

Scientific Program
Wednesday March 8, 2017

Track A – AM 2

Track B – AM 3

9:00	Registration		
9:45	Welcome		
	Biomedical Optics I Chair: Prof. Dr. Reginald Birngruber		E-Health I Chair: Hannes Ulrich, M. Sc.
10:00	02 <i>E. Beck, T. G. Seiler, M. Engler, I. E. Kochevar, R. Birngruber</i> Decreasing progressive myopia by Rose Bengal mediated crosslinking of the sclera	55	<i>S. Baumhof, B. Andersen, J. Ingenerf</i> Standardisation of Surgical Terms for the Extension of the ISO/IEEE 11073-1010X Nomenclature
10:15	09 <i>M. Engler, T. G. Seiler, E. Beck, I. E. Kochevar, R. Birngruber</i> Strengthening the cornea post-LASIK using Rose Bengal mediated crosslinking	61	<i>D. Labitzke</i> A framework for testing the compatibility of medical devices with new communication standards of the ISO/IEEE 11073 family
10:30	14 <i>S. Hagen, J. Helfmann, R. Huber</i> Determination of quality and strength of animal pericardium – Development of an optical device –	46	<i>G. C. Teeuwssen, G. Buehrle, S. Fischer</i> Development of data interfaces for ophthalmologic devices
10:45	22 <i>J. Klee, J. P. Kolb, R. Huber</i> Dispersion Compensation for Fourier-Domain Mode-Locked Lasers	52	<i>J. Abeler, A. Mildner, M. Leucker</i> MEDEAS – Development of an Medical Device Development Assistance System
11:00	Coffee Break		
	Biomedical Optics II Chair: Dr. Ralf Brinkmann		E-Health II Chair: PD Dr. Josef Ingenerf
11:10	15 <i>D. Heinrich, J. Markmann, D. Theisen-Kunde, R. Brinkmann</i> Damage thresholds of retinal pigment epithelium (RPE) cells by laser irradiation (527 nm) in the microsecond time domain	53	<i>M. Baake, A. Henke, E. Kessner, J. Ingenerf</i> Creating Reports with BIRT to support the Development Process of Medical Software
11:25	30 <i>N. Meyer-Schell, H. Schulz-Hildebrandt, J. Rehra, M. Ahrens, M. Caspers, D. Manstein, G. Hüttmann</i> Development and Optical Simulation of a Needle Endoscope for Optical Coherence Tomography to visualize Adipocyte Cells during Coolsculpting	63	<i>J.-H. Mathes, O. Meincke, H. Ulrich, J. Ingenerf</i> Replicating and Synchronising a Medical Database in an Object Relational Mapping Context
11:40	45 <i>R. Tauscher, T. Pfeiffer, R. Huber</i> Design and Implementation of a Rigid Endoscope for Optical Coherence Tomography (OCT)	60	<i>C. Kamann, A. Kock, H. Ulrich, P. Duhm-Harbeck, J. Ingenerf</i> Linked Data Applications through Ontology Based Data Access in Clinical Research
11:55	48 <i>M. vom Endt, C. Pfäffle, D. Hillmann, H. Spahr, G. Hüttmann</i> Optimization of a multi-wavelength stimulation unit for functional in-vivo full-field swept-source optical coherence tomography	68	<i>R. Süs, S. Groppe</i> Pipeline Insertion Sort on an FPGA - Special hardware for special solutions -

