Abstracts of the 2018 Annual Meeting of the German Society of Biomedical Engineering (26–28 September 2018, Aachen/DE)

Title	Authors (with affiliation and country)	Session title	ID	Session start time
Interactive Implants: Vision and challenges	Klaus-Peter Hoffmann (Fraunhofer Institute for Biomedical Engineering & IBMT, Germany); Heidi Olze (Universitätsmedizin Berlin, Germany); Werner Kneist (University Medicine Johannes Gutenberg Mainz, Germany); Thilo Krüger (Inomed Medizintechnik GmbH, Germany); Wiebke Droste (Universities of Mannheim and Heidelberg & Institut für Deutsches, Europäisches und Internationales Medizinrecht, Gesundheitsrecht und Bioethik (IMGB), Germany); Marc Ruta (Wilddesign GmbH & Co. KG, Germany); Ruediger Rupp (Heidelberg University Hospital, Germany)	FS: Interactive Implants	**A1.1**	26.09.2018 08:30
Tinnitus suppression using electrical stimulation	Heidi Olze (Universitätsmedizin Berlin, Germany); Agnieszka Szczepek (Charité University Hospital Berlin & INTAKT BMBF Project, Germany); Stefan Graebel, Uta Reich and Florian Uecker (Charité University Hospital Berlin, Germany)	FS: Interactive Implants	**A1.2**	26.09.2018 08:30
Interactive implants: Restoration of grasping function in individuals with high spinal cord injury	Ruediger Rupp and Andreas Kogut (Heidelberg University Hospital, Germany); Marcel Böttrich (Technische Universität Ilmenau, Germany); Kai Diercks (Soventec GmbH, Germany); Roman Ruff (Fraunhofer Institut für Biomedizinische Technik, Germany); Klaus-Peter Hoffmann (Fraunhofer Institute for Biomedical Engineering & IBMT, Germany)	FS: Interactive Implants	**A1.3**	26.09.2018 08:30
Electrical stimulation with motility analysis of five parts of the gastrointestinal tract	Jonas Schiemer and Axel Heimann (Johannes Gutenberg University Mainz, Germany); Karin H Somerlik-Fuchs (Albert-Ludwigs-University Freiburg, Germany); Roman Ruff (Fraunhofer Institut für Biomedizinische Technik, Germany); Klaus-Peter Hoffmann (Fraunhofer Institute for Biomedical Engineering & IBMT, Germany); Jan Baumgart (Johannes Gutenberg University Mainz, Germany); Werner Kneist (Johannes Gutenberg-University Mainz, Germany)	FS: Interactive Implants	**A1.4**	26.09.2018 08:30
Interactive implants: Translation in a medical product	Thilo Krüger (Inomed Medizintechnik GmbH, Germany); Karin H Somerlik-Fuchs (Albert-Ludwigs-University Freiburg, Germany)	FS: Interactive Implants	**A1.5**	26.09.2018 08:30
Interactive Implants: Ethical, legal and social implications	Wiebke Droste (Universities of Mannheim and Heidelberg & Institut für Deutsches, Europäisches und Internationales Medizinrecht, Gesundheitsrecht und Bioethik (IMGB), Germany)	FS: Interactive Implants	**A1.6**	26.09.2018 08:30
BioInterface - Functional fibrin-based hydrogels for the direction of cell/biomaterial interactions in biohybrid cardiovascular Implants	Sabine Neuss (RWTH Aachen University, Germany); Andrij Pich (RWTH Aachen, Germany)	DFG PAK 961 - Towards Model-based Control of Biohybrid Implant Maturation: (1)	**A2.1**	26.09.2018 11:10
Architissue - 3D-Architektur biohybrider kardiovaskulärer Implantate durch additive Fertigung	Nadine Nottrodt (Fraunhofer Institute for Lasertechnology, Aachen, Germany); Petra Mela (RWTH Aachen University, Aachen, Germany); Arnold Gillner (RWTH Aachen University and Fraunhofer Institute for Lasertechnology, Aachen, Germany)	DFG PAK 961 - Towards Model-based Control of Biohybrid Implant Maturation: (1)	**A2.2**	26.09.2018 11:10
Modelling of Structure and Fluid-Structure Interaction during Tissue Maturation in Biohybrid Heart Valves	Stefanie Reese (RWTH Aachen University, Germany); Stefan Jockenhoevel (RWTH Aachen & Helmholtz Institute for Biomedical Engineering, Germany)	DFG PAK 961 - Towards Model-based Control of Biohybrid Implant Maturation: (1)	**A2.3**	26.09.2018 11:10

ProcessModelling - Process-oriented matuaration model of biohybrid heart valves during bioreactor conditioning	Thomas Schmitz-Rode (RWTH Aachen University, Aachen, Germany); Dirk Abel (RWTH Aachen University, Aachen, Germany); Marc van Zandvoort (RWTH Aachen, University Hospital, Aachen, Germany)	DFG PAK 961 - Towards Model-based Control of Biohybrid Implant Maturation: (1)	**A2.4**	26.09.2018 11:10
DurImplant – Analysis of implant behavior after bioreactor maturation in vitro	Thomas Schmitz-Rode (RWTH Aachen University, Aachen, Germany) Wilhelm Jahnen-Dechent (RWTH Aachen University, Medical Faculty, Aachen, Germany)	DFG PAK 961 - Towards Model-based Control of Biohybrid Implant Maturation: (1)	**A2.5**	26.09.2018 11:10
ImplantMonitoring – Multimodal imaging for longitudinal in vivo monitoring of Biohybrid implants	Stefan Jockenhövel (RWTH Aachen University, Aachen, Germany); Fabian Kiessling (RWTH Aachen University, Aachen, Germany)	DFG PAK 961 - Towards Model-based Control of Biohybrid Implant Maturation: (1)	**A2.6**	26.09.2018 11:10
Direction-Dependent Control of an Industrial Lightweight Robot for Upper Arm Rehabilitation Training	Sonja Husmann and Dirk Abel (RWTH Aachen University, Germany)	FS: Model-based Control of Robot-Assisted Neuromuscular Training during Rehabilitation	**A4.1**	27.09.2018 08:30
Comparison of Different Training Algorithms for the Leg Extension Training with an Industrial Robot	Maike Ketelhut (RWTH Aachen University, Germany); Fabian Göll (German Sport University Cologne, Germany); Bjoern Braunstein (German Sport University Cologne & Centre for Health and Integrative Physiology in Space, Germany); Kirsten Albracht (German Sports University Cologne, Germany); Dirk Abel (RWTH Aachen University, Germany)	FS: Model-based Control of Robot-Assisted Neuromuscular Training during Rehabilitation	**A4.2**	27.09.2018 08:30
Biofeedback for individualized neuromuscular training and rehabilitation based on musculoskeletal models	Fabian Göll (German Sport University, Cologne); Bjoern Braunstein (German Sport University Cologne & Centre for Health and Integrative Physiology in Space, Germany); Maike Ketelhut and Dirk Abel (RWTH Aachen University, Germany); Kirsten Albracht (German Sports University Cologne, Germany)	FS: Model-based Control of Robot-Assisted Neuromuscular Training during Rehabilitation	**A4.3**	27.09.2018 08:30
Electromyography as a tool for personalized rehabilitation	Eike Petersen (University of Luebeck, Germany); Lorenz Kahl (Drägerwerk AG & Co. KGaA, Germany); Philipp Rostalski (University of Lübeck & Institute for Electrical Engineering in Medicine, Germany)	FS: Model-based Control of Robot-Assisted Neuromuscular Training during Rehabilitation	**A4.4**	27.09.2018 08:30
Eliciting somatosensory percepts via multi-channel wireless electrical stimulation of afferent nerves	Cristian Pasluosta (IMTEK, University of Freiburg, Germany); Patrick Kiele and Thomas Stieglitz (Albert-Ludwigs-Universität Freiburg, Germany)	FS: Innovative Orthotics and Prosthetics	**A5.1**	27.09.2018 11:10
Clinical Translation of Innovative Prostheses and Orthoses	Jennifer Ernst, Wolfgang Lehmann and Arndt F. Schilling (University Medical Center Göttingen, Germany)	FS: Innovative Orthotics and Prosthetics	**A5.2**	27.09.2018 11:10
Locomotion robots for individuals with spinal cord injury - hype or hope ?	Ruediger Rupp (Heidelberg University Hospital, Germany)	FS: Automation in Medicine - Rehabilitation and Technical Aids	**A6.1**	27.09.2018 16:20
Evaluation of a measurement process for recording changes in human posture during a therapy	Paula Krueger (Technische Universität Dresden, Germany); Grzegorz Sliwinski (TU Dresden, Germany); Andreas Heinke (Techische Universität Dresden, Germany); Tilman Lieberknecht (Technische Universität Dresden, Germany); Jenny Nisser and Steffen Derlien (Jena University Hospital, Germany); Zbigniew Sliwinski (Humanistic and Nature University in Kielce, Poland); Hagen Malberg (TU Dresden & Institute of Biomedical Engineering, Germany)	FS: Automation in Medicine - Rehabilitation and Technical Aids	**A6.2**	27.09.2018 16:20
Design of Nonlinear Impedance Controller for Lower Extremity Exoskeleton with Variable Stiffness Actuator	Anake Pomprapa and Lin Liu (RWTH Aachen University, Germany); Steffen Leonhardt (RWTH Aachen, Germany)	FS: Automation in Medicine - Rehabilitation and Technical Aids	**A6.3**	27.09.2018 16:20

Development of a system for the controlled relief of the spine using the example of FED therapy	Tilman Lieberknecht (Technische Universität Dresden, Germany); Grzegorz Sliwinski (TU Dresden, Germany); Andreas Heinke (Techische Universität Dresden, Germany); Paula Krueger (Technische Universität Dresden, Germany); Zbigniew Sliwinski (Humanistic and Nature University in Kielce, Poland); Hagen Malberg (TU Dresden & Institute of Biomedical Engineering, Germany)	FS: Automation in Medicine - Rehabilitation and Technical Aids	**A6.4**	27.09.2018 16:20
Application of Iterative Learning Control for Repetitive Processes in Breathing Therapy	Mathias Scheel (Hoffrichter GmbH / Hochschule Wismar, Germany); Andreas Berndt (Hoffrichter GmbH, Germany); Olaf Simanski (Hochschule Wismar - University of Applied Sciences: Technology, Business and Design, Germany)	FS: Automation in Medicine - Rehabilitation and Technical Aids	**A6.5**	27.09.2018 16:20
Using dynamic time warping in multivariable iterative learning control for FES-assisted gait therapy	Philipp Müller and Thomas Schauer (Technische Universität Berlin, Germany)	FS: Automation in Medicine - Rehabilitation and Technical Aids	**A6.6**	27.09.2018 16:20
Asterix, Obelix und die Biomedizinische Technik: Ein von der Wissenschaft bunt gezeichnetes Seminar	Martin Baumann (RWTH Aachen University, Germany); Anjali Röth (RWTH Aachen University Hospital, Germany); Michael Gundlach and Ioana Slabu (RWTH Aachen University, Germany)	BMT-Aus- und -Weiterbildung: "Marktplatz digitale Lehre"	**A7.1**	28.09.2018 08:30
Blended Learning Biomedizinische Technik: wissenschaftliche Theorie in Lehre und Forschung - Ingenieurlaborpraktika - klinisches Training - medizintechnische Anwendung	Ute Morgenstern (Technische Universität Dresden, Germany); Hans Dietrich (Ingenieurbüro Dietrich Dresden, Germany); Verena Barth (Technische Universität Dresden, Germany)	BMT-Aus- und -Weiterbildung: "Marktplatz digitale Lehre"	**A7.2**	28.09.2018 08:30
Elektronischer Unterricht in der Medizintechnik - Möglichkeiten der digitalen Lehre	Stefan M. Sesselmann, MHBA (Ostbayerische Technische Hochschule (OTH) Amberg-Weiden, Germany); Katja Sesselmann (Institut für Lern-Innovation der FAU Erlangen-Nürnberg, Germany); Frank Seehaus (Orthopädische Universitätsklinik Erlangen, Germany); Forst Raimund (Orthop, Germany); Clemens Bulitta (Ostbayerische Technische Hochschule (OTH), Germany)	BMT-Aus- und -Weiterbildung: "Marktplatz digitale Lehre"	**A7.3**	28.09.2018 08:30
Marktplatz Digitale Lehre: Lehren, Lernen, Training im Fachgebiet Biomedizinische Technik	Ute Morgenstern (Technische Universität Dresden, Germany); Marc Kraft (Technische Universität Berlin, Germany); Karsten Seidl (Bosch Healthcare Solutions GmbH, Germany); Stefan M. Sesselmann, MHBA (Ostbayerische Technische Hochschule (OTH) Amberg-Weiden, Germany); Martin Baumann (RWTH Aachen University, Germany)	BMT-Aus- und -Weiterbildung: "Marktplatz digitale Lehre"	**A7.4**	28.09.2018 08:30
From infants to elders: challenges in multi-spectral multi-camera setups for vital sign estimation	Christoph Hoog Antink, Xinchi Yu and Michael Paul (RWTH Aachen University & Chair for Medical Information Technology, Germany); Steffen Leonhardt (RWTH Aachen, Germany)	FS: Kamerabasierte Methoden in der Diagnostik	**B1.1**	26.09.2018 08:30
Bi - Domain Intraoperative Registration of Vessels	Ady Naber (Karlsruher Institut für Technologie (KIT), Germany); Werner Nahm (Karlsruhe Institute of Technology, Germany)	FS: Kamerabasierte Methoden in der Diagnostik	**B1.2**	26.09.2018 08:30
Considerations on calibratability of contactless pulse oximetry	Wim Verkruysse, Benoit Balmaekers, Mohammed Meftah and Mukul Rocque (Philips Research, The Netherlands); Marek Bartula (Philips Research Europe, The Netherlands)	FS: Kamerabasierte Methoden in der Diagnostik	**B1.3**	26.09.2018 08:30
Application of thermography for cerebral perfusion imaging during aneurysm surgery	Juliane Müller (TU Dresden, Faculty of Medicine Carl Gustav Carus, Clinical Sensoring and Monitoring, Germany); Valentin Schreiter and Elisa Böhl (TU Dresden, Faculty of Medicine Carl Gustav Carus, Neurosurgery, Germany); Gerald Steiner (Clinical Sensoring and Monitoring, Germany); Edmund Koch (Technische Universität Dresden, Germany); Gabriele Schackert (Dresden University of Technology, Germany); Matthias Kirsch (Universitätsklinikum Dresden, Germany)	FS: Kamerabasierte Methoden in der Diagnostik	**B1.4**	26.09.2018 08:30

Mock loop for bubble generation in a centrifugal blood pump for fault simulation	Andre Stollenwerk and Mateusz Buglowski (RWTH Aachen University, Germany); Jan Kuehn (Embedded Software - RWTH Aachen University, Germany)	FS: Automation in Medicine - Intensive Care and Surgery	**B2.1**	26.09.2018 11:10
Low-cost physiological simulation system for endovascular treatment of aneurysms	Oskar Pfau (University of Lübeck, Germany); André Kemmling (University Hospital of Schleswig Holstein, Germany); Philipp Rostalski (University of Lübeck & Institute for Electrical Engineering in Medicine, Germany)	FS: Automation in Medicine - Intensive Care and Surgery	**B2.2**	26.09.2018 11:10
Observer-based controller design for the minimally invasive surgery	Eike Smolinski, Alexander Benkmann, Wolfgang Drewelow and Torsten Jeinsch (University of Rostock, Germany); Peter Westerhoff and Hans-Joachim Cappius (WORLD OF MEDICINE GmbH, Germany)	FS: Automation in Medicine - Intensive Care and Surgery	**B2.3**	26.09.2018 11:10
Automatic Detection and Classification of Cardiopulmonary Diseases using Deep Structured Learning	Anake Pomprapa (RWTH Aachen University, Germany); Muhammad Sayani (RWTH Aachen Universtiy, Germany); Waqar Ahmed (RWTH Aachen University, Germany); Steffen Leonhardt (RWTH Aachen, Germany)	FS: Automation in Medicine - Intensive Care and Surgery	**B2.4**	26.09.2018 11:10
A long-term setup for kidney perfusion	Jan Kuehn (Embedded Software - RWTH Aachen University, Germany); Andre Stollenwerk and Stefan Kowalewski (RWTH Aachen University, Germany); Gregor Fabry, Tim Grzanna, Benedict Doorschodt and René Tolba (Uniklinik RWTH Aachen, Germany); Rolf Rossaint (Universitätsklinikum Aachen, Germany); Christian Bleilevens (Uniklinik RWTH Aachen, Germany)	FS: Automation in Medicine - Intensive Care and Surgery	**B2.5**	26.09.2018 11:10
A Drive Mechanism for a Blood Pump Integrated in an Oxygenator	Amin Aghababaei (Faculty of Engineering and Information Technology, Ruhr-University Bochum, Germany); Ali Kashefi (Universitätsklinikum Aachen, Germany); Martin Hexamer (Ruhr Universität Bochum, Germany)	FS: Automation in Medicine - Intensive Care and Surgery	**B2.6**	26.09.2018 11:10
Toward minimal-invasive cochlear implantation: A study on the accuracy and repeatability of a single drill tunnel approach	Samuel John and Marcel Kluge (OtoJig GmbH, Germany); Jan Stieghorst, Thomas S. Rau and Omid Majdani (Hannover Medical School, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany)	FS: Automation in Medicine - Intensive Care and Surgery	**B2.7**	26.09.2018 11:10
Individualized Implants - the clinical perspective	Mathias Wilhelmi (Medizinische Hochschule Hannover, Germany)	FS: Towards Patient-Customized Implants - Status and Future Aspects	**B3.1**	26.09.2018 16:20
Valentine Gesché	Valentine Gesché (RWTH Aachen University, Germany)	FS: Towards Patient-Customized Implants - Status and Future Aspects	**B3.2**	26.09.2018 16:20
Microbubbles for ultrasound diagnosis and therapy	Fabian Kiessling (University Hospital Aachen, Germany)	FS: Ultrasound: algorithms, technologies, applications	**B4.1**	27.09.2018 08:30
Vascular imaging with ultrasound localization microscopy using a linear motion-model	Stefanie Dencks and Marion Piepenbrock (Ruhr-Universität Bochum, Germany); Georg Schmitz (Ruhr-University Bochum, Germany)	FS: Ultrasound: algorithms, technologies, applications	**B4.2**	27.09.2018 08:30
Cardiac ultrasound imaging: high frame rate imaging towards clinical application	Alessandro Ramalli, Pedro Santos, João Pedrosa, Bidisha Chakraborty and Marta Orlowska (KU Leuven, Belgium); Aniela Petrescu and Jens-Uwe Voigt (UZ Leuven, Belgium); Jan D'hooge (KU Leuven, Belgium)	FS: Ultrasound: algorithms, technologies, applications	**B4.3**	27.09.2018 08:30
Combination of focused ultrasound hyperthermia (FUS-HT) and radiation therapy: Validation of in vitro effects in a preliminary study	Lisa Landgraf, Xinrui Zhang and Michael Unger (ICCAS, Germany); Ina Patties (University of Leipzig, Germany); Shaonan Hu (ICCAS, Germany); Damian McLeod (Technische Universität Dresden, Germany); Marc Fournelle (Fraunhofer Institut für Biomedizinische Technik, Germany); Steffen Tretbar (Fraunhofer IBMT, Germany); Thomas Neumuth (ICCAS, Germany); Andreas Melzer (Universitätsklinikum Leipzig, Germany)	FS: Ultrasound: algorithms, technologies, applications	**B4.4**	27.09.2018 08:30

