
SARA HERKE, The University of Queensland

Hamilton path decompositions of complete multipartite graphs

If a graph with n vertices and m edges can be decomposed into edge-disjoint Hamilton paths, then $t = \frac{m}{n-1}$ is an integer, where t is the number of Hamilton paths, and the maximum degree is at most $2t$, because each Hamilton path has maximum degree 2. We give an overview of our proof that, for complete multipartite graphs, these conditions are also sufficient. This talk is based on joint work with Darryn Bryant and Hao Chuien Hang.