ICCAS — Newsletter 02/2020

INNOVATION CENTER
COMPUTER ASSISTED SURGERY



EVENTS



ICCAS BECOMES INSTITUTE |

May, 2020 | ICCAS, Leipzig

After 15 years of outstanding research, ICCAS has now been transformed into a scientific institution within the Faculty of Medicine and, thus, receives official recognition as an institute of the Leipzig University. It is assigned to the clinical-practical teaching unit.

The whole ICCAS team would like to thank all those involved who have made this success possible!





ICCAS DEVELOPS CORONA STUDY APP COVIDVAL AGAINST CORONA |

April, 2020 | ICCAS, Leipzig



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ICCAS has developed the study app COVIDVAL PRO within the framework of the COVIDVAL patient study, funded by the Saxon Ministry of Science and Art (SMWK) and conducted at the St. Georg Hospital in Leipzig. The app enables patient data to

be collected telemedically. Thus, it minimizes personal consultations in the study center and allows participation under quarantine conditions. This considerably simplifies the study flow. The study also investigates how antihypertensive drugs affect the course of the disease.

Press Release (German)
Link COVIDVAL



ICCAS - 5G PIONEER IN MOBILE MEDICAL TECHNOLOGY I

May 14, 2020 | BMW Group Plant, Leipzig



Within the framework of the project "Trimodal 5G Pioneer Region Leipzig North" (Tri5G), Prof. Thomas Neumuth and a team of ICCAS scientists presented the research on emergency care using mobile medical technology in interaction with public 5G and campus networks. Tri5G aims to make the 5th generation mobile internet available for the automotive industry, logistics and IT companies as well as scientific and public applications in the north of Leipzig. The City of Leipzig commissioned a feasibility study, whose results were presented at the BMW plant in Leipzig in May.

Press release (German)



STATUSWEBINAR COMPLETES SONO-RAY PROJECT I

June 18, 2020 | ICCAS, Leipzig



At the public status webinar of the expiring BMBF joint project SONO-RAY, the two partners OncoRay and ICCAS presented their final project results.

Since 2016, the scientists around Prof. Andreas Melzer (ICCAS) and Prof. Mechthild Krause (OncoRay, Dresden) have been researching on a new tumor therapy method that combines magnetic resonance-guided focused ultrasound (FUS) and radiation therapy. They were able to verify positive thermal and mechanical effects of FUS on cancer cells and developed a robotic system for the exact positioning of the ultrasound radiation therapy. In a pilot study in Dresden, the first patients with localized prostate cancer have been treated by MR guided FUS (TulsaPro) since September 2019. The previous results are a major step towards clinically oriented implementation of the combination therapy.

Project website



CARS AND EAES CONGRESSES WENT ONLINE | June 2020 | online

During this year's first online congress of the Society for Computer Assisted Radiology and Surgery (CARS), Prof. Andreas Melzer and Prof. Thomas Neumuth virtually attended, presented and chaired sessions with focus on image-guided therapy and interventions. They talked, for example, about the development of an integrated robotic dual-arm system and a web-based surgical workflow modeling tool with ontology integration. At the virtual congress of the European Association for Endoscopic Surgery (EAES), Prof. Andreas Melzer led the first online course on ultrasound for surgeons.

PUBLICATIONS



REGIONS4PERMED REPORT ON BIG DATA PUBLISHED |

April 10, 2020 | ICCAS, Leipzig

As Regions4PerMed advisory board member, Prof. Thomas Neumuth contributed to the initiative's new Report on Big Data, Electronic Health Records and Health Governance. Regions4PerMed is a project by several European regional governments with the

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aim to foster comprehensive personalized medicine within the European Healthcare system. The report gives recommendations to key stakeholders regarding the regional governance and use of health data.

KA1 Report

WHITE PAPER ON SECURE AI SYSTEMS FOR THE MEDICAL FIELD |

April 7, 2020 | ICCAS, Leipzig

Prof. Thomas Neumuth is co-author of the white paper on The Safe
Use of Artificial Intelligence (AI) in the Medical
Field of the BMBF's Platform Learning Systems.
Using a fictitious AI-application scenario in the

Using a fictitious Al-application scenario in the cancer treatment of the future, the publication indicates the prerequisites for the reliability of Al-supported therapy recommendations. Prof. Neumuth and Prof. Melzer are working in the platform's expert group Health, Medical Technology and Maintenance.

White Paper

D Lernende Systeme



We hope the new format will help to promote the important

knowledge exchange. For more details and the program follow the

congress website.



The newest research paper from ICCAS' project team in the field of Intraoperative Multimodal Imaging has been published in The International Journal of Medical Robotics and Computer Assisted Surgery.

Title: "Classification of Hyperspectral Endocrine Tissue Images Using Support Vector Machines"

Paper link

For an extensive list of ICCAS' Publications: List 2020

UPCOMING EVENTS



ICCAS' Annual Digital Operating Room Summer School POSTPONTED to 2021!

ICCAS' Summer School in its 7th edition will be postponed to next year due to the coronavirus pandemic and the associated travel situation and access restrictions of our partner clinics. Nevertheless, we are already looking forward to welcoming you to Leipzig in 2021 with a refreshed concept and exiting program. Stay tuned on <u>our website</u>.



BMT 2020 WILL BE VIRTUAL

This year's DGBMT Annual Conference on Biomedical Engineering chaired by Andreas Melzer and Thomas Neumuth will be held virtually. Furthermore, the topics of the cancelled Active Assisted Living (AAL) Congress will be integrated into the BMT Congress. Moreover, the BMT Young Net initiative invites students, doctoral candidates and young professionals to an online program.







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