Informatik-Kolloquium

Fachgruppe Informatik

Lehrstuhl für Informatik 12 / Virtual Reality Group

RHEINISCH-WESTFÄLISCHE TECHNISCHE HOCHSCHULE AACHEN

EINLADUNG

Zeit: Donnerstag, 25.06.2015, 11:00 Uhr

Ort: Seminarraum 003, IT Center, Kopernikusstr. 6

Referent: Dr Hamish Carr

Titel: Topological Analysis of Scientific Data

Abstract:

As scientific data sets increase in size and complexity, scientific visualization increasingly depends on formal analysis of the data. One of the most successful forms of analysis uses computational topology to analyse properties such as minima, maxima, thresholds, ridges and flow. Topological analyses have been developed for scalar fields, for vector fields, and more recently, for multi-variate and tensor fields. I will survey these approaches, with particular attention to recent developments that generalise topological analysis of scalar data to topological analysis of multivariate data based on fiber topology.

Biography:

Hamish Carr received his B.C.Sc.(Hons.) (1998) from the University of Manitoba, and his M.Sc. (2000) and Ph.D. (2004) on topological visualisation from the University of British Columbia. Since then, he has held posts as Lecturer at University College Dublin and Senior Lecturer at the University of Leeds. His research interests include computational topology, computational geometry, scientific visualisation, computer graphics and geometric processing of acquired data (including LIDAR data). He is a member of the IEEE, ACM and Eurographics, and is active in the graphics and visualisation communities.