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WORKSHOP PROGRAM

Tuesday, July 5

TECHNICAL SESSION 1 - Innovative sensors and systems for the near future automotive world

Room: Building 25 - Room P1.2

Chairs: Elia Landi, *University of Siena, Italy*
Lorenzo Parri, *University of Siena, Italy*

1 High Performance Analog MEMS for IoT Based Condition Monitoring, Characterization with a Bearing Failure Emulation Test Bench

Elia Landi, University of Siena, Italy
Lorenzo Parri, University of Siena, Italy
Riccardo Moretti, University of Siena, Italy
Ada Fort, University of Siena, Italy
Marco Mugnaini, University of Siena, Italy
Valerio Vignoli, University of Siena, Italy

6 A Wirelessly-Powered Embedded System for Temperature Measurements of a High Performance Electric Motor Rotor

Mariano Nerone, HPE Coxa, Italy
Igor Valic, HPE Coxa, Italy
Matteo Zauli, University of Bologna, Italy
Alberto Leonardi, HPE Coxa, Italy
Nicola Matteazzi, HPE Coxa, Italy
Luca De Marchi, University of Bologna, Italy

12 Roller Bearing Failures Classification with Low Computational Cost Embedded Machine Learning

Matteo Bertocco, University of Padova, Italy
Ada Fort, University of Siena, Italy
Elia Landi, University of Siena, Italy
Marco Mugnaini, University of Siena, Italy
Lorenzo Parri, University of Siena, Italy
Giacomo Peruzzi, University of Siena, Italy
Alessandro Pozzebon, University of Padova, Italy

TECHNICAL SESSION 2 - Sensors and instruments for improving the sustainability of e-vehicles on the distribution grid

Room: Building 25 - Room P1.2

Chairs: Marco Pasetti, *University of Brescia, Italy*
Stefano Rinaldi, *University of Brescia, Italy*
Carmine Landi, *University of Campania L. Vanvitelli, Italy*

18 A TinyML Soft-Sensor for the Internet of Intelligent Vehicles

Thommas Flores, Federal University of Rio Grande do Norte, Brazil
Marianne Silva, Federal University of Rio Grande do Norte, Brazil
Pedro Andrade, Federal University of Rio Grande do Norte, Brazil
Jord~ao Silva, Federal University of Rio Grande do Norte, Brazil
Ivanovitch Silva, Federal University of Rio Grande do Norte, Brazil
Emiliano Sisinni, University of Brescia, Italy
Paolo Ferrari, University of Brescia, Italy
Stefano Rinaldi, University of Brescia, Italy

24 The Role of Vehicle to Grid Technology for Enhancing Power Distribution System Flexibility

Antonio Pepiciello, University of Sannio, Italy
Alfredo Vaccaro, University of Sannio, Italy

30 Impact Analysis of Electric Vehicles on Distribution Grid by Hardware-In-The-Loop Simulations

Fabrizio De Caro, University of Sannio, Italy
Nidhal Ben Mbarek, Université Clermont Auvergne, France
Firas Fredj, Université Clermont Auvergne, France
Alfredo Vaccaro, University of Sannio, Italy

36 PWM Signal Measurement Issues

Giuliano Cipolletta, University of Campania "Luigi Vanvitelli", Italy
Daniele Gallo, University of Campania "Luigi Vanvitelli", Italy
Antonio Delle Femine, University of Campania "Luigi Vanvitelli", Italy
Carmine Landi, University of Campania "Luigi Vanvitelli", Italy
Mario Luiso, University of Campania "Luigi Vanvitelli", Italy

TECHNICAL SESSION 3 - General Session Part 1

Room: Building 25 - Room P1.2

Chair: Pier Andrea Traverso, *University of Bologna, Italy*

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Fabio Pisoni, STMicroelectronics
Giovanni Gogliettino, STMicroelectronics
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Giuseppe Avellone, STMicroelectronics

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Wang Xi, Karlsruhe Institute of Technology, Germany
Xinlu Xhen, Karlsruhe Institute of Technology, Germany
Albert Albers, Karlsruhe Institute of Technology, Germany

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Marco Bosi, University of Bologna, Italy
Alessandro Campanini, University of Bologna, Italy
Lorenzo Peretto, University of Bologna, Italy
Albert Miquel Sánchez, Emzer Technological Solution SL, Spain
Francisco Javier Pajares, Emzer Technological Solution SL, Spain

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Stefano Cattini, University of Modena and Reggio Emilia, Italy
Giorgio Di Loro, University of Modena and Reggio Emilia, Italy
Luca Di Cecilia, CNH Industrial, Italy
Luca Ferrari, CNH Industrial, Italy
Luigi Rovati, University of Modena and Reggio Emilia, Italy

