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ON MULTILINEAR SINGULAR INTEGRALS OF CALDERÓN-ZYGMUND TYPE

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Abstract

A variety of results regarding multilinear Calderón-Zygmund singular integral operators is systematically presented. Several tools and techniques for the study of such operators are discussed. These include new multilinear endpoint weak type estimates, multilinear interpolation, appropriate discrete decompositions, a multilinear version of Schur's test, and a multilinear version of the $T1$ Theorem suitable for the study of multilinear pseudodifferential and translation invariant operators. A maximal operator associated with multilinear singular integrals is also introduced and employed to obtain weighted norm inequalities.

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