1046-41-473 **Mark A. Kon** (`mkon@bu.edu`), Department of Mathematics and Statistics, Boston University, Boston, MA 20059, and **Louise A. Raphael*** (`lraphael@howard.edu`), Department of Mathematics, Howard University, Washington, DC 20059. *Statistical Learning Methods for Uniform Approximation Bounds in Multiresolution Spaces.*

New constructive and non-constructive non-asymptotic uniform error bounds for approximating functions in $\mathcal{L}_s^2(\mathbb{R}^d)$, $d \geq 1$, by finite compactly supported multiresolution expansions are proved using approximation theoretic bounds derived from statistical learning theory. (Received September 04, 2008)