

1046-YY-1920      **Bruce Atwood** (atwoodb@beloit.edu), Box 224, Beloit College, 700 College Street, Beloit, WI 53511, **Raouf Boules** (rboules@towson.edu), Towson University, 8000 York Road, Department of Mathematics, Towson, MD 21252, and **Patrick Van Fleet\*** (pjvanfleet@stthomas.edu), 2115 Summit Avenue #OSS201, Department of Mathematics, University of St. Thomas, St. Paul, MN 55105. *Wavelet Packets and Applications*. Preliminary report.

In this talk, we will discuss the design and development of a project on wavelet packets and applications. The project is designed for undergraduate students. The ideal prerequisite for the project is an elementary introduction to the discrete wavelet transformation and its applications, but a good background in sophomore linear algebra, some elementary statistics, and programming skills will suffice. We will give a brief introduction to wavelet packets and discuss ways the student group can implement them on a computer. We will conclude the talk with a discussion of an application of wavelet packets to the problem of image compression and discuss how this application can be incorporated into the project. (Received September 16, 2008)