Measuring Muscle Contractions using Single Element Ultrasound Transducer Data with Artificial Neural Networks	Lukas Brausch and Holger Hewener (Fraunhofer Institute for Biomedical Engineering, Germany)	FS: Ultrasound: algorithms, technologies, applications	**B4.5**	27.09.2018 08:30
Diagnostic ultrasound probes: a typology and overview of technologies	Ramona De Luca and Tommaso Dattoma (Esaote Spa, Italy); Leonardo Forzoni (Esaote S.p.A., Italy); Jeffrey C Bamber (The Institute of Cancer Research, United Kingdom (Great Britain)); Paolo Palchetti and Alessandro Gubbini (Esaote Spa, Italy)	FS: Ultrasound: algorithms, technologies, applications	**B4.6**	27.09.2018 08:30
In silico Study of the Dynamic Interaction between Extracorporeal Circulation and Native Circulation	Markus Bongert (Fachhochschule Dortmund, Germany); Johannes Gehron (University Hospital Gießen and Marburg, Germany); Marius Geller (Fachhochschule Dortmund, Germany); Andreas Böning and Philippe Grieshaber (University Hospital Gießen and Marburg, Germany)	FS: Image guided interventions (1)	**B7.1**	28.09.2018 08:30
Comparison of two biological Aortic Valve Prostheses inside patient-specific Aorta Model by bi-directional Fluid-Structure Interaction	Markus Bongert, Jan Wüst and Marius Geller (Fachhochschule Dortmund, Germany); Markus Schlömicher (University Medical Center Bergmannsheil, Germany); Tim Ricken (University Stuttgart, Germany); Volkmar Nicolas and Justus Strauch (Universitätsklinikum Bergmannsheil Bochum, Germany)	FS: Image guided interventions (1)	**B7.2**	28.09.2018 08:30
Performance of Stereo Matching Algorithms in 3D Endoscopy	Dennis Schuldt (Fachhochschule Dortmund, Germany); Fatih Tanriverdi and Jörg Thiem (University of Applied Sciences and Arts Dortmund, Germany)	FS: Image guided interventions (1)	**B7.3**	28.09.2018 08:30
Feature Matching Improvements Based on Hyperspectral Imaging	Fatih Tanriverdi (University of Applied Sciences and Arts Dortmund, Germany); Dennis Schuldt (Fachhochschule Dortmund, Germany); Jörg Thiem (University of Applied Sciences and Arts Dortmund, Germany)	FS: Image guided interventions (1)	**B7.4**	28.09.2018 08:30
Freehand 3D ultrasound visualization of vessels - First results of an augmented reality approach	Christopher Nielsen and Heinrich M. Overhoff (Westphalian University of Applied Sciences, Germany); Stefan Maas (SomaView GbR, Germany)	FS: Image guided interventions (1)	**B7.5**	28.09.2018 08:30
Flexible interventional imaging system based on miniaturized X-ray tubes (FlexScan)	Sinja Lagotzki and Muhammad Usama Iftikhar (Otto-von-Guericke-University Magdeburg, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany); Axel Boese (Otto-von-Guericke-University Magdeburg, Germany)	FS: Image guided interventions (1)	**B7.6**	28.09.2018 08:30
Interventional MRI at research campus STIMULATE	Bennet Hensen and Urte Kägebein (Hannover Medical School, Germany); Enrico Pannicke and Oliver Speck (Otto-von-Guericke University Magdeburg, Germany); Frank Wacker (Hannover Medical School, Germany)	FS: Image guided interventions (2)	**B8.1**	28.09.2018 11:10
Signal acquisition of tissue tool interactions in robotic surgery	Chien-Hsi Chen (Otto-von-Guericke-University Magdeburg, Germany); Thomas Sühn (Otto-von-Guericke-University Magdeburg & Institute of Medical Technology, Germany); Ivan Maldonado and Hesham Ahmad (Otto-von-Guericke-University Magdeburg, Germany); Alfredo Illanes (Otto-von-Guericke University of Magdeburg, Germany); Cora Wex, Roland Croner and Axel Boese (Otto-von-Guericke-University Magdeburg, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany)	FS: Image guided interventions (2)	**B8.2**	28.09.2018 11:10
Deep transfer learning for aortic root dilation identification in 3D ultrasound images	Jannis Hagenah (University of Lübeck, Germany); Mattias Heinrich (Institute of Medical Informatics, Germany); Floris Ernst (University of Lübeck, Germany)	FS: Image guided interventions (2)	**B8.3**	28.09.2018 11:10
Evaluation of an audio acquisition system for targeting assistance	Ivan Maldonado (Otto-von-Guericke-University Magdeburg, Germany); Alfredo Illanes (Otto-von-Guericke University of Magdeburg, Germany); Axel Boese (Otto-von-Guericke-University Magdeburg, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany)	FS: Image guided interventions (2)	**B8.4**	28.09.2018 11:10

Automatic structure allocation of vascular patterns in endoscopic images of the vocal cords	Axel Boese (Otto-von-Guericke-University Magdeburg, Germany); Alfredo Illanes (Otto-von-Guericke University of Magdeburg, Germany); Sathish Balakrishnan and Nikolaos Davaris (Otto von-Guericke-University Magdeburg, Germany); Christoph Arens (Otto-von-Guericke-University, Magdeburg, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany)	FS: Image guided interventions (2)	**B8.5**	28.09.2018 11:10
Fractal Dimensions of Subviral Particle Movement	Andreas Rausch (Technisce Hochschule Mittelhessen, Germany); Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	FS: Image guided interventions (2)	**B8.6**	28.09.2018 11:10
Deep learning - a promising approach for biomedical signal analysis?	Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	FS: Artificial Intelligence & Deep Learning in Biomedical Engineering - Chance and Challenges	**C1.1**	26.09.2018 08:30
Integrating data learning methods and expert models in personal mobile and wearable health marker analytics	Oliver Amft (Friedrich-Alexander Universität (FAU) Erlangen-Nürnberg, Germany)	FS: Artificial Intelligence & Deep Learning in Biomedical Engineering - Chance and Challenges	**C1.2**	26.09.2018 08:30
Intensive Care Units	Lukas von Stülpnagel (Technische Universität München & LMU Klinikum der Universität München, Germany); Bernhard Wolf (Technische Universität München, Germany); Axel Bauer (LMU Klinikum der Universität München & DZHK German Centre for Cardiovascular Research, Germany)	FS: Artificial Intelligence & Deep Learning in Biomedical Engineering - Chance and Challenges	**C1.3**	26.09.2018 08:30
A discussion contribution about fail-safe sensor data as input for mHealth applications - requirements and challenges	Hoc Khiem Trieu (Technische Universität Hamburg-Harburg, Germany)	FS: Artificial Intelligence & Deep Learning in Biomedical Engineering - Chance and Challenges	**C1.4**	26.09.2018 08:30
Vital Sign Sensors for Artificial Intelligence and Deep Learning	Jens Kirchner and Georg Fischer (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany)	FS: Artificial Intelligence & Deep Learning in Biomedical Engineering - Chance and Challenges	**C1.5**	26.09.2018 08:30
Addressing challenges in bringing Artificial Intelligence and Deep Learning into clinical routine	Martin Braecklein (DGBMT Fachausschuss Mobile Diagnose- und Therapiesysteme - mHealth & Linde Healthcare, Germany)	FS: Artificial Intelligence & Deep Learning in Biomedical Engineering - Chance and Challenges	**C1.6**	26.09.2018 08:30
New Devices for MR Interventional procedures	Andreas Melzer (Universitätsklinikum Leipzig, Germany)	FS: MR Safety and Compatibility of Medical Devices	**C2.1**	26.09.2018 11:10
Gradient Fields in MRI	Franz Schmitt (MRI-STaR/MR:comp, Germany)	FS: MR Safety and Compatibility of Medical Devices	**C2.2**	26.09.2018 11:10
Modelling Peripheral Nerve Stimulation in MRI using Coupled Electromagnetic and Neurodynamic Simulations	Mathias Davids (Medical Faculty Mannheim, Heidelberg University, Germany); Bastien Guérin (Massachusetts General Hospital, USA); Lothar Schad (Medical Faculty Mannheim, Heidelberg University, Germany); Lawrence Wald (Massachusetts General Hospital, USA)	FS: MR Safety and Compatibility of Medical Devices	**C2.4**	26.09.2018 11:10
Magnetic Particle Imaging for Nanomedicine	Volkmar Schulz, Nils Holle, Marcel Straub and Dennis Pantke (RWTH Aachen University, Germany)	FS: Magnetic Particle Imaging (MPI)	**C3.1**	26.09.2018 16:20
OpenMPIData: An initiative for freely accessible magnetic particle imaging data	Tobias Knopp (Section for Biomedical Imaging, University Medical Center Hamburg-Eppendorf & Institute for Biomedical Imaging, Hamburg University of Technology, Germany); Patryk Szwargulski (University Medical Center Hamburg, Finland); Florian Griese (University Medical Center Hamburg-Eppendorf, Germany); Matthias Graeser (University Medical Center Hamburg, Germany)	FS: Magnetic Particle Imaging (MPI)	**C3.2**	26.09.2018 16:20

A Summing Configuration based Low Noise Amplifier for MPI and MPS	Ankit Malhotra (Universität zu Lubeck, Germany); Thorsten M. Buzug (Universität zu Lübeck, Germany)	FS: Magnetic Particle Imaging (MPI)	**C3.3**	26.09.2018 16:20
Enhancements for Traveling Wave Magnetic Particle Imaging	Patrick Vogel, Martin Rückert and Thomas Kampf (University of Würzburg, Germany); Stefan Herz and Thorsten Bley (University Hospital Würzburg, Germany); Volker C. Behr (University of Würzburg, Germany)	FS: Magnetic Particle Imaging (MPI)	**C3.4**	26.09.2018 16:20
Lateral Movement of Helical Swimmers Visualized with Magnetic Particle Imaging	Anna Bakenecker (University of Luebeck, Germany); Anselm von Gladiß (Universität zu Lübeck, Germany); Thomas Friedrich (University of Luebeck, Germany); Thorsten M. Buzug (Universität zu Lübeck, Germany)	FS: Magnetic Particle Imaging (MPI)	**C3.5**	26.09.2018 16:20
MPS-mouse: first mobile Magnetic Particle Spectrometer	Patrick Vogel, Martin Rückert and Volker C. Behr (University of Würzburg, Germany)	FS: Magnetic Particle Imaging (MPI)	**C3.6**	26.09.2018 16:20
Progress and challenges in the development of novel implant concepts for cardiovascular, ophthalmologic and otolaryngologic applications	Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.1**	27.09.2018 08:30
Stenting the Eustachian Tube for Treatment of Chronic Otitis Media	Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Tamara Wilfling (Hannover Medical School, Germany); Gerrit Paasche (Medizinische Hochschule Hannover, Germany); Kerstin Schümann (Rostock University Medical Center, Germany); Niels Grabow, Wolfram Schmidt and Klaus-Peter Schmitz (Universität Rostock, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.2**	27.09.2018 08:30
Electrospinning for polymeric implants in cardiovascular applications	Stefanie Kohse (University Medical Center Rostock, Germany); Daniela Arbeiter (Universität Rostock, Germany); Thomas Reske (Institute for ImplantTechnology and Biomaterials e. V., Germany); Thomas Eickner (University of Rostock, Germany); Michael Stiehm (University of Rostock & Germany, Germany); Klaus-Peter Schmitz and Niels Grabow (Universität Rostock, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.3**	27.09.2018 08:30
Drug release systems based on hyaluronan materials	Matthias Schnabelrauch (INNOVENT e. V. Biomaterials Department Jena, Germany); Ralf Wyrwa and Torsten Walter (INNOVENT e. V., Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.4**	27.09.2018 08:30
Regenerative cardiac valve prostheses based on cell seeding of polymeric scaffolds	Tobias Schilling (Hannover Medical School, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.5**	27.09.2018 08:30
Clinical needs and perspectives for the development of new generation TAVR	Alper Öner (Rostock University Medical Center, Germany); Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany); Michael Stiehm (University of Rostock & Germany, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.6**	27.09.2018 08:30
Development of model drug-eluting implants via fused deposition modeling	Anne Seidlitz and Wiebke Kempin (Ernst-Moritz-Arndt-Universität Greifswald, Germany); W. Weitschies (Universität Greifswald, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.7**	27.09.2018 08:30

Optimization of stent designs regarding the thrombosis risk using computational fluid dynamics	Carolin Wüstenhagen, Sylvia Pfensig and Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V., Germany); Sebastian Kaule, Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany); Michael Stiehm (University of Rostock & Germany, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.8**	27.09.2018 08:30
Inflammation-responsive polymer conjugates for adaptive delivery of anti-inflammatory compounds	Manfred Maitz and Tina Helmecke (Leibniz Institut für Polymerforschung Dresden, Germany); Carsten Werner (Leipniz Institute for Polymere Research, Germany)	FS: FS17 BMBF-Twenty20 coordinated research project "RESPONSE - Partnership for Innovation in Implant Technology"	**C4.9**	27.09.2018 08:30
Patient-specific iPS cells for endothelialisation of membrane surfaces of implantable biohybrid lung devices	Olmer Ruth and Ulrich Martin (Medizinische Hochschule Hannover, Germany)	FS DFG SPP 2014 - Towards Implantable Lung (1)	**C5.1**	27.09.2018 11:10
Development of a biohybrid lung - Preventing rejection of allogenic endothelial cells by HLA-class I silencing	Bettina Wiegmann and Constanca Figueiredo (Hannover Medical School, Germany)	FS DFG SPP 2014 - Towards Implantable Lung (1)	**C5.2**	27.09.2018 11:10
Towards an Implantable Lung - A Surgeon´s View	Christian Kühn (Medizinische Hochschule Hannover, Germany)	FS DFG SPP 2014 - Towards Implantable Lung (1)	**C5.5**	27.09.2018 11:10
Potential benefit of the ECMO mouse model for synergistic lung studies	Nodir Madrahimov (Medizinische Hochschule Hannover, Germany)	FS DFG SPP 2014 - Towards Implantable Lung (1)	**C5.6**	27.09.2018 11:10
Computational Fluid Dynamics Assessment of Hollow-fibre Membrane Oxygenators	Daniele Dipresa (Hannover Medical School, Germany); Axel Haverich (Medizinische Hochschule Hannover, Germany); Panagiotis Kalozoumis and Sotirios Korossis (Hannover Medical School, Germany)	C5 FS DFG SPP 2014 - Towards Implantable Lung (2)	**C6.4**	27.09.2018 16:20
Innovation Factory at RWTH Aachen Campus	Michael Riesener (RWTH Aachen University, Laboratory for Machine Tools and Production Engineering (WZL), Germany)	FS: Innovation Management in Medical Engineering	**C7.1**	28.09.2018 08:30
Effectiveness of technology transfer in the Bioeconomy	Michael Wustmans, Laura Borge and Stefanie Bröring (University of Bonn, Germany)	FS: Innovation Management in Medical Engineering	**C7.2**	28.09.2018 08:30
Innovating the Patient Journey - Patient Centric Solutions for the Future	Esther Novosel and Nils Dudenhoefer (Fresenius Medical Care, Germany)	FS: Innovation Management in Medical Engineering	**C7.3**	28.09.2018 08:30
Challenges in Recommending Biomedical Experts for Collaborations	Mark Bukowski (RWTH Aachen University & Institute of Applied Medical Engineering AME, Germany); Thomas Schmitz-Rode (Institute of Applied Medical Engineering AME, RWTH Aachen University, Germany); Robert Farkas (RWTH Aachen University & Institute of Applied Medical Engineering AME, Germany)	FS: Innovation Management in Medical Engineering	**C7.4**	28.09.2018 08:30
Heart phantom with electrical properties of heart muscle tissue	Leonie Korn and Simon Lyra (RWTH Aachen University, Germany); Daniel Rüschen (RWTH Aachen, Germany); Alexander Pugovkin (National Research University of Electronic Technology, Russia); Dmitry Telyshev (Sechenov First MSMU, Russia); Steffen Leonhardt and Marian Walter (RWTH Aachen, Germany)	Bioimpedance	**C8.1**	28.09.2018 11:10
Regional analysis of airway abnormalities in cystic fibrosis employing Electrical Impedance Tomography	Sabine Krueger-Ziolek and Bo Gong (Furtwangen University, Germany); Hanna Zimmermann and Ullrich Müller-Lisse (University of Munich, Germany); Knut Moeller (Furtwangen University & Institute of Technical Medicine (ITeM), Germany)	Bioimpedance	**C8.2**	28.09.2018 11:10
An efficient classification-reconstruction method for 3D EIT	Bo Gong (Furtwangen University, Germany)	Bioimpedance	**C8.3**	28.09.2018 11:10

Short Distance Impedance Pneumography	Michael Klum, Tianhao Alissa Schenck, Alexandru-Gabriel Pielmus, Timo Tigges and Reinhold Orglmeister (Technische Universität Berlin, Germany)	Bioimpedance	**C8.4**	28.09.2018 11:10
Feature based analysis of the cardiosynchronous EIT signal component using an MRI-based reconstruction model	Michael Kircher and Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany)	Bioimpedance	**C8.5**	28.09.2018 11:10
Bioimpedance Analysis of L929 and HaCaT Cells in Low Frequency Range	Viviane Silva Teixeira (Technical University of Hamburg, Germany); Jan-Patrick Kalckhoff, Wolfgang Krautschneider and Dietmar Schroeder (Hamburg University of Technology, Germany)	Bioimpedance	**C8.6**	28.09.2018 11:10
Hydrogels for light delivery in a biohybrid implant	Sonja Johannsmeier (Laser Zentrum Hannover e. V., Germany); Maria Torres-Mapa (Gottfried Wilhelm Leibniz Universität Hannover, Germany); Tammo Ripken and Dag Heinemann (Laser Zentrum Hannover e. V., Germany); Alexander Heisterkamp (Gottfried Wilhelm Leibniz Universität Hannover, Germany)	Biohybrid Medical Systems	**D1.1**	26.09.2018 08:30
Cultivation and Differentiation of Respiratory Epithelial Cells on Polycarbonate Urethane Nonwovens	Anja E. Luengen (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University & AMIBM-Maastricht University, Germany); Sophie Bezela and Caroline Kniebs (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany); Christian Cornelissen (Uniklinik RWTH Aachen, Germany); Stefan Jockenhoevel and Anja Lena Thiebes (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany)	Biohybrid Medical Systems	**D1.2**	26.09.2018 08:30
Off-the-shelf vessel substitutes based on elastin-like recombinamers	Alicia Fernández-Colino and Frederic Wolf (RWTH-Aachen University, Germany); Hans Keijdener (RWTH Aachen, Germany); Thomas Schmitz-Rode (Institute of Applied Medical Engineering AME, RWTH Aachen University, Germany); Stefan Jockenhoevel (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany); José Carlos Rodríguez-Cabello (University of Valladolid, CIBER-BBN, Spain); Petra Mela (RWTH-Aachen University, Germany)	Biohybrid Medical Systems	**D1.3**	26.09.2018 08:30
Optogenetic modulation of cardiac activity using spatial controlled light patterns	Laura Diaz-Maue (Max Planck Institute for Dynamics and Self-Organization & Biomedical Physics Group, Germany); Stefan Luther (Max Planck Institute for Dynamics and Self-Organization, Germany); Claudia Richter (Max-Planck-Institute for Dynamics and Self-Organization, Germany)	Biohybrid Medical Systems	**D1.4**	26.09.2018 08:30
The BioPacer, a tissue-engineered solution for atrioventricular-block	Hans Keijdener (RWTH Aachen, Germany); Rudolf Degen (RWTH Aachen University, Germany); Thomas Kuenzel (RWTH Aachen, Germany); Bernd Hoffmann and Rudolf Merkel (Forschungszentrum Julich, Germany); Gunter Kerst (Unikilnik RWTH Aaachen, Germany); Jaime Vázquez-Jiménez (University Hospital Aachen, RWTH Aachen University, Germany); Marc Spehr (RWTH Aachen University, Germany); Stefan Jockenhoevel (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany); Petra Mela (RWTH Aachen, Germany)	Biohybrid Medical Systems	**D1.5**	26.09.2018 08:30
Impact of Different Cell Types and Sources in the Development of Vascular Structures	Caroline Kniebs (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany); Franziska Kreimendahl (RWTH Aachen University, Germany); Anja Lena Thiebes and Stefan Jockenhoevel (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany); Marius Köpf and Horst Fischer (RWTH Aachen University, Germany)	Biohybrid Medical Systems	**D1.6**	26.09.2018 08:30

