
PETER DANZIGER, Ryerson University

Bipartite 2-factorisations of complete multipartite graphs

In the 1960's Ringel introduced the Oberwolfach problem: factor the complete graph, K_n , into an arbitrary specified 2-factor. Subsequently, a number of variations on this problem have been suggested, including specifying a number of 2-factors and an extension to the even case. We consider the case of a factorisation of the complete multipartite graph into bipartite 2-factors, and show that the obvious necessary conditions are sufficient, except that there is no factorisation of $K_{6,6}$ into the union of two disjoint 6-cycles. Joint work with Darryn Bryant and William Petterson.