**Meeting:** 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-41-1583  **Kyungwon Park** (kpark001@math.sc.edu), IMI. Department of Mathematics, University of South Carolina, Columbia, SC 29208.  *Bivariate n-term rational approximation.*

We study nonlinear approximation in $L_p(R^2), 0 < p < \infty,$ from n-term rational functions. Our main result relates n-term rational approximation in $L_p$ to nonlinear approximation from a broad class of piecewise polynomials over multilevel triangulations allowing a lot of flexibility and, in particular, arbitrarily sharp angles.

This relationship and the existing estimates for spline approximation give a Jackson estimate for n-term rational approximation in terms of a minimal smoothness norm over a large collection of anisotropic Besov type spaces (B-spaces). (Received October 05, 2004)