

# Conference Proceedings

## YRA MedTech Symposium 2017

Preliminary Rev.: 23.05.2017

	Time / Room		Lecture Rooms: Building 6, Ground Floor, 06 EG HS5
	Start	End	
08.06.2017	8:30 06 EG Foyer	9:00	Registration and Handout of the Abstract Book
	9:00 06 EG HS4	9:30	Welcome Addresses Prof. Dr. G. Stockmanns, President of the UAS Ruhr West, the IEEE IM Chapter Germany Section and the Organization Committee
	9:30 06 EG HS5  <b>Medical Image Processing</b> Chair: Prof. M. Overhoff	10:30	<b>1 Measuring, clustering and classifying pores of surgical meshes with an ImageJ plug-in</b> Sebastian Vogt, Carolin Ritter, Jürgen Trzewik, Klaus Brinker University of Applied Sciences Hamm Lippstadt
			<b>2 Multi-atlas based clavicle segmentation in chest image data</b> Cosmin Adrian Morariu, David Struck, Josef Pauli University of Duisburg-Essen
			<b>3 Estimating image quality for bone scintigraphy using machine learning</b> Christina Kolossow, Frank Horbach, Klaus Brinker University of Applied Sciences Hamm Lippstadt
	10:30 06 EG Foyer	10:45	Coffee Break, Networking with other Experts
	10:45 <b>CT, fMRI HF therapy and Radiotherapy</b> Chair: Prof. K. Brinker	11:45	<b>4 A comparison of CT Hounsfield units of medical implants and their metallic and electrical components determined by a conventional and an extended CT-scale</b> Ese Zehra, Marcel Kressmann, Jakob Kreutner, Amin Douiri, Stefan Scholz, Wolfgang Görtz, Lutz Lüdemann, Gregor Schaefers, Daniel Erni, Waldemar Zylka University of Duisburg-Essen, Westphalian University of Applied Sciences, MR:comp GmbH, MRI-STaR GmbH
			<b>5 Does hemodynamic response function change in Alzheimer disease?</b> Nathania Suryoputri, Aydin Ghaderi, Peter Linder, Konstantin Kotliar, Jens Göttler, Christian Sorg, Timo Grimmer Aachen University of Applied Sciences, Klinikum rechts der Isar, Technische Universität München
			<b>6 Investigation of flow and heat transfer during TURIS process via 2D CFD simulation</b> Mustapha El Bahia, Tino Morgenstern, Dinan Wang University of Applied Sciences Ruhr West
			Poster (during lunch break) <b>7 Monte Carlo and ray tracing algorithm for treatment planning in clinical applications with Cyberknife</b> Kirsten Galonske, Martin Thiele, Waldemar Zylka Klinikum Stadt Soest, Westphalian University of Applied Sciences
	11:45	13:00	Lunch Break (Barbecue, Mensa, with costs)
	13:00 <b>Cell Handling and Cell Analysis</b> Chair: Prof. W. Zylka	14:20	<b>8 Development and trials of a test chamber for ultrasound-assisted sampling of living cells from solid surfaces</b> Oliver Schneider, Taher Al Hakim, Peter Kayser, Ilya Digel Aachen University of Applied Sciences
<b>9 How the liquid contact angle saturates by the electrowetting effect</b> Fedor Schreiber, Daniel Erni University of Duisburg-Essen			
<b>10 Effects of nitric oxide (NO) and ATP on red blood cell phenotype and deformability</b> Katharina Schlemmer, Dariusz Porst, Rasha Bassam, Gerhard Artmann, Ilya Digel Aachen University of Applied Sciences			

