962-N1-432 **James E White*** (mathwrig@gte.net), 33641 Hartford Drive, Union City, CA 94587, and **Dan Kalman** (kalman@email.cas.american.edu), Department of Mathematics and Statistics, American University, 4400 Massachusetts Avenue, NW, Washington, DC 20016 8050. *Dynamic Interactive Explorations Using Mathwright and LAVA.*

Mathwright allows teachers to build and students to investigate highly focused mathematical explorations. It provides tight integration between symbolic, numerical, and visual aspects of a mathematical context, so that students can manipulate any aspect in the most natural way, and see the consequences from a variety of viewpoints. Student interactions might take the form of dragging objects around in a geometric display, or of typing algebraic expressions into a text window, or of assigning numerical values with a scroll bar, or of clicking on buttons to launch prescripted actions. The results might be displayed as static or animated graphic images, or symbolic or numerical output, or as prose discussion. These explorations can make mathematical contexts come to life, in a way that students can touch, see, and feel. This presentation will showcase some examples, including explorations involving cubic polynomials. Also demonstrated will be the JAVA based version of Mathwright, which can produce activities that run on a webpage. Supported by NSF Grant DUE-9952530. (Received September 14, 2000)