



Scientific Program  
6<sup>th</sup> of March, 2024, AM 4

8:30	Registration	
9:30	Welcome	
	<b>Session 1 - Track B</b>	
	<b>Auditory Technology</b>	
<b>Time</b>	Chair: Prof. Alfred Mertins	
9:45	13	<i>Lisa Marie Schneider, Daniela Hollfelder</i>
		Transmission behaviour of the Samba 2 Hi audio processor for different programs
10:00	68	<i>Peter Schumacher, Tim Jürgens, Juliane Raether, Stefan Klockgether</i>
		Validation of the spatial reproduction of realistic acoustic scenes with regard to the listener's head orientation.
10:15	2	<i>Jennifer Schmidt, Daniela Hollfelder</i>
		Reproducibility of responses in the Nijmegen Cochlear Implant Questionnaire (NCIQ): Independent vs. supervised performance and its relation to patient satisfaction and speech intelligibility
10:30	3	<i>Luca Wiederschein, Markus Kemper, Florian Denk, Hendrik Husstedt</i>
		Optimizing Illuminance for Eye-Tracking in Auditory Experiments Ensuring Robustness Through Controlled Illuminance
10:45	65	<i>Cleo Noak, Markus Kallinger, Jürgen Tchorz, Fabian Hettler, Florian Denk, Hendrik Husstedt, Tim Jürgens</i>
		Technical Characterisation of a Spherical Loudspeaker Array
11:00	79	<i>Sonja Taupadel, Nina Aldag, Philip Gouverneur, Marcin Grzegorzek, Waldo Nogueira</i>
		Measurement and Evaluation of Auditory Evoked Potentials using Deconvolution and Conventional Methods in Normal Hearing Subjects
11:15	Coffee Break	
11:30	Postersession 1	
12:30	Lunch Break	



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Session 2 - Track B		
Sensor Data Analysis		
<b>Time</b>	Chair: Dr. Frédéric Li	
13:30	83	<i>Samira Assarzadeh, Alexander Altmann, Martin Leucker, Mohammad Khodaygani, Ramtin Rahmazadeh</i>
		Realtime assessment of food spoilage using multiple sensors
13:45	8	<i>Steffen Häusler</i>
		Advancing Robotic Perception: Extracting Gyroscopic Data from Camera Streams
14:00	9	<i>Isabel Haasler, Christian Seitzer, Sebastian Fudickar</i>
		Use of RGB and Depth Information for AI-assisted Estimation of an optimal Patient Position
14:15	32	<i>Tim-Lucas Rabbel, Marko Križmančić</i>
		Development of a Modular Zigbee/LoRaWAN Wireless Sensor Network for Environmental Monitoring with Biohybrid Sensors
14:30	89	<i>Anna Osipjan, Lena Best, Christoph Kaleta, Marcin Grzegorzek</i>
		Impact of Dietary Choices on Human Gut Microbiome Composition
14:45	Coffee Break	
15:15	Postersession 2	



Session 3 - Track B		
Robotics 1		
Time	Chair: Dr. Jannis Hagenah	
9:00	82	<i>Gustav Krumnow, Tilo Jonathan Wöbber, Cem Adiyaman, Jannis Hagenah, Georg Männel</i>
		Latency Assessment of Console Input for a Virtualized Robotic Surgical Simulation
9:15	115	<i>Muhammad Junaid, Jochen Lindermayr</i>
		Mobile Robots for Machine Maintenance and Tending
9:30	120	<i>Jakob Greten, Ngoc Thinh Nguyen</i>
		Safe navigation with polytopic-based tools
9:45	100	<i>Martin Rolfs, Emmanuel Brau, Floris Ernst, David Hamilton</i>
		Refurbishment Scheme of a High Vacuum Tight Flange Seal with a Redundant Robot at ITER
10:00	123	<i>Abeer Eisa Khalid Omer, Jonas Osburg</i>
		Optical Pose Detection of a Cable-Driven Parallel Robot
10:15	Coffee Break	
10:30	Postersession 3	
Session 4 - Track B		
Robotics 2		
Time	Chair: Prof. Floris Ernst	
11:30	37	<i>Hauke Budig, Nikolaus Ammann</i>
		Multi-Sensor Calibration on a Pan-Tilt-Unit System for Unmanned Aerial Vehicles
11:45	38	<i>Hannah Lück, Thomas Pisch, Javad Ghofrani</i>
		Human-Robot Interaction in Industry: A Practical Approach on Integrating a Cobot into an Existing Workflow
12:00	50	<i>Sujay Mukherjee, Cem Adiyaman, Jannis Hagenah, Georg Männel, Dennis Kundrat, Dennis Wendt, Floris Ernst</i>
		Towards the Development of a Robotic System for Automated Surgical Trocar Insertion
12:15	81	<i>Alen James, Ahmed Mahmoudi, Mladen Berekovic</i>
		Simulation-based Fault Analysis in Object Detection Models
12:30	126	<i>Max-Ole Bastian von Waldow, Floris Ernst, Eduard Marti Bigorra</i>
		Practical Palletizing with RealWorld Considerations
12:45	Lunch Break	
13:45	Postersession 4	
14:45	Group Picture	
15:00	Coffee Break	



