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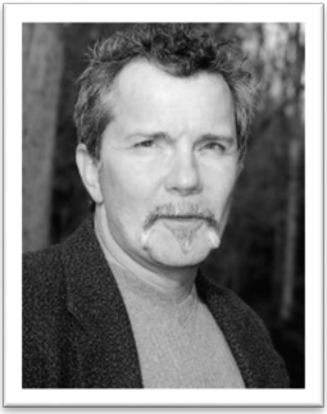
Security and Technology Group
National Institute of Standards and Technology (NIST), Gaithersburg, MD, US



Keynote – Tuesday, May 23, 2017
"Metrology of Security and Safety Technologies"

John Lataire
J. Barry Oakes Award Recipient
Vrije Universiteit Brussel

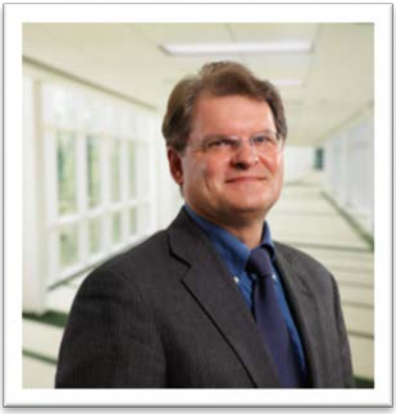
Keynote – Tuesday, May 23, 2017
"Frequency domain measurement and identification of time-varying systems"

I²MTC 2017 Keynote and Plenary Speakers

Jerome John Blair
Joseph F. Keithley Award in Instrumentation and Measurement
Keystone International, Inc., USA

Keynote – Wednesday, May 24, 2017
" I&M Application of the Kernel Theorem of Giuseppe Peano of Turin"

Jack Tuszynski
Department of Oncology & Department of Physics
University of Alberta, Edmonton, Canada



Keynote – Wednesday, May 24, 2017
"Using Mathematical Measures of Network Complexity and Image Analysis for Cancer Diagnostics and Therapy Design"

I²MTC Tradition

The first *IEEE Instrumentation and Measurement Technology Conference* was held in 1984 aboard the Queen Mary in Long Beach, California, but its origins stretch back nearly 20 years earlier to the *Electrical and Electronic Measurement and Test Instrument Conference* held each year from 1966 until 1981 in Ottawa, Canada. The latter was revived by the IEEE Instrumentation and Measurement Society with a new focus on all aspects of instrumentation and measurement. The following list contains locations and themes of the I²MTC conferences:

1984 – Long Beach, CA, USA, *Automation-Quality-Productivity*
1985 – Tampa, FL, USA, *Measurement Science*
1986 – Boulder, CO, USA, *Standards of Excellence*
1987 – Boston, MA, USA, *The Changing Face of I&M Technologies*
1988 – San Diego, CA, USA, *Intelligence in Instrumentation*
1989 – Washington, DC, USA, *Persuasive I&M Technology – A Resource*
1990 – San Jose, CA, USA, *Emerging Measurement Technologies*
1991 – Atlanta, GA, USA, *Enhancing Productivity with Instrumentation and Measurement Technologies*
1992 – Meadowlands, NJ, USA, *Smart People, Smart Instruments, Smart Measurements*
1993 – Irvine, CA, USA, *Innovative Ideas for Industry*
1994 – Hamamatsu, JAPAN, *Advanced Technologies in Instrumentation and Measurement*
1995 – Waltham, MA, USA, *I3C – Integrating Intelligent Instrumentation and Control*
1996 – Brussels, BELGIUM, *Quality Measurements – The Indispensable Bridge between Theory and Reality (No Measurements? No Science!)*
1997 – Ottawa, CANADA, *Sensing, Processing, Networking*
1998 – St. Paul, MN, USA, *Where Instrumentation is Going*
1999 – Venice, ITALY, *Measurements for the New Millennium*
2000 – Baltimore, MD USA, *Smart Connectivity: Integrating Measurement and Control*
2001 – Budapest, HUNGARY, *Rediscovering Measurement in the Age of Informatics*
2002 – Anchorage, AK, USA, *The Frontier of Instrumentation and Measurement*
2003 – Vail, CO, USA, *Instrumentation and Measurement at the Summit*
2004 – Lake Como, ITALY, *From the Electrometer to the Networked Instruments: A Giant Step toward a Deeper Knowledge*
2005 – Ottawa, CANADA, *The 22nd Reunion*
2006 – Sorrento, ITALY, *A View on the New Technologies for Instrumentation and Measurement*
2007 – Warsaw, POLAND, *Synergy of Science and Technology in Instrumentation and Measurement*
2008 – Victoria, British Columbia, CANADA, *Advances in the Science of Measurement Technology*
2009 – Singapore, *Always On: Instrumentation and Measurement in the Networked World*
2010 – Austin, TX, USA, *Innovative and Integrated Applications of I&M*
2011 – Binjiang, Hangzhou, CHINA, *Instrumentation and Measurement for Improving Quality of Life*
2012 – Graz, Austria, *Smart Measurements for a Sustainable Environment*
2013 – Minneapolis, MN, USA, *Instrumentation and Measurement for Life*
2014 – Montevideo, Uruguay, *"Instrumentation and Measurement for Sustainable Development"*
2015 – Pisa, Italy, *"The "Measurable" of Tomorrow: Providing a Better Perspective on Complex Systems"*
2016 – Taipei, Taiwan, *"Measuring the Pulse of Industries, Nature and Humans"*
2017 – Torino, Italy, *"Man is the measure of all things" - Protagoras*

Awards and Distinctions

IEEE Joseph F. Keithley Award in Instrumentation and Measurement

The IEEE Joseph F. Keithley Award in Instrumentation and Measurement is sponsored by Keithley Instruments, a Tektronix company, and the IEEE Instrumentation and Measurement Society, and recognizes outstanding contributions in electrical measurements.

The 2017 IEEE Joseph F. Keithley Award in Instrumentation and Measurement recipient is:

Jerome Blair
Keystone International, Inc.
USA

"For contributions to test procedures for analog-to-digital and digital-to-analog converters and to enhanced-accuracy gamma-ray spectrometry."

IEEE Innovation in Societal Infrastructure Award

The IEEE Innovation in Societal Infrastructure Award is sponsored by Hitachi, Limited and the IEEE Computer Society, and recognizes significant technological achievements and contributions to the establishment, development, and proliferation of innovative societal infrastructure systems through the application of information technology with an emphasis on distributed computing systems.

The 2017 IEEE Innovation in Societal Infrastructure Award recipient is:

Antonello Monti
RWTH Aachen University
Germany

"For accelerating innovation of energy, information, and communication technologies for the urban environment."

Each year the IEEE Instrumentation and Measurement Society accepts nominations for its Awards. The AdCom Awards Committee manages the nominations process, reviews the candidates, and recommends a slate. The slate of candidates is then submitted to the Society AdCom for approval and the awards are presented at our annual Awards Ceremony held as part of the I^2MTC conference. The Awards Committee is pleased to announce the 2016-2017 winners.

2016 Transactions Outstanding Associate Editors

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IEEE Instrumentation and Measurement Society Andy Chi Best Paper Award

The I&M Society Andy Chi Best Paper Award is awarded to recognize an author or authors of a paper published in the IEEE Transactions on Instrumentation and Measurement.

The 2016 Andy Chi Best Paper Award is given for the paper: *Ink-Jet Printed Pressure Sensing Platform for Postural Imbalance Monitoring.*

The recipients are:

Silvia Cruz, *University of Minho, Portugal*
Daniel Dias, *University of Minho, Portugal*
Luis Alexandre Rocha, *University of Minho, Portugal*
Julio Viana, *University of Minho, Portugal*

IEEE Instrumentation and Measurement Society Best Application Award

The I&M Society Best Application Award recognizes an individual whose idea applies measurement concepts or instrumentation technology in a novel way to benefit society. The application must be a working solution to an engineering need or problem.

The 2016 Best Application Award receipients are:

Andrea Cataldo, *University of Salento, Italy*
Dario Di Cara, *Italian National Research Council, Italy*
John Donnal, *United States Naval Academy, USA*
Roberto Ferrero, *University of Liverpool, United Kingdom*
Antonello Monti, *RWTH Aachen University, Germany*
Abhinav Sadu, *RWTH Aachen University, Germany*
Yong Yan, *University of Kent, United Kingdom*

IEEE Instrumentation and Measurement Society J. Barry Oakes Advancement Award

The IEEE J. Barry Oakes Advancement Award will be used to provide a question and answer lecture during the annual I2MTC or AUTOTESTCON. Qualifications include one or more of the following: Demonstrated contributions to IMS science and engineering; potential leadership/project management skills; potential to serve as role model for other engineers.

The 2016 J. Barry Oakes Advancement Award recipient is:

John Lataire
Vrije Universiteit Brussel
Belgium

"For fundamental contributions to the frequency domain measurement and identification of time-variant systems."

IEEE Instrumentation and Measurement Society Outstanding Young Engineer Award

The I&M Outstanding Young Engineer Award recognizes an outstanding young I&M member who has distinguished him or herself through achievements, which are technical, of exemplary service to the I&M Society, or a combination of both, early in their career. The nominee must not have reached their 39th birthday and must be an I&M member at the time of nomination.

The 2016 Outstanding Young Engineer Award recipient is:

Joseph Toby Case
The Aerospace Corporation
USA

"For outstanding contributions in the development of microwave technology as a nondestructive evaluation method, and applications of advanced ultrasound, digital radiography and other methods for the space program."

Joseph T. Case (S'99 - M'08) received his B.S. in physics and electrical engineering with honors in 2003, received his M.S. in electrical engineering in 2006, and received his Ph.D. in electrical engineering in December 2013 from the Missouri University of Science and Technology (Missouri S&T), formerly University of Missouri-Rolla (UMR). He is currently a member of the technical staff at the Aerospace Corporation since January 2014. He performs research in the Physical Sciences Laboratory in the field of nondestructive testing for microwave and millimeter wave, ultrasound, x-ray, thermography, and more (http://www.aerospace.org). Previously, he was a postdoctoral fellow at Missouri S&T in the Applied Microwave Nondestructive Testing Laboratory (amntl) (http://amntl.mst.edu). He started at the amntl in 1999 also serving roles as an Undergraduate and Graduate Research Assistant. He has also worked in the microwave testing lab at NASA Marshall Space Flight Center for intervals between 2004 and 2007. His research interests include real-time imaging systems, digital signal and image processing, multi-modal nondestructive evaluation, free-hand image formation, synthetic aperture radar, three dimensional rendering, and numerical methods. He has over 40 technical publications consisting of journal articles, conference proceedings, and technical reports. He was honored with the 2010 National Science Foundation Graduate Research Fellowship, 2006-2007 MST Chancellor's Fellowship, the 2004 Outstanding Graduate Teaching Assistant at the University of Missouri-Rolla, and the 2002 Norman R. Carson Award as the Outstanding Junior Electrical Engineering Student**.**

IEEE Instrumentation and Measurement Society Technical Award

The I&M Technical Award is given to an individual or group of individuals for outstanding contribution or leadership in advancing instrumentation design or measurement technique.

The 2016 Technical Award recipient is:

Darine Haddad
NIST
USA

"For technical leadership in constructing the NIST watt balance and leading a measurement campaign to determine Planck's constant to 34 parts in 1,000,000,000. In the record time of 5 years, Dr. Haddad assembled an apparatus that can realize the unit of mass in the redefined system of units."

Darine Haddad (M'09) received her Ph.D. in Optics, Optoelectronics and Microwaves in 2004 from the University of Versailles, France, where she continued teaching and doing research in the field of optical sensors and dimensional metrology. Since, she has been working on watt-balance experiments to measure the Planck constant and realize the unit of mass, the kg: first as a Post-Doctoral Fellow at the Laboratoire National de Métrologie et d'Essais (Trappes, France) and since 2008 at the National Institute of Standards and Technology, Gaithersburg, MD..

IEEE Instrumentation and Measurement Society Distinguished Service Award

The I&M Society Distinguished Service Award is presented each year to an individual who has given outstanding service to the Society and to the profession.

The 2016 Distinguished Service Award recipient is:

Serge N. Demidenko
Massey University
New Zealand

"For the outstanding enduring contributions to the IEEE Instrumentation and Measurement Society, the IEEE at large and the Profession."
Serge Demidenko (MIEEE'91-SMIEEE'94-FIEEE'04) is Associate Head of School of Engineering & Advanced Technology at Massey University, New Zealand. He is also Cluster Leader (Electronics, Information & Communications Systems) as well as Professor and Chair of Electronics & Computer Engineering.
Previously Vice President Academic as well as Head of Centre of Technology and Centre of Communication & Design at RMIT International University, and earlier - Head of School of Engineering at Monash University, Professor Demidenko has had distinguished academic and engineering career.
During his engineering tenure, he progressed from an electronic design engineer to the Head of Joint (industry-academy) Test Laboratory in a large computer system manufacturing company. Since the 1990s he has been on the academic and research staff of institutions of higher learning in several countries in Europe and Asia-Pacific. His specialization areas include signal processing, instrumentation, electronic testing, and fault-tolerance, where he is an author of 3 books, more than 200 research papers and holds 25 engineering patents.
Professor Demidenko is a Fellow of IEEE and IET, and UK Chartered Engineer.

IEEE Instrumentation and Measurement Society Career Excellence Award

The I&M Society Career Excellence Award is awarded to recognize a lifetime career of meritorious achievement and outstanding technical contribution by an individual in the field of instrumentation and measurement.

The 2016 Career Excellence Award recipient is:

Stuart Nelson
USDA-ARS
USA

"For pioneering research in the measurement and study of wide-frequency-range dielectric properties of agricultural materials, for exploring their engineering and scientific applications, and for documenting these properties and findings in reference publications."

Stuart Nelson was born and reared on a farm in Stanton County in northeastern Nebraska, attended a one-room country school through 8th grade, and graduated from Pilger High School in 1944. He enrolled immediately for the summer school session in Engineering on a Regents scholarship at the University of Nebraska to secure more education before entering the U. S. military service. He enlisted in the U. S. Navy Electronics program, spent a year in the Electronics school at Treasure Island Navy base in San Francisco Bay, and served the remainder of his 2-year enlistment as the senior Electronics Technician aboard the U.S.S. Bausell, flagship of Destroyer Division 12 in the Pacific theater. Upon discharge from the Navy, he returned to the University of Nebraska and completed a B. S. and M. S. in Agricultural Engineering, and an M. A. in Physics, before joining the U. S. Department of Agriculture (USDA), Agricultural Research Service (ARS) research program at the University of Nebraska in 1954. Several years later, he took leave for a year's study at Iowa State University, and a few years later completed the Ph. D. in Engineering with a dissertation on the Frequency Dependence of the Dielectric Properties of Wheat and the Rice Weevil.

His research for USDA, conducted in the Department of Agricultural Engineering at the University of Nebraska, Lincoln, involved dielectric properties measurements and use of radio-frequency (RF) and microwave energy for stored-grain insect control, seed treatment to improve germination and control fungi, RF treatment of soybeans to improve nutritional value, and sensing moisture content of grain and seed. In 1976, he moved his laboratory to the Russell Research Center, Athens, Georgia, continuing dielectric properties measurements research, and initiating studies on fruits, vegetables and pecans. Advances in techniques of measuring moisture content in grain and seed with RF and microwave frequencies followed, along with quality sensing research on fruits and vegetables, pecans, and food and poultry products. Contract research on dielectric properties of coal and minerals for the U. S. Department of Energy and the U. S. Bureau of Mines supplemented the studies.

Dr. Nelson has more than 700 publications to his credit, including papers in more than 45 different engineering and scientific journals, conference and symposia proceedings, book chapters, patents, and a book summarizing 65 years of research on dielectric properties of agricultural materials and their applications. His work has been recognized by election to Fellow grade in the American Society of Agricultural and Biological Engineers (ASABE), the Institute of Electrical and Electronics Engineers (IEEE), the International Microwave Power Institute (IMPI), and the American Association for the Advancement of Science (AAAS). Other significant honors include election to the National Academy of Engineering, The IMPI Decade Award, the NSPE Founders Gold Medal as the 1985 Federal Engineer of the Year, the ASABE McCormick- Case Gold Medal for significant engineering achievement in agriculture, the Georgia Engineering Foundation Medal of Honor, an Honorary Dr. Sc. from the University of Nebraska, induction into the University of Nebraska Biological Systems Engineering Hall

of Fame, and the USDA, ARS Science Hall of Fame. He retired in 2007 with 55 years of federal service and has continued working as a Collaborator in the USDA laboratory that he established at the Russell Research Center in Athens, Georgia.

IEEE Instrumentation and Measurement Society
Outstanding Technical Committee Award

This award is given annually to the best technical committee of the Instrumentation & Measurement Society.

The 2016 Outstanding Technical Committee Award recipient is:

TC-39 Measurements in Power Systems
Chair: Carlo Muscas

IEEE Instrumentation and Measurement Society
Graduate Fellowship Award

To be announced.

IEEE Instrumentation and Measurement Society
Faculty Course Development Award

To be announced.

2017 Instrumentation and Measurement Society Fellows

Michael F. "Mike" Gard
The Charles Machine Works
USA

"For contributions to instrumentation-and-measurement technology for petroleum exploration, computed tomography, and underground construction."
Shervin Shirmohammadi
University of Ottawa, Canada

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Social Events

Tutorial Welcome Reception

Time: Monday, May 22, 2017 – 18:00 – 20:00
Location: Politecnico Terrace

Welcome Reception

Time: Tuesday, May 23, 2017 – 19:00 – 21:00
Location: Valentino Castle

The welcome reception will be in the Castello del Valentino, a suburban mansion and residence riverside of Royal House of Savoy, inscribed in the UNESCO World Heritage List in 1997.

Gala Dinner

Time: Wednesday, May 24, 2017 – 19:00 – 22:30
Location: Galleria di Diana at the Reggia della Venaria Reale

The gala dinner will be in the Galleria di Diana at the Reggia della Venaria Reale, a member of the Association of European Royal Residences and a Unesco World Heritage Site.

