IIPhDW'19

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Program

Wednesday, 15th May

Time	Event	Location
8:30 – 9:30	Registration	Building 6, Gallery
9:30 – 10:00	Opening ceremony Conference Opening Dean of the Faculty of Engineering – Prof. Ingo Müller Welcome from the principal of the UAS Wismar Prof. Bodo Wiegand-Hoffmeister Welcome greeting from Prof. Jan Sikora Netrix S.A.	Building 6, Auditorium
10:00 – 10:45	Keynote talk #1 Dr. Thomas Schauer Automation in medicine – how can it help in rehabilitation	Building 6, Auditorium
10:45 – 11:15	Coffee break	Building 6, Gallery
11:15 – 12:45	Session 1 – Automation Chair: Olaf Simanski **A Generic Inertial Navigation System** Robert Damerius and Torsten Jeinsch **Pointwise PI Control of Population Density Reaction-Diffusion Model in a Bounded Habitat** Jordan Kralev **Localization-based software architecture for 1:10 scale autonomous car** Adam Gotlib, Mateusz Szczygielski and Kornelia Łukojć **Automatic model generation by using SES/MB Framework and a Template extension** Alexander Martens, Olaf Hagendorf, Christian Bock and Olaf Simanski **Sensitivity Analysis of Circular Microstrip Strain Sensor** Michal Herbko and Przemyslaw Lopato	Building 6, Auditorium
12:45 – 13:45	Lunch break	Mensa
13:45 – 14:30	Keynote talk #2 Prof. Christoph Lange Selected Trends and Challenges in Communication Networks	Building 6, Auditorium

14:30 – 15:10	Session 2 – Communications and Signal Processing Chair: Steffen Lochmann **On improving radar echo spectral width analysis for atmospheric turbulence estimates** Toralf Renkwitz and Ralph Latteck **Time-frequency representation of magnetic Barkhausen noise under various measurement conditions** Michal Maciusowicz, Grzegorz Psuj and Piotr Chudzik	Building 6, Auditorium
16:45 – 20:00	Welcome reception: Sailing tour with the historic cog "Wissemara"	Old harbor

Thursday, 16th May

8:30 – 9:00	Registration	Building 6, Gallery
9:00 – 10:30	Session 3 – Magnetics and Electrical Engineering Chair: Jan Sikora **Application of the Fresnel zone and Free-space Path for image reconstruction in radio tomography** Tomasz Rymarczyk, Michał Maj, Konrad Kania, Konrad Niderla, Michał Styła and Przemysław Adamkiewicz **Application of the 2D-ERT to evaluate phantom circumscribed regions in various sucrose solution concentrations** Guruprasad Rao, Muhammad Awais Sattar, Radoslaw Wajman and Lidia Jackowska Strumillo **Part of the Magnetometer Design with a Three-axis Measuring Probe** Tomas Hejtmanek and Zdenek Roubal **Measuring Ultra-Low Fluid Flow Velocities in the Context of Industry 4.0** Pavel Fiala and Jiri Zukal **RayIntegration methods for real-time reconstruction using a compact measuring device** Tomasz Rymarczyk, Konrad Kania, Michał Maj, Michał Gołąbek, Jan Sikora and Przemysław Adamkiewicz **Poster presentation teaser**	Building 6, Auditorium
10:30 – 11:15	Poster session and coffee break	Building 6, Gallery
11:15 – 12:45	Session 4 – Mechanical and Production Engineering, Maritime Studies and Transport Operations Chair: Roland Larek **Design of an Assisting Workplace Cell for Human-Robot Collaboration** Johanna Ender, Jan Wagner, Georg Kunert, Roland Larek, Thorsten Pawletta and Fang Bin Guo	Building 6, Auditorium

