# ICCAS INNOVATION CENTER COMPUTER ASSISTED SURGERY

# **NEWSFEED**

# **ICCAS** on IHE Surgery Technical Committee

ICCAS computer scientist Erik Schreiber has been appointed to the IHE Surgery Technical Committee. Since summer 2016, ICCAS joined the IHE (Integrating the Healthcare Enterprise) initiative. IHE was set up by representatives of medicine and industry to improve interoperability in the healthcare system.

News Link

# **ICCAS** in Dresden for Day of German Unity

#### 03.10.2016 | Dresden

At celebrations marking the anniversary of German reunification in Dresden, plenty of visitors were attracted to the booth hosted jointly by the medical faculties of the universities of Leipzig and Dresden. One of the exhibits was ICCAS's Smart Operating Room, where visitors were able to simulate surgical ENT procedures on head phantoms with the support of innovative assistance systems. Two high-profile visitors to the marquee were Stanislaw Tillich, the Minister President of Saxony, and Dr. Eva-Maria Stange, Saxony's Minister of Science and the Arts.

News Link

# Sandra von Sachsen awarded Faculty of Medicine's Doctoral Prize

#### 25.10.2016 | Leipzig

At the meeting of the Faculty Council on 25 October 2016, Dr. Sandra von Sachsen was awarded the Faculty of Medicine's 2015 Doctoral Prize, which is presented annually by the dean for outstanding scientific achievements in medicine and dentistry. Sandra von Sachsen's PhD thesis is entitled "Use of Numerical Simulations for a Comparison of Stent Grafts in Vascular and Endovascular Medicine. Potential, Requirement Specification and Man–Machine Interface." News Link



Minister President of Saxony Stanislaw Tillich and guests at the ICCAS booth in Dresden. Photo: Christian Hüller Fotografie



## Poster prize for DPM project

#### 26.10.2016 | Halle (Saale)

At this year's Central German ENT Congress in Halle, Dr. Matthäus Stöhr (Department of Otolaryngology, Leipzig University Hospital) was awarded the second poster prize for his article "TNM Classification of the Laryngeal Carcinoma: Modeling and Validation of the Bayesian Network". The project describes the development of a Digital Patient Model to support treatment decisions in patients with head and neck tumors. Stöhr is collaborating on this project with ICCAS computer scientist Mario Cypko under the clinical supervision of Prof. Andreas Dietz.

# **ICCAS displays Future Smart OR at MEDICA 2016**

#### 14.11.2016 - 17.11.2016 | Duesseldorf

ICCAS was showcased at the joint stand "Research for the Future" at the International exhibition MEDICA 2016 in Düsseldorf. Researchers from ICCAS explained aspects of the Future Smart OR, a mobile version of the networked demonstrator OR set up at ICCAS. Visitors were able to try it out for themselves by conducting endoscopy on a phantom.

News Link



Phantom and mobile version of the "Future Smart OR" at ICCAS booth during MEDICA 2016. Photo: ICCA

# **RECENT EVENTS**

#### **CURAC 2016**

15th Annual Conference of German Society for Computer and Robotic Assisted Surgery e.V.

29.09.-01.10.2016 | Bern, Switzerland

Prof. Thomas Neumuth | Session Chair: ,Human Machine Interfaces' Dr. Frank Heckel | lecture: ,Influence of image quality on semi-automatic 3D reconstructions of the lateral skull base for cochlear implantation'

Jan Gaebel | lecture: ,Medical logic modules for monitoring the diagnostic delay in the treatment of laryngeal cancer'

#### **BMT 2016**

Conference of the Swiss, Austrian and German Societies of Biomedical Engineering

04.-06.10.2016 | Basel, Switzerland

Prof. Andreas Melzer | leadership of the expert committees: ,Medical Technology in MRT' and ,Ultrasound'

#### ICCAS focus session ,Computer-Assisted Procedures'

Prof. Andreas Melzer and

Prof. Thomas Neumuth | Session Chairs

Dr. Frank Heckel | lecture: ,A service for monitoring the quality of intraoperative cone beam CT images'

Michael Unger | lecture: ,Automatic depth scanning system for 3D infrared thermography'

#### **SMIT 2016**

28th Conference of the International Society for Medical Innovation and Technology

05.-08.10.2016 | Delft, The Netherlands

#### Special session ,Intelligent Operating Room'

Richard Bieck | lecture: ,Situation-based extraction of medical device activity for adaptive or task management' Stefan Franke | lecture: ,Context-aware medical assistance systems in integrated surgical environments' Juliane Neumann | lecture: ,Ontology-based instrument classification for workflow-driven surgical assistance in the intelligent operating room'

