

## informatik-Kolloquium

Der Fachbereich Informatik der Johannes Kepler Universität Linz<sup>1</sup> lädt in Zusammenarbeit mit der Österreichischen Gesellschaft für Informatik (ÖGI) zu folgendem Vortrag ein:

- Topic:** Computational Projection Mapping
- Presenter:** Prof. Daisuke Iwai, Osaka University
- Date:** May 22nd, 2019, 10:00am CET
- Location:** Johannes Kepler University Linz,  
Science Park Building 3, Room 063

**Abstract:** Projection mapping dynamically augments the appearance of a real surface by digital image projection. It has been applied in many application fields such as medicine, entertainment, and product design. However, the projected results are always suffered from the reflectance properties of the surface such as spatially varying textures, subsurface scattering, and inter-reflection, and also from projector's technical limitations such as low dynamic range, narrow depth-of-field, and latency. To resolve these issues and enhance the image quality of projection mapping, several technologies based on computational display approaches have been developed. Computational display is the joint design of hardware with computational algorithms. A unique and interesting property of computational display for projection mapping is that the hardware we try to optimize includes not only optics but also surfaces, while normally only optics has been considered in computational display researches for other displays. This talk introduces a series of computational projection mapping researches, and also discuss its new application field---human augmentation.

**Short Bio:** Daisuke Iwai received his B.S., M.S., and Ph.D. degrees from Osaka University, Japan, in 2003, 2005, and 2007, respectively. He was a visiting scientist at Bauhaus-University Weimar, Germany, from 2007 to 2008, and a visiting Associate Professor at ETH, Switzerland, in 2011. He is currently an Associate Professor at the Graduate School of Engineering Science, Osaka University. His research interests include spatial augmented reality (a.k.a. projection mapping) and projector-camera systems. He published 100+ research papers in the related areas and received several academic awards including Best Paper Award in IEEE VR 2015, Best Paper Award in IEEE 3DUI 2015, Best Paper Runner-up Award in IEEE ISMAR 2016, and Best Research Demonstration Runner-up Award in IEEE VR 2019. He is a member of the IEEE.

*Einladender: Univ.-Prof. Dr Marc Streit, Institute of Computer Graphics*

<sup>1</sup> Der Fachbereich (<http://informatik.jku.at>) besteht aus folgenden Instituten: Application Oriented Knowledge Processing (FAW), Bioinformatics, Computational Perception, Computer Architecture, Applied Systems Research and Statistics, Computer Graphics, Formal Models and Verification, Networks and Security, Integrated Circuits, Pervasive Computing, Software Systems Engineering, System Software, Telecooperation, Signal Processing