Studierendentagung Lübeck 2023

HIC Lübeck

Scientific Program
Wednesday March 1, 2023

Poster-Session 2 (11:15 - 12:15)	
Biomedical Engineering 5	
100	*A. F. Wolf, J. Schöler, T. Graßl, M. Urban*
	Determination and Evaluation of the Connection Process and Speed of the
	Communication Protocols UART, I²C and SPI for given Ultra-Low
	Power Hardware with Limited CPU Power
74	*A. Răileanu, L. Lilaj, S. Coen*
	Implementation of process validation for the application
	of gel wax phantom manufacturing process
122	*N. Neupane, K. Krajeswki, C. Damiani*
	Development of a in-vitro model mimicking mechanical properties
	of brain cortex tissue
119	*R. Catena, K. L. Krajewski, C. Damiani*
	Experimental setup for the investigation of forces and displacements
	during brain surgery using medical phantoms
101	*A. Tiurin, J. Ehrhardt*
	Generation of an average brain template conditioned on age
8	*C. Avendaño Mejía, Y. T. Böge*
	Regulatory strategy for market introduction of an IoT-based laboratory
	sample tracking system for Access to the United Kingdom market
Machine Learning / AI 2	
6	*A. K. Abraham, T. Dentler, E. Sapozhnikova*
	Reinforcement Learning Algorithms for Lateral Vehicle Control in ROS
31	*M. F. Gerwin, S. Zeinali, G. Schildbach*
	NN-MPC - Replacing a First Principles Model with a Neural Network
16	*T. Plattenteich*
	Using Systolic Arrays and SystemC for Hardware Optimization
	of Deep Neural Networks
45	*F. Lentzsch, F. Li, F. Pagel, M. Lau, K. Otte, H. M. Röhling, A. Stein, A. Nisar,*
	L. Zieser, S. Glende, N. Kaartinen, S. Mansow-Model, U. Thyen, M. Grzegorzek
	Deep feature learning for fidgety movement detection
	using inertial measurement unit data
53	*T. Kruse, O. Sellhorn, H. Hellbrück*
	Evaluation of Estimated Substance Compositions by AI-based Classification
	of Optical Absorption Spectra
35	*W. Philipp, R. Benitez*
	Rule-based explanations of CNN classifiers using regional features
Biomedical Engineering 3	
11	*E. Bösemann, M. T. Irshad, H. Fischer, M. Grzegorzek*
	Evaluation of the Usability of a Ventilation Test Framework
83	*M. Algherbawi*
	The conception and prototypical development of a valve system for a realistic
	ventilation management between lung simulator and sleep therapy device
15	*S. Janßen, A. Blohm*
	TIVA Versus Volatile Anaesthetics - What Will the Future of Anaesthesia Look Like?

102	*T. Bahns, S. Eisenbrand, D. Kleinewalter*
	Implementation and validation of a navigation framework for monkey testing
	of an anesthesia workstation
107	*S. Alsamna, O. Garbrecht, H. Fischer*
	Evaluation of the temporal response of a lung simulator to a step in FiO2
52	*S. Juvekar, S. Müller*
	Future of Quantum Computing in Healthcare
Safety and Quality 1	
54	*F. Apel*
	Development and construction of a testing device for determining the
	tightness and verifying the durability of membranes
109	*J. Knuth, C. Kren, N. Koop*
	Development of a mechanical fixture for laser drilling of diffusion membranes
3	*L. Tastesen, F. Flügge, U. Günther*
	Automatic assignment of oregano species employing metabolomic fingerprints
51	*L. Köllisch, T. Martin, N. Linz*
	Improvement of the electro-magnetic brake for a medical supply system
50	*E. Norkunas, P. Plaskowski, M. Henke*
	Method for selection of a suitable level sensor for a coating station for injector
	systems
Image Processing 1	
22	*F. Brokmann*
	Time-of-Flight Cameras for Medical Applications: A brief Review
21	*F. Katlun, S. Häger, A. Lange, J. H. Moltz*
	Deep Regression as Initialization for 2D-3D Pelvis Registration
19	*P. Severin, F. Kreis, N. Linz*
	Investigation of different contrast agents for magnetic resonance imaging
	with respect to their relaxivity at low magnetic field strengths
65	*S. Wuthe, M. Momeni, M. Bitten Mølmer, E. Löbner Svendsen, M. Brabrand,*
	Heart rate estimation using Imaging Photoplethysmography
91	*T. Zarnekow, M. Schlüter*
	Stitching Planner
Biomedical Optics 1	
67	*G. Meußler, H. Spahr, T. Kepp, L. Puyo, C. Pfäffle, J. Franke, G. Hüttmann*
	Image stitching of high-resolution optical coherence tomography en-face
	projections with an intensity-based and a feature-based approach
130	*J. Klinkforth, M. Ahrens*
	Identification and Classification of Production-related Processing Defects in
	Welds in a Novel Large-format LASER Contour Welding Process for Multilayer
	Polymer Film Material
126	*K. L. Goodwin, S. Meyer, F. Sommer, T. F. Kutscher, S. Karpf*
	Development of a 976 nm Ytterbium-fiber MOPA laser
24	*L. Hoffmann, C. Burri, S. Salzmann, M. Amstutz, C. Meier, R. Brinkmann*
	Simultaneaous microbubble detection by optical coherence tomography
	and optoacoustics for selective retina therapy
116	*N. Tesmer, M. Rahlves*
	Design of low cost thermal and UV nanoimprint devices