

1010-42-32

**Richard A. Zalik\*** (zalik@auburn.edu), Department of Mathematics, 221 Parker Hall, Auburn University, AL 36849-5310. *Representation of multivariate wavelets.*

Given an orthonormal multivariate wavelet associated with a multiresolution analysis in  $L^2(\mathbb{R}^d)$ , we show how to obtain all orthonormal multivariate wavelets associated with the same multiresolution analysis. This allows us to easily find orthonormal multivariate wavelets that are not the tensor products of one-dimensional wavelets. (Received August 02, 2005)