Program Schedule – Monday, May 22

Program Schedule – Tuesday, May 23

Program Schedule – Wednesday, May 24

Program Schedule – Thursday, May 25

Tutorials – Monday, May 22

Opening Session
9:00 – 9:30
Room: Aula Magna

Session 1
9:30 – 11:00

Methodology of Measurements
Dario Petri (University of Trento, Italy)
Room: **Aula Magna**

Magnetic flux leakage system for non destructive testing
*Aldo Canova (*Politecnico di Torino, Italy)
Room: **CDF-1**

From CAD to test – advances in productivity enhancement techniques for inertial sensors calibration and testing
Marius Georghe (Ideal Aerosmith Inc., USA)
Rodrigo Barajas Ruiz (Ideal Aerosmith Inc., USA)
Room: **CDF-2**

New challenges for power measurements set by the current physical components based power theory
Leszek Czarnecki (Louisiana State University, USA)
Room: **7A**

Coffee Break
11:00 – 11:30

Session 2
11:30 – 13:00

Forensic metrology: How measurement can help justice
Veronica Scotti (Politecnico di Milano, Italy)
Alessandro Ferrero (Politecnico di Milano, Italy)
Room: **Aula Magna**

Electromagnetic sensors for charged particle accelerators and high energy physics
Michele Bozzolan (CERN, Beam Instrumentation Group, Switzerland)
Room: **CDF-1**

International product compliance and certifications
John Allen (Product Safety Consulting, USA)
Room: **CDF-2**

Frequency domain sine-wave parameter estimation
Dominique Dallet (IMS Laboratory - University Bordeaux, France)
Daniel Belega (University of Timisoara, Romania)
Room: **7A**

Tutorials – Monday, May 22

Lunch
13:00 – 14:30

Session 3
14:30 – 16:00

Measurement Uncertainty Quantification
Daniel Watzening (Graz University of Technology, Austria)
Room: **Aula Magna**

On-board sensors and instrumentation for driver-assisted/autonomous vehicles
Sergio Saponara (Università di Pisa, Italy)
Room: CDF-1

Fiber sensors for industry 4.0
Guido Perrone (Politecnico di Torino, Italy)
Room: CDF-2

Wireless for the industrial communications
Emiliano Sisinni (University of Brescia, Italy)
Mikael Ghidlund (Mid Sweden University, Sweden)
Room: **7A**

Coffee Break
16:00 – 16:30

Session 4
16:30 – 18:00

Quantum metrology for the practical realization of electrical units, in the framework of the new SI
Luca Callegaro (INRIM, Italy)
Room: Aula Magna

The drone as a flexible mobile measurement platform
Luca De Vito (University of Sannio, Italy)
Francesco Picariello (University of Sannio, Italy)
Room: CDF-1

Smart tailored environments for physiotherapy assessment in the Internet of Things era
Octavian Postolache (Instituto de Telecomunicações, ISCTE-IUL, Portugal)
Room: CDF-2

Young Professionals Best Practices in a Variety of Measures
Erik Timpson (Honeywell, USA)
Room: **7A**

18:00 – 20:00
Tutorial Welcome Reception & Young Professionals Meet-Up Event
Location: Politecnico Terrace (DET V Floor)

Tuesday, May 23

08:30 – 17:30
Registration

08:30 – 09:00
Opening Session and Student Travel Award Ceremony
Room: Aula Magna

09:00 – 09:45
Plenary Lecture #1 – "Metrology of Security and Safety Technologies"
Speaker: Nicholas G. Paulter (National Institute of Standards and Technology - NIST, Gaithersburg, MD, US)
Room: Aula Magna

09:45 – 10:00
Coffee Break
Room: Council Room

Tuesday, May 23

10:00 – 11:40
Measurement, Instrumentation, and Methodologies for Medical, Biomedical, and Healthcare Systems I
Room: Aula Magna
Chair: Kurt Barbé (Vrije Universiteit Brussel & Faculty of Sciences / Faculty Medicine (GEWE), Belgium), Domenico Grimaldi (University of Calabria, Italy)

Early Lung Cancer Identification Based on ERT Measurements
Benyuan Sun (Tianjin University, P.R. China)
Shihong Yue (Tianjin University, P.R. China)
Ziqiang Cui (Tianjin University, P.R. China)
Zhenhua Hao (Tianjin University, P.R. China)
Huaxiang Wang (Tianjin University, P.R. China)
Weiyang Zhang (Tianjin University, P.R. China)

RTD-Fluxgate Sensor for Measurements of Metal Compounds in Neurodegenerative Diseases
Carlo Trigona (University of Catania, Italy)
Salvatore Baglio (University of Catania, Italy)
Bruno Andò (University of Catania, Italy)
Valentina Sinatra (University of Catania, Italy)
Adi R. Bulsara (Space and Naval Warfare Center (San Diego), USA)
M. Zappia (University of Catania, Italy)
Alessandra Nicoletti (AOU Policlinico Vittorio Emanuele of Catania, Italy)
G. Mostile (AOU Policlinico Vittorio Emanuele of Catania, Italy)

Combining Distance and Force Measurements to Monitor the Usage of Walker Assistive Devices
Jose Costa Pereira (ESTSetúbal, Portugal)
Vítor Viegas (Polytechnic Institute of Setubal & SetUbal School of Technology, Portugal)
Octavian Adrian Postolache (Instituto de Telecomunicações, Lisboa/IT & Instituto Universitario de Lisboa, ISCTE-IUL, Portugal)
Pedro M. B. Silva Girão (Instituto Superior Técnico, Portugal)

Pulse oximeters in preterm patients: Effect of limb movement artifacts and positioning
Paolo Marchionni (Polytechnic University of Marche, Italy)
Lorenzo Scalise (Polytechnic University of Marche, Italy)
Stefano Nobile (Azienda Ospedaliero-Universitaria Ospedali Riuniti, Italy)
Virgilio Carnielli (Polytechnic University of Marche, Italy)

A flow-through infusion calorimeter for measuring muscle energetics during pharmacological interventions
Andrew Taberner (University of Auckland, New Zealand)
Toan Pham (University of Auckland, New Zealand)
June-Chiew Han (University of Auckland, New Zealand)
Riaz Uddin (University of Auckland, New Zealand)
Denis Loiselle (University of Auckland, New Zealand)

Tuesday, May 23

10:00 – 11:40
Data Acquisition Systems and Real-Time Measurements
Room: CDF-1
Chairs: Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil), Alberto Vallan (Politecnico di Torino, Italy)

Development of a Handheld Human Head Scanner Based on an RGB-D Sensor
Haiwei Dong (University of Ottawa, Canada);
Nadia Figueroa (Swiss Federal Institute of Technology in Lausanne, Switzerland);
Abdulmotaleb El Saddik (University of Ottawa, Canada)

Using Software Defined Radios for Baseband Phase Measurement and Frequency Standard Calibration
Carsten Andrich (Fraunhofer Institute for Integrated Circuits IIS)
Alexander Ihlow (Ilmenau University of Technology, Germany)
Wim A. Th. Kotterman (Technische Universität Ilmenau, Germany)
Niklas Beuster (Ilmenau University of Technology, Germany)
Giovanni Del Galdo (Technische Universität Ilmenau, Germany)

Efficient Analysis of Power Consumption Behaviour of Embedded Wireless IoT Systems
Albert Pötsch (Linz Center of Mechatronics GmbH, Austria)
Achim Berger (Linz Center of Mechatronics GmbH, Austria)
Andreas Springer (Johannes Kepler University Linz, Austria)

CMOS Technology Scaling Advantages in Time Domain Signal Processing
Jussi-Pekka Jansson (University of Oulu, Finland)
Pekka Keränen (University of Oulu, Finland)
Juha Kostamovaara (University of Oulu, Finland)
Andrea Baschirotto (University of Milano Bicocca, Italy)

Design of a Fast, High-Resolution Sensor Evaluation Platform applied to a Capacitive Position Sensor for a Micromirror
Lisa-Marie Faller (Alpen-Adria Universität, Austria)
Juliana Leitzke (Alpen-Adria Universität, Austria)
Hubert Zangl (Alpen-Adria Universität, Austria)

Tuesday, May 23

10:00 – 11:40
Signal Processing Techniques I
Room: CDF-2
Chairs: Pasquale Daponte (University of Sannio, Italy), Marco Faifer (Politecnico di Milano, Italy)

Velocity Measurement of Oil-Water Two-Phase Flow Based on Ultrasonic Doppler
Xuewei Shi (Tianjin University, P.R. China)
Xiaoxiao Dong (Tianjin University, P.R. China)
Chao Tan (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

Rail crack detection based on the adaptive noise cancellation method of EMD at high speed
Xin Zhang (Harbin Institute of Technology, P.R. China)
Yan Wang (Harbin Institute of Technology, P.R. China)
Kangwei Wang (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Hengshan Hu (Harbin Institute of Technology, P.R. China)

Hardware-Based Simplified Discrete Wavelet Transform for Detecting High-Voltage Spindles in Neuron Signals
Yu-Chieh Chen (Instrument Technology Research Center, Taiwan)
Ramesh Perumal (National Tsing Hua University, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Hsin Chen (National Tsing Hua University, Taiwan)

Iterative Method for the Definition of Frequency-Domain Volterra Models
Loredana Cristaldi (Politecnico di Milano, Italy)
Marco Faifer (Politecnico di Milano, Italy)
Christian Laurano (Politecnico di Milano, Italy)
Roberto Ottoboni (Politecnico di Milano, Italy)
Sergio Toscani (Politecnico di Milano, Italy)
Michele Zanoni (Politecnico di Milano, Italy)

A Frequency-Domain Linear Least-Squares Approach for Complex Sine-wave Amplitude and Phase Estimation
Daniel Belega (University of Timisoara, Romania)
Dario Petri (University of Trento, Italy)
Dominique Dallet (IMS Laboratory - University Bordeaux, France)

Tuesday, May 23

10:00 – 11:40
Measurement and Instrumentation for Industrial Applications and Processes I
Room: 7A
Chairs: Dario Petri (University of Trento, Italy), Jesus Ureña (University of Alcala, Spain)

Methods and Measuring Systems for Calibration of Non-Contact Vibrodiagnostics Systems
Pavel Procházka (Institute of Thermomechanics AS CR, v. v. i., Czech Republic)

A Novel Virtualized Testbed for Embedded Networking Nodes (VTENN)
Manuel Schappacher (Offenburg University of Applied Sciences, Germany);
Artem Yushev (Offenburg University of Applied, Germany)
Axel Sikora (Offenburg University of Applied, Germany)
Voicu Groza (University of Ottawa, Canada)

Real-Time Monitoring of the Hydration Level by Multi-Frequency Bioimpedance Spectroscopy
Daniele Allegri (University of Applied Sciences of Southern Switzerland (SUPSI), Switzerland)
David Vaca (University of Applied Sciences of Southern Switzerland (SUPSI), Switzerland)
Denis Ferreira (University of Applied Sciences of Southern Switzerland (SUPSI), Switzerland)
Marco Rogantini (University of Applied Sciences of Southern Switzerland (SUPSI), Switzerland)
Diego Barrettino (University of Applied Sciences of Southern Switzerland (SUPSI), Switzerland)

Resonant Cavity Water Cut Meter with Automatic Resonance Tracking System
Heron Eduardo de Lima Ávila (Federal University of Santa Catarina, Brazil)
Fernando Rangel de Sousa (Federal University of Santa Catarina, Brazil)
Daniel J. Pagano (Federal University of Santa Catarina, Brazil)

IEEE 802.11n for Distributed Measurement Systems
Federico Tramarin (University of Padova, Italy)
Stefano Vitturi (CNR, Italy)
Michele Luvisotto (University of Padova, Italy)

Tuesday, May 23

10:00 – 11:40
Measurement of Electric Quantities I
Room: 7B
Chair: Alessandra Flammini (University of Brescia, Italy), Lorenzo Peretto (University of Bologna, Italy)

Electrical and Electromagnetic Measurements of an Inductorless DC/DC Converter
Sergio Saponara (University of Pisa, Italy)
Gabriele Ciarpi (University of Pisa, Italy)

A Novel Nanocrystalline-based Current Transformer Working on Saturated Region
Cleonilson Protasio Souza (Federal University of Paraiba, Brazil)
Jailton Ferreira Moreira (Federal Institute of Education, Science and Technology of Paraiba, Brazil)
Yuri Rodriguez (Federal University of Paraíba, Brazil)

Impact of transistor model uncertainty on microwave load-pull simulations
Gianni Bosi (University of Ferrara, Italy)
Antonio Raffo (University of Ferrara, Italy)
Gustavo Avolio (Kuleuven, Belgium)
Dominique Schreurs (KU Leuven, Belgium)
Giorgio Vannini (University of Ferrara, Italy)

A Receiving Instruments of the Earth's Natural Pulse Electromagnetic Field and Its Data Analysis via Time-Frequency Method before an Earthquake
Guocheng Hao (China University of Geosciences (Wuhan), P.R. China)
Yuxiao Bai (China University of Geosciences (Wuhan), P.R. China)
Min Wu (China University of Geosciences, P.R. China)
Juan Zhao (China University of Geosciences (Wuhan), P.R. China)
Yue Yang (China University of Geosciences (Wuhan), P.R. China)

A Simple and Efficient Oscillator Based Read-out Scheme for LVDT
Vinodhini G. (Anna University, India)
Sankaran Aniruddhan (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)
Dhurga Devi J (Anna University, India)
Ramakrishna P.v. (Anna University, India)

Tuesday, May 23

11:45 – 12:30
Plenary Lecture #2 – "Frequency domain measurement and identification of time-varying systems"
Speaker: J. Barry Oakes Award Winner, John Lataire
Room: Aula Magna

12:30 – 14:00
Lunch
Room: Council Room

14:00 – 16:00
Poster Session
Room: DET Room II
Chair: Emma Paola Angelini (Politecnico di Torino, Italy), Reinoud Wolffenbuttel (Delft University of Technology, The Netherlands)

1: Combining Impedance Spectroscopy with Optical Absorption Spectroscopy in the UV for Biofuel Composition Measurement
Luke Middelburg (TU Delft, The Netherlands);
Reinoud Wolffenbuttel (TU Delft, The Netherlands)
Mohammadamir Ghaderi (TU Delft, The Netherlands)
Andre Bossche (TU Delft, The Netherlands)
Jeroen Bastemeijer (TU Delft, The Netherlands)
Ger De Graaf (Delft University of Technology, The Netherlands)
Jaco Visser (Ford, USA)

2: A Text-dependent Speaker-Recognition System
Dany Ishak (University of Balamand, Lebanon)
Antoine B. Abche (University of Balamand, Lebanon)
Georges Nassar (UVHC, France);
Elie Karam (University of Balamand, Lebanon)
Dorothee Callens (UVHC, Lebanon)

3: Design And Development Of A Non-Contact Measurement System Applied For A Conveyor
Joey Sousa (Federal Institute of Education, Science and Technology of Ceará, Brazil)
Verilton Da silva (Federal Institute of Education, Science and Technology of Paraiba, Brazil)
Luiz henrique Nóbrega (Federal Institute of Education, Science and Technology of Paraiba, Brazil)
Edleusom Silva (Federal Institute of Education, Science and Technology of Paraiba, Brazil)
Francisco Silva (Federal Institute of Education, Science and Technology of Ceará, Brazil)
Jailton Ferreira Moreira (Federal Institute of Education, Science and Technology of Paraiba, Brazil)

4: Aerial remote sensing of underwater acoustic signal based on laser interference
Mingjian Sun (Harbin Institute of Technology, P.R. China)
Guangnan Wan (Harbin Institute of Technology, P.R. China)
Xinrui Zhuang (Harbin Institute of Technology, P.R. China)
Jinshan Zhou (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Miao Zhang (Harbin Institute of Technology, P.R. China)
Hai Du (Harbin Institute of Technology, P.R. China)

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5: The Coupling Model between the Upper and Lower Limbs during Bipedal Walking
Jiali Yu (Soochow University, P.R. China)
Zhiyuan Zhao (Soochow University, P.R. China)
Yongqiang Wu (Soochow University, P.R. China)
Wei Jiang (Soochow University, P.R. China)
Hao Guo (Soochow University, P.R. China)
Juan Li (Soochow University, P.R. China)
Fei Qi (Soochow University, P.R. China)
Hongmiao Zhang (Soochow University, P.R. China)

6: Radio measurements on a customized software defined radio module: A case study of Energy detection spectrum sensing
Thomas Jordbru (University of Agder, Norway)
Henning Idsøe (Norway & University of Agder, Norway)
Linga Reddy Cenkeramaddi (University of Agder, Norway);
Baltasar Beferull-Lozano (University of Agder, Norway)
Mohammed Hamid (University of Agder, Norway)

7: Time-Domain Characterization of a Wireless ECG System Event Driven A/D Converter
Saeed Mian Qaisar (Effat University, Jeddah, KSA & INPG, ENSEIRB, France)
Manel Ben-Romdhane (Sup'Com, Tunisia)
Omar Anwar (Effat University, Jeddah, KSA, Saudi Arabia)
Mariam Tlili (SUPCOM, Tunisia)
Asma Maalej (SUPCOM, Tunisia)
Francois Rivet (University of Bordeaux, France)
Chiheb Rebai (SUPCOM, Tunisia)
Dominique Dallet (IMS Laboratory - University Bordeaux, France)

8: Real-time Pitch Diameter Measurement of Internal Thread for Nut using Laser Triangulation
Chun-Fu Lin (Instrument Technology Research Center, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Hong-Ren Fang (National Chiao Tung University, Taiwan)
Chih-Yen Chen (Instrument Technology Research Center, Taiwan)
Jyh-Rou Sze (Instrument Technology Research Center, Taiwan)

9: Robust Detection of Acoustic Partial Discharge Signals in Noisy Environments
Ramy Hussein (Unversity of British Columbia, Canada)
Khaled Bashir Shaban (Qatar University & College of Engineering, Qatar)
Ayman El-Hag (American University of Sharjah, United Arab Emirates (UAE))

10: An Automatic System for Testing of Low-Cost Electric Energy Meters Under Distorted Conditions
Giovanni Bucci (University of L'Aquila, Italy)
Fabrizio Ciancetta (University of L'Aquila, Italy)
Flavio D'Innocenzo (University of L'Aquila, Italy)
Edoardo Fiorucci (University of L'Aquila, Italy)
Daniele Gallo (University of Campania Luigi Vanvitelli, Italy)
Carmine Landi (Second University of Naples, Italy)
Mario Luiso (University of Campania Luigi Vanvitelli, Italy)

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11: A simplified approach for load flow analysis in MV smart grids based on LV power measurements
Antonio Cataliotti (University of Palermo, Italy)
Valentina Cosentino (University of Palermo, Italy)
Salvatore Nuccio (University of Palermo, Italy)
Dario Di Cara (National Research Council, Italy)
Nicola Panzavecchia (National Research Council, Italy)
Giovanni Tinè (National Research Council, Italy)

12: Implementation of Phasor Measurement Units on Low-cost Embedded Platforms: a Feasibility Study
Pietro Tosato (University of Trento, Italy)
David Macii (University of Trento, Italy)
Davide Brunelli (University of Trento, Italy)

13: Low Cost De–energizing Warning Meter Algorithm for Sensitive Loads
Jose-Maria Flores-Arias (University of Córdoba, Spain)
Francisco J. Bellido Outeiriño (University of Córdoba, Spain)
Emilio J. Palacios-Garcia (University of Córdoba, Spain)
Aurora Gil de Castro (University of Córdoba, Spain)
Antonio Moreno-Munoz (University of Córdoba, Spain)
Miguel Angel Quero-Corrales (University of Córdoba, Spain)

14: A Three-Core Power Cable Online Monitoring System Based on Phase Current Sensing
Yanling Yuan (Tangshan Electrical Power Company, P.R. China)
Shisong LI (Tsinghua University, P.R. China)
Jie Dong (Tangshan Electrical Power Company, P.R. China)
Jingfu Gan (Tangshan Electrical Power Company, P.R. China)
Wei Zhao (Tsinghua University, P.R. China)
Songling Huang (Tsinghua University, P.R. China)
Lei Chen (Tsinghua University, P.R. China)

15: Multivariable Optimization Method for Inductive Power Transfer in Wireless Sensors Nodes
Lucas Murliky (UFRGS, Brazil)
Rodrigo W Porto (UFRGS, Brazil)
Valner Brusamarello (UFRGS, Brazil)

16: A superpixel-based codebook model for real time foreground detection
Shicai Fan (UESTC, P.R. China)

17: Misalignment contribution to the autocollimator's scale distortion
Guillermo J. Bergues (Universidad Tecnológica Nacional - FRC, Argentina)
Clemar Schurrer (Universidad Tecnológica Nacional - FRC, Argentina)
Nancy Brambilla (CEMETRO, Argentina)
Luis Canali (Universidad Tecnológica Nacional - FRC, Argentina)

18: An improved method of rail health monitoring based on CNN and multiple acoustic emission events
Xin Zhang (Harbin Institute of Technology, P.R. China)
Kangwei Wang (Harbin Institute of Technology, P.R. China)
Yan Wang (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Hengshan Hu (Harbin Institute of Technology, P.R. China)

Tuesday, May 23

19: Method of Tikhonov Regularization for Weighted Frequency-Difference Electrical Impedance Tomography
Bing Han (Tianjin University, P.R. China)
Yanbin Xu (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

20: An Adaptive Local Weighted Image Reconstruction Algorithm for EIT/UTT Dual-Modality Imaging
Guanghui Liang (Tianjin University, P.R. China)
Shangjie Ren (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

