration for joint research activities with Prof. Jaime Oscar Casas Piedrafita Universitat Politècnica de Catalunya. BarcelonaTech for activities entitled Printed and Wearable Sensors for Flexion-Extension Measurement in Biomedical Applications; 6 months.
- 2014-2015 Scientific collaboration for joint research activities with Prof. Raimés Moraes Depto Engenharia Elétrica and Eletrônica Centro Tecnológico - CTC Universidade Federal de Santa Catarina Campus Trindade Florianópolis - SC for activities titled Study, realization and characterization of conditioning electronics for the measurement of vital parameters lasting 6 months.
- 2016-2017 Scientific collaboration for joint research activity with Prof Sandro Carra at EPFL Lausanne Switzerland for activities titled Sensors production for biomedical applications using different technologies of printed electronics.

## FINANCED RESEARCH PROJECTS

- PRIN 2005: participation in the project "microsensors, techniques and electronic circuits for transduction systems in unconventional Si-based technologies."
- PRIN 2007: participation in the project "Innovative microsystems based on nonlinear dynamical systems, for an efficient recovery of energy from environmental vibrations".
- 2011-2013 INDUSTRY2015: participation of three years to the project "I-Gun" Control system for homeland security.
- 2012-2014 MIUR/REGION LOMBARDY 2011: participation in a two-year project called, Gloreha Home TC home device to support the rehabilitation of patients with deficits in hand.
- 2013-2017 Smart Factory Cluster Project - Adaptive project - OR2 participation in the project as scientific referent.
- 2016-2019 EULO Foundation Project (Principal Investigator - Project Manager) Project manager entitled Low-power wireless system for measuring tongue pressure on the palate.
- 2017-2020 MOTUS Project (Principal Unit Investigator - Project Manager) Project unit manager entitled The Movement: Autonomy for the Single, Resource for the Community .
- 2016-2019 PRIN2015 MIUR (Principal Unit Investigator - Project Manager) Project unit manager entitled Six DOF scalable finger tracking system.
- 2016-2019 Project Manager for research activities in the financed project entitled Study and Research of devices realized through Aerosol-jet technology.
- 2016-2017 Project manager for research activities in the financed project entitled Sensors in Aerosol Jet technology.
- 2017-2018 Lombardy Region Project Smart Fashion and Design (Principal Unit Investigator - Project Manager) FIRECAT Fashion Industry Revolution Enabled by Ceramic Additive Technology.
- 2017-2018 Regione Lombardia Project Smart Living - Project Manager. Smart Home & Energy Management SHEM.

- 2016-2019 Project Manager for research activities in the financed project regarding the study and the evaluation of the realization possibilities offered by the Aerosol Jet Printing technology in the realization of a planar RF (Radio Frequency) circuit.

## AFFILIATIONS

GMEE (Gruppo misure elettriche ed elettroniche);

GE (Gruppo elettronici);

IEEE society;

Instrumentation and measurement society - IEEE-IMS;

International committee of BIODEVICES.