**HIGHLIGHTS**

**ICCAS at the DMEA 2019**  
**April 9 – 11, 2019 | Berlin**  
The newly developed standard “Service-Oriented Device Connectivity” (SDC) was introduced by the OR.NET association (OR.NET e.V.) at this year’s Connecting Digital Health event (DMEA) in Berlin. ICCAS was involved in the showcases where the partners explained the dynamically networked operating room with devices from different manufacturers. Numerous guests followed the invitation to learn about the benefits of the new standard.

**ICCAS Hyperspectral Imaging at the BMWi**  
**May 9, 2019 | Berlin**  
At the “Innovationstag Mittelstand”, ICCAS joined the exhibition with a hyperspectral imaging (HSI) system developed in cooperation with physicians from Leipzig University Hospital and the Diaspective Vision GmbH. The system enables non-invasive measurements of cutaneous perfusion and surface moisture to detect patient status information during surgery. This event was initiated by the Federal Ministry of Economic Affairs and Energy (BMWi).

**Successful transfer of ICCAS results in medical products**  
**May 23 – 25, 2019 | Leipzig**  
At the Annual Conference of the Society for Neonatology and Paediatric Intensive Care Medicine (GNPI), a new user interface was presented that has evolved in cooperation between the Life Support Systems group and the Fritz Stephan GmbH. The new interface combines the display of a respirator and an Electrical Impedance Tomography (EIT) system and can additionally display distributions of ventilation and blood circulation in the thorax. It gives the physician a more comprehensive overview of the patient’s ventilatory situation.

**Special robot feature introduced at EAES Congress**  
**June 12 – 15, 2019 | Sevilla, Spain**  
Within the scope of the 27th Congress of the European Association for Endoscopic Surgery (EAES), the SONO-RAY group introduced a special robot feature for the use during the combined focused ultrasound and radiation therapy: The KUKA lbr iiwa robot is able to communicate with other devices by implementing the open...
communication standard Service-oriented device connectivity (SDC). The joint EAES-OR.NET task force initiated by Andreas Melzer met with OR.NET director Thomas Neumuth to discuss the next step towards using the SDC-standard. Andreas Melzer was invited to hold the Alfred Cuschieri Lecture.

SONO-RAY group at ISTU/EUFUS Joint Symposium
June 13 – 15, 2019 | Barcelona, Spain
At the Joint International Symposium for Focused and Therapeutic Ultrasound (EUFUS/ISTU), the SONO-RAY group presented results on robot-assisted and MR-guided focused ultrasound hyperthermia at the exhibition booth and in poster presentations. Congress co-chair Prof. Andreas Melzer led two panels. Group leader Dr. Lisa Landgraf headed the session Therapy Ultrasound.

Project

ICCAS invited lecture at CARS Congress
June 18 – 21, 2019 | Rennes, France
At this year’s Computer Assisted Radiology and Surgery Congress (CARS) the Model Based Automation and Integration group enriched the workshop “Digital Operating Room”. Thomas Neumuth gave an invited lecture on artificial intelligence and machine learning in the operating room and networking of medical devices based on the SDC interface. Furthermore, the topic tissue classification based on hyperspectral imaging was introduced.

ICCAS shows its sporty side
June 19, 2019 | Leipzig
Under tropical conditions, an ICCAS-team took part in this year’s Leipzig Corporate Run. The runners focused not only on personal best times but also on team spirit and sporting fun. With over 20,000 runners from 1,000 companies, this year’s event achieved a new participation record. Thanks to more than 600 running enthusiasts, the University Medicine was once again awarded the title “Most Sporty Company”.

New MR-guided endovascular procedures in London
June 23 – 26, 2019 | London, UK
At the renowned Hamlyn Symposium on Medical Robotics (HSMR) in London Andreas Melzer gave an invited lecture on new technologies for MR-guided endovascular procedures such as: cardiac biopsy, aortic coarctation stenting, heart valve prosthesis and thrombolysis in the workshop Endovascular Intervention.