21: A Method of Spatially Adaptive Lp Regularization for Electrical Tomography
Zheng Wang (Tianjin University, P.R. China)
Yanbin Xu (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

22: Rotational Speed Measurement through Digital Imaging and Image Processing
Yunfan Wang (University of Kent, United Kingdom)
Lijuan Wang (North China Electric Power University, P.R. China)
Yong Yan (University of Kent, United Kingdom)

23: Uncertainty of Line Camera Image based Measurements
Giuseppe Di Leo (University of Salerno, Italy)
Consolatina Liguori (University of Salerno, Italy)
Antonio Pietrosanto (University of Salerno, Italy)
Roald Lengu (Ansaldo STS, Italy)

24: Measuring Changes in the Plantar Temperature Distribution in Diabetic Patients
Daniel Hernandez-Contreras (INAOE, Mexico);
Hayde Peregrina-Barreto (INAOE, Mexico)
Jose J. Rangel-Magdaleno (INAOE, Mexico)
Felipe Orihuela-Espina (INAOE, Mexico)
Juan Ramirez-Cortes (INAOE, Mexico)

25: Compressive Hyperspectral Imaging with Spatial Energy Distribution Information
Zhao Rongqiang (Harbin Institute of Technology, P.R. China)
Tong Zhao (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Jing Jin (Harbin Institute of Technology, P.R. China)
Zhaojun Wu (Harbin Institute of Technology, P.R. China)

26: Coupled Denoising and Unmixing with Low Rank Constraint and Hypergraph Regularization for Hyperspectral Image
Zhaojun Wu (Harbin Institute of Technology, P.R. China)
Xuan Liu (Harbin Institute of Technology, P.R. China)
Tiancheng Wang (Shanghai Institute of Satellite Engineering, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Jing Jin (Harbin institute of Technology, P.R. China)

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27: Recursive Intelligent Matching Pursuit Method for Image Sequences Reconstruction Based on L0 Minimization
Dan Li (Harbin Institute of Technology, P.R. China)
Chaoran Liu (Harbin Institute of Technology, P.R. China)
Xuan Liu (Harbin Institute of Technology, P.R. China)
Zhaojun Wu (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)

28: A Feedback-Based Construction of Multilayer Measurement Matrix for Compressive Sensing
Tianyou Zheng (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Yue Shen (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Xiaotian Lin (Harbin Institute of Technology, P.R. China)

29: Sensitivity Analysis of Influence Quantities on Signal-to-Noise Ratio in Face-Based Recognition Systems
Giovanni Betta (University of Cassino, Italy);
Domenico Capriglione (University of Salerno, Italy)
Mariella Corvino (University of Salerno, Italy)
Consolatina Liguori (University of Salerno, Italy)
Paolo Sommella (University of Salerno, Italy)

30: Automatic stellar spectral classification with multiple intelligent classifiers
Israel Cruz-Vega (INAOE, Mexico)
Hayde Peregrina-Barreto (INAOE, Mexico)
Jose J. Rangel-Magdaleno (INAOE, Mexico)
Juan Ramirez-Cortes (INAOE, Mexico)
Leopoldo Altamirano (INAOE, Mexico)

31: Flow Characteristics of V-Cone Flowmeter in Wet Steam
Chao Wang (Tianjin University, P.R. China)
Tianyi Li (Tianjin University, P.R. China)
Hongbing Ding (Tianjin University, P.R. China)
Jinxia Li (Tianjin University, P.R. China)

32: Brain Tissue Based Sensitivity Matrix in Hemorrhage Imaging by Magnetic Induction Tomography
Zhili Xiao (Tianjin University, P.R. China)
Chao Tan (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

33: Numerical Simulations of Electric and Acoustic Fields in Human Abdomen Models
Qinhui Wang (Tianjin University, P.R. China)
Shangjie Ren (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

Tuesday, May 23

34: Design and Implementation of a Hand-To-Hand Multifrequency Bioimpedance Measurement Scheme for Total Body Water Estimation
Anusha A S (IITMadras, India)
Preejith Sp (IITMadras, India)
Jayaraj Joseph (IIT Madras, India)
Mohanasankar Sivaprakasam (IIT Madras, India)

35: A survey of time-of-flight algorithms to determine bone positions in movement
Jose Manuel Fresno (Universidad Carlos III de Madrid, Spain)
Romano Giannetti (Universidad Pontificia Comillas, Spain)
Guillermo Robles (Universidad Carlos III de Madrid, Spain)

36: EOG Analog Front-end for Human Machine Interface
Maikon Del Re Perin (University of Caxias do Sul, Brazil)
Rodrigo W Porto (UFRGS, Brazil)
Angelo Zerbetto (University of Caxias do Sul, Brazil)
Marilda Spindola (University of Caxias do Sul, Brazil)

37: A Capacitive Proximity Sensing Scheme for Human Motion Detection
Atika Arshad (International Islamic University Malaysia, Malaysia)
Sheroz Khan (International Islamic University Malaysia, Malaysia)
Ahm Zahirul Alam (International Islamic University Malaysia, Malaysia)
Kushsairy Kadir (Universiti Kuala Lumpur British Malaysian Institute, Malaysia)
Ahmad Fadzil Ismail (International Islamic University Malaysia, Malaysia)
Rumana Tasnim (International Islamic University Malaysia, Malaysia)

38: Effects of the Inhomogeneity of the Time Resolving CMOS Single-Photon Avalanche Diode Array on Time-gated Raman Spectroscopy
Ilkka Nissinen (University of Oulu, Finland)
Jan Nissinen (University of Oulu, Finland)
Juha Kostamovaara (University of Oulu, Finland)

39: A Practical Portable Photometer using LEDs as Inspection light source
Po-Jui Chen (Instrument Technology Research Center, Taiwan)
Hsiao-Ting Wang (National Tsing Hua University, Taiwan)
Lih-Yuan Lin (National Tsing Hua University, Taiwan)
Ban-Dar Hsu (National Tsing Hua University, Taiwan)
Da-Ren Liu (Instrument Technology Research Center, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Wen-Hong Wu (Instrument Technology Research Center, Taiwan)

40: Robust Estimation and Tracking of Heart Rate by PPG Signal Analysis
Alessandra Galli (Universita' di Padova, Italy)
Guglielmo Frigo (Universita' di Padova, Italy)
Claudio Narduzzi (Universita' di Padova, Italy)
Giada Giorgi (University of Padova, Italy)

41: Automatic Renal Interstitial Fibrosis Quantification System
Wei Keat Tey (Monash University Malaysia, Malaysia)
Ye Chow Kuang (Monash University Malaysia, Malaysia)
Joon Joon Khoo (Monash University Malaysia, Malaysia)
Melanie Ooi (Heriot-Watt University, Malaysia)
Serge Demidenko (Massey University, New Zealand)

Tuesday, May 23

42: Optimized Power Harvesting Module for an Autonomous Sensor System Implanted in a Total Knee Prosthesis
Muhammad Ahmed Khan (University of Brescia, Italy)
Mauro Serpelloni (University of Brescia, Italy)
Emilio Sardini (University of Brescia, Italy)

43: Weighted Singular Value Thresholding for Sparse Photoacoustic Microscopy
Minghua Wang (Harbin Institute of Technology, P.R. China)
Xuan Liu (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Mingjian Sun (Harbin Institute of Technology, P.R. China)
Zhao Rongqiang (Harbin Institute of Technology, P.R. China)
Zhaojun Wu (Harbin Institute of Technology, P.R. China)

44: TDM-FDM configuration of Electromagnetic Tracking System for image-guided surgery devices
Anna Maria Lucia Lanzolla (Polytechnic of Bari, Italy)
Filippo Attivissimo (Polytechnic of Bari, Italy)

45: Brain Activation Energy Monitor System with self-developed NIRI sensor
Ya-Wen Tang (Instrument Technology Research Center, Taiwan)

46: Photoacoustic tomography based on a novel linear array ultrasound transducer configuration
Xiangwei Lin (Harbin Institute of Technology, P.R. China)
Guanji Leng (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)
Yan Wang (Harbin Institute of Technology, P.R. China)
Miao Zhang (Harbin Institute of Technology, P.R. China)
Mingjian Sun (Harbin Institute of Technology, P.R. China)

47: Evaluation of Muscle Synergies Stability in Human Locomotion: A comparison between normal and fast walking speed
Daniele Rimini (Politecnico di Torino, Italy)
Valentina Agostini (Politecnico di Torino, Italy)
Marco Knaflitz (Politecnico di Torino, Italy)

48: Blood Urea Nitrogen Analyzer Developed to Prevent Acute Stroke-in-Evolution
Rui-Cian Weng (Instrument Technology Research Center, Taiwan)

49: Gait measurements in the transverse plane using a wearable system: An experimental study of test-retest reliability
Valeria Rosso (Politecnico di Torino, Italy)
Laura Gastaldi (Politecnico di Torino, Italy)
Valentina Agostini (Politecnico di Torino, Italy)
Ryo Takeda (Hokkaido University, Japan)
Shigeru Tadano (Hokkaido University, Japan)

Tuesday, May 23

50: Fabrication and calibration of three temperature probes for monitoring the effects of thermal cancer ablation
Carlo Massaroni (Università Campus Bio-Medico di Roma, Italy)
Marcello Ariano (Università Campus Bio-Medico di Roma, Italy)
Paola Saccomandi (IHU-strasbourg, France)
Andrea Polimadei (ENEA Frascati Research Centre, Italy)
Michele Arturo Caponero (ENEA Frascati Research Centre, Italy)
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)
Sergio Silvestri (University Campus Bio-Medico of Rome, Italy)

51: Mechanical Behavior of Photopolymer for Additive Manufacturing Applications
Fan-Chun Hsieh (Instrument Technology Research Center, Taiwan)
Ping-Hung Lin (Instrument Technology Research Center, Taiwan)
Hsu-Pin Pan (Instrument Technology Research Center, Taiwan)
Chih-Sheng Yu (Instrument Technology Research Center, Taiwan)
Chun-Ming Chang (Instrument Technology Research Center, Taiwan)
Yi-Chiuen Hu (Instrument Technology Research Center, Taiwan)

52: NeuroEvolution of Augmenting Topologies based Musculor-Skeletal Arm Neurocontroller
Ruoshi Wen (Harbin Institute of Technology, P.R. China)
Zixi Guo (Harbin Institute of Technology, P.R. China)
Tong Zhao (Harbin Institute of Technology, P.R. China)
Xiang Ma (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)
Zhaojun Wu (Harbin Institute of Technology, P.R. China)

53: Positioning Control on a Collaborative Robot by Sensor Fusion with Liquid State Machines
Davi Sala (UFRGS, Brazil)
Valner Brusamarello (UFRGS, Brazil)
Ricardo de Azambuja (Plymouth University, United Kingdom);
Angelo Cangelosi (Adaptive Behaviour and Cognition Research Group, United Kingdom)

54: A Novel Fault Diagnosis Method for Rolling Bearing Based on EEMD-PE and Multiclass Relevance Vector Machine
Xiaodong Liu (Harbin Institute of Technology, P.R. China)
Yinsheng Chen (Harbin Institute of Technology, P.R. China)
Jingli Yang (Harbin Institute of Technology, P.R. China)

55: Motion Recognition Based on Concept Learning
Xiang Ma (Harbin Institute of Technology, P.R. China)
Tong Zhao (Harbin Institute of Technology, P.R. China)
Ruoshi Wen (Harbin Institute of Technology, P.R. China)
Zhaojun Wu (Harbin Institute of Technology, P.R. China)
Qiang Wang (Harbin Institute of Technology, P.R. China)

56: Identification of the Catenary Structure Wavelength using Pantograph Head Acceleration Measurements
Hongrui Wang (Delft University of Technology, The Netherlands)
Zhigang Liu (Southwest Jiaotong University, The Netherlands)
Alfredo Núñez (Delft University of Technology, The Netherlands)
Rolf Dollevoet (Delft University of Technology, The Netherlands)

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57: Weak signal detection based on underdamped multistable stochastic resonance
Yaguo Lei (Xi'an Jiaotong University, P.R. China);
Zijian Qiao (Xi'an Jiaotong University, P.R. China)
Xuefang Xu (Xi'an Jiaotong University, P.R. China)
Jing Lin (Xi'an Jiaotong University, P.R. China)

58: Dark Channel Prior Principle and Morphology Based Horizon Detection Method
Yabing Lu (Harbin Institute of Technology, P.R. China)
Miao Zhang (Harbin Institute of Technology, P.R. China)
Lingsha Zheng (AVIC Chengdu Aircraft Design & Research Institute, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)

59: Fast and Robust Identification of GSM and LTE Signals
Yahia Eldemerdash (Memorial University, Canada)
Octavia A. Dobre (Memorial University, Canada)
Oktay Üreten (Allen Vanguard, Canada)
Trevor Yensen (Allen Vanguard, Canada)

60: Particle swarm for path planning in a racing circuit simulation
Maurizio Bevilacqua (Cranfield University, United Kingdom)
Antonios Tsourdos (Cranfield University, United Kingdom)

61: FPGA-Based Broken Bar Detection on IM Using OMP Algorithm
Carlos Morales-Perez (INAOE, Mexico)
Jose J. Rangel-Magdaleno (INAOE, Mexico)
Hayde Peregrina-Barreto (INAOE, Mexico)
Juan Ramirez-Cortes (INAOE, Mexico)
Israel Cruz-Vega (INAOE, Mexico)

62: Coherent VI-MLP-CFAR Detector for IDEPAR Demonstrator (DVB-T passive radar) in Ground Traffic Monitoring
Nerea del Rey-Maestre (University of Alcalá, Spain)
Javier Rosado-Sanz (University of Alcalá, Spain)
Pedro-Jose Gomez-del-Hoyo (University of Alcalá, Spain)
David Mata-Moya (University of Alcalá, Spain)
Maria -Pilar Jarabo-Amores (Alcala university, Spain)

63: Making use of continuous measurements for change detection purposes: an application to water distribution networks
Andrea Scozzari (CNR ISTI, Italy)
Gianpiero Brozzo (ACAM Spa, Italy)

64: Quasi-logarithmic frequency resolution approach in DFT based spectral estimation
Carmine Ciofi (University of Messina, Italy)
Graziella Scandurra (University of Messina, Italy)
Gino Giusi (University of Messina, Italy)
Gianluca Cannatà (University of Messina, Italy)

65: Non-parametric power spectrum estimation for Riemann-Liouville fractional order signals
Kurt Barbé (Vrije Universiteit Brussel & Faculty of Sciences / Faculty Medicine (GEWE), Belgium)

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66: Performance Improvement of an Ultrasonic LPS by applying a Multipath Compensation Algorithm
David Gualda (University of Alcala, Spain)
Teodoro Aguilera (University of Extremadura, Spain)
Fernando J. Álvarez Franco (University of Extremadura, Spain)
José M. Villadangos (University of Alcala, Spain)
Alvaro Hernández (University of Alcala, Spain)
Jesus Ureña (University of Alcala, Spain)

67: Measurements of temperature during thermal ablation treatments on ex vivo liver tissue using fiber Bragg grating sensors
Giovanna Palumbo (University of Naples Parthenope, Italy)
Agostino Iadicicco (University of Naples Parthenope, Italy)
Stefania Campopiano (University of Naples Parthenope, Italy)
Daniele Tosi (Nazarbayev University, Kazakhstan)
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)
Carlo Massaroni (Università Campus Bio-Medico di Roma, Italy)
Paolo Verze (University of Naples Federico II, Italy)
Nicola Carlomagno (University of Naples Federico II, Italy)
Vincenzo Tammaro (University of Naples Federico II, Italy)
Juliet Ippolito (University of Naples Federico II, Italy)

68: Development of an Automatic System for Geotechnical Testing
Francesco Adamo (Politecnico di Bari, Italy)
Gregorio Andria (Politecnico di Bari, Italy)
Federica Cotecchia (Politecnico di Bari, Italy)
Attilio Di Nisio (Politecnico di Bari, Italy)
Anna Maria Lucia Lanzolla (Politecnico di Bari, Italy)
Daniela Miccoli (Politecnico di Bari, Italy)
Francesca Sollecito (Politecnico di Bari, Italy)
Maurizio Spadavecchia (Politecnico di Bari, Italy)
Francesco Todaro (Politecnico di Bari, Italy)
Claudia Vitone (Politecnico di Bari, Italy)

69: Monitored Natural Recovery of contaminated marine sediments. Proposal of a monitoring plan for in situ continuous testing and sensing
Sabino De Gisi (Politecnico di Bari, Italy)
Diego Minetto (Politecnico di Bari, Italy)
Francesco Todaro (Politecnico di Bari, Italy)
Anna Maria Lucia Lanzolla (Politecnico di Bari, Italy)
Michele Notarnicola (Politecnico di Bari, Italy)

70: ASTER image for environmental monitoring
Maria Giuseppa Angelini (Politecnico di Bari, Italy)
Domenica Costantino (Politecnico di bari, Italy)
Attilio Di Nisio (Politecnico di Bari, Italy)

Tuesday, May 23

16:00 – 16:20
Coffee break
Room: Council Room

16:00 – 18:00
A Comprehensive Insight into Effective and Informed Archival Journal Publication Process - "Dos and Don'ts"
Invited Speaker: Reza Zoughi
Room: DET V Floor

16:20 – 18:00
Measurement, Instrumentation, and Methodologies for Medical, Biomedical, and Healthcare Systems II
Room: Aula Magna
Chairs: Pasquale Arpaia (University of Naples Federico II, Italy), Octavian Adrian Postolache (Instituto de Telecomunicações, Lisboa/IT & Instituto Universitario de Lisboa, ISCTE-IUL, Portugal)

Clustering analysis of EMG cyclic patterns: A validation study across multiple locomotion pathologies
Valentina Agostini (Politecnico di Torino, Italy)
Samanta Rosati (Politecnico di Torino, Italy)
Cristina Castagneri (Politecnico di Torino, Italy)
Gabriella Balestra (Politecnico di Torino, Italy)
Marco Knaflitz (Politecnico di Torino, Italy)

Comparison Among Low-Cost Portable Systems for Thoracic Impedance Plethysmography
Emanuele Piuzzi (Sapienza University of Rome, Italy)
Stefano Pisa (Sapienza University of Rome, Italy)
Erika Pittella (Sapienza University of Rome, Italy)
Luca Podesta' (Sapienza University of Rome, Italy)
Silvia Sangiovanni (Sapienza University of Rome, Italy)

Cepstral Peak Prominence Smoothed distribution as discriminator of vocal health in sustained vowel
Antonella Castellana (Politecnico di Torino, Italy)
Alessio Carullo (Politecnico di Torino, Italy)
Simone Corbellini (Politecnico di Torino, Italy)
Arianna Astolfi (Politecnico di Torino, Italy)
Massimo Spadola Bisetti (Università degli Studi di Torino, Italy)
Jacopo Colombini (Università degli Studi di Torino, Italy)

An Intelligent Mannequin Based System with Real-Time View of Regional Ophthalmic Blocks
Nimal Kumar (IIT Madras, India)
Boby George (IIT Madras, India)
Mohanasankar Sivaprakasam (IIT Madras, India)

A Phonatory System Simulator for testing purposes of voice-monitoring contact sensors
Federico Casassa (Politecnico di Torino, Italy)
Adriano Troia (National Institute of Metrological Research, Italy)
Alessandro Schiavi (National Institute of Metrological Research, Italy)
Alessio Carullo (Politecnico di Torino, Italy)
Arianna Astolfi (Politecnico di Torino, Italy)
Alberto Vallan (Politecnico di Torino, Italy)
Davide Corona (National Institute of Metrological Research, Italy)

16:20 – 18:00
SS2 - Wireless Sensor Networks in the Internet of Things era
Room: CDF-1
Chairs: Emiliano Sisinni (University of Brescia, Italy), Federico Tramarin (University of Padova, Italy)