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12:10	Lunch Break			
		Biomedical Optics III		E-Health III
		Chair: Dr. Fred Reinholz		Chair: Björn Andersen, M. Sc.
13:10	08	<i>T. Eixmann, K. Karnowski, D. D. Sampson</i>		05 <i>L. Coskun, M. Paul</i>
		Components towards fiber based Raman microspectroscopy		System Testing on a Medical Software – A conception for the procedure –
13:25	04	<i>T. Blömker, M. Eibl, R. Huber</i>		40 <i>V. Semrau, A. Hettich, R. Spahlinger, R. Brinkmann</i>
		Supercontinuum Generation with Sub-Nanosecond Pulses for Stimulated Raman Scattering Microscopy		Development of a verification technique for Automatic Intra-operative SpineMask™ Registration (AIM) Fallback workflow
13:40	01	<i>B. Andersen, E. Sarofim</i>		57 <i>A. Essenwanger, J. Diesel, M.-F. Uth, H. Handels</i>
		Evaluation of filter-combinations within a DNA-Quant-Module for Next Generation Sequencing		An Image Annotation Tool for the Preparation of Object Detection and Automatic Segmentation in Thermal Images
13:55	27	<i>C. Malich, A. Link, R. Rahmanzadeh</i>		
		Light-Induced Permeabilization of Liposomes		
14:10	Coffee Break			
		Biochemical Physics I		Image Processing I
		Chair: Dr. Kerstin Lüdtke-Buzug		Chair: Prof. Dr. Philipp Rostalski
14:20	03	<i>J. Bienzeisler, M. Landry, A. Llorente</i>		56 <i>N. Broecker, J. Ehrhardt</i>
		A SpIDA-derived method to analyse the <i>in vivo</i> GABA _B receptor relocalization and oligomerization in chronic pain conditions		Joint registration and segmentation using statistical shape models
14:35	06	<i>A. Crezelius, C. Nehls, T. Gutschmann</i>		62 <i>K. D. Lux-Hoffmann, J. M. Lotz, J. Modersitzki</i>
		Characterization of structural properties of bacterial membranes with atomic force microscopy		The Schatten-p-Norm as a Distance Measure for Image Registration
14:50	26	<i>N. Ludolph, L. Paulowski, T. Gutschmann, C. Hübner</i>		51 <i>F. Zell, M. P. Heinrich</i>
		How Antimicrobial Peptides Interact with Model Membranes and Affect the Lipid Lipid Mobility – a FRAP-based Approach –		Propagation of landmarks with a registration graph
15:05	29	<i>J. Mertens, C. Nehls, T. Gutschmann</i>		69 <i>H. Uzunova, H. Handels, J. Ehrhardt</i>
		Characterization of the interaction between the antimicrobial peptide LL-32 and a lipid monolayer using a film balance		Groupwise Affine Registration of Medical Images with Missing Correspondences
15:20	Coffee Break			



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Biochemical Physics II

Chair: Prof. Dr. Christian Hübner

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| 15:30 | 21 | <i>R. Kaya, T. Guderjahn, C. Odefey, U. Eisenblätter, K. Lüdtke-Buzug</i>
Concepts for a process-safe application of a micro-precipitation method |
| 15:45 | 50 | <i>T. Wenzel, C. Fijen, J. Hohlbein, C. Hübner</i>
Characterization of nanofluidics devices for high-throughput single-molecule fluorescence detection |
| 16:00 | 49 | <i>J. Weiler, C. G. Hübner, Y-H. Song</i>
Design and implementation of a gel documentation system for multi-wavelength fluorescence detection for Biosafety Level S2 laboratories |
| 16:15 | 42 | <i>T. R. Stilla, I. Angelova-Fischer, D. Zillikens, T. W. Fischer</i>
Investigation of the correlation between the natural moisturizing factor and non-invasive parameters of the skin barrier function in vivo |

19:00 Conference Dinner

Track B – AM 3

Image Processing II

Chair: Dr. Jan Ehrhardt

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| 38 | <i>L. Schulz, B. Stender, H. Handels</i>
Registration of thermographic Images and three dimensional Point Clouds |
| 18 | <i>S. Kaminsky, W. Kristanto, J.P. Aben, A. Mertins</i>
Automatic left ventricle segmentation on axial cine cardiac MR Imaging - Phase 1 - |
| 65 | <i>J. Niemeijer, P. Pekezou Fouopi, S. Knake-Langhorst, E. Barth</i>
A Review of Neural Network based Semantic Segmentation for Scene Understanding in Context of the self driving Car |
| 70 | <i>N. Vogt, C. Lorenz, T. Brosch, M. P. Heinrich</i>
Deep learning for spinal centerline extraction |