Oberseminar Theoretische Informatik
Sommersemester 2009

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Polynomial Kernelizations for MIN $F^+\Pi_1$ and MAX NP

Montag, 13.07.2009 14:00 (c.t.) Seminarraum 3319 (Ernst-Abbe-Platz 2, 3. Stock).

The relation of constant-factor approximability to fixed-parameter tractability and kernelization is a long-standing open question. We prove that two large classes of constant-factor approximable problems, namely MIN $F^+\Pi_1$ and MAX NP, including the well-known subclass MAX SNP, admit polynomial kernelizations for their natural decision versions. This extends results of Cai and Chen (JCSS 1997), stating that the standard parameterizations of problems in MAX SNP and MIN $F^+\Pi_1$ are fixed-parameter tractable, and complements recent research on problems that do not admit polynomial kernelizations (Bodlaender et al. ICALP 2008). (Stefan Kratsch, STACS 2009)

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