

Message from the Committee
2017 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems (EESMS)
Proceedings

The growing strategic importance of environmental, energy, and structural monitoring boosts the need for flexible, effective and innovative solutions for design methods and implementation technologies with strong adaptation and evolution capabilities. The 2017 IEEE Workshop on Environmental, Energy, and Structural Monitoring Systems, in its eighth edition, aims to discuss the most recent advances in complex monitoring systems from a cross-disciplinary perspective, encompassing technology, methods and applications. In addition to the regular sessions, the workshop features also four special sessions on hot and emerging areas related to power, critical infrastructures, environment, and structural health monitoring.

The workshop is sponsored by the IEEE Italy Section, with the support and promotion of the IEEE Italy Section Systems Council Chapter and the IEEE Italy Section Instrumentation and Measurement Society Chapter. This year it has been organized with the support of Università degli Studi di Milano, Italy.

This year the workshop is held in Milan and in particular at the Università degli Studi di Milano. Milan is an important international commercial and industrial center. It is the most important Italian area for the service industry, finance, fashion, publishing and industry, the stock exchange and has branches of many multinational companies.

Many people contributed to the realization of IEEE EESMS 2017. We wish to thank those who spent their time and efforts in shaping the technical program, reviewing papers, preparing the proceedings, managing administrative and logistic aspects, and setting up the social functions.

We hope that the 2017 EESMS experience will be interesting and enriching for all the attendees, and that the research achievements presented in the workshop as well as the interactions with the other participants will inspire your future work and collaborations.

Welcome to the IEEE EESMS 2017 in Milan!

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Plenary Talk: Tuesday July 25th | 9:30 AM

Rene' Garello | IMT Atlantique & IMT Atlantique, France

"Oil Pollution Monitoring: An Integrated Approach"



Speaker Biography:

René GARELLO, professor at Télécom Bretagne, Fellow IEEE, head of the transverse program ICTO (ICT and OCEANS) within the CNRS research unit Lab-STICC.

René Garello was born in 1953. He received the Ph.D. degree in Signal Processing at the Institut National Polytechnique de Grenoble (INPG) in 1981. From 1982 to 1984 he worked as a Research Associate at Aeronomy Lab, National Oceanic and Atmospheric Administration (NOAA) at Boulder, Colorado (USA). He joined the Ecole Nationale Supérieure des Télécommunications de Bretagne (Telecom Bretagne), Brest, France in 1985. In 1988 he became Professor in this engineering school in the field of signal processing and image processing and in 1995, Prof. Garello obtained his Habilitation (HDR; Habilitation to Supervise Research).

His main research interests lie in Remote Sensing, 2D signal processing, statistical and spectral analysis applied to ocean surface features detection and characterization. For the last two decades, he has worked in the development of signal and image processing tools for the interpretation of radar signals and the extraction of sea surface features, either natural (wind, waves, currents) or manmade (ships, pollution). These application fields were supported by several European projects and industrial contracts. Prof. Garello has authored or co-authored more than 40 papers, a hundred and thirty conference communications and three books. At Telecom Bretagne, Prof. Garello was the head of the research team TOMS (Traitement, Observation et Méthodes Statistiques – Processing, Observations and Statistical Methods) within the CNRS unit Lab-STICC before creating the ICTO program. For all his works, Prof. Garello was elevated to the grade of Fellow of the IEEE, class of 2006, “for contributions to signal processing applied to remote sensing of the ocean”.