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			<b>11 Fluorescence signatures and detection limits of ubiquitous terrestrial bio-compounds</b> Max Kuhlen, Ilya Digel Aachen University of Applied Sciences
	14:20 06 EG Foyer	14:35	Coffee Break, Networking with other Experts
	14:35 <b>Assisting Information Systems</b> Chair: Prof. D. Rueter.		<b>12 Automatic dementia diagnosis based on a digital clock drawing test</b> Patrick Lange, Siegfried Reinecke, Klaus Brinker University of Applied Sciences Hamm Lippstadt
			<b>13 Measuring local pulse transit time for affective computing applications</b> Nils Beckmann, Reinhard Viga, Aysegül Dogangün, Anton Grabmaier University of Duisburg-Essen
			<b>14 Safety and security for medical devices: analysis and implementation of a secure software update for embedded systems</b> Andrei Lorengel, Jan Pelzl University of Applied Sciences Hamm Lippstadt
		15:55	<b>15 Ludic system for therapy exercises of wrist and hand phalanges</b> Amaury Perez Tirado National Autonomous University of Mexico, Aachen University of Applied Sciences
	15:55 06 EG Foyer	16:10	Coffee Break, Networking with other Experts
			IEEE Workshop 2017 / SENSORICA 2017 TPC Meeting YRA MedTech Symposium 2018
	17:30	21:00	Social Event Airship Hangar Airport Mülheim (cost free) and afterwards Optional Dinner (with costs) – Meeting Point Building 6 Ground Floor
09.06.2017	8:30 06 EG Foyer	8:45	Registration and Handout of the Abstract Book
	8:45 06 EG HS5	9:00	Welcome Addresses Prof. Dr. H. Bolivar, Vice President Research University of Siegen
	9:00 <b>Biomechanics</b> Chair: Prof. F. Kreuder		<b>16 Exposure of FAI – A squeezed labrum as the reason for limitation of movement and pain</b> Robert Cichon, Dominik Raab, Andrea Lazik Palm, Jens M. Theysohn, Stefan Landgraeber, Wojciech Kowalczyk University of Duisburg-Essen, University Clinic Essen
			<b>17 Prevention of femur neck fractures through femoroplasty</b> Alexander Abel, Daniel Pérez-Viana, Bernhard Ciritsis, Manfred Staat Aachen University of Applied Sciences, Ospedale San Giovanni EOC Bellinzona
		10:40	<b>18 Calculation of muscle forces and joint reaction loads in shoulder area via an OpenSim based computer calculation</b> Stefan Birgel, Tim Leschinger, Kilian Wegmann, Manfred Staat Aachen University of Applied Sciences, University Medical Center Cologne
			<b>19 Biomechanical simulation of different prosthetic meshes for repairing uterine/vaginal vault prolapse</b> Medisa Jabbari, Aroj Bhattarai, Ralf Anding, Manfred Staat Aachen University of Applied Sciences

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			<b>20 Upgrade of bioreactor system providing physiological stimuli to engineered musculoskeletal tissues</b> Michel Schmitjans, Jan Bernd Vorstius, Waldemar Zylka University of Dundee, Westphalian University of Applied Sciences
10:40 06 EG Foyer	10:55		Coffee Break, Networking with other Experts
10:55 <b>Biomedical Imaging and Monitoring I</b> Chair: Prof. M. Staat			<b>21 A randomized, observational thermographic study of the neck region before and after a physiotherapeutic intervention</b> Lukas de Hond, Dariusz Porst, Ilya Digel Aachen University of Applied Sciences
			<b>22 Contactless vital sign monitoring</b> Andreas R. Diewald, Daniel Schmiech Trier University of Applied Sciences
	11:55		<b>23 A camera based system for contactless pulse oximetry</b> Christian Schiffer, Andreas R. Diewald, Rene Thul Trier University of Applied Sciences
11:55	13:00		Lunch Break (Barbecue, Mensa, with costs)
13:00 <b>Biomedical Imaging and Monitoring II</b> Chair: Prof. M. Staat			<b>24 A large induction field scanner for examining the interior of extended objects or living humans</b> Martin Klein, Dirk Rueter University of Applied Sciences Ruhr West
	13:40		<b>25 Modeling and Evaluation of High Impedance Surfaces Applied to Improve the Performance of RF Coils within high-field MRI</b> Benedikt Sievert, Andreas Rennings, Daniel Erni University of Duisburg-Essen
13:40	13:45		Short Break
13:45			IEEE Workshop 2017 / SENSORICA 2017
15:05 06 EG Foyer	15:20		Coffee Break, Networking with other Experts
15:20			IEEE Workshop 2017 / SENSORICA 2017
17:00 06 EG HS4	17:15		Short Break, Concluding Discussion and Departing