

Meeting: 998, Houston, Texas, SS 3A, Special Session on Harmonic and Functional Analysis

998-42-424 **John E. Gilbert*** (gilbert@math.utexas.edu), Department of Mathematics, University of Texas at Austin, Austin, TX 78712, and **Zeimowit Rzeszotnik** (zioma@math.utexas.edu), Department of Mathematics, University of Texas at Austin, Austin, TX 78712. *Finite abelian groups, wavelets, and all that.* Preliminary report.

Wavelets and wavelet packets are usually defined on Euclidean space, but they can be constructed very simply and very concretely on finite abelian groups using the group structure for translation and nested subgroups for dilation. In this talk we will describe applications of such constructions to various extremal problems as well as to bilinear and maximal operators. (Received March 03, 2004)