KEYNOTE TALK
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8:30 AM – 9:30 AM / Ballroom 1-2

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Shaping the Future through Innovations: Personalized Medicine

Dorin Comaniciu
Integrated Data Systems Department
Siemens Corporate Research

Abstract

The promise of personalized medicine is to do more in advance, promote early detection of the disease, more efficient workflows, and provide patient-specific therapies. This talk will analyze two important imaging dimensions of personalized medicine: knowledge-based imaging and the in-silico modeling of the body function and disease. We will underline the role that semantics plays in parsing the medical image data into thousands of meaningful components. We will showcase new and comprehensive cardiac models that include patient's anatomy, dynamics and hemodynamics. By presenting a couple of example technologies that make today a difference in hospitals we will extrapolate the clinical needs, the technology potential and expectations for the near future.

We acknowledge the contributions of Siemens colleagues and academic and clinical collaborators.

Speaker Bio-Sketch: Dorin Comaniciu is Global Technology Head for Image Analytics and Informatics at Siemens Corporate Research, Princeton, New Jersey, leading a research team with offices in the US, Germany, Austria, and China. His scientific interests include robust computer vision, medical imaging, motion estimation, object tracking, information fusion, biomedical informatics, and personalized healthcare. Dorin holds 80 US patents and has co-authored more than 200 publications in the area of information processing, including best papers in CVPR and MICCAI. He received the 2004 Siemens Inventor of the Year Award, the 2010 IEEE Longuet-Higgins Prize and served as the scientific director of Health-e-Child, a project granted the 2008 Europe's Information Society Grand Prize. The aortic valve implantation technology his team contributed to Siemens received the 2010 Innovation Award of the European Association for Cardio-Thoracic Surgery. Since 2010 he is a Top Innovator of Siemens AG. He served as an Associate Editor of IEEE Transactions on Pattern Analysis and Machine Intelligence (2006-2008) and IEEE Transactions on Medical Imaging (2009-2011). Dorin graduated from University of Pennsylvania - The Wharton School (AMP'11), Rutgers University (PhD'99), and the Polytechnic University of Bucharest (PhD'95, Dipl.-Ing'88)