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#### Welcome Message from the General Chair

Dear colleagues and friends,

On behalf of the entire community of the University of Napoli Federico II, I am pleased to welcome you to the 4th IEEE International Workshop on Measurement and Networking (M&N 2017), which is held in the new San Giovanni University Complex, located in the east area of the city of Napoli, and mainly promoted by the innovative Center of Advanced Measurement and Technology Services — CeSMA - of Federico II, hosted in the same Complex, by the IEEE IM Italy Chapter and by the IEEE IMS TC-37 Measurements and Networking.

IEEE M&N is a privileged forum for the discussion of current and emerging trends on measurements, communications, computer science, wireless systems, and sensor networks, fostering a close and fruitful contact between researchers and practitioners from both academia and industry to debate the role of both measurements for networking and networking for measurements.

The University of Napoli Federico II is one of the oldest and largest universities in the world. It was established on June 5th, 1224 through an imperial Charter by Federico II Hohenstaufen, King of Sicily and Holy Roman Emperor. It was the first publicly funded university in Europe. Proud of the nearly eight century history, the University Federico II is making every effort to combine teaching and research excellence with the warm and friendly atmosphere of the Neapolitan character, being convinced that achieving such integration makes the university a much nicer place to learn and work. Above all, it is striving to keep pace with the ever-faster changes of the modern world as it always looks to the future.

Besides the University of Napoli Federico II, the organization of IEEE M&N 2017 has been mainly supported by two other relevant universities of the center and south of Italy, namely the University of Cassino and Southern Lazio and the University of Salerno.

I would like to thank all the people involved in the organization of the workshop, in special the TPC Chairs, the Publications Chair, the Publicity Chairs, the Special Session Chairs, the TPC members and the external reviewers for their fruitful contribution in putting together a very amazing and interesting program. A special appreciation goes to Domenico Capriglione, for his tireless work and invaluable guidance along the whole process, and to Francesco Bonavolontà, for his strong commitment in the workshop organization as a Local Arrangement Chair.

Further, special thanks go also to all instrument manufacturers involved with the oral presentations, focused on measurement challenges and solutions for today and future applications, spacing from advanced protocol analysis to measurements for IoT and 5G. Finally, I wish to thank all of you for being here and joining with us in these days.

Leopoldo Angrisani IEEE M&N 2017 General Chair

#### Welcome Message from the Technical Program Chairmen

It is our great pleasure to welcome you to the fourth edition of the IEEE International Workshop on Measurements & Networking (M&N 2017). The ambition of the workshop is to represent an international forum in which to share novel measurement methodologies for the characterization, the assessment and applications of modern networks, as well as to discuss new directions for research in the area of measurements and networking.

Thanks to its peculiar cross-disciplinary mission, the workshop provides researchers and practitioners in the area of measurements for networking with a unique opportunity for cross-fertilization among different areas of the ICT and measurement communities.

The workshop program consists of 53 high quality technical papers, 24 of which accepted for oral presentation. In reviewing the submitted papers, through a rigorous two-step, blind review process, we have aimed at selecting high quality and innovative research results that can be useful to your research and lead to further innovations in these fields.

The accepted papers cover a variety of topics, all in the context of measurements for networking and networking for measurements - from distributed measurement systems to wireless sensors network modeling and performance assessment; from synchronization issues to characterization of network equipment; from indoor positioning to antenna characterization and measurements; from traffic analysis and monitoring to anomaly and intrusion detection. Moreover, a number of papers focused on emerging measurement needs for 5G has been presented.

The technical program is organized in a single track and includes three Special Sessions: "Toward IoT and Beyond: Measurement and Networking for Internet of Everything", "Antenna and RCS Measurements", and "Advanced solutions for Energy Harvesting". Two oral sessions on "Distributed Measurement Systems" and "Methods and techniques for networks analysis and performance assessment", and a wide Poster Session including several topics of interest complete the program.

We wish to thank the Technical Program Committee and the Instrumentation and Measurement Society Technical Committee 37 – Measurements and Networking for their valuable help and strong involvement in the Workshop organization, as well as the Italy section of the Antenna Measurement Techniques Association for its important support in the Workshop technical program.

