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Alex Iosevich* (iosevich@math.rochester.edu). *Applications of linear and multi-linear generalized Radon transforms.*

We are going to prove some L_p-Sobolev bounds of multi-linear generalized Radon transforms and apply them to Falconer type problems in geometric measure theory and Hardy type problems on the distribution of lattice points in convex domains. (Received September 26, 2011)