Patient Safety in Research Projects on Computer-Assisted Surgery	Urs Eisenmann and Hartmut Dickhaus (University of Heidelberg, Germany)	FS: Patient Safety - New challenges for the Collaboration of Biomedical Engineering and Medical Informatics	**D2.1**	26.09.2018 11:10
Living Lab for Intensive Care and Emergency Medicine used as Usability Lab to Improve Patient Safety	Myriam Lipprandt (Universität Oldenburg, Germany); Rainer Röhrig (Carl von Ossietzky Universität, Germany)	FS: Patient Safety - New challenges for the Collaboration of Biomedical Engineering and Medical Informatics	**D2.2**	26.09.2018 11:10
Context-aware medical technologies - relief or burden for clinical users?	Thomas Neumuth (Universität Leipzig, Germany); Max Rockstroh (Innovation Center Computer Assisted Surgery, Universität Leipzig, Germany); Stefan Franke (Universität Leipzig, Germany)	FS: Patient Safety - New challenges for the Collaboration of Biomedical Engineering and Medical Informatics	**D2.3**	26.09.2018 11:10
The European Multicenter Study about Spinal Cord Injury (EMSCI) registry for controlling quality of treatment of individuals after acute spinal cord injury	Ruediger Rupp, Christian Schuld, Steffen Franz and Norbert Weidner (Heidelberg University Hospital, Germany); Emsci Study group (European Multicenter Study about Spinal Cord Injury, Switzerland)	FS: Patient Safety - New challenges for the Collaboration of Biomedical Engineering and Medical Informatics	**D2.4**	26.09.2018 11:10
As the App Enters the Team - Sociotechnical Aspects of Decision Support Systems	Cord Spreckelsen (RWTH Aachen University, Germany)	FS: Patient Safety - New challenges for the Collaboration of Biomedical Engineering and Medical Informatics	**D2.5**	26.09.2018 11:10
Design and Concept of the SMART-MI-DZHK9 trial: Telemonitoring in High-Risk Post-Infarction Patients	Lukas von Stülpnagel (Technische Universität München & LMU Klinikum der Universität München, Germany); Axel Bauer (LMU Klinikum der Universität München & DZHK German Centre for Cardiovascular Research, Germany)	FS: Patient Safety - New challenges for the Collaboration of Biomedical Engineering and Medical Informatics	**D2.6**	26.09.2018 11:10
Perspectives of the AAL Living Lab in a senior living community	Petra Friedrich (Hochschule Kempten, University of Applied Sciences, Germany); Ralf Kehrer and Tanja Thalmeier (BSG-Allgäu, Bau- und Siedlungsgenossenschaft eG, Germany); Johannes Zacher (Hochschule Kempten, Germany)	FS: Assisted Living & Health	**D3.1**	26.09.2018 16:20
The opportunities of biodynamic lighting in homes for the elderly	Herbert Plischke (Hochschule München, Germany); Matthäus Linek (Ludwig-Maximilians-Universität München, Germany); Johannes Zauner (University of Applied Sciences, Germany)	FS: Assisted Living & Health	**D3.2**	26.09.2018 16:20
AAL Functions for Home Care and Security	Christl Lauterbach, Axel Steinhage, Axel Techmer, Miguel Sousa and Raoul Hoffmann (Future-Shape GmbH, Germany)	FS: Assisted Living & Health	**D3.3**	26.09.2018 16:20
The bathroom as a healthcare location	Markus Hefele (Technical University Munich, Germany); Bernhard Wolf (Steinbeis-Transferzentrum Medizinische Elektronik und Lab on Chip-Systeme); Petra Friedrich (Hochschule Kempten, University of Applied Sciences, Germany)	FS: Assisted Living & Health	**D3.4**	26.09.2018 16:20
IBH Living Lab "Active & Assisted Living"	Tobias Werner (FH Vorarlberg, Austria); Petra Friedrich (Hochschule Kempten, University of Applied Sciences, Germany); Guido Kempter (FH Vorarlberg, Austria)	FS: Assisted Living & Health	**D3.5**	26.09.2018 16:20
Optimized Multi-electrode Transcranial Direct Current Stimulation Targeting of Human Somatosensory Network	Asad Khan and Marios Antonakakis (University of Münster, Germany); Jens Haueisen (Technical University Ilmenau, Germany); Carsten H. Wolters (University of Münster, Germany)	FS: Towards efficient and specific transcranial brain stimulation - novel biophysical modeling techniques	**D4.1**	27.09.2018 08:30

Simulated current density and technical parameters of TES applied with a flexible cap	Alexander Hunold and Uwe Graichen (Technische Universität Ilmenau, Germany); Klaus Schellhorn (Neurocare Group GmbH, Germany); Jens Haueisen (Technical University Ilmenau, Germany)	FS: Towards efficient and specific transcranial brain stimulation - novel biophysical modeling techniques	**D4.2**	27.09.2018 08:30
Modeling the origin of TMS motor evoked potentials and their sensitivity to model parameters	Konstantin Weise, Ole Numssen and Gesa Hartwigsen (Max-Planck-Institute for Human Cognitive and Brain Sciences, Germany); Thomas Knösche (MPI Leipzig, Germany)	FS: Towards efficient and specific transcranial brain stimulation - novel biophysical modeling techniques	**D4.3**	27.09.2018 08:30
Calibrating skull conductivity using combined analysis of EEG and MEG in a sphere model	Sophie Schrader (University of Münster, Germany); Stefan Rampp (University Hospital Erlangen, Germany); Gabriel Möddel (Epilepsy Center Münster-Osnabrück, Germany); Christian Engwer (University of Münster, Germany); Carsten H. Wolters (Institute for Biomagnetism and Biosignalanalysis, Germany)	FS: Towards efficient and specific transcranial brain stimulation - novel biophysical modeling techniques	**D4.4**	27.09.2018 08:30
Recovering event-related oscillations during concurrent tACS-MEG	Florian Kasten (Carl von Ossietzky University Oldenburg, Germany); Burkhard Maess (Max Planck Institute for Human Cognitive and Brain Sciences, Germany); Christoph S. Herrmann (Experimental Psychology Lab, Germany)	FS: Towards efficient and specific transcranial brain stimulation - novel biophysical modeling techniques	**D4.5**	27.09.2018 08:30
Electrochemical Stability of Thin-Film Platinum as Suitable Material for Neural Stimulation Electrodes	Jennifer Pfau, Thomas Stieglitz and Gerald Urban (Albert-Ludwigs-Universität Freiburg, Germany); Jochen Kieninger and Andreas Weltin (University of Freiburg, Germany); Dev Ganatra (University of Freiburg - IMTEK, Germany)	FS: Bioelectronic Medicine	**D5.1**	27.09.2018 11:10
Assembling technology for personalized printed neural electrode arrays	Thomas Stieglitz (Albert-Ludwigs-Universität Freiburg, Germany); Jan Stieghorst (Hannover Medical School, Germany); Maria Vomero (Albert-Ludwigs-Universität Freiburg, Germany); Theodor Doll (Medizinische Hochschule Hannover, Germany)	FS: Bioelectronic Medicine	**D5.2**	27.09.2018 11:10
Active Microelectrodearray for a Bioelectronic Diabetes Therapy Approach	Rene P. von Metzen (NMI Natural and Medical Sciences Institute, Germany); Udo Kraushaar (NMI, Natural and Medical Sciences Institute at the University Tübingen, Germany); Lena Bleck (NMI Natural and Medical Sciences Institute at the University of Tübingen, Germany); Harald Richter and Moustafa Nawito (Institut für Mikroelektronik Stuttgart, Germany); Florian Janek and Daniel Rossbach (Hahn-Schickard, Germany); Alfred Stett (Retina Implant AG, Germany)	FS: Bioelectronic Medicine	**D5.3**	27.09.2018 11:10
Silicone-based Chip-in-Foil System	Lena Bleck (NMI Natural and Medical Sciences Institute at the University of Tübingen, Germany); Andreas Heid (Hochschule Furtwangen, Germany); Rene P. von Metzen (NMI Natural and Medical Sciences Institute, Germany)	FS: Bioelectronic Medicine	**D5.4**	27.09.2018 11:10
Characterization of biostable atomic layer deposited (ALD) passivation layers/coatings on flexible substrates	Markus Westerhausen, Felix Blendinger and Andreas Heid (Hochschule Furtwangen, Germany); Rene P. von Metzen (NMI Natural and Medical Sciences Institute, Germany); Monika Fleischer (University of Tübingen, Germany); Michael Metzger (Furtwangen University, Germany); Volker Bucher (Hochschule Furtwangen, Germany)	FS: Bioelectronic Medicine	**D5.5**	27.09.2018 11:10
Miniaturization of Medical Implants and Devices - Fabrication Solutions based on Thin Film Technology and Micro Assembly	Alexander Kaiser (Cicor Advanced Microelectronics & Substrates, Germany); Sebastian Löffler (RHe Microsystems GmbH, Germany); Karl-Heinz Fritz (Cicor Advanced Microelectronics & Substrates, Switzerland); Günther Bauböck (Cicor Advanced Microelectronics & Substrates, Germany)	FS: Bioelectronic Medicine	**D5.6**	27.09.2018 11:10
Blood Pressure Measurements in Clinical Praxis	Michael Czaplik (University Hospital Aachen, Germany)	FS: Blood Pressure Surrogates in clinical applications	**D6.1**	27.09.2018 16:20

Blood pressure surrogates - an overview	Erik Bresch (Philips Research Europe, The Netherlands); Jens Muehlsteff (Philips Research, The Netherlands)	FS: Blood Pressure Surrogates in clinical applications	**D6.2**	27.09.2018 16:20
Contact-based Measurement of BP Surrogates	Alexandru-Gabriel Pielmus (Technische Universität Berlin, Germany)	FS: Blood Pressure Surrogates in clinical applications	**D6.3**	27.09.2018 16:20
Contactless measurements of blood pressure surrogates	Sebastian Zaunseder (TU Dresden & Institute of Biomedical Engineering, Germany)	FS: Blood Pressure Surrogates in clinical applications	**D6.4**	27.09.2018 16:20
Practical aspects of continuous cuffless blood pressure measurements in clinical applications	Jens Muehlsteff (Philips Research, The Netherlands); Teun van den Heuvel and Erik Bresch (Philips Research Europe, The Netherlands)	FS: Blood Pressure Surrogates in clinical applications	**D6.5**	27.09.2018 16:20
Clinical Aspects of Regulatory Approval in Blood Pressure Monitoring	Michael Imhoff (Ruhr-University Bochum, Germany)	FS: Blood Pressure Surrogates in clinical applications	**D6.6**	27.09.2018 16:20
Biomechanics and clinical experience of a 3D biomimicking vascular stent	Wolfram Schmidt (Universität Rostock, Germany); Christian Wissgott (Westkuesten-klinikum Heide, Germany); Christoph Brandt-Wunderlich (Institute for ImplantTechnology and Biomaterials, Germany); Peter Behrens (Universität Rostock, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials, Germany); Niels Grabow (Universität Rostock, Germany); Reimer Andresen (Institut f. Diagnostische u. Interventionelle Radiologie / Neuroradiologie Heide, Germany)	Biomedical Implants and Devices (2)	**D7.1**	28.09.2018 08:30
Novel 3D printing concept for the fabrication of time-controlled drug delivery systems	Jan Konasch (University of Rostock, Germany); Alexander Riess (University of Rostock, Germany); Michael Teske (University Medical Center Rostock, Germany); Natalia Rekowska (Medical University of Rostock, Germany); Robert Mau and Thomas Eickner (University of Rostock, Germany); Niels Grabow (Universität Rostock, Germany); Hermann Seitz (University of Rostock, Germany)	Biomedical Implants and Devices (2)	**D7.2**	28.09.2018 08:30
Histological evaluation of a cochlear implant electrode array with electrically activated shape change for perimodiolar positioning	Thomas S. Rau and Nuha Suzaly (Hannover Medical School, Germany); Nick Pawsey (Cochlear ltd., Australia); Silke Hügl (Hannover Medical School, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Omid Majdani (Hannover Medical School, Germany)	Biomedical Implants and Devices (2)	**D7.3**	28.09.2018 08:30
Hemodynamic influence of design parameters of novel venous valve prostheses	Michael Stiehm (University of Rostock & Germany, Germany); Stefanie Kohse (University Medical Center Rostock, Germany); Kerstin Schümann (Rostock University Medical Center, Germany); Sebastian Kaule (Universität Rostock, Germany); Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V., Germany); Jan Oldenburg (University Medical Center Rostock, Germany); Jonas Keiler (University of Rostock, Germany); Niels Grabow and Andreas Wree (Universität Rostock, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials, Germany)	Biomedical Implants and Devices (2)	**D7.4**	28.09.2018 08:30
Development and validation of a tissue-equivalent test environment for detection of malfunctions in active medical implants caused by ionizing radiation	Manuel Stich (Ostbayerische Technische Hochschule (OTH) & University Hospital Würzburg, Germany); Larissa Blümlein, Anne Slawig, Felix Schmidl and Karina Schuller (Ostbayerische Technische Hochschule Amberg-Weiden (OTH), Germany); Richard Lösch, Matthias Hipp and Sabine Hentschel (Hospital St. Marien Amberg, Germany); Gregor Schaefers (MR:comp GmbH, Germany); Ralf Ringler (Ostbayerische Technische Hochschule Amberg- Weiden (OTH), Germany)	Biomedical Implants and Devices (2)	**D7.5**	28.09.2018 08:30
Signal Processing in Medical Implants	Uwe Marschner and Wolf-Joachim Fischer (Technische Universität Dresden, Germany); Wilfried Mokwa (RWTH Aachen, Germany); Thomas Stieglitz (Albert-Ludwigs-Universität Freiburg, Germany)	Biomedical Implants and Devices (2)	**D7.6**	28.09.2018 08:30

Electrode-nerve interfaces: Long-term stable sensors and electrode corrosion	Jochen Kieninger and Andreas Weltin (University of Freiburg, Germany); Dev Ganatra (University of Freiburg - IMTEK, Germany); Hans Jürgen Maier, Luigi Angrisani and Melanie Steffens (Leibniz Universität Hannover, Germany); Kirsten Wissel (Medizinische Hochschule Hannover, Germany); Athanasia Warnecke (Hanover Medical School, Germany); Martin Durisin (Medical University of Hannover, Germany)	FS: SFB Mikrotechnische Systeme für sensorineurale Anwendungen	**D8.2**	28.09.2018 11:10
Implanteable pumps for interventional neurorehabilitative drug administration	Peter Woias (Albert-Ludwigs-Universität Freiburg, Germany); Gerrit Paasche (Medizinische Hochschule Hannover, Germany)	FS: SFB Mikrotechnische Systeme für sensorineurale Anwendungen	**D8.4**	28.09.2018 11:10
In-vitro and in-vivo sensors for monitoring neuronal restauration	Gerald Urban (Albert-Ludwigs-Universität Freiburg, Germany); Can Dincer and Andreas Weltin (University of Freiburg, Germany); Nils Prenzler (Medical School Hannover, Germany); Heike Schmitt, Athanasia Warnecke and Christine Falk (Hanover Medical School, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany)	FS: SFB Mikrotechnische Systeme für sensorineurale Anwendungen	**D8.5**	28.09.2018 11:10
Identifying functional biomarkers for responsive control of cochlear implants	Nicole Rosskothen-Kuhl (Medical Center University, Germany); Stefan Rotter and Ulrich G. Hofmann (University of Freiburg, Germany); Peter Hubka (Hannover Medical School, Germany)	FS: SFB Mikrotechnische Systeme für sensorineurale Anwendungen	**D8.6**	28.09.2018 11:10
Cellularized chitosan-based hydrogel compartments for potential application in the therapy of inner ear neuronal structures	Anayancy Osorio-Madrazo (University of Freiburg, Germany)	FS: SFB Mikrotechnische Systeme für sensorineurale Anwendungen	**D8.8**	28.09.2018 11:10
Usability Evaluation of a One-Handed Touch-based OR-Table Control	Philipp Krumholz and Armin Janß (RWTH Aachen University, Germany); Klaus Radermacher (RWTH Aachen, Germany)	Ergonomics, Usability & Integration	**E1.1**	26.09.2018 08:30
Postural workloads on paramedics during patient transport	Mark Verjans, Philipp Schleer and Andrea Schütt (RWTH Aachen University, Germany); Detlef Struck (Rettungsdienst Kreis Düren AöR, Germany); Klaus Radermacher (RWTH Aachen, Germany)	Ergonomics, Usability & Integration	**E1.2**	26.09.2018 08:30
Assessment of Natural User Interactions for Robot-Assisted Interventions	Johann Berger (Innovation Center Computer Assisted Surgery (ICCAS), Universität Leipzig, Germany); Michael Unger (ICCAS, Germany); Richard Bieck (Innovation Center Computer Assisted Surgery, University of Leipzig, Germany); Lisa Landgraf and Thomas Neumuth (ICCAS, Germany); Andreas Melzer (Universitätsklinikum Leipzig, Germany)	Ergonomics, Usability & Integration	**E1.3**	26.09.2018 08:30
Analysis and simulation of the illumination optics of rigid medical endoscopes	Alexander Gaertner and Paola Belloni (University of Furtwangen, Germany)	Ergonomics, Usability & Integration	**E1.4**	26.09.2018 08:30
Clinical Evaluation of Mobile Medical Apps	Michael Scholtes, Annemarie Behrend, Stephanie Buedenbender, Volker Gross and Keywan Sohrabi (Technische Hochschule Mittelhessen, Germany)	Ergonomics, Usability & Integration	**E1.5**	26.09.2018 08:30
Steps toward digitization of medical devices	Andreas Zimolong (Synagon GmbH, Aachen, Germany); Sandra Fiehe (Synagon GmbH, Aachen, Germany); Peter Knipp (qcmed GmbH, Niederkassel, Germany)	Ergonomics, Usability & Integration	**E1.6**	26.09.2018 08:30
Innovative Ventilation Technology for Operating Rooms	Sabine Gruber and Sebastian Buhl (Ostbayerische Technische Hochschule Amberg-Weiden, Germany); Clemens Bulitta (Ostbayerische Technische Hochschule (OTH), Germany)	Ergonomics, Usability & Integration	**E1.7**	26.09.2018 08:30
Optical strain measurement for the modeling of surgical meshes and their porosity	Andreas Horbach and Manfred Staat (FH Aachen University of Applied Sciences, Germany)	Biomechanics (1)	**E2.1**	26.09.2018 11:10