Domenico Capriglione and Luigi Ferrigno IEEE M&N 2017 Technical Program Chairmen

#### M&N 2017 Organizers

#### **GENERAL CHAIRMAN**

Leopoldo Angrisani, University of Napoli "Federico II", Italy

#### **TECHNICAL PROGRAM CHAIRMEN**

Domenico Capriglione, University of Salerno, Italy Luigi Ferrigno, University of Cassino and Southern Lazio, Italy

#### **PUBLICATION CHAIRMAN**

Gianfranco Miele, University of Cassino and Southern Lazio, Italy

#### **PUBLICITY CHAIRMEN**

Bruno Andò, University of Catania, Italy Aniello Murano, University of Napoli "Federico II", Italy

#### SPECIAL SESSION CHAIRMEN

Antonio Moschitta, University of Perugia, Italy Nuno Antunes, University of Coimbra, Portugal Pasquale Arpaia, University of Napoli Federico II

#### LOCAL ARRANGEMENTS CHAIRMEN

Domenico Antonio Grillo, University of Napoli "Federico II", Italy Francesco Bonavolontà, University of Napoli "Federico II", Italy Giuseppe Sabatino, University of Napoli "Federico II", Italy

#### TECHNICAL PROGRAM COMMITTEE

Filippo Attivissimo, Polytechnic of Bari

Stefano Avallone, University of Napoli "Federico II"

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Pere Barlet-Ros, Technical University of Catalonia

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Marilia Curado, University of Coimbra

Claudio Curcio. University of Napoli "Federico II"

Francesco D'Agostino. University of Salerno

Mauro D'Arco, University of Napoli "Federico II"

Faouzi Derbel, Leipzig University of Applied Sciences

Marco Di Felice, University of Bologna

Octavia Dobre, Memorial University

Jordi Domingo-Pascual, Universitat Politècnica de Catalunya - BarcelonaTech (UPC)

Elias Duarte, Federal University of Parana (UFPR)

Ricardo Goncalves. Universidade Nova de Lisboa

Domenico Grimaldi, University of Calabria

#### TECHNICAL PROGRAM COMMITTEE (CONTINUED)

Mehmet Gunes, University of Nevada, Reno

Mesut Günes, Otto-von-Guericke-University Magdeburg, Germany

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Samuel Kouney, University of Wuerzburg

Francesco Lamonaca, University of Sannio

Carmine Landi, University of Napoli "Federico II"

Annalisa Liccardo, University of Napoli "Federico II"

Consolatina Liguori, University of Salerno

Mario Luiso, University of Napoli "Federico II"

David Macii, University of Trento

Aniket Mahanti, University of Auckland

Nursabillilah Mohd Ali, Universiti Teknikal Malaysia Melaka

Antonio Moschitta, University of Perugia

Claudio Narduzzi, Universita' di Padova

Vincenzo Paciello, University of Cassino and Southern Lazio

Nicola Pasquino, University of Napoli "Federico II"

Daniele Pinchera, University of Cassino and Southern Lazio

Anatoliy Platonov, Warsaw University of Technology

Octavian Postolache, Instituto de Telecomunicações, Lisboa/IT

Rosario Schiano Lo Moriello, Università degli Studi di Napoli Federico II

Emiliano Sisinni, University of Brescia

Paolo Sommella, University of Salerno

Federico Tramarin, National Research Council of Italy

Marco Vieira, University of Coimbra

Li Xu, Texas Instruments

#### **Sponsors**





### **Patrons**







### **Patrons (Continued)**











#### **Patrons (Continued)**





(IMS TC-37 - Measurements and Networking)





#### **Exhibitors**













#### **Exhibitors (Continued)**

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08:30 - 08:50 Registration

08:50 - 09:10 Welcome

Room: Great Hall

Gaetano Manfredi, Chancellor of University of Napoli Federico II Giovanni Betta, Chancellor of University of Cassino and Southern Lazio Leopoldo Angrisani, General Manager of CeSMA – Center of Advanced Metrological and Technological Services, University of Napoli Federico II

