Informatik-Kolloquium

Rheinisch-Westfälische Technische Hochschule Aachen
Lehrstuhl für Informatik VIII

EINLADUNG

Zeit: Montag, 20. August 2001, 14.00 Uhr

Ort: Seminarraum Nr. 6317 Ahornstr.55

Referent: Zachi Karni, Technion, Haifa

Thema: Spectral Compression of Mesh Geometry: Fundamentals and Improvements

Abstract:

Spectral methods have been used extensively in the last two decades for compression and analysis of signals and two-dimensional images. The popular JPEG format projects the image pixels on a 2D-DCT basis and uses the resulting spectral coefficients to get better compression ratios.

Spectral decomposition for 3D meshes was proposed by Karni and Gotsman in SIGGRAPH 2000. This decomposition constructs basis functions based only on the mesh connectivity. Like in the jpeg format, they projected the mesh geometry onto the new basis and used the resulting coefficients for progressive reconstruction.

This talk will describe the fundamentals of 3D spectral decomposition and explain why it works and how to apply it to mesh geometry compression. The talk will detail the difficulties of such methods and finally introduce new techniques that overcome some of the difficulties and make spectral methods more practical.

Es laden ein: Die Dozenten der Informatik