DONALD KREHER, Michigan Technological University

Computing (λ, μ)-Factorizations of Abelian Groups

A (λ, μ)-factorization of a finite group G is a pair of subsets $S, T \subseteq G$ such that the product ST contains each nonidentity element of G exactly λ times and the identity element μ times. In group ring notation, this condition is expressed as

$$ST = \lambda(G - e) + \mu e,$$

where e denotes the identity element of G.

This presentation surveys theoretical results and focusus on computational methods for identifying such factorizations, including the complete enumeration of all factorizations of abelian groups of order up to 34.

This research is a collaborative effort with Shuxing Li and Doug Stinson.