Piero Salatino, President of Polytechnic and Basic Sciences School, University of

Napoli Federico II

09:10 - 10:00

Keynote Presentation I Room: Great Hall

Title: "Driving the Innovation in the IoT"

Presenter: Alan Smith, ST Microelectronics Napoli Site Manager

10:00 - 10:30 Coffee Break

10:30 - 12:30

SPECIAL SESSION: Toward IoT and Beyond: Measurement and Networking for

Internet of Everything Room: Great Hall

**Chair:** Pasquale Arpaia (University of Napoli Federico II, Italy) Mohammed Chadli (University of Picardie Jules Verne, France)

#### 10:30 Mobile Object to Speed Up the Synchronization of IoT Network

Francesco Lamonaca (University of Sannio, Italy) Domenico Luca Carnì (University of Calabria, Italy) Domenico Grimaldi (University of Calabria, Italy)

Paolo Francesco Sciammarella (University of Calabria, Italy)

#### 10:50 Accurate Estimation of a Coil Magnetic Dipole Moment

Antonio Moschitta (University of Perugia, Italy) Alessio De Angelis (University of Perugia, Italy) Francesco Santoni (University of Perugia, Italy) Marco Dionigi (University of Perugia, Italy) Guido De Angelis (Regione Umbria, Italy) Paolo Carbone (University of Perugia, Italy)

#### 11:10 A project of fitness telemonitoring in an information technology course

Francesco Bonavolontà (University of Napoli Federico II, Italy) Stefano Sorrentino (University of Napoli Federico II, Italy) Cristian Tommasino (University of Napoli Federico II. Italy) Andrea Scognamiglio (University of Napoli Federico II, Italy) Andrea Cavaliere (University of Napoli Federico II, Italy) Francesco Esposito (University of Napoli Federico II, Italy) Antonio Grotta (University of Napoli Federico II, Italy) Davide Astarita (University of Napoli Federico II, Italy) Francesco Calvanese (University of Napoli Federico II, Italy)

Ugo Bruno (University of Napoli Federico II, Italy)

Michele Ambrosino (University of Napoli Federico II, Italy) Pasquale Arpaia (University of Napoli Federico II, Italy)

Maurizio Marvaso (University of Napoli Federico II, Italy)

#### 11:30 Evaluation of communication latency in Industrial IoT applications

Paolo Ferrari (University of Brescia, Italy) Emiliano Sisinni (University of Brescia, Italy) Dennis Brandão (University of São Paulo, Brazil) Murilo Rocha (University of São Paulo, Brazil)

#### 11:50 Practical Limitations for Deployment of LoRa Gateways

Albert Pötsch (Linz Center of Mechatronics GmbH. Austria) Florian Haslhofer (Johannes Kepler University Linz, Austria)

#### 12:10 Preliminary Realization of a monitoring system of Activated Carbon Filter RLI based on the SENSIPLUS® microsensor platform

Gianni Cerro (University of Cassino and Southern Lazio, Italy) Marco Ferdinandi (University of Cassino and Southern Lazio, Italy) Luigi Ferrigno (University of Cassino and Southern Lazio, Italy) Mario Molinara (University of Cassino and Southern Lazio, Italy)

12:30 - 14:00 Lunch

14:00 - 15:00 POSTER SESSION Room: Poster Room

Chairs: Francesco Bonavolontà (Università di Napoli Federico II, Italy)

Rosario Schiano Lo Moriello (Università degli Studi di Napoli Federico II, Italy)

#### Quick-Response Coding System for Tracking Rehabilitation Treatments in Clinical Setting

Giovanni D'Addio (Università di Napoli Federico II, Italy) Alessandra Smarra (CRdC Tecnologie Scarl, Italy) Arcangelo Biancardi (Università di Napoli Federico II, Italy) Mario Cesarelli (University of Napoli Federico II, Italy) Pasquale Arpaia (University of Napoli Federico II, Italy)

