



Track A – AM 2

Track B – AM 3

Medical Electronics 2, Chair:

- 8:30 2003 *Luis Manuel González Villa, Tolga-Can Çallar*
Simulation Framework for a Collision Avoidance Inverse Kinematics model of a 7 degrees of freedom Ultrasound Imaging Robot
- 8:45 1927 *Leano Bohn, Javad Ghofrani, Mladen Berekovic*
6-DoF Staubli Robot Control via Siemens PLC for Trajectories on Conveyor-Moved Objects
- 9:00 1983 *Finn Niklas Horn*
A Web Application for Demonstrating Hardware-Assisted Code Coverage Analysis
- 9:15 1995 *Arian Sindram*
Fault simulator for neonatal flow sensor
- 9:30 2028 *Mahsa Yamini, Benjamin Kern, Stefan Müller*
Design and Implementation of a Calibrator for Optochemical Sensors

Biomedical Optics, Chair:

- 1939 *Maik Pfaff*
Micromechanical shifting device for nonlinear crystals in compact UV lasers
- 1949 *Tikhon Riazantsev, Hans-Jürgen Grein*
Development of embedded software for Accessible Ophthalmic Perimeter
- 1981 *Sophie Eggert, Dongyue Wu, Philipp Matten, Ralf Brinkmann*
Characterization of thermal infrared sensing in a free-space optical system
- 2026 *Janica von Dietman, Giuseppe de Vito, Lapo Turrini, Young-Hwa Song, Francesco S. Pavone*
Recalibrating the electrically tunable lens to enhance the performance of a two-photon light-sheet microscope
- 1996 *Vanessa Engelhardt, Maron Dolling, Gereon Hüttmann*
Numerical dispersion correction on spectral domain optical coherence tomography

9:45 Coffee Break / Presentation Upload

Artificial Intelligence 1, Chair:

- 10:00 1940 *Jonas Manuel Kremmers, Javier Galán Méndez, Álvaro Escarpenter, Georg Schildbach*
Outlier Detection versus Specialist Knowledge - Engine Misperformance Detection
- 10:15 1941 *Aly Elzoghhol*
Generative Artificial Intelligence for Digitalization of Manual Workflows
- 10:30 1943 *Enno Friedl, Yuya Hamamatsu, Martin Leucker*
Deep Learning-Based Dead-Reckoning for a Fin-Propelled Autonomous Underwater Vehicle with Limited Sensors
- 10:45 1947 *Laeticia Moosdorf, Niklas Kueper, Heinz Handels, Elsa Andrea Kirchner*
Comparison of Models for EEG-based Cross-Subject Movement Prediction
- 11:00 1954 *Neele Kohle, Coşku Can Horuzi, Sebastian Otte*
Extended-Long-Short-Term-Memory: A Reproducibility Study

Regulatory Affairs, Safety and Quality, Chair:

- 1930 *Dominik Philipp*
Increasing safety for a counterbalance truck – Adaptation of a crossmember for improved visibility and investigation of manufacturing capabilities
- 1942 *Fiona Christin Wormsdorff, Maik Rahlves, Felix Bartelds*
Measurement system analysis of the Keyence IM8000
- 1964 *Smit Khandelwal*
Automated Testing of an Implantable Active Medical Device (IAMD)
- 2037 *Mena Al Omaeri, Kathrin Schubert, Marc Oliver Opresnik*
Analysis of weaknesses and optimization opportunities in document management according to EN ISO 13485
- 2048 *Rafal Kaczor*
From Idea to Approval: The Development, Verification, and Approval Processes of a Medical Device



