Colloquium on VR & Visual Data Analysis

High-End Medical and Other Visualization With the Virtual Reality SunCAVE

Tuesday, Aug. 7th, 2018, 3:00pm
Conference Room 1.01, Weyertal
121 (RRZK / Computer Science)

University of Cologne
Dept. of Computer Science
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Speaker: Dr. Jürgen Schulze

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Vitae

Dr. Jürgen Schulze is an Associate Research Scientist at UCSD's Qualcomm Institute, and an Associate Adjunct Professor in the computer science department, where he teaches computer graphics and virtual reality. His research interests include applications for virtual and augmented reality systems, 3D human-computer interaction, and medical data visualization. He holds an M.S. degree from the University of Massachusetts and a Ph.D. from the University of Stuttgart, Germany. After his graduation he spent two years as a post-doctoral researcher in the Computer Science Department at Brown University working on real-time volume rendering in virtual reality. Dr. Schulze is the director of the Immersive Visualization Laboratory at UCSD's Qualcomm Institute.

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Abstract

The SunCAVE is the latest virtual reality system built at the University of California in San Diego. It displays about 500 Megapixels on 70 4k TVs in 3D stereo and employs 36 computers with 71 high end graphics cards for rendering. At night, the graphics cards are used as a supercomputer for machine learning training algorithms. In this presentation Dr. Schulze will talk about the SunCAVE's technology, various research projects it is involved in, as well as other VR-related projects at UCSD, such as the biggest VR classroom in the USA, and the first VR courses on edX. A focus of the presentation is going to be on UCSD's recent research around medical data visualization towards how medical doctors might use virtual reality in the future for diagnosis and surgical intervention of abdominal issues, including Crohn's Disease and Diverticulitis.