

HIGHLIGHTS

5th Digital Operating Room Summer School



In August, ICCAS hosted its Digital Operating Room Summer School (DORS) for the fifth time. In theory and practice the 16 participants from Italy, UK, the Netherlands, Japan, USA and Germany worked on latest computer-assisted applications in the medical fields of: Ear-Nose-Throat Surgery, Visceral and Heart Surgery, Urology and Radiology. Further topics were the Digital Patient Model, Medical Robotics and future-oriented technologies for the operating theatre of tomorrow. Between lectures, technical exercises and OR visits there was also time for constructive exchanges.

The event, accredited with 35 European CME-Credits (EACCME®), is annually organized in close cooperation with physicians of the Leipzig University Hospital, the Heart Center Leipzig and international tutors. The next DORS is waiting for participants in August 2019.

17th CURAC-Annual Meeting

On September 13 - 15, ICCAS invited to the 17th Annual Conference of the Society for Computer and Robotic Assisted Surgery (CURAC) at the University Medical Campus in Leipzig. According to the motto "Connected into the Future" about 100 experts from the fields of medical computer science, engineering and medicine jointly discussed possibilities and challenges on computer- and robot-controlled technology in operating rooms.

The keynote speakers Prof. Guang-Zhong Yang (director of the Hamlyn Center for Robotic Surgery, London) and Prof. Jens J. Rassweiler (Dep. of Urology, SLK Clinics Heilbronn) held impressive lectures on worldwide developments of medical robot applications. Within the "Get Together" ICCAS presented its research world, especially the fully networked operating room. The Best Paper Award ceremony took place in the oldtimer location DaCapo on the social evening. The first prize went to Simon Strzeletz and his team from the Laboratory for Computer-Assisted Medicine at Offenburg University of Applied Sciences.

Thanks to all participants, contributors and sponsors!



PAST EVENTS

Open Day at ICCAS - Medical-Technology for Everyone

At Open Day 2018, around 100 visitors had the opportunity to gain exciting impressions of the far-reaching research fields at ICCAS. The scientists presented their future-oriented developments, thus cancer cell research with focused ultrasound (SONO-RAY-group), a mobile measuring belt for on-location lung monitoring (Life Support Systems-group), the intelligent operating room and the digital patient model in a simulated tumor board.

Furthermore, a robotic application for the precise removal of tissue samples and an automated and networked 3D ultrasound for brain tumor resections were showed.

ICCAS thanks for the great interest and looks forward to its Open Day in 2019!



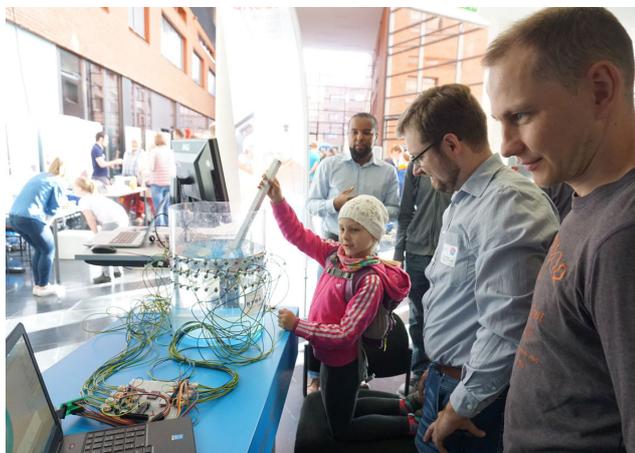
Leipzig University's Prorector for Development and Transfer Prof. Thomas Lenk and project coordinator Moritz Waschbüsch in an interview with SONO-RAY-researcher Xinrui Zhang. | © ICCAS

Special Session at CARS 2018

At this year's Computer Assisted Radiology and Surgery Congress (CARS), Prof. Thomas Neumuth headed a special session on the current topic of „Technical Standardization in the Operating Room“. Ongoing standards were discussed as well as benefits, potentials and applications. The session „Clinical decision making“ with Prof. Andreas Melzer as session leader included ICCAS lectures on topics of high-quality clinical data acquisition and information architecture for a patient-specific dashboard in head and neck tumor boards.

LSS-Exhibit at the Long Night of Sciences

At this year's Long Night of Sciences, the information booth of ICCAS's Life Support Systems-group was a great visitor's attraction. The scientists experimentally explained the function of Electrical Impedance Tomography (EIT), a gentle imaging method based on measurements of electrical conductivities in the human body. Many guests came especially to fasten the measuring belt and to watch their own lung function in the live image of the EIT measuring device.