#### Impedance Measurement in IEEE 21451 Transducer Interface Modules

Francesco Abate (University of Salerno, Italy) Antonio Pietrosanto (University of Salerno, Italy) Vincenzo Paciello (University of Cassino and Southern Lazio, Italy) Gustavo Monte (UTN Facultad Regional Del Neuguen, Argentina)

#### Analysis of Path Stability within Autonomous Systems

Muhammed Abdullah Canbaz (University of Nevada, Reno, USA) Khalid Bakhshaliyev (University of Nevada, Reno, USA) Mehmet Hadi Gunes (University of Nevada, Reno, USA)

#### Towards accurate detection of obfuscated web tracking

Hoan Le (Universitat Politecnica de Catalunya, Spain)
Federico Fallace (Universitat Politecnica de Catalunya, Spain)
Pere Barlet-Ros (Universitat Politecnica de Catalunya, Spain)

# Nonredundant Spherical Spiral NF/FF Transformation Accounting for an Offset Mounting of an electrically large Quasi-Planar AUT

Francesco D'Agostino (University of Salerno, Italy)
Flaminio Ferrara (University of Salerno, Italy)
Claudio Gennarelli (University of Salerno, Italy)
Rocco Guerriero (University of Salerno, Italy)
Massimo Migliozzi (University of Salerno, Italy)

### An Investigation on an Interference Filtering Technique for Array Diagnosis Using Sparsity

Marco Donald Migliore (University of Cassino and Southern Lazio, Italy)
Laurent Le Coq (University of Rennes 1 - IETR, France)
Benjamin Fuchs (University of Rennes 1 - IETR, France)

### A Software Architecture for Generic Human Activity Recognition from Smartphone Sensor Data

Alberto Testoni (University of Bologna, Italy) Marco Di Felice (University of Bologna, Italy)

#### IEEE 802.15.6 Compliant WBSN: A Case Study

Guglielmo Frigo (University of Padova, Italy) Giada Giorgi (University of Padova, Italy)

#### Measuring the Effectiveness of Containerization to Prevent Power Draining Attacks

Luigi Catuogno (Universita' degli Studi di Salerno, Italy) Clemente Galdi (Universita' degli Studi di Napoli Federico II, Italy) Nicola Pasquino (Universita' degli Studi di Napoli Federico II, Italy)

## On the evaluation of LoRaWAN virtual channels orthogonality for dense distributed systems

Paolo Ferrari (University of Brescia, Italy)
Alessandra Flammini (University of Brescia, Italy)
Mattia Rizzi (University of Brescia, Italy)
Emiliano Sisinni (University of Brescia, Italy)
Mikael Gidlund (MidSweden University, Sweden)

#### A crowdfunded personal air quality monitor infrastructure for active life applications

Saverio De Vito (ENEA, Italy)
Fabrizio Formisano (ENEA, Italy)
Annalisa Agresta (ENEA, Italy)
Salvatore Fiore (ENEA, Italy)
Elena Esposito (ENEA, Italy)
Ettore Massera (ENEA, Italy)
Maria Salvato (ENEA, Italy)
Grazia Fattoruso (ENEA, Italy)
Girolamo Di Francia (ENEA, Italy)

### Context-Aware Computing for improving the touristic experience: a pervasive App for the Amalfi Coast

Mario Casillo (Università di Napoli Federico II, Italy) Francesco Colace (Università degli Studi di Salerno, Italy) Francesco Pascale (Università degli Studi di Salerno, Italy) Saverio Lemma (Università degli Studi di Salerno, Italy) Marco Lombardi (Università degli Studi di Salerno, Italy)

#### **BeCAMS: a Behaviour Context Aware Monitoring System**

Francesco Colace (Università degli Studi di Śalerno, Italy) Domenico Santaniello (Università degli Studi di Salerno, Italy) Mario Casillo (Università di Napoli Federico II, Italy) Fabio Clarizia (Università degli Studi di Salerno, Italy)

