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Lanh Tat Tran and **Jiexiang Li*** (lij@cofc.edu), College of Charleston, Math Dept, Robert Scott Small Room 339, Charleston, SC 29424. *Nonparametric estimation of the regression function under mixing conditions.*

The estimation of the regression function $r(x)$ is very important because of its wide applications. Denote the integer lattice points in the N dimensional Euclidean space by Z^N and assume that (X_i, Y_i) , $i \in Z^N$ is a mixing random field. Estimators of the regression function by nearest neighbor (local mean) methods are established and investigated because it is simple and intuitive. However, local means are highly sensitive to the presence of outliers. Local median estimators with fixed bandwidth and random bandwidth are established and investigated. The limiting distribution of the estimators proposed in the paper is shown to be normal. (Received January 03, 2008)