1001-28-7 **Yang Wang*** (`wang@math.gatech.edu`), School of Mathematics, Georgia Tech, Atlanta, GA 30332, and **De-jun Feng**. *Refinable functions with arbitrary dilations.*

Refinable functions play a central role in the theory and application of wavelets and approximation theory. In both cases the dilation factors are restricted to integers. However, when analyzing refinable functions there is a fascinating connection between the algebraic properties of the dilation factors and the analytic properties of the refinable functions. We present some of these properties in this talk. (Received April 06, 2004)