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GASTVORTRAG

Timo Ropinski

Linköping University, Sweden



“Interactive Volume Illumination: Approaches and Impact”

Abstract:

In recent years several interactive volumetric illumination models have been proposed. The algorithms described in literature can be classified based on their illumination characteristics as well as their technical realization. In this talk I will briefly review the state-of-the-art regarding interactive volume illumination techniques, before describing own developments in greater detail. In this context, I will also refer to the benefits and downsides of ray-casting based volume illumination algorithms in comparison to slice-based approaches. Finally I will share our findings on the actual impact of these techniques on scene perception.

Biography:

Timo Ropinski is a professor of interactive visualization at Linköping University. After receiving his PhD in 2004 from the University of Münster, he became a project leader within the collaborative research center SFB 656, a cooperation between researchers from medicine, mathematics, chemistry, physics and computer science. His research is focused on interactive aspects in medical volume visualization with the goal to make these techniques more accessible. In 2009 Timo finished his Habilitation. He is regularly holding lectures and seminars on scientific visualization, and is the initiator of the Voreen open source project, in which a flexible volume rendering framework is developed. The results of his scientific work have been published in various international conferences including Eurographics, IEEE Visualization, IEEE VR, VMV and others.

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