Configurable clock service for time-aware IoT applications
Giada Giorgi (University of Padova, Italy)
Claudio Narduzzi (University of Padova, Italy)

IEEE 802.11s performance assessment: from simulations to real-world experiments
Alessandra Flammini (University of Brescia, Italy)
Emiliano Sisinni (University of Brescia, Italy)
Federico Tramarin (University of Padova, Italy)

Analysis of different wavelet segmentation methods for frequency-domain energy detection based spectrum sensing
Leopoldo Angrisani (University of Naples Federico II, Italy)
Domenico Capriglione (University of Salerno, Italy)
Gianni Cerro (University of Cassino and Southern Lazio, Italy);
Luigi Ferrigno (University of Cassino, Italy)
Gianfranco Miele (University of Cassino and Southern Lazio, Italy)

First step towards an IoT implementation of a wireless sensors network for environmental radiation monitoring
Alessandro Tocchi (University of Naples Federico II, Italy)
Vincenzo Roca (University of Naples Federico II, Italy)
Leopoldo Angrisani (University of Naples Federico II, Italy)
Francesco Bonavolontà (University of Naples Federico II, Italy)
Rosario Schiano Lo Moriello (University of Naples Federico II, Italy)

An optimized self-powered P-SSHI circuit for piezoelectric energy harvesting
Manel Zouari (National Engineering School of Sfax Tunisia, Tunisia)
Slim Naifar (University of Sfax, Tunisia)
Olfa Kanoun (Chemnitz University of Technology, Germany)
Nabil Derbel (University of Sfax, Tunisia)

Tuesday, May 23

16:20 – 18:00
Energy and Power Systems 1
Room: CDF-2
Chairs: Lee A Barford (Keysight Laboratories, USA), Lorenzo Peretto (University of Bologna, Italy)

On the Integration of E-Vehicle Data for Advanced Management of Private Electrical Charging Systems
Stefano Rinaldi (University of Brescia, Italy)
Marco Pasetti (University of Brescia, Italy)
Giulio Vivacqua and Massimo Trioni (A2A SpA, Italy)

The Effect of PMU Measurement Chain Quality on Line Parameter Calculation
Markos Asprou (University of Cyprus, Cyprus)
Elias Kyriakides (University of Cyprus, Cyprus)
Mihaela Albu (Politehnica University of Bucharest, Romania)

Measurement-based Parameter Identification of Non-linear Polynomial Frequency Domain Model of Single-phase Four Diode Bridge Rectifier
Markus Mirz (RWTH Aachen University, Germany)
Robert Uhl (RWTH Aachen University, Germany)
Tom Vandeplas (Keysight Technologies, Rotselaar, Belgium)
Lee A Barford (Keysight Laboratories, USA)
Antonello Monti (RWTH Aachen University, Germany)

Photovoltaic Module Cell Temperature Measurements Using Linear Interpolation Technique
Mangeni Gavin (UCSI University, Malaysia)
Rodney H.G. Tan (UCSI University, Malaysia)
Teng Hwang Tan (UCSI University, Malaysia)
Seng Kee Cheo (UCSI University, Malaysia)
Jimmy Vee Hoong Mok (UCSI University, Malaysia)
Jia Yew Pang (Heriot Watt University, Malaysia)

A Novel Equivalent Power Network Impedance Approach for Assessing the Time Reference in Asynchronous Measurements
Alessandro Mingotti (University of Bologna, Italy)
Lorenzo Peretto (University of Bologna, Italy)
Roberto Tinarelli (University of Bologna, Italy)

Tuesday, May 23

16:20 – 18:00
Measurement and Instrumentation for Industrial Applications and Processes II
Room: 7A
Chairs: Dario Petri (University of Trento, Italy), Jesus Ureña (University of Alcala, Spain)

Controlling the Irrigation Process in Agriculture Through Elongated TDR-Sensing Cables
Andrea Cataldo,
Egidio De Benedetto (University of Salento, Italy)
Giuseppe Cannazza (University of Salento, Italy)
Christof Huebner (TRUEBNER GmbH, Germany)
Dennis Trebbels (TRUEBNER GmbH, Germany)
Nicola Giaquinto (Politecnico di Bari, Italy)
Giuseppe M D'Aucelli (Politecnico di Bari, Italy)

Moisture Content Monitoring of Construction Materials: from In-line Production Through On-site Applications
Andrea Cataldo (University of Salento, Italy)
Egidio De Benedetto (University of Salento, Italy)
Giuseppe Cannazza (University of Salento, Italy)
Emanuele Piuzzi (Sapienza University of Rome, Italy)
Erika Pittella (Sapienza University of Rome, Italy)

Parameter Estimation and Performance Bounds for Radiometric Model-based Non-contact Temperature Measurements
Dominik Exel (Johannes Kepler University Linz, Austria)
Stefan Schuster (Voestalpine Stahl Gmbh, Austria)
Bernhard G. Zagar (University of Linz, Austria)
Vera Ganglberger (Voestalpine Stahl Gmbh, Austria)
Johann Reisinger (Voestalpine Stahl Gmbh, Austria)

Mass Flowrate Measurement of Wet Steam Using Combined V-cone and Vortex Flowmeters
Jinxia Li (Tianjin University, P.R. China)
Chao Wang (Tianjin University, P.R. China)
Hongbing Ding (Tianjin University, P.R. China)
Hongjun Sun (Tianjin University, P.R. China)

Force based Tool Wear Detection using Shannon Entropy and Phase Plane
Werner Kollment (University of Leoben, Austria)
Paul O'Leary (University of Leoben, Austria)
Roland Ritt (University of Leoben, Austria)
Thomas Klünsner (Materials Center Leoben, Austria)

Tuesday, May 23

16:20 – 18:00
Measurement of Electric Quantities II
Room: 7B
Chair: Marco Parvis (Politecnico di Torino, Italy), Bernardo Tellini (University of Pisa, Italy)

A Method for Remote Wattmeter Calibration
Zilvinas Nakutis (Kaunas University of Technology, Lithuania)
Marius Saunoris (Kaunas University of Technology, Lithuania)
Ramunas Ramanauskas (Kaunas University of Technology, Lithuania)
Vytautas Daunoras (Kaunas University of Technology, Lithuania)

A Novel Closed-Loop SC Capacitance-to-Frequency Converter with High Linearity
Vijayakumar Sreenath (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)

An FFT Based Readout Scheme for Passive LC Sensors
Anish Babu (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)

A reconfigurable four terminal-pair digitally assisted and fully digital impedance ratio bridge
Jan Kučera (Czech Metrology Institute, Czech Republic)
Jakub Kováč (Czech Metrology Institute, Czech Republic)

Calibration of MV Voltage Instrument Transformer in a Wide Frequency Range
Gabriella Crotti (Istituto Nazionale di Ricerca Metrologia, Italy)
Daniele Gallo (University of Campania Luigi Vanvitelli, Italy)
Domenico Giordano (Istituto Nazionale di Ricerca Metrologica, Italy)
Carmine Landi (Second University of Naples, Italy)
Mario Luiso (University of Campania Luigi Vanvitelli, Italy)
Mohammad Modarres (Politecnico di Torino, Italy)

18:00 – 18:30
Bus Transfer to Valentino Castle

19:00 – 21:00
Welcome Party
Location: Valentino Castle

Wednesday, May 24

8:15 – 17:00
Registration

8:15 – 9:00
Plenary Lecture #3 – "&M Application of the Kernel Theorem of Giuseppe Peano of Turin"
Speaker: Keithley Award Winner, Jerome Blair
Room: Aula Magna

9:00 – 9:15
Award Ceremony: Keithley Award & Innovation in Societal Infrastructure
Room: Aula Magna

9:15 – 9:30
Coffee Break
Room: Council Room

9:30 – 11:10
Measurement, Instrumentation, and Methodologies for Medical, Biomedical, and Healthcare Systems III
Room: Aula Magna
Chair: Kurt Barbé (Vrije Universiteit Brussel, Belgium), Domenico Grimaldi (University of Calabria, Italy)

Non-Uniform Sampling based ADC Architecture using an Adaptive Level-Crossing Technique
Veronica Silva (Universidade Federal Rural do Semiárido, Brazil)
Antonio Lisboa de Souza (Federal University of Paraiba, Brazil);
Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil)
Raimundo Freire (Universidade Federal de Campina Grande - PB, Brazil)

Comparative Evaluation of On-Line Missing Data Regression Techniques in Intrapartum FHR Measurements
Guglielmo Frigo (University of Padova, Italy)
Giada Giorgi (University of Padova, Italy)

A Model for Measuring the Drug Released under the Skin in Transdermal Delivery
Pasquale Arpaia (University of Naples Federico II, Italy)

Integrated Method for Impedance and Low Frequency Noise Measurements
Gino Giusi (University of Messina, Italy)
Graziella Scandurra (University of Messina, Italy)
Carmine Ciofi (University of Messina, Italy)

Factorization of EMG via muscle synergies in walking task: evaluation of intra-subject and inter-subject variability
Juri Taborri (Sapienza, University of Rome, Italy)
Eduardo Palermo (Sapienza, University of Rome, Italy)
Denisa Masiello (Sapienza, University of Rome, Italy)
Stefano Rossi (University of Tuscia, Italy)

Wednesday, May 24

9:30 – 11:10
Robotics, Control, Mechanical, and Material Measurements
Room: CDF-1
Chairs: Niclas Björsell (University of Gävle, Sweden), Ruqiang Yan (Southeast University, P.R. China)

SHAPE Algorithm for Approximate Computation of Angular Velocities in Humeral Motion
Rakesh Krishnan (University of Gävle, Sweden)
Niclas Björsell (University of Gävle, Sweden)

Characterization of the pseudoelastic damping capacity of shape memory alloy wire
Diego Scaccabarozzi (Politecnico di Milano, Italy)
Arash Valiesfahani (Politecnico di Milano, Italy)
Bortolino Saggin (Politecnico di Milano, Italy)
Marianna Magni (Politecnico di Milano, Italy)
Marco Tarabini (Politecnico di Milano, Italy)
Carlo Alberto Biffi (CNR, Italy)
Ausonio Tuissi (CNR, Italy)

Design and experimental evaluation of an infrared instrumentation for haptic interfaces
Anthony Chabrier (CEA, LIST, Interactive Robotics Laboratory, France)
Florian Gosselin (CEA, LIST, Interactive Robotics Laboratory, France)
Franck Gonzalez (Imperial College London, United Kingdom)
Wael Bachta (Sorbonne Universités, UPMC Paris 06, ISIR, France)

In-Hand Object Material Characterization with Fast Level Set in Log-Polar Domain and Dynamic Time Warping
Fei Hui (University of Ottawa, Canada)
Pierre Payeur (University of Ottawa, Canada)
Ana-Maria Cretu (Université du Québec en Outaouais, Canada)

Feasibility of Wireless Pressure Sensors for Aircraft
Juliana Leitzke (Alpen-Adria Universität, Austria)
Hubert Zangl (Alpen-Adria Universität, Austria)

Wednesday, May 24

9:30 – 11:10
Energy and Power Systems II
Room: CDF-2
Chair: David Macii (University of Trento, Italy), Carlo Muscas (University of Cagliari, Italy)

Phasor Measurement Units Performance in Three-Phase Unbalanced Systems
Paolo Castello (University of Cagliari, Italy)
Roberto Ferrero (University of Liverpool, United Kingdom)
Paolo Attilio Pegoraro (University of Cagliari, Italy)
Sergio Toscani (Politecnico di Milano, Italy)

Adaptive Management of Synchrophasor Latency for an Active Phasor Data Concentrator
Paolo Castello (University of Cagliari, Italy)
Carlo Muscas (University of Cagliari, Italy)
Paolo Attilio Pegoraro (University of Cagliari, Italy)
Sara Sulis (University of Cagliari, Italy)

On the Detection of Rapid Voltage Change (RVC) Events for Power Quality Monitoring
David Macii (University of Trento, Italy)
Dario Petri (University of Trento, Italy)

An Open Source Analogue to Digital Converter for Power System Measurements with Time Synchronisation
David Laverty (Queen's University Belfast, United Kingdom)
John Hastings (Queen's University Belfast, United Kingdom)
Xiaodong Zhao (Queen's University Belfast, United Kingdom)

Towards a Global Evaluation of Uncertainty for the Monitoring of Distribution Grids
Andrea Angioni (RWTH Aachen University, Germany)
Adriano Fioresi (Unibo, Germany)
Marco Pau (RWTH Aachen University, Germany)
Lorenzo Peretto (University of Bologna, Italy)
Ferdinanda Ponci (RWTH Aachen University, Germany)
Antonello Monti (RWTH Aachen University, Germany)

Wednesday, May 24

9:30 – 11:10
Measurement of Electric Quantities III
Room: 7A
Chair: Luca Callegaro (INRIM, Italy), Lorenzo Peretto (University of Bologna, Italy)

On the uncertainty of network analysis methods for the calibration of electrical impedance standards at high frequency
Marco Sellone (INRIM, Italy)
Luca Callegaro (INRIM, Italy)
Nosherwan Shoaib (National University of Sciences and Technology (NUST), Pakistan)

Calibration setup for ultralow-current transresistance amplifiers
Ilaria Finardi (Politecnico di Torin, Italy)
Luca Callegaro (INRIM, Italy)

On the Behavior of LED Lamps Under Non-Sinusoidal Voltage Conditions
Lorenzo Peretto (University of Bologna, Italy)
Luigi Rovati (University of Modena and Reggio Emilia, Italy)
Roberto Tinarelli (University of Bologna, Italy)
Mario Bernabei (University of Modena and Reggio Emilia, Italy)

Fast and Automated Verification of Multi-channel Full Time-Domain EMI measurement systems
Marco Azpurua (Universitat Politècnica de Catalunya, Spain)
José Oliva (Universitat Politècnica de Catalunya, Spain)
Marc Pous (Universitat Politècnica de Catalunya, Spain)
Ferran Silva (Universitat Politècnica de Catalunya, Spain)

Cryocooled Programmable and Pulse-driven Josephson Voltage Standards at INRiM
Paolo Durandetto (INRIM, Italy)
Eugenio Monticone (INRIM, Italy)
Bruno Trinchera (INRIM, Italy)
Danilo Serazio (INRIM, Italy)
Andrea Sosso (INRIM, Italy)

Wednesday, May 24

9:30 – 11:10
Non-invasive Measurement Techniques and Instrumentation I
Room: 7B
Chairs: Helena G. Ramos (Instituto de Telecomunicações, Portugal), Artur L. Ribeiro (Instituto de Telecomunicações, Portugal)

Reconstruction of Two-Dimensional Temperature Distribution in Swirling Flames Using TDLAS-Based Tomography
Chang Liu (Beihang University, P.R. China)
Lijun Xu (Beihang University, P.R. China)
Zhang Cao (Beihang University, P.R. China)
Yuzhen Lin (Beihang University, P.R. China)

Magnetic Human Body Communication based on double-inductor coupling
Yicely K. Hernández-Gómez (Universidad Nacional de Colombia, Colombia)
Germán Álvarez-Botero (Universidad Nacional de Colombia, Colombia)
Jan Bacca Rodríguez (Universidad Nacional de Colombia, Colombia)
Fernando Rangel de Sousa (Federal University of Santa Catarina, Brazil)

Towards a Fast Microwave Tomography System for Multiphase Flow Imaging
Malte Mallach (Ruhr-Universität Bochum, Germany)
Thomas Musch (Ruhr-Universität Bochum, Germany)

The Dilation Invariance Principle in Eddy-Current Non-Destructive Evaluation Technique
Prashanth Baskaran (Instituto de Telecomunicações, Portugal)
Artur L. Ribeiro (Instituto de Telecomunicações, Portugal)
Helena G. Ramos (Instituto de Telecomunicações, Portugal)

A Study of Electrical Signature Analysis for Two-Pole Synchronous Generators
Camila Salomon (Universidade Federal de Itajubá, Brazil)
Wilson Santana (Universidade Federal de Itajubá, Brazil)
Erik Bonaldi (Instituto Gnarus, Brazil)
Levy Ely de Lacerda de Oliveira (Instituto Gnarus, Brazil)
Luiz Eduardo Borges da Silva (Universidade Federal de Itajubá, Brazil)
Jonas Borges da Silva (Instituto Gnarus, Brazil)
Germano Lambert-Torres (PS Soluções, Brazil)
Alexandre Pellicel (Termonorte, Brazil)
Marco Aurelio Lopes (Termonorte, Brazil)
Gonçalo Figueiredo (Termonorte, Brazil)

Wednesday, May 24

11:10 – 11:55
Plenary Lecture #4 – "Using Mathematical Measures of Network Complexity and Image Analysis for Cancer Diagnostics and Therapy Design"
Speaker: Jack Tuszynski (University of Alberta, Edmonton, Canada)
Room: Aula Magna

11:55 – 12:30
Award Ceremony & I2MTC 2018 Presentation
Room: Aula Magna

12:30 – 14:00
Lunch
Room: Council Room

14:00 – 17:40
Industry Day Poster Session
Room: DET V Floor

Conducted EMI Equivalent Measurement and Calibration Based on Current Characteristics
Bo Zhao (Jiangsu Institute of Metrology, P.R. China)
Zhiming Feng (Jiangsu Institute of Metrology, P.R. China)
Yuming Ma (Jiangsu Institute of Metrology, P.R. China)
Xiaoming Fan (Shenzhen Zhiyong Electronic Co., Ltd., P.R. China)

Development for Battery Cable Diagnosis System Based on Pulse TDR method
Seung Jin Chang (Yonsei University, Korea)
Moon Kang Jung (Yonsei University, Korea)
Jin Bae Park (Yonsei University, Korea)
Chang Yeop Chae (GM Korea Company, Korea)

14:00 – 15:40
Industry Day Session 1
Room: DET V Floor
Chairs: Simone Corbellini (Politecnico di Torino, Italy), Mirko Marracci (University of Pisa, Italy)

Invited Talk - Electrochemical Noise - Ready for online monitoring of corrosion systems also in the field
Günther Schmitt (IFINKOR, Germany)
Peter Schrembs (IPS, Germany)

A vision-based droplet characterization technique for particle flow analysis
Chih-Yen Chen (Instrument Technology Research Center, Taiwan)
Chun-Jen Weng (Instrument Technology Research Center, Taiwan)
Chun-Fu Lin (Instrument Technology Research Center, Taiwan)
Chi-Wen Hsieh (National Chiayi University, Taiwan)
Der-Chen Huang (Chung Hsing University, Taiwan)
un-Yu Tang (JComm. Ltd., Taiwan)

Wednesday, May 24

DronesBench: a tool for the diagnosis of drones
Pasquale Daponte (University of Sannio, Italy)
Luca De Vito (University of Sannio, Italy)
Francesco Lamonaca (University of Sannio, Italy)
Francesco Picariello (University of Sannio, Italy)
Sergio Rapuano (University of Sannio, Italy)
Maria Riccio (University of Sannio, Italy)
Luca Pompetti (DPM Elettronica S. r. l., Italy)
Mauro Pompetti (DPM Elettronica S. r. l., Italy)

The Optical Payload System Facility (OPSys) for the assembly, alignment and calibration of Space Optical Payloads
Maurizio Deffacis (ALTEC SpA, Italy)
Marta Casti (ALTEC SpA, Italy)
Alessandro Bellomo (ALTEC SpA, Italy)
Silvano Fineschi (INAF Italy, Italy)
Giuseppe Massone (INAF Italy, Italy)
Gerardo Capobianco (INAF Italy, Italy)

