
Novel Computational Imaging Modalities

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Résumé

Résumé: *The last few years have seen a strong impetus of computational processing techniques onto the design of optical measurement, imaging, and projection systems. Computational techniques are becoming an integral part of novel optical devices. The digitization of the complete imaging pipeline, in conjunction with ever more powerful (on-board) processing capabilities has enabled this possibility. Being closer to the data sources and co-designing measurement, imaging, and projection systems has been proven to enable significant new capabilities and improvements of existing ones. In my talk I will give an overview of this emerging research area, outlining the major developments and trends of recent years.* **Bio:** *Ivo Ihrke is a permanent researcher at Inria Bordeaux Sud-Ouest where he leads the research group "Generalized Image Acquisition and Analysis" which is supported by an Emmy-Noether fellowship of the German Research Foundation (DFG). Prior to that he was heading a research group within the Cluster of Excellence "Multimodal Computing and Interaction" at Saarland University. He was an Associate Senior Researcher at the MPI Informatik, and associated with the Max-Planck Center for Visual Computing and Communications. Before joining Saarland University he was a postdoctoral research fellow at the University of British Columbia, Vancouver, Canada, supported by the Alexander von Humboldt-Foundation. He received a MS degree in Scientific Computing from the Royal Institute of Technology (KTH), Stockholm, Sweden (2002) and a PhD (summa cum laude) in Computer Science from Saarland University (2007). His main research interest are the modeling of forward and inverse light transport processes and computational algorithms for solving these large scale problems in the context of computational imaging, measurement, and display. He has been Program Chair of PROCAMS 2012, Colorado Springs, USA, and the Workshop on Imaging New Modalities (in conjunction with German Conference on Pattern Recognition) 2013, Saarbrücken, Germany. He has (co-)organized several tutorials and courses at Eurographics and SIGGRAPH on computational imaging and projection.*

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