Prof. Garello was an elected IEEE Oceanic Engineering Society AdCom member from 1999 to 2001, from 2003 to 2005 and in 2005 for a new three year term. In 2005, he was elected Vice-President Conference Operations and then re-elected in 2006 and 2008. In the beginning of 2001, he headed the Committee on Conference Policies (CoCoPo) which was in charge of defining a new set of Conference Policies and Procedures in order to insure continuity between the successive OCEANS conferences. This committee jointly held with MTS members defined several new approaches and came up with the concept of two Oceans-a-year (every year in Northern America, every other odd year in Europe and every other even year in Asia-Pacific). In order to implement this plan a new committee was formed: the Joint Oceans Administrative Board or JOAB, of which Prof. Garello was the co-chair until 2012. Prof. Garello was the General Chairman of the first OCEANS of the new Two-Oceans-a-year concept: OCEANS'05 held in Brest, France in June 2005. He received the OES Service Awards in 2006 for developing and implementing the two OCEANS conference policy. In 2012, Prof. René Garello was elected President of the IEEE OES for a two year term.

Technical Sessions - Monday, July 24

14:00 – 16:00

Session I | Structural Health Monitoring

Session Chair: *Vincenzo Di Lecce (Politecnico di Bari, Italy)*

An Imaging System for Visual Inspection and Structural Condition Monitoring of Railway Tunnels 1

Mark David Jenkins (Glasgow Caledonian University, United Kingdom (Great Britain))

Tom Buggy (Glasgow Caledonian University, United Kingdom (Great Britain))

Gordon Morison (Glasgow Caledonian University, United Kingdom (Great Britain))

Aerolastic Monitoring System A Part of Long-span Bridge Structural Health Monitoring System 7

Andre Yulian Atmojo (National Laboratory for Aerodynamics, Aeroelastics and Aeroacoustics Technology & Agency For Assessment and Application of Technology, Indonesia)

Khoerul Anwar (National Laboratory for Aerodynamics, Aeroelastics, and Aeroacoustics, Indonesia)

Multiresolution Wavelet Analysis to Estimate Lamb Waves Direction of Arrival in Passive Monitoring Techniques 13

Angelo Garofalo (University of Bologna, Italy)

Luca De Marchi (University of Bologna, Italy)

Numerical Modal Analysis and Identification of Historical Bell Tower of the XVIII Century 19

Mariella Diaferio (Politecnico di Bari, Italy)

Dora Foti (Politecnico di Bari, Italy)

Claudia De Feo (Intuit Structure, Italy)

Marilena Venerito (Intuit Structure, Italy)

Michele Vitti (Intuit Structure, Italy)

Fast Guided Waves Inspection Using Comprehensive Wavenumber Domain Analysis 24

Yasamin Keshmiri Esfandabadi (University of Bologna, Italy)

Alessandro Marzani (University of Bologna, Italy)

Luca De Marchi (University of Bologna, Italy)

Some Issues in the Structural Health Monitoring of a Railway Viaduct by Ground Based Radar Interferometry 30

Mariella Diaferio (Politecnico di Bari, Italy)

Aguinaldo Fraddosio (Politecnico di Bari, Italy)

Leonardo Soria (Politecnico di Bari, Italy)

Anna Castellano (Politecnico di Bari, Italy)

Luigi Mangialardi (Politecnico di Bari, Italy)

Mario Daniele Piccioni (Politecnico di Bari, Italy)

16:30 – 17:30

Session 2 | Environmental Monitoring I

Session Chair: *Angelo Cardellicchio (Politecnico di Bari, Italy)*

Real-time Monitoring System for Urban Wastewater 36

Vincenzo Di Lecce (Politecnico di Bari, Italy)
Domenico Petruzzelli (Politecnico di Bari, Italy)
Alessandro Quarto (myHermes Srl, Italy)
Domenico Soldo (myHermes Srl)
Angelo Cardellicchio (Politecnico di Bari, Italy)
Cataldo Guaragnella (Politecnico di Bari, Italy)
Rita Dario (AOU Policlinico di Bari, Italy)
Giuseppe Dentamaro (Politecnico di Bari, Italy)

Smart Pipe: A Miniaturized Sensor Platform for Real-Time Monitoring of Drinking Water Quality 41