Integration and Alignment of the Metis Coronagraph for the Solar Orbiter Mission
Sergio Mottini (Thales Alenia Space, Italy)
Stefano Cesare (Thales Alenia Space, Italy)
Mauro Montabone (Thales Alenia Space, Italy)
Roberto Boccardo (Thales Alenia Space, Italy)
Paolo Sandri (OHB Italia, Italy)
Paolo Sarra (OHB Italia, Italy)
Danilo Morea (OHB Italia, Italy)
Silvano Fineschi (INAF Italy, Italy)
Giuseppe Massone (INAF Italy, Italy)
Gianalfredo Nicolini (INAF Italy, Italy)
Maurizio Pancrazzi (INAF Italy, Italy)
Michela Uslenghi (INAF Italy, Italy)
Marco Castronuovo (Agenzia Spaziale Italiana, Italy)
Rita Carpentiero (Italian Space Agency, Italy)
Roberto Bertacin (Agenzia Spaziale Italiana, Italy)

Wednesday, May 24

14:00 – 15:40
Non-invasive Measurement Techniques and Instrumentation II
Room: Aula Magna
Chairs: Sabrina Grassini (Politecnico di Torino & Politecnico di Torino, Italy), Reza Zoughi (Missouri University of Science and Technoogy, USA)

An Efficient Digitizer for Non-Intrusive AC Voltage Measurement
Shenil PS (College of Engineering Trivandrum, India)
Boby George (Indian Institute of Technology Madras, India)

Image Distortion Characterization due to Equivalent Monostatic Approximation in Near Field Bistatic SAR Imaging
Zahra Manzoor (Missouri University of Science and Technology, USA)
Mohammad Tayeb Ghasr (Missouri University of Science and Technology, USA)
Kristen M Donnell (Missouri University of Science and Technology, USA)

Defects Detection based on Sparse Regularization Method for Electromagnetic Tomography (EMT)
Qi Wang (Tianjin Polytechnic University, P.R. China)
Lisha Cui (Tianjin Polytechnic University, P.R. China)
Jianming Wang (Tianjin Polytechnic University, P.R. China)
Yukuan Sun (Tianjin Polytechnic University, P.R. China)
Weiming Yang (Tianjin Polytechnic University, P.R. China)
Ronghua Zhang (Tianjin Polytechnic University, P.R. China)
Huaxiang Wang (Tianjin University, P.R. China)

A New Dual-Loaded Aperture Probe for Near-Field Millimeter Wave Imaging
Katelyn Brinker (Missouri University of Science and Technology, USA)
Mohammad Tayeb Ghasr (Missouri University of Science and Technology, USA)
Reza Zoughi (Missouri University of Science and Technology, USA)

Effect of Instrument Frequency Uncertainty on Wideband Microwave Synthetic Aperture Radar (SAR) Images
Matthew Horst (Missouri University of Science and Technology, USA)
Mohammad Tayeb Ghasr (Missouri University of Science and Technology, USA)
Reza Zoughi (Missouri University of Science and Technology, USA)

Wednesday, May 24

14:00 – 15:40
Sensors, Actuators, Transducers, and Sensor Fusion I
Room: CDF-1
Chairs: Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil), Luca De Vito (University of Sannio, Italy)

Non-contact Inductive Displacement-to-Digital Converter
Srinivas Rana (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)
Jagadeesh Kumar V (Indian Institute of Technology Madras, India)

A novel dual modality sensor with sensitivities to permittivity and conductivity
Jorge R. Salas Avila (The University of Manchester, United Kingdom)
Kin Yau How (The University of Manchester, United Kingdom)
Wuliang Yin (The University of Manchester, United Kingdom)

Calibration for Tilt-Compensated Electronic Compasses with Alignment Between the Magnetometer and Accelerometer Sensor Reference Frames
Marius Gheorghe (Ideal Aerosmith Inc., USA)

Navigation of a humanoid robot via head gestures based on global and local live videos on Google Glass
Zibo Wang (Tianjin University, P.R. China)
Xi Wen (Tianjin University, P.R. China)
Yu Song (Tianjin University, P.R. China)
Xiaoqian Mao (Tianjin University, P.R. China)
Wei Li (California State University, Bakersfield, USA)
Genshe Chen (Intelligent Fusion Technology, Inc, USA)

A Novel Variable Reluctance-Hall Effect Transduction Technique Based Displacement Sensor
Sandra K. Raveendran (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)
Jagadeesh Kumar V (Indian Institute of Technology Madras, India)

Wednesday, May 24

14:00 – 15:40
Energy and Power Systems III
Room: CDF-2
Chairs: Gilles Mauris (LISTIC - University Savoie Mont Blanc, France), Carlo Muscas (University of Cagliari, Italy)

Measurement System Requirements to Evaluate the Quality of Grid Connections for Offshore Wind Farms
Robert Ferdinand (RWTH Aachen University, Germany)
Marco Cupelli (RWTH Aachen University, Germany)
Antonello Monti (RWTH Aachen University, Germany)

Spatial study of the uncertainties in the localization of partial discharges for different antenna layouts
Jose Manuel Fresno (Universidad Carlos III, Spain)
Guillermo Robles (Universidad Carlos III, Spain)
Juan Manuel Martínez-Tarifa (University Carlos III, Spain)
Brian G Stewart (University of Strathclyde, United Kingdom)

Accurate Access Impedance Measurements on the Power Line with Optimized Calibration Procedures
George Hallak (University of Applied Sciences Ruhrwest, Germany)
Gerd Bumiller (Hochschule Ruhr West, Germany)
Christoph Nieß (Hochschule Ruhr West, Germany)

Development of a Low-Cost Generator for the Testing of Current Transducers under Non-Sinusoidal Conditions
Loredana Cristaldi (Politecnico di Milano, Italy)
Marco Faifer (Politecnico di Milano, Italy)
Christian Laurano (Politecnico di Milano, Italy)
Roberto Ottoboni (Politecnico di Milano, Italy)
Sergio Toscani (Politecnico di Milano, Italy)
Michele Zanoni (Politecnico di Milano, Italy)

A Power Efficient LDO Regulator for Portable CMOS SoC Measurement Systems
Jorge Perez-Bailon (University of Zaragoza, Spain)
Alejandro Marquez (University of Zaragoza, Spain)
Belen Calvo (University of Zaragoza, Spain)
Nicolas Medrano (University of Zaragoza, Spain)

Wednesday, May 24

14:00 – 15:40
Advances in Instrumentation and Measurement Developments and Techniques I
Room: 7A
Chairs: Chairs: Consolatina Liguori (University of Salerno, Italy), Ferdinanda Ponci (RWTH Aachen University, Germany)

Quantitative Determination of Small Dielectric and Loss Tangent Contrasts in Liquids
Kamel Haddadi (University of Lille1/IEMN, France)
Hind Bakli (AMC, France)

Metrological investigation of radiation filtration in x-ray computed tomography
Nadia Kourra (University of Warwick, United Kingdom)
Jason M Warnett (University of Warwick, United Kingdom)
Alex Attridge (University of Warwick, United Kingdom)
Mark A Williams (University of Warwick, United Kingdom)

An Absolute Angle Recovery Method for Dual-Interferometer-Based Rotational Stages
Pablo Serrano Galvez (CERN, Switzerland)
Mark Butcher (CERN, Switzerland)
Alessandro Masi (CERN, Switzerland)

A Laser Radar based on a "Impulse-like" Laser Diode Transmitter and a 2D SPAD/TDC receiver
Jaakko Huikari (University of Oulu, Finland)
Sahba Jahromi (University of Oulu, Finland)
Jussi-Pekka Jansson (University of Oulu, Finland)
Juha Kostamovaara (University of Oulu, Finland)

Investigations on Instability Effects in a Sapphire-based Whispering Gallery Mode Thermometer
Chiara Ramella (Politecnico di Torino, Italy)
Simone Corbellini (Politecnico di Torino, Italy)
Marco Pirola (Politecnico di Torino, Italy)
Lili Yu (Nanjing Tech University, P.R. China)
Vito C Fernicola (INRIM - Istituto Nazionale di Ricerca Metrologica, Italy)

Wednesday, May 24

14:00 – 15:40
SS3 - Measurement in healthcare - applications in industry and in clinical settings I
Room: 7B
Chairs: Paola Saccomandi (IHU-strasbourg, France), Emiliano Schena (University Campus Bio-Medico of Rome, Italy)

Measurement of Knee Articulation Looseness by Videofluoroscopy Image Analysis: CINARTRO
Franco Simini (Universidad de la República, Uruguay)
Dario Santos (Universidad de la República, Uruguay)
Jose E Artigas (Universidad de la República, Uruguay)
Veronica Gigirey (Universidad de la República, Uruguay)
Luis Dibarboure (Universidad de la República, Uruguay)
Luis Francescoli (Universidad de la República, Uruguay)

Real-time temperature monitoring and estimation of thermal damage in pancreas undergoing magnetic resonance-guided laser ablation: first in vivo study
Paola Saccomandi (IHU-strasbourg, France);
Francesco Di Matteo (Università Campus Bio-Medico di Roma, Italy)
Raoul Pop (CHRU-Centre Hospitalier Régional et Universitaire, France);
Céline Giraudeau (IHU-strasbourg, France)
Francesco Marchegiani (IHU-strasbourg, France)
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)
Luca Breschi (Elesta srl, Italy);
Michele Diana (IRCAD, France);
Guido Costamagna (Università Cattolica del Sacro Cuore, Policlinico Gemelli, Italy);
Jacques Marescaux (IRCAD, France)

Assessment of breathing volumes and kinematics by motion capture systems: comparison of protocols
Carlo Massaroni (Università Campus Bio-Medico di Roma, Italy)
Amanda Silvatti (Universidade Federal de Viçosa, Brazil)
Irisz Levai (University of Kent, United Kingdom)
Guglielmo Senesi (Università Campus Bio-Medico di Roma, Italy)
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)
Paola Saccomandi (IHU-strasbourg, France)
Ricardo de Barros (Universidade Estadual de Campinas, Brazil)
Sergio Silvestri (University Campus Bio-Medico of Rome, Italy)

Respiratory and cardiac rates monitoring during MR examination by a sensorized smart textile
Daniela Lo Presti (Università Campus Bio-Medico di Roma, Italy)
Carlo Massaroni (Università Campus Bio-Medico di Roma, Italy)
Paola Saccomandi (IHU-strasbourg, France)
Domenico Formica (Università Campus Bio-Medico di Roma, Italy)
Michele Arturo Caponero (ENEA Frascati Research Centre, Italy)
Francesco Giurazza (Università Campus Bio-Medico di Roma, Italy)
Mario Muto (AORN Cardarelli Hospital, Italy)
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)

Wednesday, May 24

A preliminary study on the validation of an automatic measurement method for Functional Reach assessment by stereophotogrammetry
Carmen D'Anna (University Roma Tre, Italy)
Silvio Scena (Sapienza Università di Roma, Italy)
Andrea Scorza (University Roma Tre, Italy)
Maurizio Schmid (University Roma Tre, Italy)
Francesco Orsini (University Roma Tre, Italy)
Salvatore Andrea Sciuto (University Roma Tre, Italy)
Silvia Conforto (University Roma Tre, Italy)

15:40 – 16:00
Coffee Break
Room: Council Room

16:00 – 17:40
Industry Day Session 2
Room: DET V Floor
Chairs: Federica Tessarin (Thales Alenia Space, Italy) and Tiziano Schillaci (Thales Alenia Space, Italy)

Invited Talk - FlexInspect: a robot-assisted solution for surface inspections and dimensional measurement
Paolo Conca, (ABB Group, Torino, Italy)

Laser Metrology for Next Generation Gravity Mission
Luciana Bonino (Thales Alenia Space, Italy)
Stefano Cesare (Thales Alenia Space, Italy)
Sergio Mottini (Thales Alenia Space, Italy)
Luca Massotti (European Space Agency (ESA), The Netherlands)
Pierluigi Silvestrin (ESA/ESTEC, The Netherlands)
Marco Pisani (Istituto Nazionale di Ricerca Metrologica (INRiM), Italy)
Kolja Nicklaus (SpaceTech GmbH Immenstaad (STI), Germany)

IXV Initial post-flight assessment
Angelo Denaro (Thales Alenia Space - Italia, Italy);
Salvatore Mancuso (European Space Agency (ESA), The Netherlands)

In Flight Temperature Measurement application COSMO Sky Med in orbit thermal data applied on COSMO SkyMed Second Generation design
Edmondo Scorzafava (Italian Space Agency (ASI), Italy)
Federica Tessarin (Thales Alenia Space, Italy)
Emanuela Bevilacqua (Thales Alenia Space, Italy)
Marco Compassi (Thales Alenia Space, Italy)

Exceptional Spacecraft pointing stability: Euclid's 'Hybrid Solution' and its Fine Guidance Sensor
Massimiliano Saponara (Thales Alenia Space, Italy)
Andrea Bosco (Thales Alenia Space, Italy)
Gonzalo Criado (ESA - ESTEC, The Netherlands)

Wednesday, May 24

16:00 – 17:40
Non-invasive Measurement Techniques and Instrumentation III
Room: Aula Magna
Chairs: Francesco Lamonaca (University of Sannio, Italy), Bernardo Tellini (University of Pisa, Italy)

Point cloud acquisition using target image-aided attitude determination method
Teng Xu (Beihang University, P.R. China)
Lijun Xu (Beihang University, P.R. China)
Xiaolu Li (Beihang University, P.R. China)
Hongming Wang (Beihang University, P.R. China)

LiDAR Ranging System Based on Automatic Gain Control and Timing Discriminators
Hongming Wang (Beihang University, P.R. China)
Xiaolu Li (Beihang University, P.R. China)
Lijun Xu (Beihang University, P.R. China)
Teng Xu (Beihang University, P.R. China)

Detection of gap in concrete-metal structures using piezoelectric sensor technique
Paritosh Giri (University of Western Sydney, Australia)
Sergey Kharkovsky (University of Western Sydney, Australia)

Distribution retrieval of temperature from its histograms via the tunable diode laser absorption spectroscopy
Chenhao Ran (Beihang University, P.R. China)
Lijun Xu (Beihang University, P.R. China)
Liuyong Chang (Beihang University, P.R. China)
Zhang Cao (Beihang University, P.R. China)

On the Microwave Photonics Based Pulsed-Time-of-Flight Techniques in the Measurement of the Thickness of Dielectric Sheets
Janne P Aikio (University of Oulu, Finland)
Juha Kostamovaara (University of Oulu, Finland)
Markus Berg (University of Oulu, Finland)
Erkki T. Salonen (University of Oulu, Finland)

Wednesday, May 24

16:00 – 17:40
Sensors, Actuators, Transducers, and Sensor Fusion II
Room: CDF-1
Chairs: Voicu Groza (University of Ottawa, Canada), Aime' Lay-Ekuakille (University of Salento, Italy)

Microwave Characterization of Graphene Films for Sensor Applications
Patrizia Savi (Politecnico di Torino, Italy)
Krishna Naishadham (Georgia Institute of Technology, USA)
Simone Quaranta (University of Ontario, Canada)
Mauro Giorcelli (Politecnico di Torino, Italy)
Ahmad Bayat (Politecnico di Torino, Italy)

A CMOS Low-Power 12-bit Digitally Programmable Analog Sinusoidal Actuation System
Alejandro Marquez (University of Zaragoza, Spain)
Jorge Perez-Bailon (University of Zaragoza, Spain)
Pedro Martinez (University of Zaragoza, Spain)
Belen Calvo (University of Zaragoza, Spain)
Nicolas Medrano (University of Zaragoza, Spain)

Design of a VLC-based Beaconing Infrastructure for Indoor Localization Applications
Gergely Zachár (University of Pannonia, Hungary)
Gergely Vakulya (University of Pannonia, Hungary)
Gyula Simon (University of Pannonia, Hungary)

Investigations Into a Low-cost TDS Sensor for Sterile Plant Tissue Culture Media
Jared Seelye (Massey University, New Zealand)
Gourab Sen Gupta (Massey University, New Zealand)
John Seelye (Plant and Food Research, New Zealand)

Short-Range Contactless Laser Sensor
Michele Norgia (Politecnico di Milano, Italy)
Federico Cavedo (Politecnico di Milano, Italy)
Alessandro Pesatori (Politecnico di Milano, Italy)
Kun Li (Beijing Institute of Technology, P.R. China)

Wednesday, May 24

16:00 – 17:40
Measurement Systems and Theory I
Room: CDF-2
Chairs: Mauro D'Arco (University of Naples Federico II, Italy), Mauro Serpelloni (University of Brescia, Italy)

Novel Telemetric Technique for Passive Resistive Sensors Based on Impedance Phase Angle Measurement at Constant Frequency
Michele Bona (University of Brescia, Italy)
Michela Borghetti (University of Brescia, Italy)
Emilio Sardini (University of Brescia, Italy)
Mauro Serpelloni (University of Brescia, Italy)

Evaluating the uncertainty of dynamic signals sampled by ADCs
Aldo Baccigalupi (University of Naples Federico II, Italy)
Mauro D'Arco (University of Naples Federico II, Italy)
Annalisa Liccardo (University of Naples Federico II, Italy)

Study on calibration algorithms of gyroscopic drift error that affected by the acceleration harmonic errors of vibration table
Zhongxian Zou (Harbin Institute of Technology, P.R. China)
Ming Zeng (Harbin Institute of Technology, P.R. China)
Xin Zhang (Harbin Institute of Technology, P.R. China)
Shen Yi (Harbin Institute of Technology, P.R. China)

The Monte Carlo Method to Uncertainty Calculation of the Displacement Measurement Interferometry in FTIR Spectrometry Systems
Fabiano Sanches Rocha (Universidade Federal de Minas Gerais, Brazil)
Flavio Henrique Vasconcelos (Universidade Federal de Minas Gerais, Brazil)
Hilton Oliveira-Mota (Universidade Federal de Minas Gerais, Brazil)

MEMS Based Inclinometers: Noise Characteristics and Suitable Signal Processing
Roland Schmidt (University of Leoben, Austria)
Paul O'Leary (University of Leoben, Austria)
Roland Ritt (University of Leoben, Austria)
Matthew Harker (University of Leoben, Austria)

Wednesday, May 24

16:00 – 17:40
Advances in Instrumentation and Measurement Developments and Techniques II
Room: 7A
Chairs: Consolatina Liguori (University of Salerno, Italy), Mirko Marracci (University of Pisa, Italy)

A New Instrumentation Concept for the Measurement of Polymer Compressive Creep Behavior
Silvia Brunbauer (Materials Center Leoben Forschung GmbH, Austria)
Paul O'Leary (University of Leoben, Austria)
Andreas Kaufmann (HOERBIGER Ventilwerke GmbH & Co. KG, Austria)

Software Defined Dissemination of Traceability - The Future
Linoh A. Magagula (National Metrology Institute of South Africa, South Africa)

Multi-rate signal processing based model for high-speed digitizers
Pietro Monsurrò (University of Rome "La Sapienza", Italy)
Alessandro Trifiletti (University of Rome "La Sapienza", Italy)
Mauro D'Arco (University of Naples Federico II, Italy)
Leopoldo Angrisani (University of Naples Federico II, Italy)

Optimization of the photoelastic fringe pattern processing for the stress evaluation in scintillating anisotropic media
Pier Paolo Natali (Università Politecnica delle Marche, Italy)
Luigi Montalto (Università Politecnica delle Marche, Italy)
Fabrizio Davì (Università Politecnica delle Marche, Italy)
Nicola Paone (Università Politecnica delle Marche, Italy)
Daniele Rinaldi (Università Politecnica delle Marche, Italy)
Lorenzo Scalise (Università Politecnica delle Marche, Italy)

Measuring the Best Linear Approximation of Wiener Systems Using Multilevel Sequences
Alessio De Angelis (University of Perugia, Italy)
Johan Schoukens (Vrije Universiteit Brussel, Belgium)
Keith Godfrey (University of Warwick, United Kingdom)
Paolo Carbone (University of Perugia, Italy)

