


Conference Program Sensorica 2024

SENSORICA 2024

10th International Workshop at the MST Institute
JUNE 13-14, 2024
Sensorica.hs-ruhrwest.de

Rev.: 12.06.2024

Time / Room	Lecture Room:	
	Start	End
	 HOCHSCHULE RUHR WEST UNIVERSITY OF APPLIED SCIENCES INSTITUT MESS- UND SENSORTECHNIK	
	Building 6, Ground Floor, 06 EG HS2	
8:00 06 EG Foyer	09:00	Registration
9:00 06 EG HS2	9:30	Welcome Addresses by Prof. Dr. Susanne Staude, president of Hochschule Ruhr West + Organization Committee Sensorica
9:30 06 EG HS2	10:50	Revolutionizing vehicle evaluation through the use of thermal imaging cameras to detect hidden pre-damages on vehicles <i>K. Rösler</i>
Contactless measurement technology		Harvesting Energy from Multi-Conductor Cables <i>S. Böller, M. Büsch</i>
Chair: Prof. Dr. Jörg Himmel		De-Embedding Method for Determining Impedance Values of Striplines in a Self-Calibrating Radiometer <i>F. Ströder, K. Thelen</i>
		In-situ Estimation of the Roll Gap in a Two-High Stand for Hot-Rolled Wire and Rod <i>A. Jobst, C. Clemens, M. Radschun, J. Himmel, O. Kanoun</i>
10:50 06 EG Foyer	11:10	Photo in front of building 6 Coffee Break, Networking with other Experts
11:10 06 EG HS2	12:30	Advancements in Magnetic Induction Tomography: Solving the Inverse Problem with Deep Learning <i>A. Hofmann, Andreas Sauer</i>
AI and adaptive learning		Correction of measurement data from an inductive low-cost rain sensor using drop size distributions <i>C. Clemens, A. Jobst, J. Himmel</i>
Chair: Prof. Dr. Andreas Sauer		A new solution to the Inverse Power flow problem in network models in Magnetic Induction Tomography <i>M. Wachs, M. Primbs</i>
		Improving Gradient Descent Optimization through Guided Exploration of Loss Landscape <i>A. Pare</i>
12:30	13:30	Lunch Break (Barbecue)
		Meeting of the organisation committee
13:30 06 EG HS2		Measuring system for recording the state of charge and electrolyte of vanadium redox flow batteries <i>L. Lütkenhorst, F. Gröniger, T. Wichmann, M. Brinker, M. Schlüter</i>
Microfluidic and Batteries		A short introduction to characterisation methodes for gas diffusion electrodes <i>M. Forster, M. Schlüter</i>

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Chair: Prof. Dr. Marvin Kaminski	14:50	Planar peristaltic pump for microfluidic applications <i>P. Stricker, D. Thiem, S. Mammitzsch, S. Jansen, M, Reufer</i>
		Development of a microfluidic separator for trace analysis based on magnetic beads <i>J. Berk, S. Mammitzsch, S. Jansen, M. Reufer</i>
14:50 06 EG Foyer	15:10	Coffee Break, Networking with other Experts
15:10 06 EG HS2 International Session Chair: Prof. Dr. Klaus Thelen		Accurate prediction of the Blood's Glucose Content Based on a Machine Learning Algorithm <i>M. Jalali, K. Neumann, J. T. Svejda, A. Prokscha, T. Kaiser, D. Erni</i>
		Enhanced Vehicle Dynamics Prediction Utilizing Adaptive Learning and MEMS-Based Sensors <i>M. Moussa, L. Alazzawi</i>
		Assessing Novel Orthostatic Vital Signs with a Wearable Sensor <i>Z. A. Elhajjaji, A. S. Basu</i>
	16:30	Automatic EEG Signal Detection and Analysis of Signal Propagation Over Adjacent Electrodes <i>A. K. Erbay, J. Allmer</i>
18:00	20:00	Social Event: Gasometer: Planet Ocean
	20:30	Optional Dinner (with costs) – Louisiana Oberhausen

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14.06.2024	8:00 06 EG Foyer	9:00	Registration
	9:00 06 EG HS2	10:00	Optimization of an optofluidic sensor system for improved diagnosis of cystic fibrosis disease <i>A. Nietert, M. Nietert, M. Schlüter</i>
	Medical measurement technology		Capturing UI Behaviors in Control Room Scenarios from Eye-Tracking and Ego-Perspective Video <i>J. Pöhler, J. Dsouza, N. Flegel, T. Mentler, K. V. Laerhoven</i>
	Chair: Prof. Dr. Carole Leguy		SVM-based classification of key occupational therapy hand exercises based on finger angles recorded with a sensor glove T. Waschk, M. Hartmann, C. Leguy
	10:00 06 EG Foyer	10:20	Coffee Break, Networking with other Experts
	10:20 06 EG HS2	11:20	Inspection of underground sewerage channel infrastructure by deploying a wireless sensor network <i>N. Lange, J. Brüning, A. Nietert, M. Schlüter</i>
	Electrical measurement		Temperature Dependency of Output Voltage Drift and Intrinsic Noise in a Lock-In Amplifier-Based Industrial Measuring Hardware <i>J. Brodmann, M. Simoneit, A. Hennig, M. Radschun, F. Ströder</i>
	Chair: TBA		Potential for NV-Center Magnetometry in Medicine – A Review <i>T. Thuilot, C. Bremer, A. Hennig</i>
11:20	12:00	Closing Words	