Optimization of the cardiovascular stent design towards improved expansion behaviour and radial stiffness properties	Lisa Wiesent, Constantin Hupke and Christian Balk (Ostbayerische Technische Hochschule Regensburg, Germany); Ulrich Schultheiß (Ostbayerische Technische Hochschule, Germany); Ulf Noster (Ostbayerische Technische Hochschule Regensburg, Germany); Thomas Schratzenstaller (Ostbayerische Technische Hochschule, Regensburg Center of Biomedical Engineering, Germany); Aida Nonn (Ostbayerische Technische Hochschule, Germany)	Biomechanics (1)	**E2.2**	26.09.2018 11:10
Spatially Resolved Distensibility of Healthy, Diseased, and Aneurysmal Aortic Walls Determined from Temporally Resolved 3D Ultrasound Measurements	Andreas Wittek (Frankfurt University of Applied Sciences & University of Siegen, Germany); Wojciech Derwich and Thomas Schmitz-Rixen (Goethe University Hospital, Germany); Claus-Peter Fritzen (University of Siegen, Germany); Armin Huß (Frankfurt University of Applied Sciences, Germany); Christopher Blase (Frankfurt University of Applied Sciences & Goethe University Frankfurt, Germany)	Biomechanics (1)	**E2.3**	26.09.2018 11:10
Numerical simulation of a transcatheter aortic heart valve under application-related loading	Sylvia Pfensig (Institute for ImplantTechnology and Biomaterials e.V., Rostock-Warnemünde); Sebastian Kaule (Universität Rostock, Germany); Robert Ott (Institute for ImplantTechnology and Biomaterials e. V. Rostock - Warnemünde, Germany); Carolin Wüstenhagen (Institute for ImplantTechnology and Biomaterials e. V., Germany); Michael Stiehm (University of Rostock & Germany, Germany); Jonas Keiler (University of Rostock, Germany); Andreas Wree and Niels Grabow (Universität Rostock, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials, Germany); Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V., Germany)	Biomechanics (1)	**E2.4**	26.09.2018 11:10
Time-harmonic elastography for the early detection of glomerulonephritis	Heiko Tzschätzsch (Charité - Universitätsmedizin Berlin, Germany); Markus Grossmann and Stephan Marticorena Garcia (Charité – Universitätsmedizin Berlin, Germany); Ingolf Sack (Charité - Universitaetsmedizin Berlin, Germany)	Biomechanics (1)	**E2.5**	26.09.2018 11:10
Experimental setup for evaluation of cavitation effects in ESWL	Nina Reinhardt, Kristin Dietz-Laursonn and Marc Janzen (RWTH Aachen University, Germany); Christian Bach (University Hospital Aachen, Germany); Klaus Radermacher and Matias de la Fuente (RWTH Aachen, Germany)	Biomechanics (1)	**E2.6**	26.09.2018 11:10
Aortic regurgitation after transcatheter aortic valve replacement - Influence of valve prosthesis implantation depth inside the aortic annulus on paravalvular regurgitation in in vitro steady flow conditions	Sebastian Kaule (Universität Rostock, Germany); Stefan Siewert and Sylvia Pfensig (Institute for ImplantTechnology and Biomaterials e. V., Germany); Robert Ott (Institute for ImplantTechnology and Biomaterials e. V. Rostock - Warnemünde, Germany); Carolin Wüstenhagen (Institute for ImplantTechnology and Biomaterials e. V., Germany); Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany); Michael Stiehm (University of Rostock & Germany, Germany)	Biomechanics (1)	**E2.7**	26.09.2018 11:10
Controlling of a ROS-based robotic system in accordance to the assist-as-needed principle in end-effector based rehabilitation systems	Sebastian Becker and Wiebke Hinterlang (Institute of Applied Medical Engineering, RWTH Aachen University, Germany); Tim Eschert (RWTH Aachen University, Germany); Catherine Disselhorst-Klug (RWTH Aachen University & Institute of Applied Medical Engineering, Germany)	Biomechanics (2)	**E3.1**	26.09.2018 16:20
Biomechanics of a novel extra articular implant for younger patients with knee osteoarthritis	Mehdi Saeidi and Maziar Ramezani (Auckland University of Technology, New Zealand); Piaras Kelly and Mohd Sabri Hussin (University of Auckland, New Zealand); Thomas Neitzert (Auckland University of Technology, New Zealand)	Biomechanics (2)	**E3.2**	26.09.2018 16:20
Effects of the medial and lateral tibial slope on knee joint kinematics in total knee arthroplasty	Malte Asseln, Luisa Berger and Mark Verjans (RWTH Aachen University, Germany); Klaus Radermacher (RWTH Aachen, Germany)	Biomechanics (2)	**E3.3**	26.09.2018 16:20

In vivo preclinical application of an active external fixator to investigate the influence of local mechanical conditions on the fracture healing	Jan Barcik, Manuela Ernst and Linda Freitag (AO Research Institute Davos, Switzerland); Constantin E. Dlaska (Charité CMSC Berlin, Germany); Boyko Gueorguiev-Rüegg (AO Research Institute Davos, Switzerland); Devakar Epari (Queensland University of Technology, Australia); Markus Windolf (AO Research Institute Davos, Switzerland)	Biomechanics (2)	**E3.4**	26.09.2018 16:20
Interaction of synergistic and antagonistic muscles of elbow joint during activities of daily living in healthy children	Alberto-Isaac Perez-SanPablo (National Institute for Rehabilitation (INR-LGII) & CINVESTAV, Mexico); Elisa Romero Avila (Applied Medical Engineering - AME Helmholtz Institute, Germany); Alicia Meneses-Peñaloza and Maria-Elena Arellano-Saldaña (National Insttitute for Rehabilitation (INR-LGII), Mexico); Catherine Disselhorst-Klug (RWTH Aachen University & Institute of Applied Medical Engineering, Germany); Josefina Gutierrez-Martinez (National Insttitute for Rehabilitation (INR-LGII), Mexico); Juan-Manuel Ibarra-Zannatha (CINVESTAV, Mexico)	Biomechanics (2)	**E3.5**	26.09.2018 16:20
Optimization of the cardiovascular stent design towards improved ex-pansion behaviour and radial stiffness properties	Lisa Wiesent (Ostbayerische Technische Hochschule Regensburg, Germany)	Biomechanics (2)	**E3.6**	26.09.2018 16:20
Effects of transcutaneous spinal cord stimulation on Muscle coordinaton in brain insulted persons	Thordur Helgason, Vilborg Gudmundsdottir and Gigja Magnusdottir (Landspitali - University Hospital, Iceland); Run Fridriksdottir and Margret Ragnarsdottir (Reykjavik University, Iceland); Belinda Chenery (University of Iceland, Iceland); Gudbjorg Ludvigsdottir (Landspitali - University Hospital, Iceland)	Biomechanics (2)	**E3.7**	26.09.2018 16:20
Flow Chamber for the Analysis of Tissue Samples under Shear Stress	Andreas Lubig (RWTH Aachen, Germany)	Biomaterials & Biocompatibility (1)	**E4.1**	27.09.2018 08:30
A Couette-based Laboratory Device for the Simultaneous Testing of Several Influencing Factors Regarding Blood Damage	Niklas Steuer and Nicolas Vidoni (RWTH Aachen University, Germany); Christina Feldmann (Hannover Medical School, Germany); Thomas Schmitz-Rode (Institute of Applied Medical Engineering AME, RWTH Aachen University, Germany); Ulrich Steinseifer (RWTH Aachen, Germany); Georg Wagner and Jutta Arens (RWTH Aachen University, Germany)	Biomaterials & Biocompatibility (1)	**E4.2**	27.09.2018 08:30
Polymer drug release system for biofilm inhibition in medical application	Katharina Wulf and Daniela Arbeiter (Universität Rostock, Germany); Thomas Eickner (University of Rostock, Germany); Katharina Riedel (University of Greifswald, Germany); Klaus-Peter Schmitz and Niels Grabow (Universität Rostock, Germany); Stefanie Kohse (University Medical Center Rostock, Germany)	Biomaterials & Biocompatibility (1)	**E4.3**	27.09.2018 08:30
Polyelectrolyte Coatings for Surface Modification of Medical Implants	Alexander Rudt (Reutlingen University, Germany); Xin Xiong and Hanna Hartmann (NMI Natural and Medical Sciences Institute at the University of Tübingen, Germany); Rumen Krastev (Reutlingen University & NMI Natural and Medical Sciences Institute at the University of Tübingen, Germany)	Biomaterials & Biocompatibility (1)	**E4.4**	27.09.2018 08:30
Accelerated in vitro-calcification of potential urethane based heart valve re-placement materials	Stefan Oschatz (Universitätsmedizin Rostock, Germany); Stefanie Kohse (University Medical Center Rostock, Germany); Volkmar Senz (Universität Rostock, Germany); Thomas Eickner (University of Rostock, Germany); Klaus-Peter Schmitz and Niels Grabow (Universität Rostock, Germany)	Biomaterials & Biocompatibility (1)	**E4.5**	27.09.2018 08:30

Quantification method for timolol in in vivo samples for the development of a new glaucoma drug depot	Thomas Eickner (University of Rostock, Germany); Franziska Kopp (University Medical Center Rostock, Germany); Andreas Brietzke (Rostock University Medical Center, Institute for Biomedical Engineering, Germany); Sabine Kischkel (University of Rostock, Germany); Stefan Oschatz (Universitätsmedizin Rostock, Germany); Klaus-Peter Schmitz (Universität Rostock, Germany); Rudolf Guthoff (Universität Rostock & Universitätsaugenklinik Rostock, Germany); Niels Grabow (Universität Rostock, Germany)	Biomaterials & Biocompatibility (2)	**E5.1**	27.09.2018 11:10
Novel Test Procedure for Testing Antimicrobially Active Materials	Alexander Stich and Sebastian Buhl (Ostbayerische Technische Hochschule Amberg-Weiden, Germany); Clemens Bulitta (Ostbayerische Technische Hochschule (OTH), Germany)	Biomaterials & Biocompatibility (2)	**E5.2**	27.09.2018 11:10
Inkjet printing for localized coating and functionalization of medical devices	Robert Mau (University of Rostock, Germany); Gerrit Paasche and Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Hermann Seitz (University of Rostock, Germany)	Biomaterials & Biocompatibility (2)	**E5.3**	27.09.2018 11:10
Do 3D-printing materials comply with biocompatibility standards for biomedical application?	Ariane Leone (Ludwig Maximilians University München, Germany); Nikolaus Thierfelder (Ludwig-Maximilians University, Munich, Germany); Stefan Leonhardt (Technical University Munich, Germany); Maximilian Grab (Ludwig-Maximilians University, Munich, Germany); Marco Tscherner (Gerg Lighthouse GmbH, Germany); Christian Hagl and Fabian König (Ludwig Maximilians University, Munich, Germany)	Biomaterials & Biocompatibility (2)	**E5.4**	27.09.2018 11:10
An Artificial Oxygen Carrier Fluid for Oxygenator Performance Tests - Proof of Concept	Niklas Steuer, Lena Schlotterhose and Peter Schlanstein (RWTH Aachen University, Germany); Thomas Schmitz-Rode (Institute of Applied Medical Engineering AME, RWTH Aachen University, Germany); Ulrich Steinseifer (RWTH Aachen, Germany); Georg Wagner and Jutta Arens (RWTH Aachen University, Germany)	Biomaterials & Biocompatibility (2)	**E5.5**	27.09.2018 11:10
Thermomechanical properties of PEGDA and its co-polymers	Natalia Rekowska (Medical University of Rostock, Germany); Daniela Arbeiter (Universität Rostock, Germany); Jan Konasch (University of Rostock, Germany); Alexander Riess, Robert Mau, Thomas Eickner and Hermann Seitz (University of Rostock, Germany); Niels Grabow (Universität Rostock, Germany); Michael Teske (University Medical Center Rostock, Germany)	Biomaterials & Biocompatibility (2)	**E5.6**	27.09.2018 11:10
Laser-assisted bioprinting with integrated Raman analysis for single cell selection of high producer cells	Richard Lensing (Fraunhofer Institut für Lasertechnik ILT, Germany)	Biomaterials Tissue Engineering	**E6.1**	27.09.2018 16:20
Controlled-occluding textile-hydrogel membrane as a stent graft component for spinal cord ischaemia prophylaxis	Alexander Löwen (RWTH Aachen University & Institut für Textiltechnik, Germany); Larissa Hussmann (DWI - Leibniz-Institut für Interaktive Materialien, Germany); Alexander Gombert and Drosos Kotelis (Klinik für Gefäßchirurgie of Uniklinik RWTH Aachen, Germany); Alexander Töpel (DWI - Leibniz-Institut für Interaktive Materialien, Germany); Andrij Pich (RWTH Aachen, Germany); Michael Jacobs (Klinik für Gefäßchirurgie of Uniklinik RWTH Aachen, Germany); Thomas Gries (RWTH Aachen University, Germany); Stefan Jockenhoevel (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany); Andreas Blaeser (Institut für Textiltechnik of RWTH Aachen University, Germany)	Biomaterials Tissue Engineering	**E6.2**	27.09.2018 16:20

Towards a tracheal substitute: the establishment of a prevascularized tri-co-culture model in 3D-printable hydrogel scaffolds	Franziska Kreimendahl and Marius Köpf (RWTH Aachen University, Germany); Anja Lena Thiebes (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany); Horst Fischer (RWTH Aachen University, Germany); Stefan Jockenhoevel (AME-Helmholtz-Institute for Biomedical Engineering, RWTH Aachen University, Germany)	Biomaterials Tissue Engineering	**E6.3**	27.09.2018 16:20
UHV-alginate matrix for stem cell based neuroprotective drug delivery	Jana Schwieger (Hannover Medical School, Germany); Andrea Hoffmann (Medizinische Hochschule Hannover, Germany); Michael M. Gepp (Fraunhofer Institute for Biomedical Engineering & Fraunhofer Project Centre for Stem Cell Process Engineering, Germany); Julia Neubauer (Fraunhofer Institute for Biomedical Engineering, Germany); Heiko Zimmermann (Fraunhofer Institute for Biomedical Engineering IBMT, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Verena Scheper (Hannover Medical School & Cluster of Excellence Hearing4all, German Research Foundation, Germany)	Biomaterials Tissue Engineering	**E6.4**	27.09.2018 16:20
Soft tissue volume augmentation in the oral cavity with a collagen-based 3D matrix with orientated open pore structure	Ingo Heschel, Olde Damink and Hans Leemhuis (Matricel GmbH, Germany); Martina Tortorici (Charité-Julius Wolff Institut, Germany); Bastian Wessling (Praxisklinik am Luisenhospital, Germany)	Biomaterials Tissue Engineering	**E6.5**	27.09.2018 16:20
Practical Education Courses Demand Practical Assessments	Martin Baumann, Andreas Ritter and Michael Gundlach (RWTH Aachen University, Germany)	Education & Intellingent Assistance	**E7.1**	28.09.2018 08:30
On objective structured practical examination (OSPE) in a biomedical engineering bachelor programme	Stefan Gräf and Daniela Kamutzki (THM Technische Hochschule Mittelhessen, Germany); Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	Education & Intellingent Assistance	**E7.2**	28.09.2018 08:30
Mindfulness based stress reduction in students - A pilot study	Martin Bogdanski, Mike Sandbothe and Andreas Voss (Ernst-Abbe-Hochschule Jena, Germany)	Education & Intellingent Assistance	**E7.3**	28.09.2018 08:30
Real-time Intelligent Tele-Care Assistance Systems	Sabrina Hoppstock (Hochschule Harz, Germany); Ulrich Fischer-Hirchert (Hochschule Harz & Harz University of Applied Sciences, Germany); Peter Kußmann (Research Assistant, Germany)	Education & Intellingent Assistance	**E7.4**	28.09.2018 08:30
Effects of local activation times on the tension development of human cardiomyocytes in a computational model	Armin Müller, Ekaterina Kovacheva, Steffen Schuler and Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany); Lukas Baron (Karlsruher Institut für Technologie (KIT), Germany)	Modelling & Simulation (2)	**E8.1**	28.09.2018 11:10
Effects of Serum Calcium Changes on the Cardiac Action Potential and the ECG in a Computational Model	María Hernández Mesa, Nicolas Pilia and Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany); Stefano Severi (Università di Bologna, Italy); Axel Loewe (Karlsruhe Institute of Technology (KIT), Germany)	Modelling & Simulation (2)	**E8.2**	28.09.2018 11:10
Sudden cardiac death in hemodialysis patients: severe sinus bradycardia due to hypocalcaemia as a potential pathomechanism	Axel Loewe and Yannick Lutz (Karlsruhe Institute of Technology (KIT), Germany); Alan Fabbri (University of Bologna, Germany); Stefano Severi (Università di Bologna, Italy)	Modelling & Simulation (2)	**E8.3**	28.09.2018 11:10
Evaluation of an anatomy-based model for the simulation of selective muscle activation during functional electrical stimulation	Johanna Baier and Marc Neumann (Ruhr-University Bochum, Germany)	Modelling & Simulation (2)	**E8.4**	28.09.2018 11:10
An analysis of the impact of the inclusion of expiration data on the fitting of a predictive pulmonary elastance model	Sophie Morton, Paul Docherty, Jennifer Dickson and J. Geoffrey Chase (University of Canterbury, New Zealand)	Modelling & Simulation (2)	**E8.5**	28.09.2018 11:10

Discrete multipole expansion to model mathematical dipoles for Finite Element Methods	Anne Hanrath (Institute for Geometry and Practical Mathematics (IGPM), RWTH Aachen University, Germany); Johannes Vorwerk (University of Münster, Germany); Carsten H. Wolters (Institute for Biomagnetism and Biosignalanalysis, Germany); Lars Grasedyck (Institut für Geometrie und Praktische Mathematik (IGPM), Germany)	Modelling & Simulation (2)	**E8.6**	28.09.2018 11:10
Fluid-structure interaction of heart valve dynamics in comparison to finite-element analysis	Finja Borowski (Universität Rostock, Germany); Michael Sämann (University Medical Center Rostock, Germany); Sylvia Pfensig and Carolin Wüstenhagen (Institute for ImplantTechnology and Biomaterials e. V., Germany); Robert Ott (Institute for ImplantTechnology and Biomaterials e. V. Rostock - Warnemünde, Germany); Sebastian Kaule (Universität Rostock, Germany); Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V., Germany); Niels Grabow (Universität Rostock, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials, Germany); Michael Stiehm (University of Rostock & Germany, Germany)	Modelling & Simulation (2)	**E8.7**	28.09.2018 11:10
Analysis of focus shift speed for in vivo 3D corneal confocal microscopy	Stephan Allgeier (Karlsruhe Institute of Technology (KIT), Germany); Andreas Bartschat (Karlsruhe Institute of Technology, Germany); Sebastian Bohn (Rostock University Medical Center, Germany); Klaus-Martin Reichert (Karlsruhe Institute of Technology (KIT), Germany); Karsten Sperlich (Rostock University Medical Center, Germany); Ralf Mikut (Karlsruhe Institute of Technology (KIT), Germany); Oliver Stachs (Universität Rostock, Germany); Bernd Köhler (Karlsruhe Institute of Technology (KIT), Germany)	Microscopic & non Invasive Imaging	**F3.1**	26.09.2018 16:20
In vivo myocardial tissue characterization of all four chambers using high-resolution quantitative MRI	Kirsten M Becker (Physikalisch-Technische Bundesanstalt (PTB), Braunschweig and Berlin, Germany); Jeanette Schulz-Menger (Experimental and Clinical Research Center, Charité, HELIOS Klinikum, Berlin, Germany); Tobias Schaeffter and Christoph Kolbitsch (Physikalisch-Technische Bundesanstalt, Berlin, King's College London, London, Germany)	Microscopic & non Invasive Imaging	**F3.2**	26.09.2018 16:20
A 3D Resolution and Aberration Test Target Design for Fluorescence Microscopic Imaging	Yilun Su (Karlsruhe Institute of Technology (KIT), Germany); Werner Nahm (Karlsruhe Institute of Technology, Germany)	Microscopic & non Invasive Imaging	**F3.3**	26.09.2018 16:20
Sensitivity Enhancement in Magnetic Particle Imaging	Matthias Graeser (University Medical Center Hamburg, Germany); Patryk Szwargulski (University Medical Center Hamburg, Finland); Tobias Knopp (Section for Biomedical Imaging, University Medical Center Hamburg-Eppendorf & Institute for Biomedical Imaging, Hamburg University of Technology, Germany)	Microscopic & non Invasive Imaging	**F3.4**	26.09.2018 16:20
Smartphone-based low-cost microscope with monolithic focusing mechanism	Max Schäfer, David Reichert, Kent W. Stewart, Alois Herkommer and Carsten Reichert (University of Stuttgart, Germany); Peter P. Pott (Universität Stuttgart, Germany)	Microscopic & non Invasive Imaging	**F3.5**	26.09.2018 16:20
New Tracer for Magnetic Particle Imaging - SPIONs encapsulated in RBCs	Kerstin Lüdtke-Buzug (Universität zu Lübeck, Germany)	Microscopic & non Invasive Imaging	**F3.6**	26.09.2018 16:20
Monte-Carlo Simulation of Light Tissue Interaction in Medical Hyperspectral Imaging Applications	Christoph Hornberger and Bert Herrmann (Hochschule Wismar, Germany)	Microscopic & non Invasive Imaging	**F3.7**	26.09.2018 16:20
Brain Signal Acquisition with Miniaturized Electronic Systems for the Investigation of Local Neural Networks	Andreas Bahr (University of Kiel, Germany)	Biomedical Implants and Devices (1)	**F4.1**	27.09.2018 08:30

