Informatik-Kolloquium

Rheinisch-Westfälische Technische Hochschule Aachen
Lehrstuhl für Informatik VIII

RWTH

EINLADUNG

Zeit: Freitag, 04. Mai 2001, 15.15 Uhr

Ort: Raum 5056, Ahornstr.55

Referent: Prof. Dr. Peter Schröder, Caltech, Pasadena, U.S.A

Thema: Digital Geometry Processing

Abstract:

Looking at digital multimedia data we can identify a progression from 1D (sound) to 2D (images) and 3D (video) as compute power and acquisition capabilities (e.g., digital cameras) have become successively cheaper.

We are now seeing a similar development with the 4th wave of multimedia, geometry. Acquisition and creation are becoming cheaper (though they are still very laborious) and computer power is getting to the point where even complex geometry can be manipulated on low end hardware.

Digital signal processing was at the heart of making the earlier waves of multimedia data easy and flexible to manipulate. Unfortunately many of the techniques do not carry over easily to the surface setting. Instead a new apparatus is needed to enable the processing of geometry.

In my talk I will give an overview of some Digital Geometry Processing algorithms which are largely based on subdivision surfaces and very general multiresolution (hierarchical) representations. I will use editing and geometry compression as particular examples to demonstrate the benefit of this new class of algorithms but also touch on a number of other applications, for example physical simulation.

Es laden ein: Die Dozenten der Informatik