Wednesday, May 24

16:00 – 17:40
SS3 - Measurement in healthcare: applications in industry and in clinical settings II
Room: 7B
Chairs: Paola Saccomandi (IHU-strasbourg, France), Emiliano Schena (University Campus Bio-Medico of Rome, Italy)

Development and preliminary characterization of a novel system for the force platforms dynamic calibration
Francesco Orsini (Roma Tre University, Italy)
Andrea Rossi (Roma Tre University, Italy)
Andrea Scorza (Roma Tre University, Italy)
Salvatore Andrea Sciuto (Roma Tre University, Italy)

A Novel Sensor for Wrist based Optical Heart Rate Monitor
Payal Mohapatra (IIT Madras, India)
Preejith Sp (IIT Madras, India)
Mohanasankar Sivaprakasam (IIT Madras, India)

Use of phantoms and test objects for Local Dynamic Range evaluation in medical ultrasounds: a preliminary study
Andrea Scorza (Roma Tre University, Italy)
Francesco Orsini (Roma Tre University, Italy)
Salvatore Andrea Sciuto (Roma Tre University, Italy)

Tactile piezoresistive sensors for robotic application: design and metrological characterization
Paola Saccomandi (IHU-strasbourg, France);
Annalisa Fasano (Università Campus Bio-Medico, Italy)
Anna Lisa Ciancio (Università Campus Bio-Medico, Italy)
Loredana Zollo (Università Campus Bio-Medico, Rome, Italy)
Maria Carrozza (Scuola Superiore Sant'Anna, Italy)
Domenico Camboni (Scuola Superiore Sant'Anna, Italy)
Emiliano Schena (Università Campus Bio-Medico, Italy)
Calogero Maria Oddo (Scuola Superiore Sant'Anna, Italy)

Fabrication and preliminary assessment of a fiber optic-based relative humidity sensor for application in mechanical ventilation
Carlo Massaroni (Università Campus Bio-Medico di Roma, Italy)
Paola Saccomandi (IHU-strasbourg, France)
Michele Arturo Caponero (Research Center Enea, Italy)
Rosaria D'Amato (Research Center Enea, Italy)
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)

18:00 – 18:30
Bus Transfer Departure to Reggia di Venaria

19:00 – 22:30
Gala Dinner – Venaria Reale

23:00 – 23:30
Bus Transfer to Torino

Thursday, May 25

8:30 – 16:00
Registration

8:50 – 10:30
SS4 - Recent advances in fiber optic sensors: sensor design, instrumentation and measurement
Room: Aula Magna
Chairs: Emiliano Schena (University Campus Bio-Medico of Rome, Italy), Alberto Vallan (Politecnico di Torino, Italy)

Assessment of a linearly chirped fiber Bragg grating sensor under linear and non-linear temperature gradient
Ambra Varalda (Università Campus Bio-Medico di Roma, Italy)
Carlo Massaroni (Università Campus Bio-Medico di Roma, Italy)
Paola Saccomandi (IHU-strasbourg, France)
Daniele Tosi (Nazarbayev University, Kazakhstan)
Andrea Polimadei (ENEA Frascati Research Centre, Italy)
Michele Arturo Caponero (ENEA Frascati Research Centre, Italy)
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)

Characterization of fiber optic distributed temperature sensors for tissue laser ablation
Riccardo Gassino (Politecnico di Torino, Italy)
Alberto Vallan (Politecnico di Torino, Italy)
Guido Perrone (Politecnico di Torino, Italy)
Maria Konstantaki (Institute of Electronic Structure and Laser, FORTH – Hellas, Greece)
Stavros Pissadakis (Institute of Electronic Structure and Laser, FORTH – Hellas, Italy)

Single mode-multimode-single mode optical fiber sensors: review and application to temperature measurements using a bend-insensitive fiber
Massimo Olivero (Politecnico di Torino, Italy)
Alberto Vallan (Politecnico di Torino, Italy)
Renato Orta an(Politecnico di Torino, Italy)d
Guido Perrone (Politecnico di Torino, Italy)

Temperature measurements on overhead lines using Fiber Bragg Grating sensors
Fabián Barón (Universidad Nacional de Colombia, Colombia)
Germán Álvarez-Botero (Universidad Nacional de Colombia, Colombia)
Francisco Amortegui (Universidad Nacional de Colombia, Colombia)
Daniel Pastor (Universidad Politécnica de Valencia, Spain)
Gloria Margarita Varón Durán (Universidad Nacional de Colombia, Colombia)

Research for Wearable Multiple Vital Sign Sensor using Fiber Bragg Grating-Verification of several pulsate points in human body surface-
Shun Chino (Shinshu University, Japan)
H Ishizawa (Shinshu University, Japan)
Satoshi Hosoya (Shinshu University, Japan)
Shouhei Koyama (Shinshu University, Japan)
Keisaku Fujimoto (Shinshu University, Japan)
Takashi Kawamura (Shinshu University, Japan)

Thursday, May 25

8:50 – 10:30
Sensors, Actuators, Transducers, and Sensor Fusion III
Room: CDF-1
Chairs: Luca De Vito (University of Sannio, Italy), Andrew Taberner (University of Auckland, New Zealand)

Vapor pressure thermometry at room temperature
Callum Johnston (University of Auckland, New Zealand)
Poul F Nielsen (University of Auckland, New Zealand)
Ian Hunter (MIT, USA)
Andrew Taberner (University of Auckland, New Zealand)

Position Uncertainty of a System for the Localization of a Reciprocating Drill for Geological Inspections
Marco Tarabini (Politecnico di Milano, Italy)
Diego Scaccabarozzi (Politecnico di Milano, Italy)
Bortolino Saggin (Politecnico di Milano, Italy)
Pietro Marzaroli (Politecnico di Milano, Italy)
Hermes Giberti (Università di Pavia, Italy)

A Wireless Sensor Network for the Biomechanical Analysis of the Gait
Felipe Mota (Federal University of Minas Gerais, Brazil)
Hilton Oliveira-Mota (Federal University of Minas Gerais, Brazil)
Flavio Henrique Vasconcelos (Federal University of Minas Gerais, Brazil)

A Wide Range Planar Coil Based Displacement Sensor with High Sensitivity
Anish Babu (Indian Institute of Technology Madras, India)
Boby George (Indian Institute of Technology Madras, India)

A Comparative Study of Polymer Coated Capacitive Sensors for Soil Moisture Sensing
Anindita Kalita (Indian Institute of Technology, Kharagpur, India)
Moupali Chakraborty (Indian Institute of Technology, Kharagpur, India)
Karabi Biswas (Indian Institute of Technology, Kharagpur, India)

Thursday, May 25

8:50 – 10:30
Measurement Systems and Theory II
Room: CDF-2
Chairs: Gregorio Andria (Politecnico di Bari, Italy), Alessandro M Ferrero (Politecnico di Milano, Italy)

Smartphone-based Measurements of LTE Network Performance
Stefania Zinno (University Federico II of Naples, Italy)
Stefano Avallone (University of Naples, Italy)
Nicola Pasquino (University of Naples Federico II, Italy)
Domenico Casillo (University of Naples Federico II, Italy)

Influence of measurement time on acoustic noise uncertainty
Consolatina Liguori (University of Salerno, Italy)
Alessandro Ruggiero (University of Salerno, Italy)
Domenico Russo (University of Salerno, Italy)
Paolo Sommella (University of Salerno, Italy)

Moments and Maximum Entropy Method for Expanded Uncertainty Estimation in Measurements
Arvind Rajan (Monash University, Malaysia)
Ye Chow Kuang (Monash University, Malaysia)
Melanie Ooi (Heriot-Watt University, Malaysia)
Serge Demidenko (Massey University, New Zealand)

An extension of Kalman filter within the possibility theory
Simona Salicone (Politecnico di Milano, Italy)
Wei Jiang (National University of Defense Technology, P.R. China)
Alessandro M Ferrero (Politecnico di Milano, Italy)
Roberto Ferrero (University of Liverpool, United Kingdom)
Qi Zhang (National University of Defense Technology, Italy)

Capacitance to Digital Converter Based Parallelized Multi-Channel Measurement System
Matthias Flatscher (Graz University of Technology, Austria)
Gerald Schwarz (Graz University of Technology, Austria)
Markus Neumayer (Graz University of Technology, Austria)
Thomas Bretterklieber (Graz University of Technology, Austria)

Thursday, May 25

8:50 – 10:30
Measurement and Instrumentation for Industrial Applications and Processes III
Room: 7A
Chairs: Paolo Carbone (University of Perugia, Italy), Ada Fort (University of Siena, Italy)

Analisys of Modular Bridge Platform for Heterogeneous Software Defined Networking in Smart City Applications
Stefano Rinaldi (University of Brescia, Italy)
Paolo Ferrari (University of Brescia, Italy)
Alessandra Flammini (University of Brescia, Italy)

Design of a Dual Camera Children Monitoring System based on Motion Tracking Technology
Weiyang Zhang (Tianjin University, P.R. China)
Ziqiang Cui (Tianjin University, P.R. China)
Huaxiang Wang (Tianjin University, P.R. China)

Analysis of simultaneous 3D positioning and attitude estimation of a planar coil using inductive coupling
Antonio Moschitta (University of Perugia, Italy)
Alessio De Angelis (University of Perugia, Italy)
Marco Dionigi (University of Perugia, Italy)
Paolo Carbone (University of Perugia, Italy)

Using a SVD-based algorithm for T2 spectrum calculation in TD-NMR application to detect hidden defects in hazelnuts
Domenico Di Caro (University of Salerno, Italy)
Consolatina Liguori (University of Salerno, Italy)
Antonio Pietrosanto (University of Salerno, Italy)
Paolo Sommella (University of Salerno, Italy)

Thursday, May 25

8:50 – 10:30
SS8 - Advances in Environmental Measurements and Monitoring
Room: 7B
Chairs: Attilio Di Nisio (Politecnico di Bari, Italy), Maurizio Spadavecchia (Politecnico di Bari, Italy)

Transmission Line Simulator for TDR-Based Measurements
Giuseppe M D'Aucelli (Politecnico di Bari, Italy)
Nicola Giaquinto (Politecnico di Bari, Italy)
Emanuele Piuzzi (Sapienza University of Rome, Italy)
Andrea Cataldo (University of Salento, Italy)
Egidio De Benedetto (University of Salento, Italy)
Giuseppe Cannazza (University of Salento, Italy)

Permittivity Measurement on Construction Materials Through Free Space Method
Stefano Pisa (Sapienza University of Rome, Italy)
Erika Pittella (Sapienza University of Rome, Italy)
Emanuele Piuzzi (Sapienza University of Rome, Italy)
Paolo D'Atanasio (ENEA Casaccia Research Centre, Italy)
Alessandro Zambotti (ENEA Casaccia Research Centre, Italy)

Design of Microspheres and Microbubbles for Environmental Chemical/Biological Optical Sensing
Mario Christian Falconi (Politecnico di Bari, Italy)
Giuseppe Palma (Politecnico di Bari, Italy)
Angela Ameruoso (Politecnico di Bari, Italy)
Claudio Laterza (Politecnico di Bari, Italy)
Stefano Popolizio (Politecnico di Bari, Italy)
Luca Rinaldi (Politecnico di Bari, Italy)
Andrea Rizzi (Politecnico di Bari, Italy)
Gabriella Testa (Politecnico di Bari, Italy)
Francesco Tragni (Politecnico di Bari, Italy)
Francesco Chiavaioli (Istituto di Fisica Applicata Nello Carrara, Italy)
Francesco Baldini (Istituto di Fisica Applicata Nello Carrara, Italy)
Daniele Farnesi (Istituto di Fisica Applicata Nello Carrara, Italy)
Gualtiero Nunzi Conti (Istituto di Fisica Applicata Nello Carrara, Italy)
Stefano Pelli (Istituto di Fisica Applicata Nello Carrara, Italy)
Giancarlo Cesare Righini (Istituto di Fisica Applicata Nello Carrara, Italy)
Silvia Soria (Istituto di Fisica Applicata Nello Carrara, Italy)
Cosimo Trono (Istituto di Fisica Applicata Nello Carrara, Italy)
Francesco Prudenzano (Politecnico di Bari, Italy)

Low-cost, rapid deployment, over-the-top HVAC and room thermal efficiency system using open source hardware design
Luke Russell (Carleton University, Canada)
Rafik Goubran (Carleton University, Canada)

Photo-Induced combustion of Gaseous Fuels using Carbon Nanotubes as Ignitor Agents: driving and measuring systems, Characterizations
Paolo Visconti (University of Salento, Italy)
Patrizio Primiceri (University of Salento, Italy)
Luciano Strafella (University of Salento, Italy)
Aime' Lay-Ekuakille (University of Salento, Italy)
Antonio Paolo Carlucci (University of Salento, Italy)

Thursday, May 25

10:30 – 10:50
Coffee Break
Room: Council Room

10:50 – 12:30
SS6 - Instrumentation and measurement for improving quality, reliability and safety: new perspectives for research and industry
Room: Aula Magna
Chairs: Lorenzo Ciani (University of Florence, Italy), Loredana Cristaldi (Politecnico di Milano, Italy)

Target Measurements Influence on Level Crossing Detection System Safety Assessment
Tommaso Addabbo (University of Siena, Italy)
Cristian Della Giovampaola (University of Siena, Italy)
Ada Fort (University of Siena, Italy)
Marco Mugnaini (University of Siena, Italy)
Alberto Toccafondi (University of Siena, Italy)
Valerio Vignoli (University of Siena, Italy)

A Hybrid Approach for Solar Radiation and Photovoltaic Power Short-Term Forecast
Giacomo Leone (Politecnico di Milano, Italy)
Loredana Cristaldi (Politecnico di Milano, Italy)
Roberto Ottoboni (Politecnico di Milano, Italy)

Unbalance Fault Localization in Rotating Machinery Disks Using EEMD and Optimized Multi-class SVM
Mohammad Rahbar (University of Guilan, Iran)
Saeed Amirkhani (University of Guilan, Iran)
Ali Chaibakhsh (University of Guilan, Iran)
Faraz Rahbar (University of Guilan, Iran)

Component Level Energy Accounting and Fault Detection on Electrical Devices Using Power Signatures
Marius Marcu (Politehnica University of Timisoara, Romania)
Marius Darie (INSEMEX, Romania)
Cosmin Cernazanu (Politehnica University of Timisoara, Romania)

Defect Localisation in Photovoltaic Panels with the Help of Synchronized Thermography
Christian Schuss (University of Oulu, Finland)
Kari Remes (University of Oulu, Finland)
Kimmo Leppänen (Oy GW Berg & Co Ab, Finland)
Juha Saarela and Tapio Fabritius (University of Oulu, Finland)
Bernd Eichberger (Graz University of Technology, Austria)
Timo Rahkonen (University of Oulu, Finland)

Thursday, May 25

10:50 – 12:30
SS7 - Monitoring and control in chemical, pharmaceutical and process industry
Room: CDF-1
Chairs: Antonello Barresi (Politecnico di Torino, Italy), Davide Fissore (Politecnico di Torino, Italy)

On the use of temperature measurement to monitor a freeze-drying process for pharmaceuticals
Davide Fissore (Politecnico di Torino, Italy)
Roberto Pisano (Politecnico di Torino, Italy)
Antonello Barresi (Politecnico di Torino, Italy)

Freeze-drying monitoring via Pressure Rise Test: the role of the pressure sensor dynamics
Roberto Pisano (Politecnico di Torino, Italy)
Davide Fissore (Politecnico di Torino, Italy)
Antonello Barresi (Politecnico di Torino, Italy)

Matched Filter for Microwave-Based Detection of Dielectric Objects in Powders
Johan Nohlert (Chalmers University of Technology, Sweden)
Thomas Rylander (Chalmers University of Technology, Sweden)
Tomas McKelvey (Chalmers University of Technology, Sweden)

Application of Focused Ultrasonic Sensors for Suspension Measurement of Solid-Liquid Two-Phase Flow
YiDan Xia (China Jiliang University, P.R. China)
Dailiang Xie (China Jiliang University, P.R. China)
YaLi An (China Jiliang University, P.R. China)
ZhiPeng Xu (China Jiliang University, P.R. China)

Mass Flow Measurement of Two-phase Carbon Dioxide Using Coriolis Flowmeters
Lijuan Wang (North China Electric Power University, P.R. China)
Jinyu Liu (University of Kent, United Kingdom)
Yong Yan (University of Kent, United Kingdom)
Xue Wang (University of Kent, United Kingdom)
Tao Wang (KROHNE Ltd, United Kingdom)

Thursday, May 25

10:50 – 12:30
Signal Processing Techniques II
Room: CDF-2
Chairs: Emma Paola Angelini (Politecnico di Torino, Italy), Pasquale Daponte (University of Sannio, Italy)

Which Sampling Method More Suitable for Portable Electronic Noses: Classic or Bio-inspired one?
Pei-Feng Qi (Tianjin University, P.R. China)
Qing-Hao Meng (Tianjin University, P.R. China)
Ying-Jie Liu (Tianjin University, P.R. China)
Ming Zeng (Tianjin University, P.R. China)

Fast and Secure Chaotic Stream Cipher with a MEMS-Based Seed Generator
Miguel Garcia-Bosque (University of Zaragoza, Spain)
Carlos Sanchez-Azqueta (University of Zaragoza, Spain)
Adrian Perez (University of Zaragoza, Spain)
Antonio D Martínez (University of Zaragoza, Spain)
Santiago Celma (University of Zaragoza, Spain)

Soot Propensity Detection by Eulerian Video Magnification
Julio Ignacio Pino (Universidad Técnica Federico Santa María, Chile)
Juan Cuevas (The University of Queensland, Australia)
Felipe Escudero (Aix-Marseille University, France)
Pedro Reszka (Universidad Adolfo Ibañez, Chile)
Andrés Fuentes (Universidad Técnica Federico Santa María, Chile)

Towards Solving Massive Regression Problems: Least Squares Multisplitting
Gilles Inghelbrecht (Vrije Universiteit Brussel, Belgium)
Kurt Barbé (Vrije Universiteit Brussel, Belgium)

Experimental Characterization of a RF Mixer for Wideband Data Acquisition Systems
Pasquale Daponte (University of Sannio, Italy)
Luca De Vito (University of Sannio, Italy)
Grazia Iadarola (University of Sannio, Italy)
Sergio Rapuano (University of Sannio, Italy)

Thursday, May 25

10:50 – 12:30
Measurement and Instrumentation for Industrial Applications and Processes IV
Room: 7A
Chairs: Yu-Fen Chang (University of Bergen, Norway), Antonio Moschitta (University of Perugia, Italy)

Study and Analysis of Two GMR-Based Eddy-Current Probes for Defect-Detection
Tapabrata Sen (Indian Institute of Technology Kharagpur, India)
Chandrika Sreekantan Anoop (Indian Institute of Space Science and Technology, India)
Siddhartha Sen (Indian Institute of Technology Kharagpur, India)

Design of a Smart Sensor for Dyebath Concentration Measurement in Textile Industry
Mehmet Taygun (Eliar Electronics Corp., Turkey)
Ahmet Cezayirli (Eliar Electronics Corp., Turkey)

Automatic compensation of primary field coupling for a frequency-domain electromagnetic induction sensor
Davorin Ambruš (University of Zagreb, Croatia)
Darko Vasić (University of Zagreb, Croatia)
Vedran Bilas (University of Zagreb, Croatia)

TDoA Based Positioning using Ultrasound Signals and Wireless Nodes
Alessio De Angelis (University of Perugia, Italy)
Antonio Moschitta (University of Perugia, Italy)
Antonella Comuniello (University of Perugia, Italy)

