

**Oberseminar Theoretische Informatik**  
Sommersemester 2008

Matthias Hagen

## **Some fixed-parameter tractable classes of hypergraph duality and related problems**

Monday, April 28 at 2:30pm in room 3319 (Ernst-Abbe-Platz 2, floor 3).

In this talk we present fixed-parameter algorithms for the problem DUAL—given two hypergraphs, decide if one is the transversal hypergraph of the other—and related problems. In the first part, we consider the number of edges of the hypergraphs, the maximum degree of a vertex, and a vertex complementary degree as our parameters.

In the second part, we use an Apriori approach to obtain FPT results for generating all maximal independent sets of a hypergraph, all minimal transversals of a hypergraph, and all maximal frequent sets where parameters bound the intersections or unions of edges.

Homepage:

<http://theinfl.informatik.uni-jena.de/teaching/ss08/oberseminar-ss08>