65 Experimental investigation on noise due to the cavitation phenomenon in proportional spool valves

Luca Romagnuolo, University of Naples Federico II, Italy
Emma Frosina, University of Sannio, Italy
Adolfo Senatore, University of Naples Federico II, Italy
Umberto Cesaro, University of Naples Federico II, Italy

TECHNICAL SESSION 4 - Measurement for improving Quality, Reliability and Safety in Automotive Applications

Room: Building 25 - Room P1.2

Chairs: Lorenzo Ciani, *University of Florence, Italy*

Gabriele Patrizi, *University of Florence, Italy*

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Hao Tang, Hunan Institute of Metrology and Test, China
Weixian Zeng, Hunan Institute of Metrology and Test, China
Wenhui Lin, Hunan Institute of Metrology and Test, China
Lan Yin, Hunan Institute of Metrology and Test, China
Yihong Xia, Hunan Institute of Metrology and Test, China
Qiuxi Deng, Hunan Institute of Metrology and Test, China
Zheng Peng, Hunan Institute of Metrology and Test, China
Fu Lin, Hunan Institute of Metrology and Test, China
Jiawei Yue, Hunan Institute of Metrology and Test, China
Feilong Wang, Potelissom Company Limited, China
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Mansour H. Assaf, The University of the South Pacific, Republic of Fiji
Voicu Z. Groza, University of Ottawa, Canada
Emil M. Petriu, University of Ottawa, Canada
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Marcantonio Catelani, University of Florence, Italy
Lorenzo Ciani, University of Florence, Italy
Francesco Grasso, University of Florence, Italy
Gabriele Patrizi, University of Florence, Italy
Alberto Reatti, University of Florence, Italy
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Uday Akasapu, AVL List GmbH, Austria
Michael Leighton, AVL List GmbH, Austria
-

Wednesday, July 6

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Room: Building 25 - Room P1.2

Chairs: *Grazia Iadarola, Polytechnic University of Marche, Italy*
Susanna Spinsante, Polytechnic University of Marche, Italy

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Grazia Iadarola, Polytechnic University of Marche, Italy
Federico Tramarin, University of Modena and Reggio Emilia, Italy
Paolo Pavan, University of Modena and Reggio Emilia, Italy
Susanna Spinsante, Polytechnic University of Marche, Italy
Luigi Rovati, University of Modena and Reggio Emilia, Italy
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V. Bruschi, Università Politecnica delle Marche, Italy
S. Nobili, Università Politecnica delle Marche, Italy
A. Terenzi, Università Politecnica delle Marche, Italy
A. Carini, University of Trieste, Italy

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Filippo Pimpini, Polytechnic University of Marche, Italy
Noemi Tridenti, Polytechnic University of Marche, Italy
Linda Senigagliesi, Polytechnic University of Marche, Italy
Susanna Spinsante, Polytechnic University of Marche, Italy
Ennio Gambi, Polytechnic University of Marche, Italy

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Room: Building 25 - Room P1.2

Chair: Alberto Morato, IEIIT-CNR, Italy

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Ilaria De Munari, University of Parma, Italy

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Valentina Di Pinto, University of Modena and Reggio Emilia, Italy
Alberto Morato, CNR-IEIIT, Italy
Federico Tamarin, University of Modena and Reggio Emilia, Italy
Stefano Cattini, University of Modena and Reggio Emilia, Italy
Luigi Rovati, University of Modena and Reggio Emilia, Italy

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Stefano Cattini, University of Modena and Reggio Emilia, Italy
Luigi Rovati, University of Modena and Reggio Emilia, Italy

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Antonio Affanni, University of Udine, Italy
Taraneh Aminosharieh Najafi, University of Udine, Italy

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Room: Building 25 - Room P1.2

Chair: Stefano Cattini, University of Modena and Reggio Emilia, Italy

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Beatrice Pulvirenti, University of Bologna, Italy
Raffaella Di Sante, University of Bologna, Italy
Giovanni Bottiglieri, Webasto Thermo & Comfort, Italy
Federico Coiro, Webasto Thermo & Comfort, Italy

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Cinzia Tornatore, STEMS-CNR, Italy

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Pasquale Daponte, University of Sannio, Italy

Gianluca Mazzilli, University of Sannio, Italy

Enrico Picariello, University of Sannio, Italy

Francesco Picariello, University of Sannio, Italy

Ioan Tudosa, University of Sannio, Italy