

Oberseminar Theoretische Informatik
Wintersemester 2009/2010

Mathias Weller

Extended Islands of Tractability for Parsimony Haplotyping

Montag, 07.12.2009 14:00 (c.t.) Seminarraum 3319 (Ernst-Abbe-Platz 2, 3.
Stock).

In computational biology, PARSIMONY HAPLOTYPING is the problem of finding a smallest set of haplotypes that can explain a given set of genotypes. The problem is NP-hard, and many heuristic and approximation algorithms as well as polynomial-time solvable special cases have been discovered. We propose improved fixed-parameter tractability results with respect to the size of the haplotype set. Furthermore, we show that the problem becomes polynomial-time solvable if the given set of genotypes is complete, i.e., contains all possible genotypes that can be explained by the set of haplotypes.

Homepage:

<http://theinfl.informatik.uni-jena.de/teaching/ws0910/oberseminar-ws0910>