11:15		Postersession Jury	
12:15		Lunch Break / Presentation Upload	
		Artificial Intelligence 2, Chair:	Sensor Data Analysis, Chair:
13:15	1986	<i>Bjarne Clement, Solveig Kathleen Najork, Axel Steinhage, Marcin Grzegorzec</i> Developing a Seclusion Detection Algorithm for Nursing Homes based on a Floor Sensor	1994 <i>Isticahayanittamiarzahraa, Raika Rauterberg, Johannes Kollien, Max Urban</i> Implementation and Evaluation of a Prototypical Service for the Processing and Provision of Clinical Trend Data in a Distributed System
13:30	2012	<i>Ahmet Muaz Salah, Ahmed Mahmoudi, Mladen Berekovic</i> Performance Evaluation of RISC-V-Based Cores for Machine Learning Workloads	1934 <i>Alissa Kovalenko</i> Signal Analysis of EEG-Data Using Artifact Subspace Reconstruction and Power Spectral Density
13:45	2016	<i>Lucas Beer, Norbert Linz</i> Differentiation of high-grade glioma tissue with hyperspectral imaging	1936 <i>Annemarie Uhlig, Charlotte Brandebusemeyer, Fabian Stolp, Hawzhin Hozhabr Pour, Bert Arnrich</i> Examining Software Developers' Cognitive Load During Daily Activities with Wearables
14:00	1957	<i>Shubham Bhadani, Tolga-Can Çallar, Jens Temminghoff</i> Position-dependent Friction Identification of 6-DOF Robotic Manipulator	2042 <i>Sarah Landwehrs, Ralf Bruder</i> Embedded software design for a real-time electromagnetic 6 DoF tracking system
14:15	1923	<i>Shrawan Kumar Mehta, Franziska Bilda, Jan Graßhoff</i> Analyzing Patient-Ventilator Interaction with Neural Networks	2020 <i>Michel Christiansen, Annika Crüger, Marco Maass, Philipp Koch, Friederike Wortmann, Marcin Grzegorzec</i> Parameter Evaluation of Sepsis Classification in Neutropenic Patients
14:30		Coffee Break / Presentation Upload	
		Biophysics, Chair:	Robotics, Chair:
14:45	1960	<i>Laraib Ahmad, Christian Nehls, Thomas Gutschmann</i> Permeabilization of reconstituted Lipid Bilayers containing mycobacterial TDM through the AMP LL32: Insights into Membrane-Peptide Interactions	1958 <i>Lukas Freiling, Martin Krimm, Matthias Haase</i> Real-Time Line Segmentation for Mobile Robots in 2D Point Clouds
15:00	1961	<i>David Kaltwasser, Aiyun Brown, Xinge Liu, Spencer Smyth, Claudiu Gradinaru</i> Implementation of FRET-FCS Methods to Study Conformational Dynamics in Proteins	1984 <i>Mokrane Ouarezki, Nils Rottmann, Ngoc Thinh Nguyen</i> Customizing Cartographer for Landmark-Based Mapping in Autonomous Cleaning Robots
15:15	2000	<i>Nidal Can Battikh, Yamil Maluje, Darko Castven, Hauke Busch, Anke Fähnrich</i> Analysis of Single-Cell RNA Sequencing Data from Cholangiocarcinoma Patients	2010 <i>Kilian Schweppe, Satya Prakash Nayak, Arabinda Ghosh, Atef Tej, Anne-Kathrin Schmuck</i> Integrating Physical and Logical Feedback Control on a Differential Drive



Student Conference Lübeck



Track A – AM 2

- 15:30 2011 *Blessing Esu*
Measurement of growth curve of adult bovine skin-derived (BSD) cell population under 5% and 10% fetal calf serum (FCS)
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- 15:45 2052 *Jingxuan Zhou, Lisa Marshall*
Effects of exogenous stimulation during sleep on brain electric activity and the autonomic nervous system

Track B – AM 3

- 1956 *Alina Köster, Stefan Bolus, Georg Schildbach*
Trends, Markets and Development of Robotics in the Oil and Gas Industry
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- 1968 *Tim Stichnoth, Dennis Kundrat, Daniel Reichard*
Path Planning for Medical Robots – Approaches and Experimental Evaluation

16:15 **Award Presentation and Farewell**