Sehr geehrte Damen und Herren,

hiermit laden wir Sie herzlich ein zu dem Vortrag:

“Deep Learning Meets Image Analysis and Visualization in Cardiology and Cardiac Surgery“

von Sandy Engelhardt
Hochschule Mannheim

am Montag, 13.05.2019, 16.15 Uhr

Im K13, Turm Süd Marsillus Arkaden, Im Neuenheimer Feld 130.2, 69120 Heidelberg

Cardiac imaging improves on diagnosis of cardiovascular diseases by providing images at high spatiotemporal resolution. Manual evaluation of these time-series, however, is expensive and prone to biased and non-reproducible outcomes. Convolutional neural networks (CNN) have recently shown outstanding performance in medical image processing. We present a method that addresses named limitations by integrating segmentation and disease classification into a fully automatic processing pipeline. We will reflect on our winning contribution for MICCAI’s 2017 Automated Cardiac Diagnosis Challenge (STACOM). The fully automatic processing pipeline constitutes an attractive software for clinical decision support in adult and pediatric cardiology due to the visualization of segmentation maps, the comprehensive quantification of cardiologic assessment and the rapid processing speed.

In the second half of the talk, we will focus on computer-assisted cardiac surgery applications. We will present novel visualizations of the mitral valve to improve planning of complex mitral valve repair surgeries. Beyond visualization, we present enhanced tools for surgical training and an unique training simulator concept based on ‘Hyperrealism’.

Alle Interessenten sind herzlich eingeladen!

Gezeichnet: Dickhaus, Kieser, Knaup, Kopp-Schneider, Wellek

Organisation: Birgit Schleweis
Institut für Medizinische Biometrie und Informatik, Im Neuenheimer Feld 130.3, 69120 Heidelberg Tel. 06221/56-4142. Bitte registrieren Sie sich hier für die Ankündigung der Vorträge per E-Mail: https://web.imbi.uni-heidelberg.de/newsletter/