#### A Wearable Device for Sport Performance Analysis and Monitoring

Raffaele Iervolino (University of Napoli Federico II, Italy) Francesco Bonavolontà (University of Napoli Federico II, Italy) Adolfo Cavallari (Megaris, Italy)

#### Near-Field Far-Field Transformation for Circular Aperture Antennas

Amedeo Capozzoli (Università di Napoli Federico II, Italy) Claudio Curcio (Università di Napoli Federico II, Italy) Angelo Liseno (Università di Napoli Federico II, Italy)

#### How to perform fully compliant Spectrum Sensing in IEEE 802.22 framework

Domenico Capriglione (University of Salerno, Italy)
Gianni Cerro (University of Cassino and Southern Lazio, Italy)
Luigi Ferrigno (University of Cassino and Southern Lazio, Italy)
Emanuele Grossi (University of Cassino and Southern Lazio, Italy)
Gianfranco Miele (University of Cassino and Southern Lazio, Italy)
Luca Venturino (University of Cassino and Southern Lazio, Italy)

### Effect of the reporting rate of synchrophasor measurements for distributed secondary control of AC microgrid

Edoardo De Din (RWTH Aachen University, Germany) Gianluca Lipari (RWTH Aachen University, Germany) Andrea Angioni (RWTH Aachen University, Germany) Ferdinanda Ponci (RWTH Aachen University, Germany) Antonello Monti (RWTH Aachen University, Germany)

# Real-time optimization tool for wireless data transmission system: an application to Campi Flegrei (Italy) volcano surveillance

Giovanni Scarpato (Istituto Nazionale di Geofisica e Vulcanologia, Italy)
Antonietta Maria Esposito (Istituto Nazionale di Geofisica e Vulcanologia, Italy)
Teresa Caputo (Istituto Nazionale di Geofisica e Vulcanologia, Italy)
Massimo Orazi (Istituto Nazionale di Geofisica e Vulcanologia, Italy)
Claudio Martino (Istituto Nazionale di Geofisica e Vulcanologia, Italy)

#### **Fault Tolerant Low Cost IMUS for UAVs**

Egidio D'Amato (Universit'a degli Studi della Campania Luigi Vanvitelli, Italy

Massimiliano Mattei (Universit'a degli Studi della Campania Luigi Vanvitelli. Italv

Agostino Mele (Universit'a degli Studi della Campania Luigi Vanvitelli, Immacolata Notaro (Universit'a degli Studi della Campania Luigi Vanvitelli, Italv)

Valerio Scordamaglia (University of Reggio Calabria, Italy)

#### Enabling wireless technologies for Industry 4.0: State of the Art

Francesco Bonavolontà (Università di Napoli Federico II, Italy)
Annarita Tedesco (National Research Council - Institute for
Technologies Applied to Cultural Heritage, Italy)
Rosario Schiano Lo Moriello (Università degli Studi di Napoli Federico
II, Italy)
Antonio Tufano (Pegaso Telematic University, Italy)

#### Experimental Analysis of Software Network Emulators in Packet Delay Emulation

Leopoldo Angrisani (University of Napoli Federico II, Italy)
Domenico Capriglione (University of Salerno, Italy)
Gianni Cerro (University of Cassino and Southern Lazio, Italy)
Luigi Ferrigno (University of Cassino and Southern Lazio, Italy)
Gianfranco Miele (University of Cassino and Southern Lazio, Italy)

### Instrumentation and Measurements for Non-Invasive EEG-Based Brain-Computer Interface

Leopoldo Angrisani (University of Napoli Federico II, Italy) Pasquale Arpaia (University of Napoli Federico II, Italy) Deborah Casinelli (University of Napoli Federico II, Italy)

### A Preliminary Discussion of Measurement and Networking Issues in Cyber Physical Systems for Industrial Manufacturing

Annarita Tedesco (National Research Council - Institute for Technologies Applied to Cultural Heritage, Italy)
Mosè Gallo (Pegaso Telematic University, Italy)
Antonio Tufano (Pegaso Telematic University, Italy)

