

Meeting: 1003, Atlanta, Georgia, MAA CP F1, MAA Session on Mathlets for Teaching and Learning Mathematics

1003-F1-917 **David E Meel*** (mee1@bgnnet.bgsu.edu), P.O. Box 313, Bradner, OH 43406-0313. *Tool building:
Web-based linear algebra modules.*

This paper presents several interactive web-based tools for visually exploring various linear algebra concepts. These tools were developed using The Geometer's Sketchpad. The web-based, platform independent interactivity is accomplished through the use of JavaSketchpad, a web applet. The user needs only a Java-enabled browser. In particular, this paper presents four tools: GridMaster, Transformer2D, Transformer3D, and Eigenizer. Each of these tools permits students to interact with both algebraic and geometric representations of concepts such as linear transformations, eigenvalues, and eigenvectors. Student reactions are provided to enhance the discussion and identify the effects of utilizing such tools as part of linear algebra explorations. (Received October 01, 2004)