Marco Carminati (Politecnico di Milano, Italy)
Valerio Stefanelli (Politecnico di Milano, Italy)
Giorgio Ferrari (Politecnico di Milano, Italy)
Andrea Turolla (Politecnico di Milano, Italy)
Marco Maria Agostino Rossi (Politecnico di Milano, Italy)
Stefano Malavasi (Politecnico di Milano, Italy)
Manuela Antonelli (Politecnico di Milano, Italy)
Valentina Pifferi (Universita' degli Studi di Milano, Italy)
Luigi Falciola (Universita' degli Studi di Milano, Italy)
Marco Sampietro (Politecnico di Milano, Italy)

A Wireless Sensor Network for Early Forest Fire Detection 47

Sakib Abdullah (University of Westminster, United Kingdom (Great Britain))
Sandor Bertalan (University of Westminster, United Kingdom (Great Britain))
Stanislav Masar (University of Westminster, United Kingdom (Great Britain))
Adem Coskun (University of Westminster, United Kingdom (Great Britain))
Izzet Kale (University of Westminster, United Kingdom (Great Britain))

17:30-18:10

Session 3 | Energy and Electrical Power Systems Monitoring

Session Chair: *Marco Carminati (Politecnico di Milano, Italy)*

Residential Electrical Consumption Disaggregation on a Single Low-Cost Meter 52

Giacomo Tanganelli (University of Pisa, Italy)
Carlo Vallati (University of Pisa, Italy)
Enzo Mingozzi (University of Pisa, Italy)

Low-Cost and Distributed Health Monitoring System for Critical Buildings 58

Mohammed Ikram (University of Technology Sydney, Australia)
Farookh Khadeer Hussain (University of Technology Sydney, Australia)
Mohammad Alshehri (University of Technology, Sydney, Australia)

Technical Sessions - Tuesday, July 25th

9:30-10:30

Plenary Talk

Session Chair: *Cataldo Guaragnella (Politecnico di Bari, Italy)*

Oil Pollution Monitoring: An Integrated Approach 64

Rene' Garelo (IMT Atlantique & IMT Atlantique, France)

11:00-12:40

Session 4 | Environmental Monitoring II

Session Chair: *Luca De Marchi (University of Bologna, Italy)*

Energy Neutral Design of an IoT System for Pollution Monitoring..... 70

Maurizio Rossi (University of Trento, Italy)

Pietro Tosato (University of Trento, Italy)

An Optimized Wind Energy Harvester for Remote Pollution Monitoring..... 76

Leone Pasquato (University of Trento, Italy)

Nicola Bonotto (University of Trento, Italy)

Pietro Tosato (University of Trento, Italy)

Davide Brunelli (University of Trento, Italy)

Method for Recognizing Alpha and Beta Radioactive Contamination in Portal Monitor Using Open-Air-Gas-Discharge Counter..... 82

Boris Gurkovskiy (National Research Nuclear University MEPhI, Russia)

Yuri Bocharov (National Research Nuclear University MEPhI, Russia)

Andrey Borisovich Simakov (National Research Nuclear University MEPhI, Russia)

Evgeniy Mikhailovich Onishchenko (National Research Nuclear University MEPhI, Russia)

Evaluation of Lagrangian Time Scales and Turbulent Diffusivities by GPS Equipped Drifters 86

Agnese Pini (University of Rome "La Sapienza", Italy)

Livia Grandoni (University of Rome "La Sapienza", Italy)

Francesco Maicu (National Research Council Institute of Marine Sciences (CNR-ISMAR), Italy)

Francesca De Pascalis (Polytechnic University of Bari DICATECh - Dpt., Italy)

Giovanni Leuzzi (University of Rome "La Sapienza", Italy)

Paolo Monti (University of Rome "La Sapienza", Italy)

Enhanced Fault Detection of an Air Quality Monitoring Network..... 92

Majdi Mansouri (Electrical and Computer Engineering Program, Texas A&M University at Qatar, Qatar)

Mohamed Faouzi Harkat (Faculty of Engineering Sciences, USA)

Hazem N Nounou (Texas A&M University at Qatar, Qatar)

Mohamed Nounou (Texas A&M University at Qatar, Qatar)

