

Vorträge

Donnerstag, 13. September 2012, Seminarraum, Olga Taussky-Todd Seminarraum (C 209), UZA 4
Außerordentliches mathematisches Kolloquium

Vortrag: 14:00-14:45 Uhr:

Prof. Dr. Christoph Schnörr (Uni Heidelberg)

„Variational and Optimization Approaches to Image Partitioning – Discrete and Continuous Aspects“

(K&K 14:45 Uhr – 15:00 Uhr, Common Room C 206)

Vortrag: 15:15-16:00 Uhr

Prof. Dr. Mathias Hein (Uni Saarland)

“Tight relaxations of combinatorial problems as nonlinear eigenproblems”

Abstract:

Many problems in unsupervised learning are of combinatorial nature. Prominent examples are balanced graph cuts for clustering, feature selection and the densest subgraph problem in community detection.

The purpose of the talk will be i) to address and characterize the full range of combinatorial problems which allow for a tight relaxation as a continuous nonlinear eigenproblem and ii) to discuss the efficient computation of nonlinear eigenvectors. While the resulting optimization problem for the computation of nonlinear eigenvectors is non-convex, nonlinear eigenvectors can be computed by solving a sequence of convex optimization problems.

For the solution of the combinatorial problems we will show how one can develop similarly algorithms which compute critical points via a discrete d.c. type algorithm. We are aiming at a comparison of both types of algorithms in the continuous and set-valued domain in terms of speed and quality.

Dekan Univ.-Prof. Dr. Harald Rindler, Univ.-Prof. Dipl.-Ing. Dr. Otmar Scherzer

**Montag, 3. September 2012, ab 9:00 Uhr bis Freitag, 14. September 2012, ab 9:00 Uhr,
Erwin Schrödinger Lecture Hall, Boltzmanngasse 9, 1090 Wien**

**The Interaction of Geometry and Representation Theory. Exploring new frontiers
(Details siehe Attachment)**

organized by: Andreas Cap, Alan Carey, A. Rod Gover, C. Robin Graham, Jan Slovák