Evaluation of the effect of steam sterilisation cycles on high-temperature RFID transponders	Lukas Boehler (Aesculap AG, Germany & AGH University of Science and Technology, Poland); Mateusz Daniol (AGH University of Science and Technology & Aesculap AG, Germany); Anton Keller (Aesculap AG, Germany); Ryszard Sroka (AGH University of Science and Technology, Poland)	Biomedical Implants and Devices (1)	**F4.2**	27.09.2018 08:30
A demonstrator for a flexible active microelectrode array with high electrode number	Andreas Heid (Hochschule Furtwangen, Germany); Lena Bleck (NMI Natural and Medical Sciences Institute at the University of Tübingen, Germany); Rene P. von Metzen (NMI Natural and Medical Sciences Institute, Germany); Volker Bucher (Hochschule Furtwangen, Germany)	Biomedical Implants and Devices (1)	**F4.3**	27.09.2018 08:30
Energy supply for sterilisable IoT sensor systems	Mateusz Daniol (AGH University of Science and Technology & Aesculap AG, Germany); Lukas Boehler (Aesculap AG, Germany & AGH University of Science and Technology, Poland); Anton Keller (Aesculap AG, Germany); Ryszard Sroka (AGH University of Science and Technology, Poland)	Biomedical Implants and Devices (1)	**F4.4**	27.09.2018 08:30
Development of a Stair Climbing Mechanism for a Novel Mechatronic Transport Aid: Preliminary Results	Philipp Schleer (RWTH Aachen University, Germany); Max Kinzius (SurgiTAIX AG, Germany); Mark Verjans and Ferdinand Kähler (RWTH Aachen University, Germany); Klaus Radermacher (RWTH Aachen, Germany)	Biomedical Implants and Devices (1)	**F4.5**	27.09.2018 08:30
Supporting the mobility of disabled people by an intelligent assistance system	Michael Ramsperger, Achim Bumüller, Bernhard Vondenbusch and Katrin Skerl (Hochschule Furtwangen, Germany)	Biomedical Implants and Devices (1)	**F4.6**	27.09.2018 08:30
A New Method of Measuring Stimulation Threshold	Werner Irnich (Justus-Liebig-University, Germany)	Biomedical Implants and Devices (1)	**F4.7**	27.09.2018 08:30
Context-awareness for control consoles in integrated operating rooms	Stefan Franke (Universität Leipzig, Germany); Max Rockstroh (Innovation Center Computer Assisted Surgery, Universität Leipzig, Germany); Thomas Neumuth (Universität Leipzig, Germany)	FS: Personalized model-based medical technology	**F5.4**	27.09.2018 11:10
Patient-specific Treatment of acetabular Bone Defects	Martin Herzmann (Materialise GmbH, Germany)	FS: Personalized model-based medical technology	**F5.5**	27.09.2018 11:10
Residual U-Net Convolutional Neural Network Architecture for Low-Dose CT Denoising	Mattias Heinrich (Universität zu Lübeck, Germany); Maik Stille (Universtity of Luebeck, Germany); Thorsten M. Buzug (Universität zu Lübeck, Germany)	Imaging Technologies & Post Processing	**F6.1**	27.09.2018 16:20
Digital phantom for near-infrared spectroscopy of tissue - concept and proof-of-principle experiments	Heidrun Wabnitz (Physikalisch-technische Bundesanstalt, Berlin, Germany); Lin Yang and Rainer Macdonald (Physikalisch-Technische Bundesanstalt, Berlin, Germany); Jeeseong Hwang (National Institute of Standards and Technology (NIST), USA)	Imaging Technologies & Post Processing	**F6.2**	27.09.2018 16:20
Electromechanical Vortex Filaments during Cardiac Fibrillation	Jan Christoph (Max Planck Institute for Dynamics and Self-Organization, Germany)	Imaging Technologies & Post Processing	**F6.3**	27.09.2018 16:20
Cross-sectional and en-face depolarization imaging for the assessment of dental lesions	Jonas Golde (TU Dresden, Faculty of Medicine Carl Gustav Carus, Germany); Florian Tetschke (TU Dresden, Germany); Julia Walther (University of Technology Dresden, Germany); Tobias Rosenauer, Franz Hempel and Christian Hannig (TU Dresden, Faculty of Medicine Carl Gustav Carus, Germany); Edmund Koch and Lars Kirsten (Technische Universität Dresden, Germany)	Imaging Technologies & Post Processing	**F6.4**	27.09.2018 16:20

Imaging of the human tympanic Membrane by endoscopic optical coherence tomography	Martin Schindler, Lars Kirsten and Joseph Morgenstern (Technische Universität Dresden, Germany); Jonas Golde (TU Dresden, Faculty of Medicine Carl Gustav Carus, Germany); Mikael Erkkilä (Medical University of Vienna, Austria); Julia Walther and Max Kemper (University of Technology Dresden, Germany); Matthias Bornitz (University of Technology, Germany); Marcus Neudert and Thomas Zahnert (University of Technology Dresden, Germany); Edmund Koch (Technische Universität Dresden, Germany)	Imaging Technologies & Post Processing	**F6.5**	27.09.2018 16:20
Analysis of the illumination optics in rigid medical endoscopes applying optical simulation	Isolde Wertz (Henke-Sass, Wolf GmbH, Germany); Jakob Wojciechowski, Alexander Gaertner and Paola Belloni (University of Furtwangen, Germany)	Imaging Technologies & Post Processing	**F6.6**	27.09.2018 16:20
Establishment and initial characterization of a simple 3D organotypic wound healing model	Sabine Hensler (HFU Furtwangen University, Germany); Claudia Kühlbach (Hochschule Furtwangen, Germany); Jacquelyn Dawn Parente (HFU Furtwangen University, Germany); Sabine Krueger-Ziolek (Furtwangen University, Germany); Knut Moeller (Furtwangen University & Institute of Technical Medicine (ITeM), Germany); Margareta Mueller (HFU Furtwangen University, Germany)	Cellular- Tissue & Bioengineering	**F7.1**	28.09.2018 08:30
Method Comparison of In Vitro Wound Area Measurements	Ahmed Gdoura (Furtwangen University, Germany); Jacquelyn Dawn Parente and Sabine Hensler (HFU Furtwangen University, Germany); Sabine Krüger-Ziolek and Claudia Kuehlbach (Furtwangen University, Germany); Margareta Mueller (HFU Furtwangen University, Germany); Knut Moeller (Furtwangen University & Institute of Technical Medicine (ITeM), Germany)	Cellular- Tissue & Bioengineering	**F7.2**	28.09.2018 08:30
Processing pericardial tissue for cardiovascular surgery - Highlighting the importance of a comprehensive quality management	Linda Grefen, Maximilian Grab, Christian Hagl, Fabian König and Nikolaus Thierfelder (Ludwig-Maximilians University, Munich, Germany)	Cellular- Tissue & Bioengineering	**F7.3**	28.09.2018 08:30
Effects of uniaxial stretching on tenocytes migration behavior	Gözde Dursun (RWTH Aachen University, Germany)	Cellular- Tissue & Bioengineering	**F7.4**	28.09.2018 08:30
Reflection on boon and bane of Water Absorbing Components in Active Implants during Package Testing and Operation	Liane Koker (Karlsruhe Institute of Technology, Germany); Ulrich Gengenbach (Karlsruhe Institute of Technology & Campus North, Germany); Georg Bretthauer (Karlsruhe Institute of Technology, Germany)	Cellular- Tissue & Bioengineering	**F7.5**	28.09.2018 08:30
A compact and accurate set of basis functions for model-based reconstructions	Christina Eckel, Sebastian Bannasch and Robert Frysch (Otto-von-Guericke University Magdeburg, Germany); Georg Rose (OVGU, Germany)	Image Processing	**G2.1**	26.09.2018 11:10
Volumetric 3D stitching of optical coherence tomography volumes	Max-Heinrich Laves, Lüder A. Kahrs and Tobias Ortmaier (Leibniz Universität Hannover, Germany)	Image Processing	**G2.2**	26.09.2018 11:10
Characterization and validation of camera system and illumination during Intraoperative Hyperspectral Imaging in neurosurgery	Richard Mühle (Technische Universität Dresden, Germany); Stephan Sobottka (Dresden University of Technology, Germany); Ute Morgenstern (Technische Universität Dresden, Germany)	Image Processing	**G2.3**	26.09.2018 11:10
Enhancement of Region of Interest CT Reconstructions through Multimodal Data	David Schote and Tim Pfeiffer (Otto von Guericke Universität, Germany); Georg Rose (OVGU, Germany)	Image Processing	**G2.4**	26.09.2018 11:10
Intervention assessment tool for primary tumors in the liver	Cristina Oyarzun Laura (Fraunhofer Institute for Computer Graphics Research, Germany); Klaus Drechsler (Aachen University of Applied Sciences, Germany); Marius Erdt (Fraunhofer IDM@NTU, Singapore); Stefan Wesarg (Fraunhofer Institute for Computer Graphics Research, Germany); Reto Bale (Medical University Innsbruck, Austria)	Image Processing	**G2.5**	26.09.2018 11:10

Motility analysis by means of video tracked markers	Kornelius Lente (Inomed Medizintechnik GmbH, Germany); Karin H Somerlik-Fuchs (Albert-Ludwigs-University Freiburg, Germany); Jonas Schiemer and Axel Heimann (Johannes Gutenberg University Mainz, Germany); Roman Ruff (Fraunhofer Institut für Biomedizinische Technik, Germany); Jan Baumgart (Johannes Gutenberg University Mainz, Germany); Klaus-Peter Hoffmann (Fraunhofer Institute for Biomedical Engineering & IBMT, Germany); Thilo Krüger (Inomed Medizintechnik GmbH, Germany); Werner Kneist (University Medicine Johannes Gutenberg Mainz, Germany)	Image Processing	**G2.6**	26.09.2018 11:10
Combination of Color and Focus Segmentation for Medical Images with Low Depth-of-Field	Tamara Wirth (Karlsruhe Institute of Technology (KIT), Germany); Ady Naber (Karlsruher Institut für Technologie (KIT), Germany); Werner Nahm (Karlsruhe Institute of Technology, Germany)	Image Processing	**G2.7**	26.09.2018 11:10
An In vitro Laboratory Investigation on Layer Thickness-Independent Prediction of the Hemoglobin Concentration	Philipp Wegerich (Universität zu Lübeck, Germany); Hartmut Gehring (University of Luebeck & Universitätsklinikum Schleswig-Holstein, Germany)	Biosensors & Bioanalytics	**G3.1**	26.09.2018 16:20
In Vitro Determination of Concentration-Dependent Optical Properties of Hemoglobin	Philipp Wegerich (Universität zu Lübeck, Germany); Hartmut Gehring (University of Luebeck & Universitätsklinikum Schleswig-Holstein, Germany)	Biosensors & Bioanalytics	**G3.2**	26.09.2018 16:20
Thorax adapted 40 channel MCG using an optically pumped magnetometer array	Nawar Habboush (University of Kiel, Germany); Thomas Middelmann, Katharina Rolfs and Olaf Kosch (Physikalisch-Technische Bundesanstalt, Germany); Ulrich Stephani and Michael Siniatchkin (University of Kiel, Germany); Tilmann Sander-Thoemmes (Physikalisch-Technische Bundesanstalt, Germany); Andreas Galka (University of Kiel, Germany)	Biosensors & Bioanalytics	**G3.3**	26.09.2018 16:20
Development of a compact stand-alone esophageal pressure measurement device	Andre Richter (Technische Universität Dresden, Faculty of Medicine Carl Gustav Carus, Germany); Christian Schnabel and Edmund Koch (Technische Universität Dresden, Germany); Peter Spieth (Pulmonary Engineering Group, Germany)	Biosensors & Bioanalytics	**G3.4**	26.09.2018 16:20
Visualization and Parametrization of the Motion Behaviour of Subviral Particles	Michelle Kaak (Technische Hochschule Mittelhessen, Germany); Andreas Rausch (Technisce Hochschule Mittelhessen, Germany); Dennis Müller and Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	Biosensors & Bioanalytics	**G3.5**	26.09.2018 16:20
Magnetoneurograhy of an Electrically Stimulated Arm Nerve	Eric Elzenheimer (Christian-Albrechts-Universität zu Kiel & Faculty of Engineering, Germany); Helmut Laufs (University Hospital Schleswig Holstein, Germany); Tilmann Sander-Thoemmes (Physikalisch-Technische Bundesanstalt, Germany); Gerhard Schmidt (CAU Kiel, Germany)	Biosensors & Bioanalytics	**G3.6**	26.09.2018 16:20
Measuring of calcification risk with polymer microchips	Julia Bavendiek (RWTH Aachen University, Germany); Johannes Sackmann and Werner Karl Schomburg (RWTH Aachen, Germany); Steffen Gräber (Helmholtz-Institut für Biomedizinische Technik - Uniklinik RWTH Aachen, Germany); Willi Jahnen-Dechent (RWTH Aachen, Germany); Andreas Pasch (Calciscon AG, Switzerland)	Biosensors & Bioanalytics	**G3.7**	26.09.2018 16:20
Dynamic Time Warping of Pulse Wave Curves	Alexandru-Gabriel Pielmus, Reinhold Orglmeister, Michael Klum and Timo Tigges (Technische Universität Berlin, Germany); Oliver Hunsicker and Aarne Feldheiser (Charité Universitätsmedizin, Germany); Dennis Osterland (TU Berlin, Germany)	Biosignal Processing (1)	**G4.1**	27.09.2018 08:30
Using singular value decomposition for generalized linear autoregression of signals	Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	Biosignal Processing (1)	**G4.2**	27.09.2018 08:30

Multimodal Sensor Fusion for Robust Heart Rate Variability Analysis in the Frequency Domain	Timo Tigges, Thomas Büchler, Alexandru-Gabriel Pielmus and Michael Klum (Technische Universität Berlin, Germany); Aarne Feldheiser and Oliver Hunsicker (Charité Universitätsmedizin, Germany); Reinhold Orglmeister (Technische Universität Berlin, Germany)	Biosignal Processing (1)	**G4.3**	27.09.2018 08:30
Distribution of dominant mapping electrodes along splines of mini basket catheters for distinct segments within the left atrium	Laura Anna Unger (Karlsruhe Institute of Technology, Germany); Tobias Oesterlein (Boston Scientific, USA); Armin Luik and Claus Schmitt (Städtisches Klinikum Karlsruhe, Germany); Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany)	Biosignal Processing (1)	**G4.4**	27.09.2018 08:30
Statistische Beschreibung der Druckverteilung zur Beurteilung der Beatmung	Lisa Steinbrecher and Keywan Sohrabi (Technische Hochschule Mittelhessen, Germany); Andreas Weissflog (ThoraTech GmbH, Germany); Florian Schudt and Henning Schneider (Technische Hochschule Mittelhessen – University of Applied Sciences, Germany); Werner Seeger (Universitätsklinikum Giessen, Germany); Volker Gross (Technische Hochschule Mittelhessen, Germany)	Biosignal Processing (1)	**G4.5**	27.09.2018 08:30
Causal assessment of the central-cardiovascular network pathways in a neuro-logical disorder	Steffen Schulz (University of Applied Sciences Jena, Germany); Aniol Juhé and Beatriz Giraldo (Universitat Politècnica de Catalunya Barcelona, Spain); Jens Haueisen (Technical University Ilmenau, Germany); Karl Jürgen Bär (University Hospital, Jena, Germany); Andreas Voss (Ernst-Abbe-Hochschule Jena, Germany)	Biosignal Processing (1)	**G4.6**	27.09.2018 08:30
Monte-Carlo parameter variation study of cardiovascular pathologies to quantify parameter specific uncertainty	Stefan Krickl (Hochschule Pforzheim, Germany)	Biosignal Processing (2)	**G5.1**	27.09.2018 11:10
Individualized magnetoencephalography using optically pumped magnetometers with an anatomy derived sensor holder	Anna Jodko-Władzińska (Warsaw University of Technology, Poland); Taoxi Yang (Ludwig-Maximilian Universität, Germany); Rüdiger Brühl (Physikalisch-Technische Bundesanstalt, Germany); Patricia Cotic (Institute of Mathematics, Physics and Mechanics, Slovenia); Lutz Trahms (Physikalisch-Technische Bundesanstalt, Germany); Vojko Jazbinsek (Institute of Mathematics, Physics and Mechanics, Slovenia); Tilmann Sander-Thoemmes (Physikalisch-Technische Bundesanstalt, Germany)	Biosignal Processing (2)	**G5.2**	27.09.2018 11:10
sEMG-based differentiation of muscular activation patterns in children and adults during elbow movements	Elisa Romero Avila (Applied Medical Engineering - AME Helmholtz Institute, Germany); Alberto-Isaac Perez-SanPablo (National Institute for Rehabilitation (INR-LGII) & CINVESTAV, Mexico); Catherine Disselhorst-Klug (RWTH Aachen University & Institute of Applied Medical Engineering, Germany); Alicia Meneses-Peñaloza, Maria-Elena Arellano-Saldaña and Josefina Gutierrez-Martinez (National Instittute for Rehabilitation (INR-LGII), Mexico); Juan-Manuel Ibarra-Zannatha (CINVESTAV, Mexico)	Biosignal Processing (2)	**G5.3**	27.09.2018 11:10
High-density Mapping Reveals Short-term Reversibility of Atrial Ablation Lesions	Oliver Huhn and Stefan Pollnow (Karlsruhe Institute of Technology (KIT), Germany); Laura Anna Unger (Karlsruhe Institute of Technology, Germany); Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany); Armin Luik and Claus Schmitt (Städtisches Klinikum Karlsruhe, Germany); Tobias Oesterlein (Boston Scientific, USA)	Biosignal Processing (2)	**G5.4**	27.09.2018 11:10
Investigating sources of camera-based respiratory signals	Fabian Schrumpf, Christoph Mönch, Bianca Reichard and Mirco Fuchs (HTWK Leipzig, University of Applied Sciences, Germany)	Biosignal Processing (2)	**G5.5**	27.09.2018 11:10
An HMM-based averaging approach for creating mean motion data from a full-body Motion Capture system to support the development of a biomechanical model	Andreas Kitzig, Julia Demmer and Tobias Bolten (Niederrhein University of Applied Sciences, Germany); Edwin Naroska (University of Applied Sciences Niederrhein, Germany); Gudrun Stockmanns (Niederrhein University of Applied Sciences, Germany); Reinhard Viga and Anton Grabmaier (University of Duisburg-Essen, Germany)	Biosignal Processing (2)	**G5.6**	27.09.2018 11:10

