

THE MULTILINEAR CIRCLE METHOD

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We consider a general family of multilinear, polynomial, ergodic averages associated to a family of commuting, measure-preserving transformations and establish pointwise almost everywhere convergence for these averages, answering a question of Bergelson from 1995.

The main tool we develop to solve this problem is a robust multilinear circle method.

This is joint work with D. Kosz, M. Mirek and S. Peluse.