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Technical Program: Tuesday, July 2

8:30 - 9:00 Registration Room: Chiostro

9:00 - 9:30

Opening Ceremony

Session Chairs: Marco Laracca (Sapienza University of Rome, Italy), Gianfranco Miele (University of Cassino and Southern Lazio, Italy)

Room: Sala del Chiostro

9:30 - 10:00

Keynote: Digital Revolution: Unlocking Tomorrow's Security (And Today's Headaches)

Presenter: Leonardo Querzoni (Sapienza University of Rome, CYBER 4.0, Italy)

Room: Sala del Chiostro

10:00 - 10:30 Coffee Break Room: Chiostro

10:30 - 11:50

Special Session: Anomaly Detection in Instrumentation and Measurement for Distributed Sensor Systems Session Chairs: Irida Shallari (Mid Sweden University, Sweden), Marco Carratù (University of Salerno, Italy)

Room: Sala del Chiostro

10:30

Empirical analysis of the IOTA Tangle ledger in the Stardust stage...1

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Special Session: Digitalization in Urban Energy and Mobility Systems: The approach of the Samothrace Project and Beyond (1)

Session Chair: Alfio Lombardo (University of Catania, Italy)

Room: Sala del Chiostro

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Alfio Lombardo (University of Catania, Italy)

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Prof. F. Russo, Università Mediterranea Reggio Calabria

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Room: Chiostro

14:00 - 14:30

Keynote: The Pathway from 5G to 6G Wireless Networks: A Journey through Research and Standardization Activities

Presenter: Stefano Buzzi (University of Cassino and Southern Lazio, Italy)

Room: Sala del Chiostro

14:30 - 15:30

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Session Chair: Alfio Lombardo (University of Catania, Italy)

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Meeting Location: Chiostro

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Welcome Reception

Room: Chiostro

Technical Program: Wednesday, July 3

8:30 - 9:00 Registration Room: Chiostro

9:00 - 9:45

WS: Developing and characterizing on-wafer reference structures for signal Integrity metrology at the chip level

Presenter: Djamel Allal (LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS, France)

Session Chair: Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

9:45 - 10:30

Hands-On Lab - Conceptual background

Presenter: António Espírito Santo (University of Beira Interior, Portugal)

Room: Measurement Laboratory

9:45 - 10:30

WS: Recommendations for the Design of Differential Thin-Film Microstrip Lines

Presenter: Gia Ngoc Phung (PHYSIKALISCH-TECHNISCHE BUNDESANSTALT, Germany)

Session Chair: Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

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Presenter: António Espírito Santo (University of Beira Interior, Portugal)

Room: Measurement Laboratory

11:00 - 11:45

WS: Power integrity and electromagnetic interference characterization of FPGA boards and performance

Presenter: Seif Ben Hassine (LABORATOIRE NATIONAL DE MÉTROLOGIE ET D'ESSAIS, France)

Session Chair: Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

11:45 - 12:30

WS: Guidelines for the Design of Thin Film Microstrip Lines for 5G Applications

Presenter: Khitem Lahbacha (University of Cassino and Southern Lazio)

Session Chair: Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

12:30 - 13:00

Panel Session on Measurement methods for Signal and Power Integrity

Session Chair: Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

Technical Program: Wednesday, July 3 (cont.)

13:00 - 14:00

Lunch

Room: Chiostro

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WS: Characterising non-linear behaviour of high power GaN FETs

Presenter: Dilbagh Singh (National Physical Laboratory, UK) **Session Chair:** Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

15:00 - 15:45

WS: Analysis of the Measurement Noise in Reflection Coefficients Synthesized with Mixed-Signal Active Tuners

Presenter: Faisal Mubarak (VSL National Metrology Institute, The Netherlands)

Session Chair: Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

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Presenter: Hung-Ju Lin (Federal Institute of Metrology, Switzerland) **Session Chair:** Dilbagh Singh (National Physical Laboratory, UK)

Room: Sala del Chiostro

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Session Chair: Dilbagh Singh (National Physical Laboratory, UK)

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Room: Sala del Chiostro

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10:30 - 11:00 Coffee Break Room: Chiostro

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Special Session: Methods and Techniques for Structural Health Monitoring

Session Chairs: Marco Di Felice (University of Bologna, Italy), Emiliano Sisinni (University of Brescia, Italy)

Room: Sala del Chiostro

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Room: Sala del Chiostro

13:00 - 14:00

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Room: Chiostro

14:00 - 15:30

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Session Chairs: Gennaro Di Mambro (University of Cassino and Southern Lazio), Elisa Augello (University of Bologna), Narges Heidari