Seizure Prediction by Multivariate Autoregressive Model Order Optimization	Katja Mühlberg and Jens Müller (TU Dresden, Germany); Ronald Tetzlaff (Technische Universität Dresden, Germany)	Biosignal Processing (2)	**G5.7**	27.09.2018 11:10
Hyperspectral based discrimination of thyroid and parathyroid during surgery	Manuel Barberio (University of Strasbourg, France); Marianne Maktabi (University of Leipzig, Germany); Ines Gockel, Nada Rayes and Boris Jansen-Winkeln (University Hospital of Leipzig, Germany); Hannes Köhler (University of Leipzig, Innovation Center Computer Assisted Surgery (ICCAS), Germany); Sebastian M Rabe, Lena Seidemann and Jonathan P Takoh (University Hospital of Leipzig, Germany); Michele Diana (IRCAD Strasbourg, France); Thomas Neumuth (Universität Leipzig, Germany); Claire Chalopin (University of Leipzig, Germany)	Computer Assisted Surgery	**G6.1**	27.09.2018 16:20
Minimally invasive mastoidectomy approach using a mouldable surgical targeting system	Thomas S. Rau, Sina Witte, Lea Uhlenbusch, Jakob Lexow and Silke Hügl (Hannover Medical School, Germany); Lüder A. Kahrs (Leibniz Universität Hannover, Germany); Omid Majdani (Hannover Medical School, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany)	Computer Assisted Surgery	**G6.2**	27.09.2018 16:20
Surgical Tool Classification in Laparoscopic Videos Using Convolutional Neural Network	Tamer Abdulbaki Alshirbaji and Nour Aldeen Jalal (Furtwangen University, Germany); Knut Moeller (Furtwangen University & Institute of Technical Medicine (ITeM), Germany)	Computer Assisted Surgery	**G6.3**	27.09.2018 16:20
Suggested mandibular reconstruction for computer-assisted planning of bone grafts with autologous fibula segments	Niclas Hagen and Urs Eisenmann (University of Heidelberg, Germany); Sebastian Kallus (Universität Heidelberg, Germany); Christain Freudlsperger (Heidelberg University Hospital, Germany); Hartmut Dickhaus (University of Heidelberg, Germany)	Computer Assisted Surgery	**G6.4**	27.09.2018 16:20
Modular design of versatile surgical mini-robots	Lukas Theisgen (RWTH Aachen University, Germany); Matias de la Fuente and Klaus Radermacher (RWTH Aachen, Germany)	Computer Assisted Surgery	**G6.5**	27.09.2018 16:20
Evaluating Convolutional Neural Network and Hidden Markov Model for Recognising Surgical Phases in Sigmoid Resection	Nour Aldeen Jalal and Tamer Abdulbaki Alshirbaji (Furtwangen University, Germany); Knut Moeller (Furtwangen University & Institute of Technical Medicine (ITeM), Germany)	Computer Assisted Surgery	**G6.6**	27.09.2018 16:20
Towards acoustic emission and ultrasound integration for needle guidance in minimally invasive procedures	Laveena Kewlani (Technical University of Munich & INKA Intelligente Katheter, Germany); Alfredo Illanes (Otto-von-Guericke University of Magdeburg, Germany); Bjoern Menze (Technical University of Munich, Germany); Ivan Maldonado (Otto-von-Guericke-University Magdeburg, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany)	Computer Assisted Surgery	**G6.7**	27.09.2018 16:20
Detecting Signatures in Hyperspectral Image Data of Wounds: A Compound Model of Self-Organizing Map and Least Square Fitting	Redwan Mohammed and Daniel Schäle (Hochschule Wismar, Fakultät für Ingenieurwissenschaften, Germany); Steffen Emmert (Clinic for Dermatology and Venereology, University Medical Center Rostock, Germany); Christoph Hornberger (Hochschule Wismar, Germany)	Modelling & Simulation (1)	**G7.1**	28.09.2018 08:30
Development of a mathematical model to calculate mechanical properties at the proximal end of peripheral vein catheters	Leonard Pawelzik (FH Münster, Germany); Niels Hinricher (Fachhochschule Münster, Germany); Claus Backhaus (FH Münster, Germany)	Modelling & Simulation (1)	**G7.2**	28.09.2018 08:30
Verification of a Finite Element Updating Approach for in vivo Identification of the Nonlinear and Orthotropic Properties of Aortic Walls based on 4D Ultrasound Strain Imaging	Andreas Wittek (Frankfurt University of Applied Sciences & University of Siegen, Germany); Wojciech Derwich and Thomas Schmitz-Rixen (Goethe University Hospital, Germany); Claus-Peter Fritzen (University of Siegen, Germany); Armin Huß (Frankfurt University of Applied Sciences, Germany); Christopher Blase (Frankfurt University of Applied Sciences & Goethe University Frankfurt, Germany)	Modelling & Simulation (1)	**G7.3**	28.09.2018 08:30

Hemolysis Prediction in Medical Devices Using Cell Deformation and Pore Formation Models	Stefan Haßler (RWTH Aachen, Germany); Lutz Pauli and Marek Behr (RWTH Aachen University, Germany)	Modelling & Simulation (1)	**G7.4**	28.09.2018 08:30
Temperature distribution and moisture wall film in the lung as effect of humidity and temperature of the respiratory air	Bastian Schöneberger (Friedrich-Alexander Universität, Germany); Antonio Delgado (University Erlangen-Nuremberg, Germany)	Modelling & Simulation (1)	**G7.5**	28.09.2018 08:30
Experimental and numerical investigations of fluid flow in bioreactors for optimized in vitro stem cell loading in xenografts	Robert Ott (Institute for ImplantTechnology and Biomaterials e. V. Rostock - Warnemünde, Germany); Carolin Wüstenhagen (Institute for ImplantTechnology and Biomaterials e. V., Germany); Wolfram Schmidt and Heiner Martin (Universität Rostock, Germany); Michael Stiehm (University of Rostock & Germany, Germany); Annika Kasten (University of Rostock, Germany); Jan Liese and Carsten Fechner (Rostock University Medical Center, Germany); Nadia Einnolf (RoweMed AG - Medical 4 Life, Germany); Bernhard Frerich and Niels Grabow (Universität Rostock, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials, Germany); Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V.,	Modelling & Simulation (1)	**G7.6**	28.09.2018 08:30
Expiratory flow control improves the homogeneity of pressure distribution in a four-compartment physical lung model	Christin Wenzel (University Medical Center Freiburg, Germany); Carina Frey (Medical Center, University of Freiburg, Faculty of Medicine, Germany); Matthias Schneider (University Hospital Freiburg, Germany); Stefan Schumann (University Medical Center of Freiburg, Germany)	Modelling & Simulation (1)	**G7.7**	28.09.2018 08:30
Beyond Superparamagnetism: Novel Perspectives for Magnetic Nanoparticles in the Life Sciences	Annette Schmidt (Universität zu Köln & Institut für Physikalische Chemie, Germany)	FS: Magnetic Nanoparticles in Biomedical Diagnostics and Therapy	**H2.1**	26.09.2018 11:10
Metrology and Standardisation of Magnetic Nanoparticles for Biomedical Applications	Frank Wiekhorst, Georg Marks, James Wells and Uwe Steinhoff (Physikalisch-Technische Bundesanstalt, Germany)	FS: Magnetic Nanoparticles in Biomedical Diagnostics and Therapy	**H2.2**	26.09.2018 11:10
Endoscopic Targeting of Magnetic Nanoparticles in Cancerous Tissues	Anjali Röth and Ulf Neumann (RWTH Aachen University Hospital, Germany); Thomas Schmitz-Rode and Ioana Slabu (RWTH Aachen University, Germany)	FS: Magnetic Nanoparticles in Biomedical Diagnostics and Therapy	**H2.3**	26.09.2018 11:10
Long-term stable phantoms for quantitative magnetic particle imaging	Lucas Wöckel (Technische Universität Ilmenau, Germany)	FS: Magnetic Nanoparticles in Biomedical Diagnostics and Therapy	**H2.4**	26.09.2018 11:10
MRI Investigation of Hybridmaterials Marked with Magnetic Nanoparticles for Implant Engineering	Benedikt Mues (RWTH Aachen University, Germany); Klas-Moritz Kossel (Institut für Textiltechnik der RWTH Aachen University, Germany); Maximilian Maier (RWTH Aachen University, Germany); Thomas Schmitz-Rode (Institute of Applied Medical Engineering AME, RWTH Aachen University, Germany); Ioana Slabu (RWTH Aachen University, Germany)	FS: Magnetic Nanoparticles in Biomedical Diagnostics and Therapy	**H2.5**	26.09.2018 11:10
Magnetic Fluid Hyperthermia in Biomedical Application	Ulrich M Engelmann and Ioana Slabu (RWTH Aachen University, Germany)	FS: Magnetic Nanoparticles in Biomedical Diagnostics and Therapy	**H2.6**	26.09.2018 11:10

Polymer-based electrode arrays for the electromyographic long-term monitoring of the spinal erectors	Andreas Heinke (Techische Universität Dresden, Germany); Grzegorz Sliwinski (TU Dresden, Germany); Paula Krueger and Tilman Lieberknecht (Technische Universität Dresden, Germany); Hagen Malberg (TU Dresden & Institute of Biomedical Engineering, Germany)	Wearables	**H3.1**	26.09.2018 16:20
Hierarchical Analysis of Thorax Models to Measure Tidal Volume	Bernhard Laufer (Institute of Technical Medicine, Germany); Sabine Krueger-Ziolek (Furtwangen University, Germany); Paul Docherty (University of Canterbury, New Zealand); Fabian Höflinger (University of Freiburg, Germany); Leonhard M. Reindl (University of Freiburg & IMTEK - Institute for Microsystem Technology, Germany); Knut Möller (Furtwangen University, Germany)	Wearables	**H3.2**	26.09.2018 16:20
Synchronized Sensor Insoles for Clinical Gait Analysis in Home-Monitoring Applications	Nils Roth (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany); Christine Martindale (Friedrich Erlangen University Erlangen-Nürnberg, Germany); Heiko Gaßner, Zacharias Kohl and Jochen Klucken (University Hospital, Erlangen, Germany); Bjoern M Eskofier (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)	Wearables	**H3.3**	26.09.2018 16:20
Increasing the Robustness of the automatic IMU calibration for lower Extremity Motion Analysis	Arne Küderle (Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany); Sebastian Becker (Institute of Applied Medical Engineering, RWTH Aachen University, Germany); Catherine Disselhorst-Klug (RWTH Aachen University, Germany)	Wearables	**H3.4**	26.09.2018 16:20
Oral multispecies biofilm model - a reproducible in vitro test system	Nadine Kommerein and Katharina Doll (Hannover Medical School, Germany); Sascha Nico Stumpp (Medizinische Hochschule Hannover, Germany); Mathias Müsken (TWINCORE, Centre of Experimental and Clinical Infection Research, Germany); Nina Ehlert (Leibniz Universität Hannover, Germany); Andreas Winkel (Hannover Medical School, Germany); Susanne Häußler (Twincore, Center for Experimental and Clinical Infection Research, Hannover, Germany); Peter Behrens (Leibniz Universität Hannover, Germany); Falk Buettner (Hannover Medical School, Germany); Meike Stiesch (Medizinische Hochschule Hannover, Germany)	FS: Prevention of implant-associated infections	**H4.1**	27.09.2018 08:30
How does nano-silver get inside bacteria ? - Mechanistic studies using AgAu al-loy nanoparticles	Christoph Rehbock (University of Duisburg-Essen, Germany)	FS: Prevention of implant-associated infections	**H4.2**	27.09.2018 08:30
Innovative antimicrobial surfaces for orthopaedic applications	Martin Fabritius (Aesculap AG, Germany); Ilia Platzman, Rongcong Luo and Joachim Spatz (MPI for Medical Research, Germany); Katrin Sternberg (Aesculap AG, Germany)	FS: Prevention of implant-associated infections	**H4.3**	27.09.2018 08:30
Liquid-infused titanium as biofilm-repellent implant surface	Katharina Doll and Ines Yang (Hannover Medical School, Germany); Elena Fadeeva (Leibniz University of Hannover, Germany); Joern Schaeske, Nadine Kommerein, Szymon Szafrański, Andreas Greuling and Andreas Winkel (Hannover Medical School, Germany); Boris Chichkov (Leibniz University of Hannover, Germany); Sascha Nico Stumpp and Meike Stiesch (Medizinische Hochschule Hannover, Germany)	FS: Prevention of implant-associated infections	**H4.4**	27.09.2018 08:30
Monitoring of Infection Development by Multi Capillary Column - Ion Mobility Spectrometry (MCC/IMS)	Rainer Bargon (Frond End Innovation & Materials & Aesculap AG, Germany); Ann-Kathrin Sippel, Rebecca Brehm and Joerg Baumbach (Faculty of Applied Chemistry, Reutlingen University, Germany); Michael Mueller (Center for Orthopedics and Trauma Surgery (CC 9), Virchow Klinikum, Germany); Katrin Sternberg (Aesculap AG, Germany)	FS: Prevention of implant-associated infections	**H4.5**	27.09.2018 08:30
Investigation of Peri-implantitis in Rats	Andreas Winkel, Eva Bettenhausen and Jasmin Grischke (Hannover Medical School, Germany); Sebastian Stelljes and Henning Menzel (Braunschweig University of Technology, Germany); Meike Stiesch (Hannover Medical School, Germany)	FS: Prevention of implant-associated infections	**H4.6**	27.09.2018 08:30

Implementation of open-porous load-bearing structures for the improvement of the primary stability of acetabular press-fit cups	Volker Weißmann (University of Applied Sciences Technology, Business and Design, Germany); Rainer Bader (Universität Rostock, Germany); Harald Hansmann (University of Applied Science, Technology, Business and Design Wismar, Germany); Christian Boss (Institute for Polymertechnologies e. V., Germany)	Poster Session	**P001**	26.09.2018 13:40
Heart rhythm model for the simulation of electric fields in transesophageal atrial pacing and cardiac resynchronization therapy	Kerem Göküs (University of Applied Sciences Offenburg, Germany); Matthias Heinke (University of Applied Sciences Offenburg & Department of Electrical Engineering and Information Technology, Germany); Johannes Hörth (University of Applied Sciences Offenburg, Germany)	Poster Session	**P002**	26.09.2018 13:40
Testing of dynamic wrist joint external fixator mobility and reaction moment	Heiner Martin (Universität Rostock, Germany); Michael Stiehm (University of Rostock & Germany, Germany); Ingmar Rinas (University Medical Centre Rostock, Surgical Clinic, Germany); Niels Grabow and Thomas Mittlmeier (Universität Rostock, Germany)	Poster Session	**P003**	26.09.2018 13:40
Quantification of environmental influences and interferences affecting an active lens implant	Liane Koker (Karlsruhe Institute of Technology, Germany); Matthias Stoll (Fa. Bertrandt, Germany); Ulrich Gengenbach (Karlsruhe Institute of Technology & Campus North, Germany); Georg Bretthauer (Karlsruhe Institute of Technology, Germany)	Poster Session	**P004**	26.09.2018 13:40
Detecting Lamellipodia in Epithelial Cell Clusters Using a Fully Convolutional Neural Network	Simon Gruetzmacher (Reutlingen University, Germany); Ralf Kemkemer (Max Planck Institute for Medical Research & Reutlingen University, Germany); Christian Thies and Cristobal Curio (Reutlingen University, Germany)	Poster Session	**P005**	26.09.2018 13:40
CurvChip - chip platform for investigating cell responses to curved surface features	Kerstin Frey and Alena Fischer (Reutlingen University, Germany); Rumen Krastev (Reutlingen University & NMI Natural and Medical Sciences Institute at the University of Tübingen, Germany); Ralf Kemkemer (Max Planck Institute for Medical Research & Reutlingen University, Germany)	Poster Session	**P006**	26.09.2018 13:40
Sonographic Detection of Iron Oxide Nanoparticles Employing Shear Waves	Michael Fink (Friedrich-Alexander-University Erlangen-Nuremberg, Germany); Stefan Lyer (University Hospital Erlangen, Germany); Christoph Alexiou (University Hospital Erlangen & University Hospital Erlangen, Germany); Helmut Ermert (Friedrich-Alexander-University Erlangen-Nuremberg, Germany)	Poster Session	**P007**	26.09.2018 13:40
Single trial classification of invasively recorded auditory evoked potentials in cochlear implant user	Günther Bauernfeind (Hannover Medical School & Cluster of Excellence Hearing4all, Germany); Martin Bleichner (University Oldenburg, Germany); Magnus Teschner (Hannover Medical School & Cluster of Excellence Hearing4all, Germany); Stefan Debener (University of Oldenburg, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Sabine Haumann (Hannover Medical School & Cluster of Excellence Hearing4all, Germany)	Poster Session	**P008**	26.09.2018 13:40
Histological Image Processing for the Assessment of Tissue Engineered Cartilage	Fabian Och and Ulla Wenzel (Ulm University of Applied Sciences, Germany); Katja Hasch and Eva Goldberg-Bockhorn (University Medical Center, Ulm, Germany); Nicole Rotter (Mannheim University Medical Center, Germany); Martin Hessling (Hochschule Ulm - University of Applied Sciences, Germany); Michael Munz (Ulm University of Applied Sciences, Germany)	Poster Session	**P009**	26.09.2018 13:40
Vascular response towards biodegradable sirolimus-eluting polymeric scaffolds in the porcine model	Sabine Kischkel (University of Rostock, Germany); Carsten Bünger (Vivantes Humboldt-Klinikum, Germany); Anja Püschel (Rostock University Medical Center, Germany); Klaus-Peter Schmitz, Wolfgang Schareck and Niels Grabow (Universität Rostock, Germany)	Poster Session	**P010**	26.09.2018 13:40
A treatment monitoring application for whole body PET imaging	Laveena Kewlani (Technical University of Munich & INKA Intelligente Katheter, Germany); Stephan Nekolla (Klinikum Rechts der Isar, Germany)	Poster Session	**P011**	26.09.2018 13:40

A methodical approach for integrating end-user usability evaluations into the procurement process of medical devices	Lorenz Müller and Claus Backhaus (FH Münster, Germany)	Poster Session	**P012**	26.09.2018 13:40
Improving electrocorticograms of awake and anaesthetized mice using wavelet denoising	Michael Schweigmann (University of the Saarland & Trier University of Applied Sciences, Germany); Fabian Auler (Trier University of Applied Sciences, Germany); Frank Kirchhoff (University of the Saarland, Germany); Klaus Peter Koch (Trier University of Applied Sciences, Germany)	Poster Session	**P013**	26.09.2018 13:40
Characterization of Acoustic Properties of Poly-(L)-lactic Acid Nanoparticles in terms of Inertial Cavitation	Pia-Theresa Hiltl, Michael Fink, Astrid Hofmann and Helmut Ermert (Friedrich-Alexander-University Erlangen-Nuremberg, Germany); Stefan Johann Rupitsch (University of Erlangen Nuremberg, Germany); Geoffrey Lee (Friedrich-Alexander-University Erlangen-Nuremberg, Germany)	Poster Session	**P014**	26.09.2018 13:40
Cryoballoon model and simulation of catheter ablation for pulmonary vein isolation in atrial fibrillation	Robin Müssig (Hochschule Offenburg, Germany); Matthias Heinke (University of Applied Sciences Offenburg & Department of Electrical Engineering and Information Technology, Germany); Johannes Hörth (University of Applied Sciences Offenburg, Germany)	Poster Session	**P015**	26.09.2018 13:40
Development of a graphical user interface and cross manufacturer adaptation of a program for determining the pulse wave velocity in the aorta from phase-contrast magnetic resonance images	Constantin Schareck (University of Luebeck, Germany); Thekla Oechtering and Alex Frydrychowicz (Universitätsklinikum Schleswig-Holstein, Germany); Martin A. Koch (University of Lübeck, Germany)	Poster Session	**P016**	26.09.2018 13:40
Reconstruction of the Excitation Origin Region of Focal Ventricular Tachycardia with the ECG	Nicolas Pilia and Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany)	Poster Session	**P017**	26.09.2018 13:40
Biphasic parameter identification of equine articular cartilage from creep indentation data using an optimized 3D FE-based method	Thomas Reuter (ICM-Institut Chemnitzer Maschinen- und Anlagenbau, Germany); Christof Hurschler (Medizinische Hochschule Hannover (MHH), Germany)	Poster Session	**P018**	26.09.2018 13:40
Comparison of biphasic material properties of equine articular cartilage from stress relaxation indentation tests with and without tension-compression nonlinearity	Thomas Reuter (ICM-Institut Chemnitzer Maschinen- und Anlagenbau, Germany); Christof Hurschler (Medizinische Hochschule Hannover (MHH), Germany)	Poster Session	**P019**	26.09.2018 13:40
Development of a tissue model to simulate extravasation	Niels Hinricher, Claus Backhaus and Leonard Pawelzik (FH Münster, Germany)	Poster Session	**P020**	26.09.2018 13:40
Molecular processes of corneal collagen cross-linking in keratoconus therapy	Steven Melcher (TU Dresden, Germany); Eberhard Spörl (University Hospital Carl Gustav Carus, TU Dresden, Germany); Edmund Koch (Technische Universität Dresden, Germany); Gerald Steiner (Clinical Sensoring and Monitoring, Germany)	Poster Session	**P021**	26.09.2018 13:40
Advanced characterization of particles and cells in a laser flow cytometer by angular-resolved light scattering	Martin Hussels, Dirk Grosenick, Jörg Neukammer, Jonas Gienger and Hermann Groß (Physikalisch-Technische Bundesanstalt (PTB), Germany)	Poster Session	**P022**	26.09.2018 13:40
3D reconstruction of thyroid ultrasound images segmented using k-means clustering	Prabal Poudel (Otto-von-Guericke-Universität Magdeburg, Germany); Alfredo Illanes (Otto-von-Guericke University of Magdeburg, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany)	Poster Session	**P023**	26.09.2018 13:40

