

18/10/2019

InterCity - seminar

19

Neuchâtel - Fribourg/Freiburg
Bern

Time	Speaker	Talk
14:00	Adam Kurpisz (ETH Zürich)	New Dependencies of Semialgebraic Proof Systems in Polynomial Optimization One of the most promising approaches in constructing efficient algorithms for Constrained Polynomial Optimization Problems (CPOP) is based on certifying non-negativity of polynomials over basic semialgebraic sets. We compare four key hierarchies for solving CPOP arising from semialgebraic proof systems: Sum of Squares (SOS), Sum of Diagonally Dominant (SDSOS), Sum of Nonnegative Circuits (SONC), and the Sherali Adams (SA). We prove a collection of dependencies among these hierarchies both for general CPOPs and for optimization problems on the Boolean hypercube. The results presented in this talk complete the current understanding of the dependencies among these semialgebraic proof systems.
15:30	Jose Samper (MPI MIS Leipzig)	On Stanley's conjecture for h-vectors of matroids In 1977 Stanley conjectured that the h -vector of the independence complex of a matroid is pure O -sequence. This is a combinatorial strengthening of a statement about generic Artinian reductions of the face ring of the independence complex, in terms of coefficients of certain evaluation of the Tutte Polynomial of the matroid. The goal of the talk is to explain this conjecture, its history and new approach based on polyhedral geometry.

The talks will take place in 228, ExWi, Sidlerstrasse 5, University of Bern.

For further informations please refer to the seminar's webpage

www.combinatorialmethods.ch/intercity/

or contact the organisers:

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