1014-42-427 **Eric Weber*** (esweber@iastate.edu), Department of Mathematics, Iowa State University, 396 Carver Hall, Ames, IA 50011, **Ghanshyam Bhatt**, Department of Mathematics, Rose-Hulman Institute of Technology, Terre Haute, IN 47803, and **Brody Dylan Johnson**, Department of Mathematics and Computer Scienc, Saint Louis University, Saint Louis, MO 63103. *Orthogonal Wavelet Frames.*

We present an algorithm for constructing orthogonal wavelet frames from MRA's in $L^2(\mathbb{R})$, as well as for the associated filter banks. This construction gives rise to a vector-valued wavelet transform (VDWT) for vector valued data, such as images. We present numerical results of image data compression using the VDWT. (Received September 15, 2005)