

MARTINGALES AND THE BEURLING-AHLFORS OPERATOR, AN OVERVIEW

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Abstract

This will be an overview talk discussing Burkholder's sharp inequalities for martingales and their use to derive information on the L^p -norms of Riesz transforms and related singular integrals. In particular, we will describe progress made in recent years via martingales on the celebrated conjecture of Tadeusz Iwaniec concerning the L^p -norms of the Beurling-Ahlfors operator.