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Eric Weber* (esweber@iastate.edu), Department of Mathematics, 400 Carver Hall, Iowa State University, Ames, IA 50011. *Wavelet Frames and Admissible Group Representations*. Preliminary report.

Wavelet frames arise from the square integrable representation of the affine group acting on Euclidean space. Weyl-Heisenberg frames arise from the representation of the Heisenberg group acting on Euclidean space; this representation is "almost" square integrable. We present in this talk a few results which suggest that the only way frames can arise from a group representation is one which is nearly square integrable, or admissible. In particular this is true for groups which are similar in structure to the affine group. An application of these results shows that every wavelet frame comes from a Generalized Frame Multiresolution Analysis (GFMRA). (Received February 25, 2004)