Determination of tissue optical properties from spatially resolved diffuse reflectance	Dirk Grosenick and Thomas Gladytz (Physikalisch-Technische Bundesanstalt (PTB), Germany); Andreas Pohlmann and Thoralf Niendorf (Max Delbrueck Center for Molecular Medicine, Germany); Kathleen Cantow, Sarah Brix, Bert Flemming and Erdmann Seeliger (Institut für Vegetative Physiologie, Charité Universitätsmedizin Berlin, Germany)	Poster Session	**P024**	26.09.2018 13:40
Determination of spatiotemporal gait parameters from different sensor configurations	Bernhard Penzlin (RWTH Aachen University, Germany); João Pedro Batista, Jr and Cornelius Bollheimer (RWTH Aachen University Hospital, Germany); Jonas Nienhaus (RWTH Aachen University, Germany); Steffen Leonhardt (RWTH Aachen, Germany)	Poster Session	**P025**	26.09.2018 13:40
Influence of additives on physico-chemical properties of electrospun poly(L-lactide)	Daniela Arbeiter (Universität Rostock, Germany); Stefanie Kohse (University Medical Center Rostock, Germany); Thomas Eickner (University of Rostock, Germany); Klaus-Peter Schmitz and Niels Grabow (Universität Rostock, Germany)	Poster Session	**P026**	26.09.2018 13:40
Design and Evaluation of a Mechanism Modelling CSF Resorption for In-Vitro Simulation	Stefan Stürmer and Anne Benninghaus (RWTH Aachen University, Germany); Steffen Leonhardt and Klaus Radermacher (RWTH Aachen, Germany)	Poster Session	**P027**	26.09.2018 13:40
Increased baroreflex sensitivity in a patient with hereditary spastic paraplegia - type SPG11 - A case report	Gerald Fischer (UMIT - University for Health Sciences, Medical Informatics and Technology & AFreeze GmbH, Austria); Jürgen Fortin (CN-Systems Inc., Austria); Sara Baumgartner Sigl (University Hospital Innsbruck, Austria); Daniel Baumgarten (UMIT - University for Health Sciences, Medical Informatics and Technology, Austria & Technische Universität Ilmenau, Germany)	Poster Session	**P028**	26.09.2018 13:40
Non-invasive reconstruction of atrial ectopic activity using a spatio-temporal basis of body surface potentials	Steffen Schuler, Axel Loewe and Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany)	Poster Session	**P029**	26.09.2018 13:40
A Model of Cerebral Collateral Circulation for Evaluation of Blood Flow in Case of M1-Stenosis	Yannick Lutz, Lorena Krames and Axel Loewe (Karlsruhe Institute of Technology (KIT), Germany); Giorgio Cattaneo (Acandis GmbH, Pforzheim, Germany); Olaf Doessel (Karlsruhe Institute of Technology (KIT), Germany)	Poster Session	**P030**	26.09.2018 13:40
Concept of a multi sensor and freely configurable patient table for CT applications	Mathias Leopold (Otto von Guericke University Magdeburg, Germany); Thomas Hoffmann (Otto-von Guericke University Magdeburg, Germany); Klemens Opfermann (Otto von Guericke University, Germany); Enrico Pannicke (Otto-von-Guericke University Magdeburg, Germany); Elmar Woschke (Otto von Guericke University, Germany); Georg Rose (OVGU, Germany)	Poster Session	**P031**	26.09.2018 13:40
Development of biodegradable stents for the treatment of Eustachian tube dysfunction	Kerstin Schümann (Rostock University Medical Center, Germany); Tamara Wilfling (Hannover Medical School, Germany); Gerrit Paasche (Medizinische Hochschule Hannover, Germany); Robert Schuon (Hannover Medical School, Germany); Wolfram Schmidt (Universität Rostock, Germany); Heinz Müller and Carsten Momma (CORTRONIK GmbH, Germany); Klaus-Peter Schmitz (Universität Rostock, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Niels Grabow (Universität Rostock, Germany)	Poster Session	**P032**	26.09.2018 13:40
Enhanced language mapping in awake brain surgery by using intraoperative optical imaging	Martin Oelschlägel (Klinik und Poliklinik für Neurochirurgie, Universitätsklinikum Carl Gustav Carus, Dresden, Germany); Stephan Sobottka, Matthias Kirsch and Gabriele Schackert (Klinik und Poliklinik für Neurochirurgie, Universitätsklinikum Carl Gustav Carus, Dresden); Ute Morgenstern (Institut für Biomedizinische Technik, Technische Universität Dresden, Dresden)	Poster Session	**P033**	26.09.2018 13:40

Impact of anatomical variations on insertion forces - An investigation using artificial cochlear models -	Silke Hügl (Department of Otorhinolaryngology, Hannover Medical School, Hannover, Germany); Tobias Blum (Hannover Medical School, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Omid Majdani and Thomas S. Rau (Hannover Medical School, Germany)	Poster Session	**P034**	26.09.2018 13:40
Novel hot-wire based spirometry is highly accurate at low flow rates	Petra Friedrich (Hochschule Kempten, University of Applied Sciences, Germany); Rosina Ledermüller (PARI GmbH, Germany); Arshan Perera (Pari GmbH, Germany)	Poster Session	**P035**	26.09.2018 13:40
Automatic identification for medical instruments - development and proof of concept of a memory chip based solution	Friederike Redemann (Hochschule Mannheim University of Applied Sciences, Germany); Thilo Krüger (Inomed Medizintechnik GmbH, Germany); Oliver Weihberger (Inomed Medizintechnik, Germany); Jürgen Wangler (Inomed Medizintechnik GmbH, Germany)	Poster Session	**P036**	26.09.2018 13:40
MEMS Needle Electrode for Impedance Spectroscopy on Cell Spheroids	Stefan Hanitsch and Martin Hoffmann (Technische Universität Ilmenau, Germany); Uwe Pliquett (Institute for Bioprocessing and Analytical Measurement Techniques, Germany); Stefan Sinzinger (Technische Universität Ilmenau, Germany)	Poster Session	**P037**	26.09.2018 13:40
Lossless and Lossy Compression of Neural Signals with Predictor Schemes on in-vitro and in-vivo Pre-Recorded Signals	Matteo Pagin (University of Ulm, Germany); Florian Jetter (Natural and Medical Sciences Institute at University of Tuebingen, Germany); Günther Zeck (NMI at the University Tuebingen, Germany); Maurits Ortmanns (University of Ulm, Germany)	Poster Session	**P038**	26.09.2018 13:40
Chip-based sensing of glycosylphosphatidylinositol-anchored proteins in complex with phospholipids and correlation to metabolic states	Günter Müller (Helmholtz Center Munich & Deutsches Forschungszentrum für Gesundheit und Umwelt (GmbH), Germany)	Poster Session	**P039**	26.09.2018 13:40
MATLAB Simulation Environment for Estimating the Minimal Number and Positions of Cameras for 3D Surface Reconstruction in a Fully-Digital Surgical Microscope	Andreas Wachter and Jan Kost (Karlsruhe Institute of Technology (KIT), Germany); Werner Nahm (Karlsruhe Institute of Technology, Germany)	Poster Session	**P040**	26.09.2018 13:40
Electrophoretic deposition of dielectric film on stimulation electrodes for the use in intraoperative neuromonitoring	Karin Chen (University of Stuttgart, Germany); Johanna Oswald and Thilo Krüger (Inomed Medizintechnik GmbH, Germany)	Poster Session	**P041**	26.09.2018 13:40
Interface Adhesion in Flexible Micromedical Devices	Helen Steins (NMI Natural and Medical Sciences Institute, Germany); Lena Bleck (NMI Natural and Medical Sciences Institute at the University of Tübingen, Germany); Rene P. von Metzen (NMI Natural and Medical Sciences Institute, Germany)	Poster Session	**P042**	26.09.2018 13:40
Comparing distance measures on assessed medical device incident data using Average Silhouette Width	Christian Bayer (Federal Institute for Drugs and Medical Devices, Germany); Robin Seidel (Federal Institute for Drugs and Medical Devices BfArM & Research Division, Germany)	Poster Session	**P043**	26.09.2018 13:40
Investigation of balloon dilation devices for treatment of Eustachian tube dysfunction	Julia Schubert (Rostock University Medical Center, Germany); Tamara Wilfling (Hannover Medical School, Germany); Kerstin Schümann (Rostock University Medical Center, Germany); Gerrit Paasche (Medizinische Hochschule Hannover, Germany); Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany); Thomas Lenarz (Medizinische Hochschule Hannover, Germany); Wolfram Schmidt (Universität Rostock, Germany)	Poster Session	**P044**	26.09.2018 13:40
Design Evaluation of Bipolar Electrodes for Promontory Stimulation	Jennifer Biendara (Hochschule Offenburg, Germany); Celine Wegner and Thilo Krüger (Inomed Medizintechnik GmbH, Germany)	Poster Session	**P045**	26.09.2018 13:40

Distribution of the Electromechanical Delay in the Heart Muscle: a Study on a Simple Geometry	Ekaterina Kovacheva (Karlsruhe Institute of Technology (KIT), Germany); Lukas Baron (Karlsruher Institut für Technologie (KIT), Germany); Olaf Doessel and Axel Loewe (Karlsruhe Institute of Technology (KIT), Germany)	Poster Session	**P046**	26.09.2018 13:40
Real-Time Streaming of 3D Ultrasound Data to HoloLens	Felix von Haxthausen and Floris Ernst (University of Lübeck, Germany); Ralf Bruder (University of Luebeck, Germany); Veronica Garcia Vazquez (University of Lübeck, Germany)	Poster Session	**P047**	26.09.2018 13:40
In vitro bio-stability screening of novel implantable polyurethane elastomers. Morphological design and mechanical aspects	Larysa Kutuzova, Kiriaki Athanasopulu, Markus Schneider and Andreas Kandelbauer (Reutlingen University, Germany); Ralf Kemkemer (Max Planck Institute for Medical Research & Reutlingen University, Germany); Günter Lorenz (Reutlingen University, Germany)	Poster Session	**P048**	26.09.2018 13:40
Multiobjective Optimization Routine for the Parameterization of the HGO Material Model for Abdominal Aneurysm Wall Tissue Based on Uniaxial Testing	Achim Hegner (Frankfurt University of Applied Sciences, Germany); Andreas Wittek (Frankfurt University of Applied Sciences & University of Siegen, Germany); Stefan Dominico (Frankfurt University of Applied Sciences, Germany); Christopher Blase (Frankfurt University of Applied Sciences & Goethe University Frankfurt, Germany)	Poster Session	**P049**	26.09.2018 13:40
Balloon-based measuring system for compliance investigations	Carsten Tautorat and Kerstin Schümann (Rostock University Medical Center, Germany); Olaf Specht (Universität Rostock, Germany); Frank Kamke (University Medical Center Rostock, Germany); Peter Behrens, Klaus-Peter Schmitz, Niels Grabow and Wolfram Schmidt (Universität Rostock, Germany)	Poster Session	**P050**	26.09.2018 13:40
Visualization of biomechanical model parameters by adapting methods from game development	Tobias Bolten, Andre Kürten and Andreas Kitzig (Niederrhein University of Applied Sciences, Germany); Edwin Naroska (University of Applied Sciences Niederrhein, Germany)	Poster Session	**P051**	26.09.2018 13:40
Multi-functional Test-Setup to Characterize the Mechanical Properties of Human Hair	Günther Benderoth, Achim Hegner and Armin Huß (Frankfurt University of Applied Sciences, Germany); Mounir Jebabli, Yacine Achour and Nahid Miah (Computer Sciences and Engineering, Germany)	Poster Session	**P052**	26.09.2018 13:40
CT and IR Perfusion Measurement: Do They Match?	Igor Fischer (Heinrich-Heine University, Germany); Bernd Turowski, Jan Cornelius, Philipp Slotty, Athanasios Petridis, Hans-Jakob Steiger and Marcel Kamp (Heinrich Heine University, Germany)	Poster Session	**P053**	26.09.2018 13:40
Modern orthotic design requires state of the art modular custom measurement techniques for evaluation	Lucien Opitz, Maxim Kirillov and David Hochmann (University of Applied Sciences Muenster, Germany)	Poster Session	**P054**	26.09.2018 13:40
Synchronized presentation of a language task to the electrical stimulation of cortical regions during speech mapping in an awake surgery	Laura Hansmeyer (Goethe University Frankfurt & Inomed Medizintechnik GmbH, Germany); Thilo Krüger (Inomed Medizintechnik GmbH, Germany)	Poster Session	**P055**	26.09.2018 13:40
Inverse dynamics simulation to optimize ergometer cycling after hip replacement	Maike Sauerhoff (University of Bochum, Germany)	Poster Session	**P056**	26.09.2018 13:40
Pacing electrode modelling and simulation of cardiac contractility modulation	Tom Roller (University of Applied Science Offenburg, Germany); Matthias Heinke (University of Applied Sciences Offenburg & Department of Electrical Engineering and Information Technology, Germany); Johannes Hörth (University of Applied Sciences Offenburg, Germany)	Poster Session	**P057**	26.09.2018 13:40
Efficient feature-based motion estimation in neurosurgery using non-maximum suppression	Fang Chen, Jan Müller and Jens Müller (TU Dresden, Germany); Ronald Tetzlaff (Technische Universität Dresden, Germany)	Poster Session	**P058**	26.09.2018 13:40

Concept of an open interface CT for hybrid imaging	Thomas Hoffmann (Otto-von Guericke University Magdeburg, Germany); Mathias Leopold (Otto von Guericke University Magdeburg, Germany); Shiras Abdurahman (Otto-von Guericke University, Germany); Georg Rose (OVGU, Germany)	Poster Session	**P059**	26.09.2018 13:40
Visualization of interfacial defects at dental restorations with spectral domain and polarization sensitive optical coherence tomography	Florian Tetschke (TU Dresden, Germany); Jonas Golde (TU Dresden, Faculty of Medicine Carl Gustav Carus, Germany); Julia Walther (University of Technology Dresden, Germany); Lars Kirsten (Technische Universität Dresden, Germany); Claudia Rüger and Hartmut Schneider (University of Leipzig, Germany); Edmund Koch (Technische Universität Dresden, Germany); Rainer Haak (University of Leipzig, Germany); Christian Hannig (TU Dresden, Faculty of Medicine Carl Gustav Carus, Germany)	Poster Session	**P060**	26.09.2018 13:40
Feasibility of Promontory Stimulation eABR recording in cochlear implant candidates with MED-EL clinical system: An update	Daniel Polterauer (Klinikum der Universität München, Germany); Giacomo Mandruzzato (MED-EL GmbH, Austria); Maike Neuling (Klinikum der Universität München, Germany); Marek Polak (MED-EL GmbH, Austria); Joachim Müller and John-Martin Hempel (Klinikum der Universität München, Germany)	Poster Session	**P061**	26.09.2018 13:40
An automatic detector of intracranial epileptic spikes based on multivariate classification of EEG epochs	Daniel Lachner-Piza (Universitätsklinikum Freiburg & Albert-Ludwigs-Universität Freiburg, Germany); Jonas Bruder, Julia Jacobs and Andreas Schulze-Bonhage (University Hospital Freiburg, Germany); Thomas Stieglitz (Albert-Ludwigs-Universität Freiburg, Germany); Matthias Dümpelmann (University Hospital Freiburg, Germany)	Poster Session	**P062**	26.09.2018 13:40
Rotational activity around fibrotic tissue during Atrial Fibrillation	Mark Nothstein (Karlsruhe Institute of Technology, Germany); Olaf Doessel and Axel Loewe (Karlsruhe Institute of Technology (KIT), Germany)	Poster Session	**P063**	26.09.2018 13:40
3D Tumor Models Based on Histologic Data for Magnetic Drug Targeting	Max Lindemann (RWTH Aachen University, Germany); Anjali Röth (RWTH Aachen University Hospital, Germany); Thomas Schmitz-Rode (Institute of Applied Medical Engineering AME, RWTH Aachen University, Germany); Ioana Slabu (RWTH Aachen University, Germany)	Poster Session	**P064**	26.09.2018 13:40
Initial results on energy harvesting by exploiting the temperature gradient in hip implants	Thomas Sühn (Otto-von-Guericke-University Magdeburg & Institute of Medical Technology, Germany); Joachim Döring, Jessica Bertrand, Christoph Lohmann, Sagar Shetty and Axel Boese (Otto-von-Guericke-University Magdeburg, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany)	Poster Session	**P065**	26.09.2018 13:40
A Customized Highly Linear Power Resistor For Distortion Measurements in a Magnetic Particle Imaging Signal Chain	Jan Stelzner, Jonas Beuke, Huimin Wei and Thorsten M. Buzug (Universität zu Lübeck, Germany)	Poster Session	**P066**	26.09.2018 13:40
Linear stability analysis of epileptic seizure models	Steffen Hartmann (Ansbach University of Applied Sciences, Germany); Dennis Adamski (University of Applied Science Ansbach, Germany); Bastian Seifert and Christian Uhl (Ansbach University of Applied Sciences, Germany)	Poster Session	**P067**	26.09.2018 13:40
Multiclass sEMG signal processing and classification for upper-limb FES-NP control	Cinthya Toledo (Instituto Nacional de Rehabilitación, Mexico); Eloisa Flores (Universidad Autónoma Metropolitana, Mexico); Jorge Mercado (Instituto Nacional de Rehabilitación, Mexico); Pilar Castellanos (Universidad Autónoma Metropolitana, Mexico); Josefina Gutierrez (Instituto Nacional de Rehabilitacion I.GII, Mexico)	Poster Session	**P068**	26.09.2018 13:40
Brain-pressure sensor for esophageal pressure measurement during magnetic stimulation in rats	Christin Wenzel (University Medical Center Freiburg, Germany); Sashko Spassov and Stefan Schumann (University Medical Center of Freiburg, Germany)	Poster Session	**P069**	26.09.2018 13:40

Systematic analysis about residual chloroform removal from PCL films	Michael Teske (University Medical Center Rostock, Germany); Daniela Arbeiter (Universität Rostock, Germany); Konstanze Schober (University Medical Center Rostock, Germany); Thomas Eickner (University of Rostock, Germany); Niels Grabow (Universität Rostock, Germany)	Poster Session	**P070**	26.09.2018 13:40
Hydrophilic silicone elastomer with excellent cell adhesion capability - A promising material for ophthalmologic micro-implants	Andreas Brietzke (Rostock University Medical Center, Institute for Biomedical Engineering, Germany); Stefan Siewert and Wolfram Schmidt (Institute for ImplantTechnology and Biomaterials e.V. Germany); Thomas Stahnke (Rostock University Medical Center, Department of Ophthalmology Germany); Christine Kreiner (KreCo Kreiner Consulting, Germany); Niels Grabow (University Medical Center, Institute for Biomedical Engineering Germany); Rudolf Guthoff (Rostock University Medical Center, Department of Ophthalmology Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials e.V. Germany)	Poster Session	**P071**	26.09.2018 13:40
An Implantable Brain-Computer Interface for Investigation of Novel Closed-Loop Therapies	Martin Schuettler (CorTec GmbH, Germany); Thomas Stieglitz (Albert-Ludwigs-Universität Freiburg, Germany); Christian Stolle, Fabian Kohler and Jörg Fischer (CorTec GmbH, Germany); C. Alexis Gkogkidis (University Medical Center Freiburg & Albert-Ludwigs-University Freiburg, Germany); Xi Wang (University of Freiburg, Germany); Mortimer Gierthmuehlen (University Hospital Freiburg, Germany); Christian Scheiwe (Medical Center – University of Freiburg, Germany); Tonio Ball (Epilepsiezentrum am Universitätsklinikum Freiburg, Germany)	Poster Session	**P072**	26.09.2018 13:40
Automated particle analysis by Raman microscopy - a method development	Thomas Reske (Institute for ImplantTechnology and Biomaterials e. V., Germany); Michael Teske (University Medical Center Rostock, Germany); Thomas Eickner (Rostock University Medical Center, Germany); Volkmar Senz, Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany)	Poster Session	**P073**	26.09.2018 13:40
Foetal heart rate signal spectral analysis by using time-varying autoregressive modelling	Patricio Fuentealba (Otto-von-Guericke University of Magdeburg, Germany & Universidad Austral de Chile, Chile); Alfredo Illanes and Frank Ortmeier (Otto-von-Guericke University of Magdeburg, Germany)	Poster Session	**P074**	26.09.2018 13:40
Optimization of manufacturing processes for biodegradable polymeric stents regarding improved mechanical properties	Olga Sahmel (University of Rostock, Germany); Daniela Arbeiter (Universität Rostock, Germany); Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V., Germany); Kerstin Schümann (Rostock University Medical Center, Germany); Klaus-Peter Schmitz and Niels Grabow (Universität Rostock, Germany)	Poster Session	**P075**	26.09.2018 13:40
Identification of structurally non-identifiable and sloppy parameters of a detailed ventricular myocyte model	Tobias Gerach, Olaf Doessel and Axel Loewe (Karlsruhe Institute of Technology (KIT), Germany)	Poster Session	**P076**	26.09.2018 13:40
Methodology for the normalization of intraoperative testing results in deep brain stimulation	Dorian Vogel (University of Applied Sciences and Arts Northwestern Switzerland & Linköping University, Switzerland); Ashesh Shah (University of Applied Sciences and Arts Northwestern Switzerland, Switzerland); Fabiola Alonso (Linköping University, Sweden); Erik Schkommodau (University of Applied Sciences Northwestern Switzerland, Switzerland); Karin Wårdell (University of Linköping, Sweden); Simone Hemm-Ode (University of Applied Sciences Northwestern Switzerland & School of Life Sciences, Switzerland)	Poster Session	**P077**	26.09.2018 13:40

