

1068-42-313

Leonid Slavin* (leonid.slavin@uc.edu) and **Winston Ou**. *The sharp $A^\infty \rightarrow A_1$ action of the dyadic maximal operator via Bellman functions.*

We construct the upper and lower Bellman functions for the A_1 characteristic of the dyadic maximal function of an A^∞ weight w . The resulting estimates are sharp with respect to $[w]_{A^\infty}$. The proofs, dependent in part on solving a Monge–Ampère equation on a plane domain, are complicated by the fact that the domain is non-convex. This is joint work with Winston Ou. (Received January 20, 2011)