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Algorithms for difference families in finite abelian groups

Our main objective is to show that the computational methods that we previously developed for difference families in cyclic groups can be fully extended to the more general setting of arbitrary finite abelian groups. In particular the power spectral density (PSD) test and the method of compression can be used to speed up search algorithms.

This is joint work with Dragomir Z. Djokovic (University of Waterloo)