Compound Quality Assessment in Laser Beam Melting Processes Using Layer Images
Joschka zur Jacobsmühlen (RWTH Aachen University, Germany);
Stefan Kleszczynski (University of Duisburg-Essen, Germany)
Gerd Witt (University of Duisburg-Essen, Germany)
Dorit Merhof (RWTH Aachen University, Germany)

Thursday, May 25

10:50 – 12:30
Measurement Applications and Software I
Room: 7B
Chairs: Simone Corbellini (Politecnico di Torino, Italy), Octavian Adrian Postolache (Instituto de Telecomunicações, Lisboa/IT & Instituto Universitario de Lisboa, ISCTE-IUL, Portugal)

Low-frequency spectral estimation (f<1 Hz) employing PC soundcards
Graziella Scandurra (University of Messina, Italy)
Gino Giusi (University of Messina, Italy)
Gianluca Cannatà (University of Messina, Italy)
Carmine Ciofi (University of Messina, Italy)

A Markovian model for the computation time of real-time applications
Luca Abeni (University of Trento, Italy)
Daniele Fontanelli (University of Trento, Italy)
Luigi Palopoli (University of Trento, Italy)
Bernardo Villalba Frìas (University of Trento, Italy)

Integration of a Micro Reactor System to a ICP Mass Spectrometer
Vinh Quang Do (Center for Life Science Automation - CELISCA, Germany)
Heidi Fleischer (University of Rostock, Germany)
Kerstin Thurow (Center for Life Science Automation - CELISCA, Germany)

Automated Combination of the Results of Elemental and Structural Analysis with the Help of a learning Knowledgebase to Identify the contained Analytes
Martin Adam (University of Rostock, Germany)
Heidi Fleischer (University of Rostock, Germany)
Kerstin Thurow (Center for Life Science Automation - CELISCA, Germany)

Exploring the Current Consumption of an Intel Edison Module for IoT Applications
Tung Minh Dam (Hallym University, Korea)
Jeong-Gun Lee (Hallym University, Korea)
Toan Van Nguyen (Hallym University, Korea)

12:30 – 14:00
Lunch
Room: Council Room

Thursday, May 25

14:00 – 15:30
Poster Session
Room: DET Room II
Chairs: Emma Paola Angelini (Politecnico di Torino, Italy), Francesco Lamonaca (University of Sannio, Italy)

71: Classifying Measured Electrocardiogram Signal Quality Using Deep Belief Networks
Bahareh Taji (University of Ottawa, Canada)
Adrian D.C. Chan (Carleton University, Canada)
Shervin Shirmohammadi (University of Ottawa, Canada)

72: Monitoring of train driver's alertness: a feasibility study
Diego Scaccabarozzi (Politecnico di Milano, Italy)
Laura Mazzola (Politecnico di Milano, Italy)
Marco Bocciolone (Politecnico di Milano, Italy)
Ferruccio Resta (Politecnico di Milano, Italy)
Bortolino Saggin (Politecnico di Milano, Italy)

73: On the Use of Fluxmetric Methods for Characterizing Feebly Magnetic Materials
Pasquale Arpaia (University of Naples Federico II, Italy)
Marco Buzio (CERN, Switzerland)
Annalisa Liccardo (University of Naples Federico II, Italy)
Alessandro Parrella (University of Lisbon, Portugal)

74: Measurement of Intake Airflow in Cylinder Diesel Engine by Industrial Computed Tomography
Xiaofan Zhang (South China University of Technology, P.R. China)
Lifu Li (South China University of Technology, P.R. China)

75: PIV measurements of the instantaneous velocities of flow in an annular Duct
Marlon Hernandez (University of São Paulo & EESC - USP, Brazil)
Andreza Bortoloti (University of São Paulo & EESC - USP, Brazil)
Oscar M H Rodriguez (University of São Paulo & EESC - USP, Brazil)
Victor Baptistella (University of São Paulo & EESC - USP, Brazil)

76:Humidification apparatus and data analysis for supersonic condensation of moist gas
Chao Wang (Tianjin University, P.R. China)
Daxuan Lin (Tianjin University, P.R. China)
Hongbing Ding (Tianjin Uinversity, P.R. China)
Gang Wang (Tianjin University, P.R. China)

77: Induced and Transferred Charge Signals Decoupling Based on Discrete Wavelet Transform for Dilute Gas-Solid Two-Phase Flow Measurement
Chao Wang (Tianjin University, P.R. China)
Ni Zhan (Tianjin University, P.R. China)
Jingyu Zhang (Tianjin University, P.R. China)

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78: Eddy current testing on weld defect based on the dual frequency independent component analysis
Chao Wang (Tianjin University, P.R. China)
Kai Wang (Tianjin University, P.R. China)
Zheng Cong (Tianjin University, P.R. China)
Ziqiang Cui (Tianjin University, P.R. China)

79: Optical power model for low power laser diodes
Ramon Borras (Universitat Politècnica de Catalunya, Spain);
Joaquin del Rio (Universitat Politècnica de Catalunya, Spain)

80: Design of the AXIe Instrument Module Interfacing Component
Qiao JiaQing (Harbin Institute of Technology, P.R. China)
Xianzhao Jia (Harbin Institute of Technology, P.R. China)
Xinyu Zhao (China Aero-Poly Technology Establishment, P.R. China);
Feng Lei (Harbin Institute of Technology, P.R. China)
Wenbin Zheng (Harbin Institute of Technology, P.R. China)
Ping Fu (Harbin Institute of Technology, P.R. China)
Minglong Zhu (Harbin Institute of Technology, P.R. China)
Hongtao Yin (Harbin Institute of Technology, P.R. China)

81: A Virtual Instrument for Diagnosis to Substation Grounding Grids in Harsh Electromagnetic Environment
Hengli Song (China University of Geosciences, P.R. China)
Haobin Dong (China University of Geosciences, P.R. China)
Peng Zhang (University of Technology Sydney, P.R. China)

82: Analysis, Design, Realization and Test of a Sensor Network for Aerospace Applications
Fabio Leccese (Università Roma Tre, Italy)
Marco Cagnetti (Università Roma Tre, Italy)
Andrea Scorza (Università Roma Tre, Italy)
Enrico Silva (Università Roma Tre, Italy);
Salvatore Andrea Sciuto (Università Roma Tre, Italy)
Kostiantyn Torokhtii (Università Roma Tre, Italy)

83: Study and characterization of a Rogowski coil with superparamagnetic magnetite core
Mirko Marracci (University of Pisa, Italy)
Bernardo Tellini (University of Pisa, Italy)
Elisa Bertolucci (University of Pisa, Italy)

84: Magnetic Shielding of Rogowski Coils
Karel Draxler (Czech Technical University in Prague, Czech Republic)
Renata Styblikova (Czech Metrology Institute, Czech Republic)

85: A Gas Ultrasonic Flowmeter for Low Pressure Applications
Weiguo Zhao (China Jiliang University, P.R. China)
Jieyong Yu (China Jiliang University, P.R. China)
Shengyi Zhang (Zhejiang Cangnan Instrument Group, P.R. China)
Chaochuan Huang (Zhejiang Cangnan Instrument Group, P.R. China)
Jingdian Lin (Zhejiang Cangnan Instrument Group, P.R. China)

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86: Eliminating Re-Burn-In in Semiconductor Manufacturing through Statistical Analysis of Production Test Data
Hung Pham (RMIT University, Vietnam)
Serge Demidenko (Massey University, New Zealand)
Giovanni Maria Merola (Xi'an Jioatong Liverpool University, P.R. China)

87: Comparison between Sine Wave Fitting and Zero-Crossing Methods Applied to QCM Impedance Measurements
Juan Antonio Chávez (Universitat Politècnica de Catalunya, Spain)
Miguel Jesús García (Universitat Politècnica de Catalunya, Spain)
Oliver Millán Blasco (Universitat Politècnica de Catalunya, Spain)
Ignasi Tur (Universitat Politècnica de Catalunya, Spain)
Antoni Turó (Universitat Politècnica de Catalunya, Spain)
Miquel A Amer (Escola Universitària Salesiana de Sarrià, Spain)
Jordi Salazar (Universitat Politècnica de Catalunya, Spain)

88: Simple Optical Method for Measuring Oil-Mist Lubrication
Michele Norgia (Politecnico di Milano, Italy)
Alessandro Pesatori (Politecnico di Milano, Italy)

89: A Deep Learning based Soft Sensor for a Sour Water Stripping Plant
Salvatore Graziani (University of Catania, Italy)
Maria Gabriella Xibilia (University of Messina, Italy)

90: Non-reproducible alignment and fitting algorithm effects on Laser Radar measurement
Ercihan Kiraci (University of Warwick, United Kingdom)
Pasquale Franciosa (University of Warwick, United Kingdom)
Jason M Warnett (University of Warwick, United Kingdom)
Alex Attridge (University of Warwick, United Kingdom)
Mark A Williams (University of Warwick, United Kingdom)

91: Domestic electrical standard system for Power Line Communication tests
Fabrizio Ciancetta (University of L'Aquila, Italy)
Flavio D'Innocenzo (University of L'Aquila, Italy)
Edoardo Fiorucci (University of L'Aquila, Italy)
Giovanni Bucci (University of L'Aquila, Italy)

92: An Instrument for Measuring Force Vector and Frequency of CPR Compressions
Lorran Ferreira (LNCC/MCTI, Brazil)
Graziele Kapps (LNCC/MCTI, Brazil)
Jauvane C. Oliveira (National Laboratory for Scientific Computing, Brazil)
Shervin Shirmohammadi (University of Ottawa, Canada)

93: Linearity error in Clamp-on ultrasonic flowmeters due to the installation on pipes made of dispersive materials
Oliver Millán Blasco (Universitat Politècnica de Catalunya, Spain)
Jordi Salazar (Universitat Politècnica de Catalunya, Spain)
Juan Antonio Chávez (Universitat Politècnica de Catalunya, Spain)
Antoni Turó (Universitat Politècnica de Catalunya, Spain)
Miguel Jesús García (Universitat Politècnica de Catalunya, Spain)

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94: Determination of elongation of electrically small objects in building structures by polarimetric synthetic aperture radar
Daniel Rönnow (University of Gävle, Sweden)
Baptiste Laporte-Fauret (Bordeaux INP, France)
Niclas Björsell (University of Gävle, Sweden)

95: A Fast Inversion Method for 2-D Flame Temperature Measurement
Biao Zhang (Southeast University, P.R. China)
Shengnan Wang (Southeast University, P.R. China)
Chuanlong Xu (Southeast University, P.R. China)
Shimin Wang (Southeast University, P.R. China)

96: Measuring the thickness of transparent objects using a confocal displacement sensor
Chun-Jen Weng (Instrument Technology Research Center, Taiwan)
Bo-Rong Lu (National Chiao Tung University, Taiwan)
Pi-Ying Cheng (National Chiao Tung University, Taiwan)
Chi-Hung Hwang (Instrument Technology Research Center, Taiwan)
Chih-Yen Chen (Instrument Technology Research Center, Taiwan)

97: Numerical and Experimental Analysis of Ultrasound Attenuation in Oil-Water Two-Phase Flow
Yizhe Shao (Tianjin University, P.R. China)
Chao Tan (Tianjin University, P.R. China)
Feng Dong (Tianjin University, P.R. China)

98: Evaluation of Blood Pressure by Analyzing the Fluctuation Frequency of Oxygen Saturation in Palmar Digital Vein
Yu-Hsuan Lin (Instrument Technology Research Center, Taiwan)
Chih-Wei Hung (Instrument Technology Research Center, Taiwan)
Hsin-Yi Tsai (Instrument Technology Research Center, Taiwan)
Kuo-Cheng Huang (Instrument Technology Research Center, Taiwan)

99: Circumference Liquid Film Measurement Method with Single High-speed Camera
Ting Xue (Tianjin University, P.R. China)

100: Experimental Performance Assessment of Compressive Sampling-based THz Imaging Systems
Leopoldo Angrisani (University of Naples Federico II, Italy)
Giovanni Cavallo (Unversity of Naples Federico II, Italy)
Francesco Bonavolontà (University of Naples Federico II, Italy)
Annalisa Liccardo (University of Naples Federico II, Italy)
Rosario Schiano Lo Moriello (University of Naples Federico II, Italy)
Antonello Andreone (University of Naples Federico II, Italy)
Gian Paolo Papari (University of Naples Federico II, Italy)

101: Electrokinetic Experiments of Porous Transducer in Liquid Circular Angular Accelerometer
Li Ming (Beijing Institute of Technology, P.R. China)
Meiling Wang (Beijing Institute of Technology, P.R. China)
Tong Liu (Beijing Institute of Technology, P.R. China)
Siyuan Cheng (Beijing Institute of Technology, P.R. China)
Meng-Yin Fu (Beijing Institute of Technology, P.R. China)
Lei Tong Wang (The Third Academic of Aerospace and Technology Group of China, P.R. China)

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102: Improving the accuracy of laser self-mixing interferometry for velocity measurement
Hui Sun (Technical University of Munich, Germany)

103: Transimpedance Amplifier with Programmable Gain and Bandwidth for Capacitive MEMS Accelerometers
Guillermo Royo (University of Zaragoza, Spain)
Miguel Garcia-Bosque (University of Zaragoza, Spain)
Carlos Sanchez-Azqueta (University of Zaragoza, Spain)
Cecilia Gimeno (Université Catholique de Louvain, Belgium)
Concepción Aldea (University of Zaragoza, Spain)
Santiago Celma (University of Zaragoza, Spain)

104: Continuous-Time Equalizer for CMOS Integrated Photodiodes
Javier Aguirre (University of Zaragoza, Spain)
Erick Guerrero (University of Zaragoza, Spain)
Carlos Sanchez-Azqueta (University of Zaragoza, Spain)
Antonio D Martínez (University of Zaragoza, Spain)
Miguel Garcia-Bosque (University of Zaragoza, Spain)
Cecilia Gimeno (Université Catholique de Louvain, Belgium)
Santiago Celma (University of Zaragoza, Spain)

105: Calibration of Wearable Flexible Humidity Sorption Sensors
Bartosz Dzikowski (Warsaw University of Technology, Poland)
Jerzy Weremczuk (Warsaw University of Technology, Poland)
Adrian Zduńczyk (Warsaw University of Technology, Poland)
Grzegorz Owczarek (Central Institute for Labour Protection – National Research Institute, Poland)

106: A Simple and Efficient Front-End Circuit for Magneto-Resistive Angle Sensors
Kishor Nandapurkar (Indian Institute of Technology Kaharagpur, India)
Chandrika Sreekantan Anoop (Indian Institute of Space Science and Technology, India)
Pranab K. Dutta (Indian Institute of Technology Kaharagpur, India)

107: Single Droplet On-line Testing Path Optimization for Digital Microfluidic Biochips based on the Improved Ant Colony Algorithm
Wenbin Zheng (Harbin Institute of Technology, P.R. China)
Hongjie Yu (Harbin Institute of Technology, P.R. China)
Feng Lei (Harbin Institute of Technology, P.R. China)
Ping Fu (Harbin Institute of Technology, P.R. China)
Hongyuan Jiang (Harbin Institute of Technology, P.R. China)
Bing Liu (Harbin Institute of Technology, P.R. China)

108: A Gas Concentration Estimation Method Based on Multivariate Relevance Vector Machine Using MOS Gas Sensor Arrays
Yinsheng Chen (Harbin Institute of Technology, P.R. China)
Xiaodong Liu (Harbin Institute of Technology, P.R. China)
Jingli Yang (Harbin Institute of Technology, P.R. China)
Yonghui Xu (Harbin Institute of Technology, P.R. China)

109: A Real-Time Fault Detection and Isolation Strategy for Gas Sensor Array
Jingli Yang (Harbin Institute of Technology, P.R. China)
Yinsheng Chen (Harbin Institute of Technology, P.R. China)
Zhen Sun (Harbin Institute of Technology, P.R. China)

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110: Study Of the Stability Of the NiTi Wire Applied To Thermomechanical Actuators
Walber Medeiros Lima (Rural Federal University of Semi-Arid, Brazil)
Carlos José de Araújo (Federal University of Campina Grande, Brazil)
Rodinei Medeiros Gomes (Federal University of Paraíba, Brazil)
Cícero Souto (Federal University of Paraíba, Brazil);
Ana Maria Marques de Lima (Federal University of Paraíba, Brazil)
Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil)

111: Development and improvement of acoustic sensors for the detection of pollutants in aquatic environments
David Lapeine (University of Montpellier & Instiute Electronic and System (IES), France)
Fabien Pascal (University of Montpellier & Instiute Electronic and System (IES), France)
Didier Laux (University of Montpellier & Instiute Electronic and System (IES), France)
Jean-Yves Ferrandis (University of Montpellier & Instiute Electronic and System (IES), France)
Philippe Combette (University of Montpellier & Instiute Electronic and System (IES), France)

112: Velocity Prediction from Acceleration Measurements in Motorcycle Suspensions
Marco Carratu' (University of Salerno, Italy)
Vincenzo Paciello (University of Cassino and Southern Lazio, Italy)
Antonio Pietrosanto (University of Salerno, Italy);
Paolo Sommella (University of Salerno, Italy)

113: Preliminary characterization of metal-packaged fiber Bragg gratings under fatigue loading
Grzegorz Fusiek (University of Strathclyde, United Kingdom)
Tim Rubert (University of Strathclyde, United Kingdom)
Pawel Niewczas (University of Strathclyde, United Kingdom)
Jack McAlorum (University of Strathclyde, United Kingdom)
Marcus Perry (University of Strathclyde, United Kingdom)

114: A friction less accelerometer exploiting a magnetic levitating mechanism and an inductive readout strategy
Vincenzo Marletta (University of Catania, Italy)
Bruno Andò (University of Catania, Italy)
Salvatore Baglio (University of Catania, Italy)
Angelo Valastro (University of Catania, Italy)
Antonio Pistorio (University of Catania, Italy)
Carlo Trigona (University of Catania, Italy)

115: A Smart Bearing System Based on Piezoresistive Carbon Black Loaded Natural Rubber
Salvatore Graziani (University of Catania, Italy)
Pietro Giannone (University of Catania, Italy)

116: Quartz Crystal Microbalance sensors based on TiO2 nanoparticles for gas sensing
Ada Fort,
Tommaso Addabbo (University of Siena, Italy)
Marco Mugnaini (University of Siena, Italy)
Marco Tani (University of Siena, Italy)
Valerio Vignoli (University of Siena, Italy)
Mara Bruzzi (University of Florence, Italy)

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117: Forecasting Methods to Reduce Energy Consumption in WSN
Faouzi Derbel (Leipzig University of Applied Sciences, Germany)
Florian Strakosch (Leipzig University of Applied Sciences, Germany)
Imen Ben Arbi (The Higher School of Communications of Tunisia, Tunisia)

118: An optical temperature sensor based on Silicone and Plastic Optical Fibers for biomedical applications
Nunzio Cennamo (University of Campania Luigi Vanvitelli, Italy)
Agostino Della Monica (Seconda Università di Napoli, Italy)
Paola Zuppella (CNR–IFN UOS Padova, Italy)
Luigi Zeni (University of Campania Luigi Vanvitelli, Italy)

119: Fault Detection in Class-E2 Resonant Converters
Marcantonio Catelani (University of Florence, Italy)
Lorenzo Ciani (University of Florence, Italy)
Fabio Corti (University of Florence, Italy)
Antonio Luchetta (University of Florence, Italy)
Stefano Manetti (University of Florence, Italy)
Maria Cristina Piccirilli (University of Florence, Italy)
Francesco Grasso (University of Florence, Italy)
Alberto Reatti (University of Florence, Italy)
Agasthya Ayachit (Wright State University, USA)
Marian K. Kazimierczuk (Wright State University, USA)