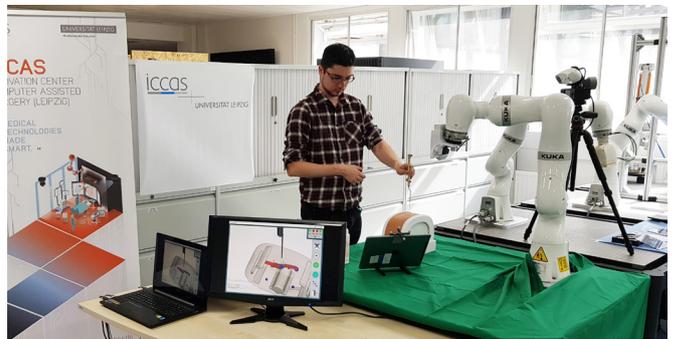
Visitors at the booth of the LSS group on Electrical Impedance Tomography at the Leipzig Long Night of Sciences in the BBZ. | © ICCAS

ProSafeMed- Network Meeting at ICCAS

In June, ICCAS hosted the 3rd ProSafeMed network meeting. In the international ZIM cooperation network which is funded by the Federal Ministry for Economic Affairs and Energy (BMWi) and coordinated by the AGIL GmbH Leipzig, next to ICCAS 22 German and Polish companies and research institutions joined forces to develop new medical devices and procedures for the European medical device market.

Surgical Robot Challenge at Hamlyn Symposium

On June 24, scientists from the SONO-RAY-group presented how robot systems can support the ultrasound-guided removal of tissue samples in the final of the Surgical Robot Challenge in London. Here, the world's leading research groups yearly compete in the field of robot applications for surgery. The competition was held as part of the renowned international Hamlyn Symposium with the support of KUKA AG. The exhibit has already been successfully validated together with radiologists from Leipzig University Hospital. The funds for the robotic arms were provided by the Saxon State Ministry of Science and the Arts (SMWK). Furthermore, Prof. Andreas Melzer passed on his knowledge on MR guided Focused Ultrasound Therapy (FUS) in the symposium related workshop "Image Guided Therapy".



Demo set-up at the Hamlyn Symposium in London. | © ICCAS

EU-MFH Steering Committee Meeting

On July 10 and 11, the international steering committee members of the EU-project "European Modular Field Hospital" (EU-MFH) met in Leipzig to promote the conception of a mobile hospital for emergency operations on behalf of the EU-commission for humanitarian aid and civil protection. The aim is to improve the medical care within the scope of emergency measures of the European civil protection. Prof. Thomas Neumuth chaired the meeting, in which representatives of the humanitarian aid and civil protection of the interior ministries of nine European countries came together.



Steering committee members of the „European Modular Field Hospital“ (EU-MFH) project in front of the Villa Tillmanns in Leipzig. | © ICCAS

Research Meeting Between TWIns and ICCAS

For the second time, ICCAS scientists visited the joint institution for Advanced Biomedical Sciences of Tokyo Women's Medical University and Waseda University (TWIns) in Tokyo to discuss the topic "open networking of medical devices and IT systems in operating room and hospital". During the four-week stay, they succeeded to establish a prototype connection between the two system approaches. This enables the communication of medical devices in Tokyo and Leipzig and serves as the basis for further research work of both teams.



Erik Schreiber, Johann Berger and Max Rockstroh with their colleagues from TWIns in Tokyo. | © ICCAS

MEDIA

YouTuber Lisa Ruhfus Explains the Future OR

In August, youtuber Lisa Ruhfus informed herself about the functionalities of the future operating theatre. Her informative video was commissioned by the BMBF initiative "Workplaces of the Future" and is online to be seen:

Video: <https://www.youtube.com/watch?v=3se1U7Yoxxc>



Prof. Thomas Neumuth explains to Lisa Ruhfus how the intelligent operating room works. | © ICCAS

UPCOMING EVENTS

ICCAS Statusseminar 2018 | January 24, 2019 | Leipzig

ICCAS's status seminar on the research of the year 2018 will take place on January 24, 2019. Exciting presentations as well as the outlook on future tasks will await the visitors. We cordially invite all interested parties to be our guests.

24.01.2019
10:00 - 16:00 Uhr
**STATUS
SEMINAR
2018**
ICCAS
Innovation Center
Computer Assisted Surgery



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