#### Analysis of Localization Technologies for Indoor Environment

Leopoldo Angrisani (University of Napoli Federico II, Italy) Pasquale Arpaia (University of Napoli Federico II, Italy) Daniele Gatti (University of Napoli Federico II, Italy)

#### Roughness Assessment of Reflector Surface via Near-field Data

George Cheng (Allwave Corporation, USA) Yong Zhu (Allwave Corporation, USA) Jan Grzesik (Allwave Corporation, USA) Choon Sae Lee (Southern Methodist University, USA)

#### GAMbUSIA - a GenerAl purpose Metalanguage for instrUments with Serial InterfAce

Gian Paolo Donnarumma (Istituto Nazionale di Geofisica e Vulcanologia, Italy) Sergio Guardato (Istituto Nazionale di Geofisica e Vulcanologia, Italy) Claudio Martino (Istituto Nazionale di Geofisica e Vulcanologia, Italy) Giovanni Iannaccone (Istituto Nazionale di Geofisica e Vulcanologia, Italy)

### First step towards a cost-effective IoT platform for customers power consumption awareness

Leopoldo Angrisani (University of Napoli Federico II, Italy)
Pasquale Arpaia (University of Napoli Federico II, Italy)
Francesco Bonavolontà (University of Napoli Federico II, Italy)
Annalisa Liccardo (University of Napoli Federico II, Italy)
Rosario Schiano Lo Moriello (University of Napoli Federico II, Italy)

### Comparison of Current Sensors for Power Consumption Assessment of Wireless Sensors Network Nodes

Francesco Adamo (Polytechnic University of Bari, Italy)
Filippo Attivissimo (Polytechnic University of Bari, Italy)
Attilio Di Nisio (Polytechnic University of Bari, Italy)
Carlo Guarnieri Calò Carducci (Polytechnic University of Bari, Italy)
Maurizio Spadavecchia (Polytechnic University of Bari, Italy)
Antonio Guagnano (Polytechnic University of Bari, Italy)
Goh Mok (Singapore Institute of Manufacturing Technology, Singapore)

15:00 - 15:20 Coffee Break

15:20 - 17:00

**ORAL SESSION I: Distributed measurement systems** 

Room: Great Hall

Chairs: Domenico Grimaldi (University of Calabria, Italy)

Emiliano Sisinni (University of Brescia, Italy)

#### 15:20 Fast beacon recognition for accurate ultrasonic indoor positioning

Leopoldo Angrisani (University of Napoli Federico II, Italy) Pasquale Arpaia (University of Napoli Federico II, Italy) Daniele Gatti (University of Napoli Federico II, Italy)

### 15:40 Sub-nanosecond Time Synchronization Mechanism for Radio Interferometer Array

El Houssain Ait Mansour (Station de Radioastronomie de Nancay, France) Bruno Da Silva (Station de Radioastronomie de Nançay, France) Stéphane Bosse (Station de Radioastronomie de Nançay, France) Karl-Ludwig Klein (Observatoire de Paris, LESIA, France)

### 16:00 Design of Energy Detection Based on Selection Diversity Combining in Cognitive Radio

Shusuke Narieda (National Institute of Technology, Akashi College, Japan) Hiromichi Ogasawara (National Institute of Technology, Akashi College, Japan)

#### 16:20 Sensor Network for Museum Environmental Monitoring

Luca Lombardo (Politecnico di Torino, Italy) Simone Corbellini (Politecnico di Torino, Italy) Ahmed Elsayed (Politecnico di Torino, Italy) Emma Paola Angelini (Politecnico di Torino, Italy) Marco Parvis (Politecnico di Torino, Italy) Sabrina Grassini (Politecnico di Torino, Italy)

# 16:40 A Map Framework Using Crowd-Sourced Data for Indoor Positioning and Navigation

Thomas Graichen (Chemnitz University of Technology, Germany) Erik Gruschka (Chemnitz University of Technology, Germany) Ulrich Heinkel (Chemnitz University of Technology, Germany)