120: Self-cleaning of Si photovoltaic modules by a nanostructured TiO2 spray-coating
Lorenzo Ciani (University of Florence, Italy)
Alessio Farina (University of Florence, Italy)
Marcantonio Catelani (University of Florence, Italy)
Andrea Baldi (University of Florence, Italy)
Ennio Carnevale (University of Florence, Italy)
Samuele Calastrini (University of Florence, Italy)
Lorenzo Signorini (Analytical srl - Laboratorio CETACE, Italy)
Lio Pacini (Italvernici, Italy)
Mara Bruzzi (University of Florence, Italy)

121: Characterization of a Si/InGaAs lateral beam splitting photovoltaic system
Samuele Calastrini (University of Florence, Italy)
Andrea Baldi (University of Florence, Italy)
Ennio Carnevale (University of Florence, Italy)
Lorenzo Ciani (University of Florence, Italy)
Marcantonio Catelani (University of Florence, Italy)
Mara Bruzzi (University of Florence, Italy)

122: Power Distribution in Harsh Environment: Measurement on Commercial Power Brick
Mauro Citterio (INFN, Italy)
Massimo Lazzaroni (Università degli Studi di Milano, Italy)
Francesco Tartarelli (INFN, Italy)
Helio Takai (BNL, USA)
Hucheng Chen (BNL, USA)
James Kierstead (BNL, USA)

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123: Measurement Methods to be Included in Uni-En Guidelines to Characterize Waste Bricks
Francesco Lamonaca (University of Sannio, Italy)
Domenico Luca Carnì (University of Calabria, Italy)
Monica Vasile (Ovidius University of Constanta, Italy)
Alessandro Vitale (University of Calabria, Italy)
Domenico Grimaldi (University of Calabria, Italy)
Alfonzo Nastro (University of Calabria, Italy)

124: Development of a multiple-scattering acoustic sensor for process monitoring
María F Blasina (Universidad de la República, Uruguay)
Nicolás Pérez (Universidad de la República, Uruguay)
Eliana Budelli (Universidad de la República, Uruguay)
Patricia Lema (Universidad de la República, Uruguay)
Carlos Negreira (Universidad de la República, Uruguay)
Ros Kiri Ing (Institut Langevin, France)

125: Thermometry based on Computed Tomography Images during Microwave Ablation: Trials on ex vivo Porcine Liver
Emiliano Schena (Università Campus Bio-Medico di Roma, Italy)
Paola Saccomandi (IHU-strasbourg, France);
Carlo Massaroni (Università Campus Bio-Medico di Roma, Italy)
Francesco Giurazza (Università Campus Bio-Medico di Roma, Italy)
Yuman Fong (City of Hope Medical Center, Italy)
John Park (City of Hope Medical Center, Italy)

126: New design ideas for TDR-based liquid level detectors
Lars Bengtsson (University of Gothenburg, Sweden)

127: DSP Based Module for Processing Vibration Signals of Rotation Machinery
Wang Liu (Harbin Institute of Technology, P.R. China)
David He (University of Illinois at Chicago, USA)
Tianchi Zhao (Harbin Institute of Technology, P.R. China)
Datong Liu (Harbin Institute of Technology, P.R. China)

128: Dynamic Imaging based on Spatio-temporal Information for Electrical Impedance Tomography
Qi Wang (Tianjin Polytechnic University, P.R. China)
Yuanyuan Peng (Tianjin Polytechnic University, P.R. China)
Xiaojing Chen (Tianjin Polytechnic University, P.R. China)
Jing He (Tianjin Polytechnic University, P.R. China)
Pengcheng Zhang (Tianjin Polytechnic University, P.R. China)
Jianming Wang (Tianjin Polytechnic University, P.R. China)
Ronghua Zhang (Tianjin Polytechnic University, P.R. China)
Huaxiang Wang (Tianjin University, P.R. China)

129: A Linearizing Interface Circuit with Phase-Error Compensated Direct-Digital Output for TMR-Based Angular Position Sensor
Kishor Nandapurkar (Indian Institute of Technology Kaharagpur, India)
Chandrika Sreekantan Anoop (Indian Institute of Space Science and Technology, India)
Pranab K. Dutta (Indian Institute of Technology Kaharagpur, India)

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130: A monocular vision 3D measurement method based on rotating lens
Wei Liu (Dalian University of Tech-nology, P.R. China)
Xin Ma (Dalian University of Tech-nology, P.R. China)
Liang Bin (Dalian University of Tech-nology, P.R. China)
Yang Zaihua (Beijing Institute of Spacecraft Environment Engineering, P.R. China)
Yi Wangmin (Beijing Institute of Spacecraft Environment Engineering, P.R. China)
Long Changyu (Beijing Institute of Spacecraft Environment Engineering, P.R. China)
Zhenyuan Jia (Dalian University of Tech-nology, P.R. China)

131: Attaining low uncertainties in measurements with RF signal generators and analyzers
Niklas Beuster (Ilmenau University of Technology, Germany)
Florian Raschke (Fraunhofer Institute for Integrated Circuits IIS Germany, Germany)
Alexander Ihlow (Ilmenau University of Technology, Germany)
Carsten Andrich (Ilmenau University of Technology, Germany)
Giovanni Del Galdo (Fraunhofer Institute for Integrated Circuits IIS, Germany)

132: Diagnosis Method for Corn Nitrogen Status Measurement based on Multispectral Imaging
Yu Zhao (Northeast Agricultural University, P.R. China)
Xingan Hu (Harbin Institute of Technology, P.R. China)
Wenbin Zheng (Harbin Institute of Technology, P.R. China)
Shuwen Wang (Northeast Agricultural University)

133: Electronic Instrumentation for the Characterization of a Rotary Thermoelectric Motor Driven by Shape Memory Alloy Springs
José Marques Basílio Sobrinho (Federal University of Paraíba, Brazil)
Maxsuel Ferreira Cunha (Federal University of Paraíba, Brazil)
Cícero Souto (Federal University of Paraíba , Brazil)
Simplício Arnaud da Silva (Federal University of Paraíba, Brazil)
Alexsandro Santos (Federal University of Paraíba, Brazil)
Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil)

134: Resonant Inductive Wireless Power Transfer Links Operating in a Coupling-independent Regime: Theory and Experiments
Alessio De Angelis (University of Perugia, Italy)
Marco Dionigi (University of Perugia, Italy)
Paolo Carbone (University of Perugia, Italy)
Mauro Mongiardo (University of Perugia, Italy)
Qinghua Wang (Nanjing University of Science and Technology, P.R. China)
Wenquan Che (Nanjing University of Science and Technology, P.R. China)
Franco Mastri (University of Bologna, Italy)
Giuseppina Monti (University of Salento, Italy)

135: Development and Characterization of an Electric Power Generator Using Piezoelectric (PZT) Subjected to Base Excitation
Renato F. Rangel (Federal University of Paraiba, Brazil);
Cícero Souto (Federal University of Paraíba, Brazil);
Alan Gonçalves (Federal University of Paraíba, Brazil)
Maxsuel Ferreira Cunha (Federal University of Paraíba, Brazil)
Ana Maria Marques de Lima (Federal University of Paraíba, Brazil)
Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil)

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136: Distortion characterization of exponential signal generated by AWG
Domenico Luca Carnì (University of Calabria, Italy)
Domenico Grimaldi (University of Calabria, Italy)

137: Crack Detection Using the MOI method Based on Artifical Neural Network
Yuhua Cheng (University of Electronic Science and Technology of China, P.R. China)
Lulu Tian (University of Electronic Science and Technology of China, P.R. China)
Chun Yin (University of Electronic Science and Technology of China, P.R. China)
Libing Bai (University of Electronic Science and Technology of China, P.R. China)
Xiaoyu Shi (University of Electronic Science and Technology of China, P.R. China)
Bo Zhang (University of Electronic Science and Technology of China, P.R. China)

138: Dielectric-resonator-based measuring devices: relevance of the dielectric quality
Kostiantyn Torokhtii (Università Roma Tre, Italy)
Nicola Pompeo (Università Roma Tre, Italy)
Enrico Silva (Università Roma Tre, Italy)

139: Fitting strategy of resonance curves from microwave resonators with non-idealities
Nicola Pompeo (Università Roma Tre, Italy)
Kostiantyn Torokhtii (Università Roma Tre, Italy)
Fabio Leccese (Università Roma Tre, Italy)
Andrea Scorza (Università Roma Tre, Italy)
Salvatore Andrea Sciuto (Università Roma Tre, Italy)
Enrico Silva (Università Roma Tre, Italy)

140: Surface impedance measurements in thin conducting films: substrate and finite-thickness-induced uncertainties
Nicola Pompeo (Università Roma Tre, Italy)
Kostiantyn Torokhtii (Università Roma Tre, Italy)
Enrico Silva (Università Roma Tre, Italy)

141: Investigation of selected AC voltage generators for high-frequency AC-DC transfer
Michal Grzenik (Silesian University of Technology, Poland)
Krzysztof Musiol (Silesian University of Technology, Poland)
Marian Kampik (Politechnika Slaska, Poland)
Andrea Sosso (INRiM - Istituto Nazionale di Ricerca Metrologica, Italy)

142: Lead Acid Battery SoC Estimation Based on Extended Kalman Filter Method Considering Different Temperature Conditions
Rafael Santos (Universidade Federal da Paraíba, Brazil)
Caio Alves (Universidade Federal da Paraíba, Brazil)
Euler Tavares Macedo (Universidade Federal da Paraíba, Brazil)
Juan Moises Mauricio Villanueva (Universidade Federal da Paraíba, Brazil)
Lucas Hartmann (Universidade Federal da Paraíba, Brazil)
Sebastian Yuri Cavalcanti Catunda (Federal University of Rio Grande do Norte, Brazil)

143: Investigation of the current circulation offshore Taranto by using field measurements and numerical model
Diana De Padova (Technical University of Bari, Italy)
Francesca De Serio (Politecnico di Bari, Italy)
Michele Mossa (Politecnico di Bari, Italy)
Elvira Armenio (Politecnico di Bari, Italy)

Thursday, May 25

15:30 – 15:50
Coffee Break
Room: Council Room

15:50 – 17:30
SS9 - Advanced Measurement and Data Processing for Complex Engineering System Health Monitoring
Room: Aula Magna
Chairs: Ada Fort (University of Siena, Italy), Ruqiang Yan (Southeast University, P.R. China)

Gas Flow-Rate Measurement Using A Transit-Time Multi-Path Ultrasonic Flow Meter Based on PSO-SVM
Xiaoyu Tang (Zhejiang University, P.R. China);
Qinmin Yang (Zhejiang University, P.R. China)
Youxian Sun (Zhejiang University, P.R. China)

Reliability assessment of rolling bearing based on principal component analysis and Weibull proportional hazard model
Fengtao Wang (Dalian University of Technology, P.R. China)
Xutao Chen (Dalian University of Technology, P.R. China)
Chenxi Liu (Dalian University of Technology, P.R. China)
Dawen Yan (Dalian University of Technology, P.R. China)
Qingkai Han (Dalian University of Technology, P.R. China)
Hongkun Li (Dalian University of Technology, P.R. China)

Defect Detection on Thin-Wall Structure via Dictionary Learning
Xiang Li (The University of Aizu, Japan)
Shuxue Ding (The University of Aizu, Japan)

Bearing Fault Diagnosis Using Wavelet Domain Operator-Based Signal Separation
Borui Hou (Southeast University, P.R. China)
Ruqiang Yan (Southeast University, P.R. China)
Xuefeng Chen (Xi'an Jiaotong University, P.R. China)
Yanmeng Liu (Xi'an Jiaotong University, P.R. China)

Evolutionary Particle filter design for misalignment estimation in presence of flexure effect
Sudipta Chakraborty (B. P. Poddar Institute of Management and Technology, India);
Suvendu Chattaraj (IIEST, Shibpur, India)
Abhik Mukherjee (IIEST, Shibpur, India)

Thursday, May 25

15:50 – 17:30
SS5 - Instrumentation and measurement science and technology in Archaeometry and for the Conservation and Display of tangible Cultural Heritage
Room: CDF-1
Chairs: Monica Gulmini (Università degli Studi di Torino, Italy), Alessandro Lo Giudice (University of Torino & INFN Sezione di Torino, Italy)

Investigation of artefacts retrieved from a shipwreck of Vasco da Gama using X-ray Computed Tomography
Jason M Warnett (University of Warwick, United Kingdom)
Mark A Williams (University of Warwick, United Kingdom)
Alex Attridge (University of Warwick, United Kingdom)
David Mearns (Blue Water Recoveries, United Kingdom)
Joao Vieira (Universidade de Lisboa, Portugal)

Utilizing X-Ray Computed Tomography for Heritage Conservation: The case of Megalosaurus bucklandii
Paul Wilson (University of Warwick, United Kingdom)

A new digital radiography system for paintings on canvas and on wooden panels of large dimensions
Alessandro Lo Giudice (University of Torino, Italy)
Jacopo Corsi (University of Torino, Italy);
Giorgio Cotto (University of Torino, Italy)
Giorgia Mila (University of Torino, Italy)
Alessandro Re (University of Torino, Italy)
Chiara Ricci (University of Torino, Italy)
Roberto Sacchi (University of Torino, Italy)
Lorenzo Visca (University of Torino, Italy)
Lorenzo Zamprotta (University of Torino, Italy)
Nadia Pastrone (INFN Sezione di Torino, Italy)
Fauzia Albertin (INFN Sezione di Torino, Italy)
Rosa Brancaccio (INFN Sezione di Torino, Italy)
Giovanni Dughera (INFN Sezione di Torino, Italy)
Paolo Mereu (INFN Sezione di Torino, Italy)
Amedeo Staiano (INFN Sezione di Torino, Italy)
Marco Nervo (Centro Conservazione e Restauro “La Venaria Reale”, Venaria Reale, Torino, Italy)
Paola Buscaglia (Centro Conservazione e Restauro “La Venaria Reale”, Venaria Reale, Torino, Italy)
Annamaria Giovagnoli (Centro Conservazione e Restauro “La Venaria Reale”, Venaria Reale, Torino, Italy)
Novella Grassi (Centro Conservazione e Restauro “La Venaria Reale”, Venaria Reale, Torino, Italy)

Cloud Infrastructure for Museum Environmental Monitoring
Simone Corbellini (Politecnico di Torino, Italy);
Sabrina Grassini (Politecnico di Torino, Italy);
Luca Lombardo (Politecnico di Torino, Italy)
Emma Paola Angelini (Politecnico di Torino, Italy)
Marco Parvis (Politecnico di Torino, Italy)
Ahmed Elsayed (Politecnico di Torino, Italy)

Thursday, May 25

15:50 – 17:30
SS13 - New trends in education in instrumentation and measurement
Room: CDF-2
Chairs: Francesco Lamonaca (University of Sannio, Italy), Maria Riccio (University of Sannio, Italy)

A remotely accessible laboratory for corrosion training
Leonardo Iannucci (Politecnico di Torino, Italy)
Elisabetta Di Francia (Politecnico di Torino, Italy)
Marco Parvis (Politecnico di Torino, Italy)
Sabrina Grassini (Politecnico di Torino, Italy)

Measurement Science and Education in the Drone Times
Pasquale Daponte (University of Sannio, Italy)
Luca De Vito (University of Sannio, Italy)
Francesco Lamonaca (University of Sannio, Italy)
Francesco Picariello (University of Sannio, Italy)
Sergio Rapuano (University of Sannio, Italy)
Maria Riccio (University of Sannio, Italy)

Serious Game for Physical Rehabilitation: measuring the effectiveness of virtual and real training environments
Octavian Adrian Postolache (Instituto de Telecomunicações, Lisboa/IT & Instituto Universitario de Lisboa, ISCTE-IUL, Portugal);
Filipe Lourenço (ISCTE-IUL, Portugal);
Jose Costa Pereira (ESTSetúbal, Portugal);
Pedro M. B. Silva Girão (Instituto Superior Técnico, Portugal)

Method for compensating the effect of disturbances on magnetometer measurements: experimental results
Pasquale Daponte (University of Sannio, Italy)
Luca De Vito (University of Sannio, Italy)
Gianluca Mazzilli (University of Sannio, Italy)
Francesco Picariello (University of Sannio, Italy)
Sergio Rapuano (University of Sannio, Italy)

Thursday, May 25

15:50 – 17:30
Image Processing and Computational Intelligence Techniques
Room: 7A
Chairs: Alessandro M Ferrero (Politecnico di Milano, Italy), Annamária R. Várkonyi-Kóczy (Óbuda University, Hungary)

Kernel Sparse Representation Based Classification of Focal Liver Lesions with Contrast-Enhanced Ultrasound
Dandan Li (Harbin Institute of Technology, P.R. China)
Yakui Zhang (Harbin Institute of Technology, P.R. China)
Jing Jin (Harbin Institute of Technology, P.R. China)

An IFCE-based Effective Color Tracking System for a Humanoid Robot in Cluttered Environments
Xiaoqian Mao (Tianjin University, P.R. China)
Huidong He (Tianjin University, P.R. China)
Wei Li (California State University, Bakersfield, USA)
Genshe Chen (Intelligent Fusion Technology, Inc, USA)

Robust Variable Length Data Classification with Extended Sequential Fuzzy Indexing Tables
Balazs Tusor (Óbuda University, Hungary)
Annamária R. Várkonyi-Kóczy (Óbuda University, Hungary)
János Tóth (J. Selye University, Slovakia)

AFM-based robust image analysis to contrast reversal effects in cell-cerium oxide nanoparticles interactions
Arianna Mencattini (Università di Roma Tor Vergata, Italy)
Paola Casti (Università di Roma Tor Vergata, Italy)
Giuseppe Fazio (Università di Roma Tor Vergata, Italy)
Eugenio Martinelli (Università di Roma Tor Vergata, Italy)
Corrado Di Natale (Università di Roma Tor Vergata, Italy)
Lina Ghibelli (University of Rome Tor Vergata, Italy);
Antonio Cricenti (National Research Council, Italy)
Marco Luce (National Research Council, Italy)

Block Based Dense Stereo Matching Using Adaptive Cost Aggregation and Limited Disparity Estimation
Xiao Yang (Shanghai Jiao Tong University, P.R. China)
Xiaobo Chen (Shanghai Jiao Tong University, P.R. China)
Juntong Xi (Shanghai Jiao Tong University, P.R. China)

Thursday, May 25

15:50 – 17:30
Measurement Applications and Software II
Room: 7B
Chairs: Simone Corbellini (Politecnico di Torino, Italy), Sergio Rapuano (University of Sannio, Italy)

Agent-Based Software Architecture for Distributed Measurement Systems and Cyber-Physical Systems Design
Paolo Francesco Sciammarella (University of Calabria, Italy)
Libero Nigro (University of Calabria, Italy)
Domenico Grimaldi (University of Calabria, Italy)
Franco Cicirelli (University of Calabria, Italy)
Domenico Luca Carnì (University of Calabria, Italy

Experimental Characterization and Modeling of Low-Cost Oscillators for Improved Carrier Phase Synchronization
John A McNeill (Worcester Polytechnic Institute, USA)
Sabah Razavi (Worcester Polytechnic Institute, USA)
Kirty Vedula (Worcester Polytechnic Institute, USA)
Donald R. Brown, III (Worcester Polytechnic Institute, USA)

Online Monitoring Soft Errors in Reconfigurable FPGA during Radiation Test
Boyang Du (Politecnico di Torino, Italy)
Luca Sterpone (Politecnico di Torino, Italy)

Efficient Logarithmic Conversion on an ARM Microcontroller for Real Time Acoustic Monitoring
Mark Hopkins (University of Kent, United Kingdom)
Peter Lee (University of Kent, United Kingdom)

Effects of runtime failures in IEEE 1588 clock networks
Balint Ferencz (Budapest University of Technology and Economics, Hungary)
Tamás Kovácsházy (Budapest University of Technology and Economics, Hungary)

17:30 – 18:00
Closing Session
Room: Aula Magna

18:30 – 20:30
Concert of the Politecnico Choir