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Judith A Packer* (packer@euclid.colorado.edu), Department of Mathematics, Campus Box 395, University of Colorado, Boulder, CO 80309-0395. *Isometries arising from filter functions and wavelets*. Preliminary report.

Work initiated by O. Bratteli and P. Jorgensen has shown that systems of filter functions used in the theory of multiresolution analyses can be used to construct isometries in Hilbert space. Here we examine recent results concerning some of these isometries and their use in studying the corresponding wavelets and frames. The work discussed is joint with L. Baggett, J. D'Andrea, P. Jorgensen, N. Larsen, K. Merrill, and I. Raeburn. (Received September 23, 2006)