Studierendentagung Lübeck 2020

BioMedTec Wissenschaftscampus

Scientific Program

Thursday March 5, 2020

		Track A – AM 2		Track B – AM 3
		Biomedical Optics Chair: Prof. Dr. Dr. Reginald Birngruber		**Auditory Technology** Chair: Prof. Dr. Tim Jürgens
9:30	50	*S. Hao, T. Eixmann, M. vom Endt, H. Schulz-Hildebrandt, G. Hüttmann* Development of a high-performance 2D representation of circumferentially scanned swept-source optical coherence tomography	8	*F. Kraus, M. Wöstmann, S. Puschmann, J. Obleser* Spectro-Temporal Response Functions of the Human Brain with Clear and Vocoded Speech in a Bimodal Hearing Situation
9:42	29	*J. Franke, W. Newberry, E. F. Durech, M. V. Sarunic* Visible light optical coherence tomography and fluorescence imaging with dual-stage aberration correction	25	*N. Rybacki, S. Meier, K. Langschwager* Development of a knowledgebase and Learning Management System for Corona E3
9:54	21	*V. Lutz, B. B. Jensen, S. Karpf, J. R. Brewer* Non-linear Raman microscopy with an experimental approach on resolution enhancement	43	*K. Mohnlein, J. Tchorz, C. Pischel, N. Acs* The effect of experimental design on reverberation preferences in normal hearing and hearing impaired listeners using hearing aids
10:06	7	*L. Schnelle, B.-M. Dicks, M. Kroh, F. Reinholz* Infrared raytracing simulation for measuring beam mixing in multi gas sensors	11	*M. Kemper, N. Herbert, J. Tchorz* Skin Conductance as a Measure of Listening Effort: A Pilot Study
10:18	55	*M. Seitz, R. von Elm, K. Seger, R. Huber* Simulation of Universal Laser Beam Parameter Correction of a High Power UV Laser System	59	*S. Griepentrog, J. Rehmann, S. Klockgether, V. Kuehnel, J. Tchorz* Measurement of Spectro-Temporal Modulation Detection Thresholds with Hearing Impaired Listeners
10:30	2	*J. K. Luther, S. Kassumeh, R. Birngruber* Improved semi-automatic quantification of experimental parameters after laser treatment for presbyopia	9	*M. Geisen, S. Meier, T. Jürgens* Assembling and verifying a hearing-aid prototype, consisting of a Raspberry Pi and the opensource-software openMHA
10:45		**Coffee Break**		
		Regulatory Affairs Chair: Prof. Dr. Folker Spitzenberger		**Medical Imaging** Chair: Prof. Dr. Thorsten M. Buzug
11:00	60	*S. Shrestha* Development of a digital tool for Risk Management of Medical Devices	84	*N. K. Menon, A. Palumbo, P. Grüning, S. K. Landt, L. Heckmann, L. Bartram, A. Madany Mamlouk, M. Zille* Segmentation of fluorescently labelled axons in a model of brain hemorrhage-induced axonal degeneration using convolutional neural networks
11:12	49	*U. Satyal* The benefit and specifications of a digital tool to optimize Clinical Evaluation of Medical Devices	64	*K. Brandt, E. Mattingly, E. E. Mason, M. Śliwiak, L. L. Wald, T. M. Buzug* A low-cost, open-source device for characterizing super-paramagnetic nanoparticles

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11:24	52	*R. Pradhan* Development of a digital tool for Post-Market Surveillance of Medical Devices	71	*R. J. Alejandro, P. A. Packard, N. Bunzeck* The semantic congruence effect is not impaired in older subjects but associated with changes in neural processing
11:36	1	*S. Henn, C. Kunath, M. Zaubitzer, T. Cordes* Approval of safety valves and globe valves in South Korea	68	*J. Magonov, C.-K. Mahadevaswamy, M. Schett, T. M. Buzug* Development of a Monitoring System for the Team Foundation Server-Build and Test Infrastructure
11:48	76	*A. Safi* Regulatory requirements for laboratory developed tests (LDTs) – International comparison and conclusions for best-practice requirements for safety and performance of “in-house” IVD medical devices	75	*A. Bolke, M. Zvolský, M. Rafecas* Monte-Carlo simulation of positron emission tomography combined with Compton-camera imaging
12:00		**Lunch Break**		
		Image Processing A1 Chair: Dr. Kumar Rajamani		**Signal Processing B1** Chair: Prof. Dr. Jürgen Tchorz
13:00	14	*S. Rüttgers, J. Hocke, M. Heinrich* Automatic segmentation of prostate zones in MRI data using different variants of the U-Net	70	*M. Kuttner, J. Tchorz* Acoustic scene classification with neural networks
13:12	38	*M. Mehdi, J. Hagenah, F. Ernst* Estimation of Healthy Aortic Root Shapes from Pathological Images with Conditional Variational Autoencoder	40	*G. Röwekamp, F. Katzberg, A. Mertins* Measurement of Room Impulse Responses and Comparison of Different Interpolation Methods
13:24	17	*J. Sirocko, J. Diesel, M. Heinrich* Frequency based detection of regions of interest in videodata to estimate human breathing frequency	37	*K. Mrotzeck, H. Gamboa, A. Mertins* Single-Channel EEG - Detection of the Event-Related Potential (ERP) P300 Using an Acoustic Stimuli Synchronization
13:36	66	*P. A. Gunawan* A Combination of Normalized Metal Artefact Reduction and the Use of Multiple Prior Images in Computed Tomography	48	*L. Boudnik, J. Hochreiter, G. Müllegger, M. Heinrich* Removal of ECG artifacts caused by mechanical CPR using externally recorded compression markers
13:48	44	*S. Postel, A. Mastmeyer, J. Hirsch* Workflow development to create and analyse QA parameter from MRI images	73	*A. Biel, F. Katzberg, A. Mertins* Interpolation of individual HRTF datasets using principal component analysis
14:00		**Coffee Break**		

		Track A – AM 2		Track B – AM 3
		Image Processing A2 Chair: Prof. Dr. Heinz Handels		**Signal Processing B2** Chair: Prof. Dr. Alfred Mertins
14:15	34	*C. Großbröhmer, M. Blendowski, M. P. Heinrich* Efficient Self-Supervised Context Learning on MRI data	77	*S. Karthikeyan, B. Redmer, B. Nestler, S. Müller* Optimisation of support vector regression for the determination of haemoglobin derivatives in whole blood
14:27	15	*L. Bartram, B. Dedersen, M. Heinrich* Development of a Deep Learning based classification of respirator masks for a mobile application	39	*S. Herrmann, D. Schneider, J. Mrongowius, M. Heinrich* Aortic Detection in Image Sequences of Electrical Impedance Tomography
14:39	51	*O. Mietzner, A. Mastmeyer* Automatic multi-object organ detection and segmentation in abdominal CT data	72	*J. Ackers, B. Gleich, J. Rahmer, I. Schmale, T. M. Buzug* Model-based evaluation of magneto-mechanical oscillator signals for wireless sensing and localization
14:51	19	*M. L. Gillner, L. Hansen, M. P. Heinrich* Fast Pulmonary Fissure Detection in CT Scans using Deep Learning on Point Clouds	41	*N. S. Brügge, M. Eger, T. Handzsuj, S. Walterspacher, P. Rostalski* Convolutional and recurrent neural networks for surface electromyography-based respiratory diagnostics and therapy
15:03		**Coffee Break + Poster-Session**		
15:15		**Award Presentation and Farewell**		