1047-42-214   **Tian-Xiao He*** (`the@iwu.edu`), Dept Math & CS, P. O. Box 2900, Illinois Wesleyan University, Bloomington, IL 61702-2900. *Spline Wavelets, Finite Element Wavelets, and Wavelets with Composite Dilation.* Preliminary report.

We present here some preliminary work for continuing and smoothing off the two-dimensional Haar-type non-separable composite dilation wavelets. A comparison of the wavelets with composite dilation, spline wavelets, and finite element wavelets will be presented. If time permits, the advantages of one-dimensional composite dilation wavelets will also be discussed. (Received January 29, 2009)