Discrete Mathematics Seminar

Illinois State University

2:00–2:50 pm, February 27@ STV 120

Speaker: Saad El-Zanati, Illinois State University

On k-factorizations of uniform hypergraphs of small order–An Updated Version

A *k-factorization* of the complete t-uniform hypergraph $K_v^{(t)}$ is an H-decomposition of $K_v^{(t)}$ where H is a k-regular spanning subgraph of $K_v^{(t)}$. In the first part of this talk, we give a quick summary of some of the known results on k-factorizations of complete graphs. We then investigate which 2-regular and 3-regular spanning subhypergraphs of $K_v^{(3)}$ factorize $K_v^{(3)}$ or $K_v^{(3)} - I$, where I is a 1-factor and $v \leq 10$.

This is an updated version of a prior talk on joint-work with Peter Adams, Peter Florido, and William Turner.