Session 5 - Track B		
E-Health		
<b>Time</b>	Chair: Prof. Josef Ingenerf	
15:15	64	<i>Robin Holland, Gabriel Gomez, Hendrik Husstedt</i>
		A web-based listening test suite for an immersive listening lab
15:30	31	<i>Bettina Uliczka, Josef Ingenerf, Joshua Wiedekopf, Lorenz Rosenau</i>
		Pathwalker - a tool for supporting interactive analytics on FHIR data
15:45	66	<i>Herwig Nicolaus, Michael Anywar, Santiago Pazmino Pinto, Hannes Ulrich, Jan Schladetzky, Ann-Kristin Kock-Schoppenhauer, Josef Ingenerf</i>
		Integration of the Oncologic Base Data Set into the UKSH
		Medical Data Integration Center
16:00	85	<i>Laura Meyenborg, Josef Ingenerf, Jonas Schön</i>
		Structured data for the legal electronic health record using a
		FHIR-based clinical data repository
16:15	67	<i>Rghia Fakrun</i>
		SWOT Analysis of Utilizing Medial Device Log Data into
		Post-Market Activities According to the EU Medial Device Regulation



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Session 6 - Track B		
Safety and Quality		
<b>Time</b>	Chair: Dr. Maria Henke	
9:00	56	<i>Michael Kurenkov, Tobias Klass, Georg Schildbach</i>
		Advancing Automotive ECU Software Validation: Automated Testing in a Software-in-the-Loop Environment for Enhanced Efficiency and Robustness
9:15	128	<i>Julia Röller, Karsten Hiltawsky</i>
		Literature Research on Medical Technology Products for Monitoring Perioperative Processes in Anesthesia
9:30	42	<i>Stjepan Radic, Peter Baltin, Ulf Pilz</i>
		Humidification system of the incubator: An investigation of possible methods and the development of potential concepts
9:45	51	<i>Negar Sedaghatimonavar, Kevin Vaughan, Stefan Müller</i>
		Optimizing the Endoscope Bending Rubber Adhesive Process
10:00	54	<i>Sherbeen Vadakken, Igor Knor, Luca Belloi, Ulf Pilz</i>
		Development of a Microcontroller-Based Test Device for Air Temperature Sensor Probe of a Neonatal Incubator
10:15	Coffee Break	
Session 7 - Track B		
Machine Learning		
<b>Time</b>	Chair: Dr. Javad Ghofrani	
10:30	4	<i>Nina Cassandra Wieggers, Sebastian Germer, Christiane Rudolph, Katharina Rausch, Natalie Rath, Heinz Handels</i>
		A Comparison of Imputation Techniques to Improve Lung Cancer Survival Estimation
10:45	35	<i>Amira Moulahi, Saleh Mulhem, Mladen Berekovic</i>
		Numerical- vs NN-based Solutions for Solving Differential Equations
11:00	39	<i>Caterina Grundt</i>
		Using Contrastive Language-Image Pretraining Models for Medical Image Retrieval
11:15	62	<i>Konrad von Kügelgen</i>
		Fine-Tuning Pre-Trained Image and Language Models on a Large German Radiological Dataset for Image-to-Text Retrieval
11:30	40	<i>Tim-Louis Lewejohann</i>
		Optimizing Planetary Rover Simulation Dynamics with Real Trajectories: A Comparative Study
11:45	103	<i>Agastya Heryudhanto, Jörg Schroeter, Max Urban</i>
		Pattern Recognition and Machine Learning-driven Classification of Solid-State Polymer Signals in ContinuousWave NMR
12:00	Lunch Break	
13:00	Postersession Jury	



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Session 8 - Track B		
Control Technology		
<b>Time</b>	Chair: Dr. Dimitrios S. Karachalios	
13:50	122	<i>Liesa Kunert</i>
		Creating a Graphical User Interface as Clickdummy with Simple Directmedia Layer Library in C++
14:05	21	<i>Manuel Herbst, Martin Leucker, Lennart Landt</i>
		Implementation of an interface between a foot switch and an augmented reality device based on the SDC standard
14:20	93	<i>Malin-Berit Kluge, Robin Brütt, Georg Männel</i>
		Pressure Control of a Blower-Based Valve Test Bench
14:35	75	<i>Kishore Kumar Mariappan, Hossam S. Abbas, Dimitrios S. Karachalios</i>
		Balancing and Trajectory Tracking of a Ballbot based on Linear Parameter-Varying Modeling and Control
14:50	127	<i>Miklos Libak, Robin Kensbock, Fabian Domberg, Georg Schildbach</i>
		Looking Ahead: Comparison of Stanley and Model Predictive Control for Miniature Sized Cars Using Lookahead Point
15:05	Coffee Break	
15:20	<b>Award Presentation and Farewell</b>	