20:00

Pizza Welcome Dinner Location: Gran Gusto Via Marina 5, Napoli

#### Thursday, September 28

09:00 - 10:00

**Keynote Presentation II** 

Title: "Towards the Formal Verification of Correctness and Robustness of Robotic Swarms"

Presenter: Alessio Lomuscio, Imperial College London, UK

10:00 - 10:20 Coffee Break

10:20 - 12:30

ORAL SESSION: Measurement challenges and solutions for today and future

applications

Room: Great Hall

Chairs: Domenico Capriglione (University of Salerno, Italy)

Luigi Ferrigno (University of Cassino, Italy)

10:20-10:45

Title: "Explore Bluetooth 5: features and use cases"

Presenter: Tomás O'Raghallaigh, Sales Manager EMEA Teledyne LeCroy Protocol

Solution

10:45-11:10

Title: "Solutions for IoT test challenges"

Presenter: Alessandro Salsano, Key Account Manager Tektronix

11:10 - 11:35

Title: "5G Technology and the new Base Station"

Presenter: Raja N. Mir, Ph.D, 5G MN Products Nokia - US/Irving

11:35 - 12:00

Title: "5G Technology Introduction. Market Status Overview and Worldwide Trials"

Presenter: Marco Brusati - Sales Manager R&S Italia

12:00 - 12:25

Title: "Examining the Challenges in Implementing and Testing Massive MIMO for 5G" Presenter: Francesco Spadafora - RF & Microwave Measurement Expert - Keysight Italia

12:30 - 14:00

Lunch

14:00 - 15:40

SPECIAL SESSION: Antenna and RCS Measurements

Room: Great Hall

Chair: Alessandro Toscano (University of Roma Tre, Italy)

14:00 Interlaboratory Comparisons and Proficiency Tests of Electromagnetic **Compatibility Measurements** 

Carlo Carobbi (University of Florence, Italy)

14:20 Measurement of Equivalent Circuit Parameters of Avalanche Beacons Antennas for Rapid Prototyping

David Macii (University of Trento, Italy) Giacomo Filippetto (University of Trento, Italy) Massimo Donelli (University of Trento, Italy)

#### Thursday, September 28

### 14:40 Measurement System with Leaky Coaxial Cables operating as Distributed Antennas for UHF-RFID Readers

Alice Buffi (University of Pisa, Italy) Paolo Nepa (University of Pisa, Italy) Bernardo Tellini (University of Pisa, Italy)

#### 15:00 Spherical Near-field Measurements for Electrically Large Antennas

George Cheng (Allwave Corporation, USA) Yong Zhu (Allwave Corporation, USA) Jan Grzesik (Allwave Corporation, USA) Choon Sae Lee (Southern Methodist University, USA)

### 15:20 Wearable Antennas for Applications in Remote Assistance to Elderly People

Laura Corchia (University of Salento, Italy)
Egidio De Benedetto (University of Salento, Italy)
Giuseppina Monti (University of Salento, Italy)
Andrea Cataldo (University of Salento, Italy)
Luciano Tarricone (University of Salento, Italy)

15:40 - 16:00 Coffee Break

16:00 - 17:40

ORAL SESSION II: Methods and techniques for networks analysis and performance

assessment Room: Great Hall

Chairs: Gianfranco Miele (University of Cassino and Southern Lazio, Italy)

Antonio Pescapé (University of Napoli Federico II, Italy)

# 16:00 Experimental characterization of LTE Adaptive Modulation and Coding scheme under actual operating conditions

Stefano Avallone (University of Napoli Federico II, Italy) Nicola Pasquino (University of Napoli Federico II, Italy) Stefania Zinno (University of Napoli Federico II, Italy) Domenico Casillo (University of Napoli Federico II, Italy)

### 16:20 An experimental evaluation of the impact of heterogeneous scenarios and virtualization on the available bandwidth estimation tools

Giuseppe Aceto (University of Napoli Federico II, Italy) Valerio Persico (University of Napoli Federico II, Italy) Antonio Pescapé (University of Napoli Federico II, Italy)