Fluid-structure interaction in intracranial vessel walls: The role of patient-specific wall thickness	Samuel Voß (University of Magdeburg "Otto von Guericke" & Research Campus STIMULATE, Germany); Sylvia Saalfeld (University of Magdeburg, Germany); Thomas Hoffmann (Otto-von Guericke University Magdeburg, Germany); Gábor Janiga (University of Magdeburg, Germany); Oliver Beuing (Otto-von Guericke University Magdeburg, Germany); Philipp Berg (University of Magdeburg, Germany)	Poster Session	**P078**	26.09.2018 13:40
Hydrogel-based Actuation for Selfbending Perimodiolar Cochlear Electrode Arrays	Theodor Doll (Medizinische Hochschule Hannover, Germany); Steffen Hadeler and Jan Stieghorst (Hannover Medical School, Germany)	Poster Session	**P079**	26.09.2018 13:40
Effects of Sterilization Methods on Polycarbonaturethan-co-Silicone for Biomedical Applications	Marcel Ricklefs (Hannover Medical School, Germany); Stefanie Kohse (University Medical Center Rostock, Germany); Lucrezia Morticelli (Hannover Medical School, Germany); Niels Grabow (Universität Rostock, Germany); Axel Haverich (Medizinische Hochschule Hannover, Germany); Sotirios Korossis and Tobias Schilling (Hannover Medical School, Germany); Wolfram Schmidt (Universität Rostock, Germany)	Poster Session	**P080**	26.09.2018 13:40
Test system for microclimatic properties of medical aids, particularly with regard to body-attached medical aids (KliMed-HM)	Simon Gallinger and Christina Mittag (Technische Universität Berlin, Germany)	Poster Session	**P081**	26.09.2018 13:40
In vitro study of sirolimus release from nonwoven PLLA matrices	Sabine Illner (Institute for Biomedical Engineering, University Medical Center Rostock, Germany); Stefanie Kohse and Claudia Michaelis (University Medical Center Rostock, Germany); Thomas Reske (Institute for ImplantTechnology and Biomaterials e. V., Germany); Thomas Eickner (Rostock University Medical Center, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials, Germany); Niels Grabow (Universität Rostock, Germany)	Poster Session	**P082**	26.09.2018 13:40
Fabrication and Characterization of Bending-Independent Capacitive CMOS Pressure Sensor Stacks	Roland Fischer and Heinrich Ditler (RWTH Aachen University, Germany); Michael Görtz (Fraunhofer IMS, Germany); Wilfried Mokwa (RWTH Aachen, Germany)	Poster Session	**P083**	26.09.2018 13:40
Classification of thyroid and non-thyroid regions in ultrasound images using Linear Discriminant Analysis	Elmer Jeto Gomes Ataide (Otto-von-Guericke Universität & INKA - Intelligente Katheter, Germany); Prabal Poudel (Otto-von-Guericke-Universität Magdeburg, Germany); Alfredo Illanes (Otto-von-Guericke University of Magdeburg, Germany); MIchael Kreißl (Otto-von-Guericke Universiät, Germany); Michael Friebe (Otto-von-Guericke-Universität, Germany)	Poster Session	**P084**	26.09.2018 13:40
Model-driven dimensionality reduction of epileptic EEG-data	Dennis Adamski (University of Applied Science Ansbach, Germany); Steffen Hartmann, Christian Uhl and Bastian Seifert (Ansbach University of Applied Sciences, Germany)	Poster Session	**P085**	26.09.2018 13:40
In vitro investigation of the radial compliance of porcine carotid arteries	Christoph Brandt-Wunderlich (Institute for ImplantTechnology and Biomaterials, Germany); Olaf Specht (Universität Rostock, Germany); Heinrich Ortmann (University Medical Center Rostock, Germany); Wolfram Schmidt, Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany)	Poster Session	**P086**	26.09.2018 13:40

Development of a drug-eluting microstent for micro-invasive glaucoma surgery	Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V., Germany); Wolfram Schmidt (Universität Rostock, Germany); Sylvia Pfensig (Institute for ImplantTechnology and Biomaterials e. V., Germany); Stefanie Kohse (University Medical Center Rostock, Germany); Katharina Wulf (Universität Rostock, Germany); Swen Großmann (Institute for ImplantTechnology and Biomaterials e. V., Germany); Michael Stiehm (University of Rostock & Germany, Germany); Franziska Kopp (University Medical Center Rostock, Germany); Rudolf Guthoff (Universität Rostock & Universitätsaugenklinik Rostock, Germany); Niels Grabow (Universität Rostock, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and	Poster Session	**P087**	26.09.2018 13:40
Didactic Concept to Teach Regulatory Affairs by Means of a Simulation Game	Michael Scholtes, Annemarie Behrend, Stephanie Buedenbender, Volker Gross and Keywan Sohrabi (Technische Hochschule Mittelhessen, Germany)	Poster Session	**P088**	26.09.2018 13:40
Conceptual design of a personalized radiation therapy patch for skin cancer	Ali Pashazadeh (Otto-von-Guericke-University Magdeburg, Germany); Nathan Castro (Queensland University of Technology & Institute of Health & Biomedical Innovation, Australia); Elena Morganti (Queensland University of Technology, Australia); Sinja Lagotzki and Axel Boese (Otto-von-Guericke-University Magdeburg, Germany); Dietmar W Hutmacher (Queensland University of Technology & Institute of Health & Biomedical Innovation, Australia); Michael Friebe (Otto-von-Guericke-Universität, Germany)	Poster Session	**P089**	26.09.2018 13:40
Influence of application parameters of ultrasonic-assisted bone instruments on the tear force of a substitute material for spinal dura mater	Marie Foelkel (Hamburg University of Technology, Germany); Vitali Herzog and Markus Meier (Söring GmbH, Germany); Michael Morlock (TU Hamburg-Harburg, Germany)	Poster Session	**P090**	26.09.2018 13:40
Investigation of avascular tumor-immune system interactions using a CA-PDE model	Jörg Wassenberg (Westphalian University, Campus Gelsenkirchen, Germany); Waldemar Zylka (Westfälische Hochschule, Campus Gelsenkirchen, Germany)	Poster Session	**P091**	26.09.2018 13:40
Adaption of a spike sorting algorithm to ECG signals	Pavel Larionov, Jan-Dirk Janßen and Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	Poster Session	**P092**	26.09.2018 13:40
Cross-Correlation based comparison between the conventional 12-lead ECG and an EASI derived 12-lead ECG	Melanie Holderith and Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	Poster Session	**P093**	26.09.2018 13:40
Capacitive ultra-low power ECG measurement system for intelligent clothes	Daniel Laqua (Technische Universität Ilmenau & Institute for Biomedical Engineering and Informatics, Germany); Jakob Reck, David Sambale, Florian Kreische and Marc-Patrick Heppner (Technische Universität Ilmenau, Germany); Peter Husar (Technische Universiät Ilmenau, Germany)	Poster Session	**P094**	26.09.2018 13:40
Differences between muscle control of computational musculoskeletal models and healthy children during elbow flexion and extension movements	Alberto-Isaac Perez-SanPablo (National Institute for Rehabilitation (INR-LGII) & CINVESTAV, Mexico); Alicia Meneses-Peñaloza (National Instittute for Rehabilitation (INR-LGII), Mexico); Elisa Romero Avila (Applied Medical Engineering - AME Helmholtz Institute, Germany); Maria-Elena Arellano-Saldaña (National Instittute for Rehabilitation (INR-LGII), Mexico); Catherine Disselhorst-Klug (RWTH Aachen University & Institute of Applied Medical Engineering, Germany); Josefina Gutierrez-Martinez (National Instittute for Rehabilitation (INR-LGII), Mexico); Juan-Manuel Ibarra-Zannatha (CINVESTAV, Mexico)	Poster Session	**P095**	26.09.2018 13:40
Optimisation of enzyme cascades for the in vitro synthesis of hyaluronic acid	Johannes Gottschalk, Anna Eisele and Lothar Elling (RWTH Aachen, Germany)	Poster Session	**P097**	26.09.2018 13:40

Targeting Galectins - From molecular ligand design to theranostic anti-cancer agents	Dominic Laaf (RWTH Aachen University, Germany); Lothar Elling (RWTH Aachen, Germany)	Poster Session	**P098**	26.09.2018 13:40
Enhancing haptic feedback of subsurfaces during needle insertion	Sven-Thomas Antoni, Stefan Soltau, Jens Beringhoff, Omer Rajput, Christoph Otte and Alexander Schlaefer (Hamburg University of Technology, Germany)	Poster Session	**P099**	26.09.2018 13:40
Bidirectional data transmission for battery-less medical implants	Özgü Dogan (Micro-and Nanosystems, Pressure Sensor Systems, Fraunhofer IMS, Germany); Andreas Hennig (Fraunhofer, Germany); Alexander Stanitzki (Fraunhofer IMS, Germany); Mario Baum (Fraunhofer ENAS & ENAS, Germany); Anton Grabmaier (University of Duisburg-Essen, Germany)	Poster Session	**P100**	26.09.2018 13:40
Development of glycan-functionalized microgels for scavenging of Clostridium difficile toxins A and B	Viktoria Heine (RWTH Aachen University, Germany)	Poster Session	**P101**	26.09.2018 13:40
Development of a textile-integrated, multimodal sensor device for biosignal acquisition	Dominik Granich, Akram Idrissi and Thomas Gries (RWTH Aachen University, Germany); Andreas Blaeser (Institut für Textiltechnik of RWTH Aachen University, Germany)	Poster Session	**P102**	26.09.2018 13:40
Fabrication of Micro Structured Dental Implant Abutments for Optimized Soft Tissue Integration	Patrick Doll (Karlsruher Institut für Technologie (KIT), Germany); Christoph Semperowitsch and Melanie Haefner (Karlsruhe Institute of Technology (KIT), Germany); Ralf Ahrens (Karlsruher Institut für Technologie (KIT), Germany); Bruno Spindler (Fräszentrum Ortenau GmbH und Co. KG, Germany); Andreas Guber (Karlsruher Institut für Technologie (KIT), Germany)	Poster Session	**P103**	26.09.2018 13:40
Learning motion artefacts in non-Cartesian magnetic resonance imaging	Martin A. Koch, Jannis Hagenah, Maximilian Wattenberg and Floris Ernst (University of Lübeck, Germany)	Poster Session	**P104**	26.09.2018 13:40
Temperature controlled drug release from magnetic PLGA microspheres	Diana Zahn and Andreas Weidner (TU Ilmenau, Germany); Zeynab Nosrati (UBC Vancouver, Canada); Lucas Wöckel (Technische Universität Ilmenau, Germany); Kathy Saatchi (UBC Vancouver, Canada); Urs Häfeli (The University of British Columbia, Canada); Silvio Dutz (Technische Universität Ilmenau, Germany)	Poster Session	**P105**	26.09.2018 13:40
"MigraineMonitor" - Towards a System for the Prediction of Migraine Attacks using Electrostimulation	Andrea Stefke, Frauke Wilm, Robert Richer, Stefan Gradl, Bjoern M Eskofier, Clemens Forster and Barbara Namer (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)	Poster Session	**P106**	26.09.2018 13:40
A novel test system for the determination of breath-triggered drug release for preterm neonates in real-time	Felix Carl Wiegandt (Fraunhofer Institute for Toxicology and Experimental Medicine, Germany); Ulrich Froriep (Fraunhofer-Institut für Toxikologie und Experimentelle Medizin, Germany); Theodor Doll (Medizinische Hochschule Hannover, Germany); Andreas Dietzel (Technische Universität Braunschweig, Germany); Gerhard Pohlmann (Fraunhofer-Institut für Toxikologie und Experimentelle Medizin, Germany)	Poster Session	**P107**	26.09.2018 13:40
Development and Validation of a Modular Braiding Core for Semi-Automated Production of Bifurcated Stents on a 3D Braiding Machine	Felix Merkord (Institut für Textiltechnik, RWTH Aachen University, Germany)	Poster Session	**P108**	26.09.2018 13:40
Standardized technique of water permeability measurement for biomedical applications	Swen Großmann and Stefan Siewert (Institute for ImplantTechnology and Biomaterials e. V., Germany); Stefanie Kohse (University Medical Center Rostock, Germany); Robert Ott (Institute for ImplantTechnology and Biomaterials e. V. Rostock - Warnemünde, Germany); Wolfram Schmidt, Niels Grabow and Klaus-Peter Schmitz (Universität Rostock, Germany)	Poster Session	**P109**	26.09.2018 13:40

Osteofit - Determination of a limit load for the treatment of osteoporosis based on a natural movement of the patient and acoustic emission analysis AEA	Olaf Nalik (Technische Hochschule Mittelhessen, Germany); Udo Wolf (University of Applied Sciences Fulda, Germany); Hans-Joachim Schwalbe and Jörg Subke (Technische Hochschule Mittelhessen, Germany)	Poster Session	**P110**	26.09.2018 13:40
Spinal Monitoring for Emergency Care Training	Björn Krystek (Hamburg University of Applied Sciences, Germany); Marcel Dudda (University of Duisburg-Essen, Germany); Boris Tolg (Hamburg University of Applied Sciences, Germany)	Poster Session	**P111**	26.09.2018 13:40
Nanofibrous polyamide 6 scaffolds promote adhesion of endothelial cells	Valeria Khaimov (Institute for ImplantTechnology and Biomaterials & Institute for Biomedical Engineering, Germany); Stefanie Kohse (University Medical Center Rostock, Germany); Daniela Arbeiter and Niels Grabow (Universität Rostock, Germany); Klaus-Peter Schmitz (Institute for ImplantTechnology and Biomaterials, Germany)	Poster Session	**P112**	26.09.2018 13:40
Mechanical properties of 3D printed electrode arrays for electrocortical monitoring	Filip Jakimovski (Medical School Hannover, Germany); Jan Stieghorst (Hannover Medical School, Germany); Theodor Doll (Medizinische Hochschule Hannover, Germany)	Poster Session	**P113**	26.09.2018 13:40
Nanostructuring of Titanium by Anodic Oxidation with Sulfuric and Hydrofluoric Acid	Patrick Doll (Karlsruher Institut für Technologie (KIT), Germany); Monika Wolf and Manon Weichert (Karlsruhe Institute of Technology (KIT), Germany); Ralf Ahrens (Karlsruher Institut für Technologie (KIT), Germany); Bruno Spindler (Fräszentrum Ortenau GmbH und Co. KG, Germany); Andreas Guber (Karlsruher Institut für Technologie (KIT), Germany)	Poster Session	**P114**	26.09.2018 13:40
Diffusion and relaxation profiling of skin layers employing the Fourier NMR-MOUSE	Jennifer Flohr (RWTH Aachen, Germany); Christoph Kuppe (University Hospital Aachen, Germany); Christian Rehorn (RWTH Aachen University, Germany); Jürgen Floege (University Hospital Aachen, Germany); Bernhard Blümich (RWTH Aachen University, Germany)	Poster Session	**P117**	26.09.2018 13:40
The CellDrum and PulSElect system: Tools to evaluate mechanical and pharmacological effects on arterial cells	Robin Bayer (University of Cologne, Germany)	Poster Session	**P118**	26.09.2018 13:40
Sparse autoregressive modelling of biomedical signals	Thomas Schanze (Technische Hochschule Mittelhessen, Germany)	Poster Session	**P119**	26.09.2018 13:40
Integrating a Usability Engineering Process into a Consisting Risk Management	Michael Scholtes, Stephanie Buedenbender, Annemarie Behrend, Keywan Sohrabi and Volker Gross (Technische Hochschule Mittelhessen, Germany)	Poster Session	**P120**	26.09.2018 13:40
Low-cost active knee orthoses - a systematic evaluation	Swantje Janzen and Kent W. Stewart (University of Stuttgart, Germany); Peter P. Pott (Universität Stuttgart, Germany)	Poster Session	**P121**	26.09.2018 13:40
Proposal of a functional assessment battery for elbow functionality for the design and evaluation of assistive technology for children with spastic cerebral palsy	Alberto-Isaac Perez-SanPablo (National Institute for Rehabilitation (INR-LGII) & CINVESTAV, Mexico); Elisa Romero Avila (Applied Medical Engineering - AME Helmholtz Institute, Germany); Alicia Meneses-Peñaloza and Maria-Elena Arellano-Saldaña (National Instittute for Rehabilitation (INR-LGII), Mexico); Catherine Disselhorst-Klug (RWTH Aachen University & Institute of Applied Medical Engineering, Germany); Josefina Gutierrez-Martinez (National Instittute for Rehabilitation (INR-LGII), Mexico); Juan-Manuel Ibarra-Zannatha (CINVESTAV, Mexico)	Poster Session	**P122**	26.09.2018 13:40
Challenges of Medical Device Regulation for Small and Medium sized Enterprises	Thomas Schanze and Marcel Vila Wagner (Technische Hochschule Mittelhessen, Germany)	Poster Session	**P123**	26.09.2018 13:40

Electrode model and simulation of catheter ablation of supraventricular tachycardia	Karl Ehret (University of Applied Sciences Offenburg, Germany); Matthias Heinke (University of Applied Sciences Offenburg & Department of Electrical Engineering and Information Technology, Germany); Johannes Hörth (University of Applied Sciences Offenburg, Germany)	Poster Session	**P124**	26.09.2018 13:40
Registration of pre- and postoperative surface scans for pediatric neurosurgery	Manuel Katanacho and John-Certus Lack (Fraunhofer Institute for Production Systems and Design Technology IPK, Germany); Felix Fehlhaber (Fraunhofer-Institute for Production Systems and Design Technology IPK, Germany); Jörg Krüger (Fraunhofer IPK, Germany)	Poster Session	**P125**	26.09.2018 13:40
Computational comparison of different textile implants to correct apical prolapse in females	Aroj Bhattarai and Manfred Staat (FH Aachen University of Applied Sciences, Germany)	Poster Session	**P126**	26.09.2018 13:40
Extended CT Hounsfield values scale as a method to improve radiotherapy for patients with active and metallic implants	Zehra Ese (MR:comp GmbH, Germany)	Poster Session	**P127**	26.09.2018 13:40
Microplastic extraction from biological materials - a possible extraction method	Folker Wenzel, Andreas Fath and Adriano Monteleone (Hochschule Furtwangen, Germany)	Poster Session	**P128**	26.09.2018 13:40
Digital products and processes in dental technology	Eva Rothgang, Ostbayerische Technische Hochschule, Germany; Michael Wehmöller, Hochschule Osnabrück, Germany	Poster Session	**P129**	26.09.2018 13:40