Kenya partner universities visit ICCAS
June 26, 2019 | ICCAS, Leipzig
Teachers and administration staff from two Kenyan partner universities visited the ICCAS to learn more about practice-oriented university teaching and application-targeted project work. The researchers introduced the intelligent operating room, the digital patient model and a joint industry project. The 16 guests are currently participating in the university’s training program for the worldwide support of small and medium-sized enterprises.

Informatic students test ICCAS developments
June 27, 2019 | ICCAS, Leipzig
Medical informatics students from universities in Brunswick, Heidelberg and Amsterdam received an insight into the research in computer-assisted and robot-aided surgery at ICCAS. They could test minimally invasive surgery at laparoscopy trainers and a robot assisted biopsy. The 16 students are involved in the international Frank van Swieten Lectures of the university’s Institute for Medical Informatics, Statistics and Epidemiology (IMISE).

Future Med Technologies 2019 – Abstract book available
All scientific contributions of this year’s doctoral workshop “Future Med Technologies” (FMT) have been published in an Abstract
book. The FMT workshop was organized by ICCAS in March for the exchange between doctoral candidates with regional companies to jointly launch intelligent medical technology. Thematic fields: Model-assisted therapy and future operating room, Active assisted living, Non-invasive imaging and Image-assisted intervention.

**New Papers Published**


Karakitsios I, Mihcin S, Melzer A. Reference-less MR thermometry on pre-clinical thiel human cadaver for liver surgery with MRgFUS. Minimally Invasive Therapy & Allied Technologies. 2019;1–7. [Link]


Marianne Maktabi, Hannes Köhler, Margarita Ivanova, Boris Jansen-Winkeln, Jonathan Takoh, Stefan Niebisch, Sebastian M. Rabe, Thomas Neumuth, Ines Gockel, Claire Chalopin. Tissue classification of oncologic esophageal resectates based on hyperspectral data. [Link]

**UPCOMING EVENTS**

**DORS 2019 – Only 2 months left!**

August 26 – 30, 2019 | ICCAS, Leipzig

In about two months, our 6th Digital Operating Room Summer School (DORS) will open its doors. You are keen of latest computer-assisted technologies in different medical disciplines? You are interested in hands-on experience with surgical devices? You want to gain insights into modern OR’s and Labs? We are looking forward to your DORS-visit in Leipzig!

Information and registration

**Discuss with us about: AI against cancer**

October 7, 2019 | Leipzig University Hospital, Atrium Pediatric Clinic

**ICCAS Open Day 2019 – Save the Date!**

November 14, 2019 | ICCAS, Leipzig

**JOB OFFERS**

**Scientific staff**

MR-research group:

Computer-assisted image-assisted interventions

Research project:

Development of assistance applications for the personalized tumor therapy

Research project:

Communication technologies and appropriate interfaces for medical technology applications (2 vacancies)

**PEOPLE**

At this year’s joint conference of the societies Mitteldeutsche Gesellschaft für Gastroenterologie and Mitteldeutsche Chirurgenvereinigung, Hannes Köhler won the Young Surgeon’s Prize and Marianne Maktabi the poster prize for their common work on „Hyperspectral imaging during esophagectomy for the measurement of ischemic conditioning effects of gastric conduit“.

Prof. Andreas Melzer was elected a fellow of the British “Academy of Medical Sciences”. The Academy is an independent institution in the United Kingdom representing the diversity of medical science. Furthermore, he has been appointed visiting professor by the National Cancer Center Graduate School of Cancer Science and Policy in South Korea for two years. At the teaching- and research center located in the east of Seoul, experts share their knowledge and practical experience in the fields of research, therapy, cancer control and -policy.

**Dr. Claire Chalopin** successfully completed her habilitation process. Her postdoctoral thesis deals with the technical development of intraoperative 3D ultrasound with contrast medium and dynamic infrared thermography for neurosurgery.