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**Robert J Decker\*** (rdecker@hartford.edu), Dr. Robert Decker, Math Dept, University of Hartford, 200 Bloomfield Ave, West Hartford, CT 06117. *Creating Your Own Dynamic Software with TCL/TK.*

TCL/TK is a platform independent, interpreted, programming language, which can be used to create simple interactive/dynamic programs with a modern graphical user interface. The learning curve for TCL/TK is quite short, especially if one is familiar with another language such as Basic or Pascal. It is especially easy to create the components of a graphical user interface; one can create, for example, a slider which when moved instantly reflects the effect of a parameter change on the graph of a function or differential equation. The presenter will demonstrate two simple programs written in TCL/TK for graphing differential equations and their vector fields. One of the programs will be used to illustrate the onset of resonance in a forced harmonic oscillator by dynamically changing a parameter (the forcing frequency) using a slider. The second program will be used to show bifurcations of a system of equations in a two-dimensional parameter space by varying the two parameters simultaneously. Both programs are short enough to be understood and modified by anyone interested in doing so. A more extensive dynamic program, developed by the presenter, will be briefly demonstrated as well. (Received September 13, 2000)