#### 16:40 Detection of Video/Audio Streaming Packet Flows for Non-Intrusive QoS/QoE Monitoring

Stefano Galetto (nTh Network Technologies to Help, Italy)
Pierantonio Bottaro (nTh Network Technologies to Help, Italy)
Cesarella Carrara (nTh Network Technologies to Help, Italy)
Fernando Secco (nTh Network Technologies to Help, Italy)
Arianna Guidolin (University of Padua, Italy)
Enrico Targa (University of Padua, Italy)
Claudio Narduzzi (University of Padua, Italy)
Giada Giorgi (University of Padua, Italy)

#### Thursday, September 28

### 17:00 Detecting Network Performance Anomalies with Contextual Anomaly Detection

Giorgos Dimopoulos (UPC BarcelonaTech, Spain)
Pere Barlet-Ros (UPC BarcelonaTech, Spain)
Constantine Dovrolis (Georgia Institute of Technology, USA)
Ilias Leontiadis (Telefonica Research, Spain)

### 17:20 Development of the Measurement Method for Challenging NLOS Conditions in Mobile Networks

Marjo Heikkilä (Centria University of Applied Sciences, Finland) Juha Erkkilä (Centria University of Applied Sciences, Finland) Marjut Koskela (Centria University of Applied Sciences, Finland) Joni Heikkilä (Centria University of Applied Sciences, Finland) Tuomo Kupiainen (Centria University of Applied Sciences, Finland) Jouni Tervonen (University of Oulu, Finland) Marco Donald Migliore (University of Cassino, Italy)

19:00 Social Dinner

**Location:** Corte dei Leoni *Via Tasso 615, Napoli* 

#### Friday, September 29

09:30 - 10:30

SPECIAL SESSION: Advanced solutions for Energy Harvesting

Room: Great Hall

Chair: Vincenzo Marletta (University of Catania, Italy)

#### 09:30 Preliminary Investigation of an Inductive Bistable Energy Harvester

Bruno Andò (University of Catania, Italy) Salvatore Baglio (University of Catania, Italy) Vincenzo Marletta (University of Catania, Italy) Antonio Pistorio (University of Catania, Italy)

Adi R. Bulsara (Space and Naval Warfare Center (San Diego), USA)

#### 09:50 Conformable Piezoelectric-Foil for Energy Scavenging Applications

Carlo Trigona (University of Catania, Italy) Bruno Andò (University of Catania, Italy) Salvatore Baglio (University of Catania, Italy)

#### 10:10 Low-Power Smart Sensing in Energy and Water Systems Integration

António Espírito Santo (University of Beira Interior, Portugal)
Pedro Serra (University of Beira Interior, Portugal)
Sérgio Albuquerque (University of Beira Interior, Portugal)
Bruno Ribeiro (University of Beira Interior, Portugal)
Fernando Charrua-Santos (University of Beira Interior, Portugal)

Jose Pascoa (University of Beira Interior, Portugal)

10:30 - 11:00 Coffee Break

11:00 - 13:00 Join with IEEE Day Room: Great Hall

13:00 - 14:00 Lunch

14:00 - 15:30

Presentations and round table on H2020 program

Room: Great Hall

Chair: Leopoldo Angrisani (University of Napoli Federico II, Italy)

14:00 - 14:30

Title: EU Innovation and Communication for H2020 Projects

Dr. Mariano Bonavolontà, Communication officer at the Europe Direct LUPT "Maria

Scognamiglio" University of Napoli Federico II

14:30 - 15:00

**Title:** EU funding opportunities in the field of "Measurements and Networking" *Bruno Andò, DIEEI-University of Catania, Italy* 

15:00 - 15:30

Open Discussion

### Friday, September 29

15:30 - 15:50 Coffee Break

15:50 - 17:00

Awards, Wrap-up table on "Measurements & Networking", & Closing

Room: Great Hall

Chairs: Leopoldo Angrisani (University of Napoli Federico II, Italy)

Domenico Capriglione (University of Salerno, Italy)

Luigi Ferrigno (University of Cassino, Italy)