14:10 - 14:50

Session 5 | Critical Infrastructure Monitoring

Session Chair: Luca De Marchi (University of Bologna, Italy)

The Effect of Node Deployment Scheme on LWSN Lifetime for Railway Monitoring Applications 98

Nukhet Sazak (Sakarya University, Turkey)

Mutlu Ertug (Sakarya University, Turkey)

Low Cost Monitoring Network for Smart Cities 102

Jose Hernandez (Fundacion CARTIF, Spain)

Alvaro Corredera (Fundacion CARTIF, Spain)

Ruben Garcia (Fundacion CARTIF, Spain)

Roberto Sanz (Fundacion CARTIF, Spain)

Cecilia Sanz (Fundacion CARTIF, Spain)

14:50- 15:30

Session 6 | Sensors and Instrumentation I

Session Chair: Mark David Jenkins (Glasgow Caledonian University, United Kingdom (Great Britain))

Performance of Photonic Crystal Based Gas Sensors Under the Influence of Losses 107

Hana Medhat (German University in Cairo (GUC), Egypt)

Frank Gunzer (German University in Cairo, Egypt)

Microwave Dosimeters for Domestic Use 112

Andrey Borisovich Simakov (National Research Nuclear University MEPhI, Russia)

Evgeniy Mikhailovich Onishchenko (National Research Nuclear University MEPhI, Russia)

Boris Gurkovskiy (National Research Nuclear University MEPhI, Russia)

Vladimir Butuzov (National Research Nuclear University MEPhI, Russia)

Yuri Bocharov (National Research Nuclear University MEPhI, Russia)

Igor Vodokhlebov (National Research Nuclear University MEPhI, Russia)

Viacheslav Pershenkov (National Research Nuclear University MEPhI, Russia)

Boris Zhuravlev (P. K. Anokhin Institute of Normal Physiology, Russia)

Natalya Trifonova (P. K. Anokhin Institute of Normal Physiology, Russia)

16:00 – 17:20

Session 7 | Sensors and Instrumentation II

Session Chair: Matteo Nardello (University of Trento, Italy)

Analysis of the Mercury Induced Fragmentation of Certain N-Alkanes in Pulsed Ion Mobility Spectrometry with Gold's Algorithm 116

Hana Medhat (German University in Cairo (GUC), Egypt)

Frank Gunzer (German University in Cairo, Egypt)

An Innovative LPWA Network Scheme to Increase System Reliability in Remote Monitoring 121

Matteo D'Aloia (MASVIS SRL, Italy)

Annalisa Longo (MASVIS SRL, Italy)

Ruggero Russo (MASVIS SRL, Italy)

Sante Stanisci (MASVIS SRL, Italy)

Davide Amendolare (MASVIS SRL, Italy)

Marco Vessia (Vessia Impianti di Vessia Marco, Italy)

Federico Lomastro (Vessia Impianti di Vessia Marco, Italy)

Maria Rizzi (Politecnico di Bari, Italy)

Evaluation of Smartphone Usage in Neurological Pathologies Diagnosis..... 127

Angelo Cardellicchio (Politecnico di Bari, Italy)
Rita Dario (AOU Policlinico di Bari Italy, Italy)
Vincenzo Di Lecce (Politecnico di Bari, Italy)
Cataldo Guaragnella (Politecnico di Bari, Italy)
Angela Lombardi (Politecnico di Bari, Italy)
Lucia Mongelli (Istat - Ufficio territoriale per la Puglia)
Alessandro Quarto (myHermes Srl, Italy)
Domenico Soldo (myHermes Srl, Italy)

IoT and CPS Applications Based on Wearable Devices. A Case Study: Monitoring of Elderly and Infirm Patients 133

Alessandro Quarto (myHermes Srl, Italy)
Domenico Soldo (myHermes Srl, Italy)
Simona Gemmano (E-labor@ Srls, Italy)
Rita Dario (AOU Policlinico di Bari Italy, Italy)
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