

Institut für Diskrete Mathematik

## Combinatorics Seminar

Friday 31st January 12:30

Online meeting (Webex)

### Tiling thresholds in 3-uniform hypergraphs

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A classical question in extremal (hyper)graph theory asks for tight minimum degree conditions which force the existence of certain spanning structures in large graphs, generalising Dirac's theorem from 1952. One aspect of this concerns tiling graphs with identical vertex disjoint copies of a small subgraph. For example, asking for tight minimum codegree conditions in a  $k$ -uniform hypergraph which force a perfect matching (under the obvious additional necessary condition that the number of vertices is divisible by  $k$ ). Whilst there has been a lot of interest in these types of tiling problems, still very few results are known. We share a new result in this area, which is joint work with Amarja Kathapurkar, Natasha Morrison and Richard Mycroft.

Joshua Erde, Mihyun Kang, Ronen Wdowinski