Department of Mathematical Sciences Colloquium

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The Collocation and Galerkin Finite Element Methods Employed by PDE2D, a General-Purpose PDE Solver

PDE2D is a finite element program which solves nonlinear systems of time-dependent and steady-state partial differential equations, and linear eigenvalue systems, in 1D intervals, arbitrary 2D regions and a wide range of simple 3D regions. Both Galerkin and collocation finite element methods are available for the 1D and 2D problems, collocation is used for the 3D problem. The relative merits of these two finite element methods are examined.

PDE2D has an interactive interface so it is very easy to use, and it produces many types of graphical output. www.pde2d.com contains a list of more than 170 publications in which PDE2D was used to produce the numerical results; some typical applications are presented.

Friday, November 10, 2006 at 3 pm in Bell Hall 143
The University of Texas at El Paso

Refreshments will be served in front of the colloquium room, 15 minutes before the start of the colloquium.

For further information, please contact Dr. Pavel Šolín, Bell Hall 220. Phone: (915) 747-6770, email: `solin@utep.edu`.