Erik Schreiber | lecture: ,Intraoperative process model generation using XMS and ISO/IEE 11073'

#### 11th Interventional MRI Symposium

07.-08.10.2016 | Baltimore, MD, USA

Prof. Andreas Melzer | keynote lecture on 'MR-guided focused ultrasound'; presentation of 'New MRI interventional Coil DuoFlex' and 'MRI safe Guide Wires'

#### **MICCAI 2016**

19th International Conference on Medical Image Computing & Computer Assisted Intervention

17.-21.10.2016 | Athens, Greece

**M2CAI** Workshop

Prof. Thomas Neumuth | Co-organizer

Stefan Franke | presentation: ,Towards the intelligent OR - Implementation of distributed, context-aware automation in an integrated surgical working'

Juliane Neumann | lecture: ,BPMNSIX – A BPMN 2.0 surgical intervention extension'

# Scientists from Jordan visit ICCAS

25.10.2016 | ICCAS, Leipzig

Jordanian professors of medicine, biotechnology, medical informatics and engineering visited the ,Future Smart OR' at ICCAS.

#### **WCES 2016**

15th World Congress of Endoscopic Surgery

09.-12.11.2016 | Shanghai-Suzhou, China

Prof. Andreas Melzer | invited lecture: 'Non-invasive surgery by image guided Focused Ultrasound'

#### **RSNA 2016**

102nd Scientific Assembly and Annual Meeting of the Radiological Society of North America

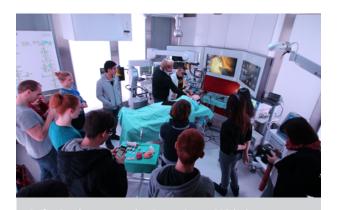
27.11.-01.12.2016 | Chicago, IL, USA

Prof. Andreas Melzer | presentation of 'New MRI interventional Coil DuoFlex' and 'MRI safe Guide Wires'

#### **ICCAS Open Day during Dies academicus**

02.12.2016 | ICCAS, Leipzig

During Dies academicus (foundation date of Leipzig University) computer scientist Max Rockstroh presented the operating room as part of a medical team and how to teach its selfthinking in the Study Center of Leipzig University Hospital. ICCAS was open for public visitors and presented it's ,Future Smart OR'.



## **Symposium Medical Engineering**

08.12.2016 | Leipzig

During the symposium ICCAS informed participants about the achievements of the satellite project ,OR.NET – secure and dynamic networking in the operating room and clinic'. In addition excursions to the ,Future Smart OR' at ICCAS were offered.

# **UPCOMING EVENTS**

# Status Seminar & Advisory Board Meeting 2016 19.01.2017 | ICCAS, Leipzig

A review of ICCAS activities in 2016. Reports of all research groups and presentation of research highlights await the visitors. Afterwards the meeting of the advisory board will be held.

#### **EAES Technology Wintermeeting 2017**

03.02.2017 | Frankfurt am Main

Prof. Andreas Melzer | invited lecture

#### **SPIE Medical Imaging**

11.-16.02.2017 | Orlando (Florida), USA

Erik Schreiber | Lecture during IHE-Meeting about requirements of the digital operating room in relation to interoperability, standardization and certification

Link SPIE Medical Imaging

# **PEOPLE**

# Groupleader of SONORAY project

Dr. Doudou Xu



Since October 2016 Dr. Doudou Xu (Chongqing, China) is our research group leader of the new SONORAY project at the ICCAS. Xu completed her doctorate 2014 in Biomedical Engineering at the University of Dundee (UK). Her research work has been focused on modern cancer treatment. The SONORAY project aims to combine therapeutic focused ultrasound (FUS) and radiation therapy (RT) to treat malignant solid tumors and tumor metastases with the aim of a more effective cancer treatment.

# **Guest researcher from Mexico Jesús Guillermo Cabal Aragón**



Since September 2016 Jesús Guillermo Cabal Aragón from the University of Guanajuato (Mexico) joined the Multimodal Intraoperative Imaging group (IMI). He studied **Communications and Electronics** Engineering and received a scholarship for three years from the Mexican National Council on Science and Technology (CONACYT) to perform his PhD study at the ICCAS. The topic of his PhD is the development of a patient specific intraoperative model of cerebral structures based on multimodal imaging in order to support brain tumor operations.

#### **IMPRINT**

a good start in a
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#### **Editor:**

# **Leipzig University**

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