



第209回GMSI公開セミナー／第33回CIAiSセミナー

Translational imaging for innovative integrated procedures Dr. Christoph Hennersperger

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Learning real-time 3D perception from noisy visual data Dr. Federi Tombari

日時: 2016年10月6日(木) 11:00-12:00

場所: 東京大学工学部 3F 232号講義室(2-301)

Title: Translational imaging for innovative integrated procedures

Abstract: Medical imaging is an essential part of modern medicine. With new generations of imaging systems, information can be provided on-demand and in real-time. With respect to an interventional setting, however, an adaptation to the performed procedure (e.g. surgery), as well as the personalization to each individual patient is necessary. This talk will give an overview of recent research activities at the chair for Computer Aided Medical Procedures, aiming at the development of systems for innovative medical procedures overcoming today's limitations. By integrating physical and domain models into processing systems for ultrasound imaging, examples for the improved reconstruction and intuitive visualization will be shown. On this basis, the talk will also discuss innovative robotic imaging systems tailored to the specific requirements of interventional and screening environments, which will be demonstrated for robotic SPECT and 3D-US acquisitions.



Dr. Christoph
Hennersperger

Title: Learning real-time 3D perception from noisy visual data

Abstract: This talk illustrates an overview of the research activities recently developed at the Computer Vision group of the CAMP Chair, TUM with a focus on the use of machine learning for RGB-D image understanding. This regards in particular the development of reliable technology for processing noisy visual data such as that acquired from low-cost consumer depth cameras and webcams, in the context of 3D computer vision applications such as 3D reconstruction, object detection and tracking, and deep learning for depth prediction and semantic segmentation. Finally, the talk will present an application of RGB-D perception and deep learning to the medical context of human pose estimation for epileptic seizure detection.



Dr. Federi Tombari