	Process optimization by transferring conventional electrical discharge machining to near dry proceedings for precise bore hole in CoCrMo Mathias Lorenz **Control and monitoring of a full-scale biogas plant treating the highly polluted wastewater from the cleaning of tank cars transporting food and fodder** Van Than Nguyen, Dirk Awe, Jan Neuemann, Jens Tränckner and Wolfgang Pfeiffer **Data-based prediction of particle emissions during manoeuvring of ships** Michèle Martina Schaub, Georg M. Finger, Felix Dahms, Egon Hassel, Torsten Jeinsch and Matthias Kirchhoff	
12:45 – 13:45	Lunch break	Mensa
13:45 – 14:30	Keynote talk #3 Prof. Ojaras Purvinis Agent-based Simulation	Building 6, Auditorium
14:30 – 16:00	Session 5 – Electrical Engineering and Computer Science Chair: Dieter Schott **Frequency adaptive state observer for grid current estimation of wind energy systems** Alexander Schöley and Torsten Jeinsch **Application of logistic regression to image reconstruction in EIT** Tomasz Rymarczyk, Edward Kozłowski, Grzegorz Kłosowksi, Paweł Tchórzewski and Tomasz Cieplak **Analysis of changes in flame luminosity for process diagnostics** Żaklin Grądz, Waldemar Wójcik and Andrzej Kotyra **Mutual Information and Delay Embeddings in Polysomnography Studies** Andres Vejar, Tomasz Rymarczyk and Piotr Paprzycki **Accelerating Reinforcement Learning for Robot Controls Using Interim Rewards and Master/Slave Computing** Georg Kunert, Thorsten Pawletta, Sven Pawletta and Olaf Simanski	Building 6, Auditorium
18:00	Social event: Gala dinner at the "Brauhaus"	Old town, Brauhaus Kleine Hohe Straße 15

Friday, 17th May

8:30 – 9:00	Registration	Building 6, Gallery
9:00 – 10:10	Session 6 – Communications and Signal Processing Chair: Dieter Schott **Characterization of Mechanically Stressed Multi-Mode Fiber Channels** André Sandmann, Andreas Ahrens and Steffen Lochmann **Computationally Efficient Training for FDD Massive Multi-user MISO Systems with Correlated Channels** Yasser Naguib **Detection Limits of Optical Autocorrelations with a CDM Interrogator for Overlapping FBG Spectra** Marek Götten, Steffen Lochmann, Andreas Ahrens and Cesar Benavente Peces **Low Complexity Channel Prediction for TDD Massive MIMO Systems** Yasser Naguib	Building 6, Auditorium
10:10 – 10:40	Coffee break	Building 6, Gallery
10:40 – 11:15	Keynote talk #4 Dr. Kort Bremer (35min) Optical waveguide sensors: Research challenges and future trends	Building 6, Auditorium
11:15 – 12:30	Session 7 – Computer Science Chair: Andreas Ahrens **Distributed system for long-term monitoring of cardiopulmonary activity** Paweł Nita, Tomasz Rymarczyk, Andres Vejar, Barbara Stefaniak, Michal Wos and Andrzej Stanikowski **A Review of Post-quantum Cryptography and Crypto-agility Strategies** Olaf Grote, Andreas Ahrens and Cesar Benavente Peces **Comparison of the effectiveness of tree algorithms in the diagnosis of spongy tissue** Róża Dzierżak, Zbigniew Omiotek and Waldemar Wójcik **A Python Framework for Model Specification and Automatic Model Generation for Multiple Simulators** Hendrik Folkerts, Thorsten Pawletta, Christina Deatcu and Sven Hartmann	Building 6, Auditorium
12:30 – 12:45	Best paper award	Building 6, Auditorium
12:45 – 13:00	Closing ceremony	Building 6, Auditorium

Poster Presentations Thursday, 16th May, 10:30 – 11:15

Estimation Of Phantom Vortex Size For Liquid Gas Separation Using Electrical Tomography
Muhammad Awais Sattar, Robert Banasiak, Jacek Nowakowski, Arto Voutilainen, Jouni Hartikainen, Mika Mononen and Laurent Babout

Model of the fuel gas valve fractional-order PID controller in closed loop system
Adam Trojnar

Analytical and Numerical Determination of Eddy Current Distribution in Three-layer Configuration of MAT-MI Model
Adam Ryszard Zywica, Marcin Ziolkowski and Stanislaw Gratkowski