

## Oberseminar Theoretische Informatik

Wintersemester 2007/2008

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# Fixed-Parameter Algorithms for Cluster Vertex Deletion

Mo, 26.11.2007 um 14 Uhr (c.t.) im SR 3319 (Ernst-Abbe-Platz 2, 3. Stock).

We initiate the first systematic study of the NP-hard CLUSTER VERTEX DELETION (CVD) problem (unweighted and weighted) in terms of fixed-parameter algorithmics. Here one searches for a minimum number of vertex deletions to transform a graph into a collection of disjoint cliques. The parameter is the number of vertex deletions. We present several efficient fixed-parameter algorithms for CVD. Our iterative compression algorithm for CVD seems to be the first nontrivial application of this fairly new technique to a problem that is not a feedback set problem. Moreover, we study the variant of CVD where the number of cliques to be generated is specified. Here, we detect surprising connections to fixed-parameter algorithms for (weighted) VERTEX COVER.

Internetseite der Veranstaltung:

<http://theinf1.informatik.uni-jena.de/teaching/ws0708/oberseminar-ws0708>