

18th IMEKO TC10 Workshop

Final schedule

26.09.2022				
09:00	09:30	Opening Ceremony	Dr. Zsolt János Viharos	Prof. Piotr Bilski
09:30	10:30	<u>INVITED SPEAKER SESSION: SCIENTIFIC</u>	prof. Diego Galar	Social and cognitive digital twins. A metaverse approach
10:30	11:00	<i>Coffee break</i>		
11:00	11:20	T4 - Failure & fault detection and prognosis	Doris Schadler, Michael Wohlthán, Andreas Wimmer	Adaptive Methods for Fault Detection on Research Engine Test Beds
11:20	11:40		Krzysztof Dowalla, Piotr Bilski	Series arc fault detection and line selection based on Non-Intrusive Load Monitoring Method
11:40	12:00		Karol Kuczynski, Piotr Bilski, Adrian Bilski, Jerzy Szymanski	Identification of the Defects in the Magnetolectric Ring Sensor
12:00	12:20		I. Mpia Bolombanza, G. Ekulu Ndiakama, M. Avoci Ugwiri, B. Kilundu	Coupling Singular Spectral and Envelope Analysis for Localised Bearing Defect Detection
12:20	12:40		Monica Egusquiza, Alex Presas, David Valentin, Carme Valero, Eduard Egusquiza	Diagnosis of a hydraulic turbine failure
12:40	13:00		Maria Emanuela Palmieri, Laura Fabbiano, Antonella Gaspari, Luigi Tricarico	Robust control of the draw-in in a deep-drawing process: a measurement-based approach
13:00	14:00	<i>Lunch break</i>		
14:00	14:20	T5 - Artificial intelligence, machine learning and data science for Diagnostics, Optimization & Control	D. Buonocore, M. Carratù, M. Lamberti	Classification of coffee bean varieties based on a deep learning approach
14:20	14:40		Yukio Hiranaka, Koichi Tsujino, Hidenori Katsumura, Maho Mori	Deterioration Score of Cold Extrusion Dies by Using Acoustic Emission Signals
14:40	15:00		Iacopo Marria, Emil Petkovski, Loredana Cristaldi, Marco Faifer	Lithium-ion batteries SoH estimation based on support-vector regression and a feature-based approach
15:00	15:20		Marco Carratù, Vincenzo Gallo, Antonio Pietrosanto, Paolo Sommella	An LSTM based soft sensor for rear motorcycle suspension
15:20	15:40		Paul-Alexander Vogel, Anh Tuan Vu, Hendrik Mende, Shrey Gulati, Tim Grunwald, Robert H. Schmitt, Thomas Bergs	Machine learning-based predictions of form accuracy for curved thin glass by vacuum assisted hot forming process
15:40	16:00		Chao-Chingg Ho, Wei-Ming Su, Sankarsan Mohanty	Based on Deep Convolutional Neural Network and Machine Vision Applied to the Surface Defect Detection of Hard Disk Metal Gaskets
16:00	16:20	<i>Coffee break</i>		
16:20	16:40	<u>INVITED SPEAKER SESSION: INDUSTRIAL</u>	HUAWEI: Daniel Michalczyk	Dive into Digital. Create New Value Together
17:40	18:40	IMEKO TC10 board meeting		

19:00 - Gala dinner

* virtual presentations

27.09.2022

09:00	10:00	INVITED SPEAKER SESSION: SCIENTIFIC	prof. Michał Bartyś	The role of measurements in process diagnostics
10:00	10:30	<i>Coffee break</i>		
10:30	10:50	T2 - Sensors, signal acquisition and processing for Diagnostics, Optimization & Control	Rubens M. B. da S. Lima, Hugo B. S. Araujo, Cleonilson P. de Souza	An Analysis of Block Sizes for Compressive Sensing Reconstruction Applied in Image Processing Optimisation
10:50	11:10		Marco Carratù, Marcantonio Catelani, Lorenzo Ciani, Gabriele Patrizi, Antonio Pietrosanto, Paolo Sommella	Reliability estimation of Inertial Measurement units using Accelerated Life Test
11:10	11:30		E. Natale, G. D'Emilia, L. Chiominto, A. Gaspari, S. Marsella, M. Marzoli	Metrological comparison between instruments for status monitoring of buildings after earthquake
11:30	11:50		Balázs Scherer	Card Level Management Solution for the BRAINE edge framework
11:50	12:10		Gianluca Albanese, Antonio Delle Femine, Daniele Gallo, Claudio Iodice, Massimo Iorizzo, Carmine Landi, Francesco Letizia, Mario Luiso, Bruno Testa	Measurement of the Effect of Pulsed Electric Fields on the Inactivation of Wine Yeasts
12:10	12:30		<i>Lunch break</i>	
12:30	13:30	<i>Lunch break</i>		
13:30	13:50	T6 - Industry 4.0 foundations, applications, trends and novelties & T11 - Digital transformation & T21: Agriculture	Gabriele Patrizi, Alessandro Bartolini, Lorenzo Ciani, Marcantonio Catelani	Failure analysis of a smart sensor node for precision agriculture
13:50	14:10		Lauryna Siaudynite	Traceable metrology of soft X-ray to IR optical constants and nanofilms for advanced manufacturing
14:10	14:30		Tamás Gyulai, Péter Wolf, Ferenc Kása, Zsolt János Viharos	Operational Structure for an Industry 4.0 oriented Learning Factory
14:30	14:50		Viola Gallina, Zsolt János Viharos, Gabor Nick, Maik Frye, Andreas Kluth, Robert H. Schmitt	Factory of the Year Prize – A Benchmarking
14:50	15:00	<i>Coffee break</i>		
15:00	15:20	T5 - Artificial intelligence, machine learning and data science for Diagnostics, Optimization & Control	László Móricz, Zsolt János Viharos	Vibration Based Cutting Tool Path differentiation by Feature Selection
15:20	15:40		Dariusz Zieliński, Damian Grzechca	Energy distribution on surge arrester elements selected by genetic algorithm in railway systems
15:40	16:00		Adrian Bilski	Wind Generation Forecast With the Use of AI-Based Regression Methods
16:00	16:20		Yu Jun, Olena Hordiichuk-Bublivska, Yan Lingyu, Marian Kyryk, Mykola Beshley, Hu Jiwei	Big Data Analysis in Smart Grid Systems
16:20	16:40		Mirko Marracci, G. Caposciutti, A. Buffi, G. Bandini, B. Tellini	Failure limit analysis for Li-ion batteries using Ragone plot: a preliminary study
16:40	17:00	Award and closing ceremony	Dr. Zsolt János Viharos Prof. Piotr Bilski Prof. Lorenzo Ciani	Enjoy the scientific life inside our IMEKO TC10 on Measurement for Diagnostics, Optimization and Control

* virtual presentations