(Polytechnic University of Milan)

Room: Sala del Chiostro

14:00

Invited Presentation - Introduction to the project MOST - Sustainable Mobility Center funded by European Union Next-GenerationEU (PIANO NAZIONALE DI RIPRESA E RESILIENZA (PNRR) - MISSIONE 4 COMPONENTE 2, INVESTIMENTO 1.4 - D.D. 1033 17/06/2022, CN00000023)

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16:00 - 16:30

Keynote: Time-Sensitive Computing and Communications in Converged Networks

Presenter: Dave Cavalcanti (Intel, USA)

Room: Sala del Chiostro

16:30 - 17:30

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Session Chairs: Alberto Morato (IEIIT-CNR, Italy), Ciro D'Elia (University of Cassino, Italy), Federico Tramarin (University of Modena

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Session Chairs: Dilbagh Singh (National Physical Laboratory, UK), Gianfranco Miele (University of Cassino and Southern Lazio, Italy)

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Location: Hotel Forum

Technical Program: Friday, July 5

8:30 - 9:00 Registration Room: Chiostro

9:00 - 10:40

Special Session: Bio/chemical measurements via IoT Point-Of-Care-Tests

Session Chairs: Giuseppe Quero (University of Molise, Italy), Francesco Arcadio (University of Campania "Luigi Vanvitelli", Italy), Nunzio

Cennamo (University of Campania Luigi Vanvitelli, Italy)

Room: Sala del Chiostro

9:00

Invited Speech: Optical Fiber SERS Probes for Liquid Biopsies

Giuseppe Quero (University of Molise, Italy)

9:20

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11:00 - 13:00

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Stefania Zinno (University Federico II of Naples, Italy); Alessio Botta (University of Napoli Federico II, Italy); Nicola Pasquino and Giorgio Ventre (University of Naples Federico II, Italy)

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Lunch

Room: Chiostro

14:00 - 15:40

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Session Chair: Federico Carere (Sapienza University of Rome, Italy), Gianfranco Miele (University of Cassino and Southern Lazio, Italy) Room: Sala del Chiostro

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Identifying Data Issues in Networked Energy Monitoring Platforms...306

Jorge Valverde, Alberto Cruz and Christopher Vaccaro (ESPOL University, Ecuador); Jocellyn Luna and Jose Cordova-Garcia (ESPOL, Ecuador)

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Marco Danger, Christian Arendt, Hendrik Schippers and Stefan Böcker (TU Dortmund University, Germany); Maciej Muehleisen (Ericsson GmbH, Germany); Paul Becker (Ericsson, Germany); Jordi Biosca-Caro (Ericsson Research, Germany); Gorjana Gjorgjievska and Mazen Abdel Latif (Ericsson, Germany); Junaid Ansari (Ericsson Research, Germany); Niklas Beckmann and Niels König (Fraunhofer Institute for Production Technology IPT, Germany); Robert H. Schmitt (Laboratory for Machine Tools and Production Engineering WZL of RWTH Aachen Univ, Germany); Christian Wietfeld (TU Dortmund University, Germany)

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Earthquake Magnitude Estimation with Single Seismic Station using Deep Learning...318

Vincenzo Gallo, Valter Laino, Marco Carratù and Vincenzo Paciello (University of Salerno, Italy); António Espírito Santo (University of Beira Interior, Portugal); Irida Shallari (Mid Sweden University, Sweden)

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A Comparative Analysis of Application Layer Protocols within an Industrial Internet of Things Monitoring System...324 Jurgen Aquilina, Peter Xuereb, Emmanuel Francalanza, Jasmine Mallia and Paul Refalo (University of Malta, Malta)

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Performance Enhancement of Graphene-Based Biopotential Electrodes through Electrical Contact Geometry Optimization...330 Babar Ali, Umar Farooq, Marco Laracca, Hossein Cheraghi Bidsorkhi and Alessandro Giuseppe D'Aloia (Sapienza University of Rome, Italy); Maria Sabrina Sarto (University of Rome, La Sapienza, Italy)

15:40 - 16:00

Closing Session- Awards Ceremony

Session Chair: Marco Laracca (Sapienza University of Rome, Italy), Gianfranco Miele (University of Cassino and Southern Lazio, Italy)

Room: Sala del Chiostro

16:00 - 16:30

Coffee, Drinks, and Greetings

Room: Chiostro