



香港浸會大學
HONG KONG BAPTIST UNIVERSITY

高效能集群系統電腦中心
High Performance Cluster Computing Centre

Jointly organized with Department of Mathematics

Distinguished Lecture Series

The Pseudo-Transient Continuation Method for Solving Nonlinear Equations



Professor C. T. Kelley

North Carolina State University

Date: Tuesday, 7 February 2006

Time: 11:30 am (Preceded by Tea Reception at 11:00am)

Venue: RRS 905

Sir Run Run Shaw Building

Ho Sin Hang Campus

Hong Kong Baptist University

Abstract

Pseudo-transient continuation is a method for finding dynamically stable solutions of nonlinear equations. The approach mimics temporal integration, but uses large time steps toward the end of avoiding the cost of a fully time-accurate simulation. In this talk we will compare pseudo-transient continuation to conventional damped Newton method approaches, discuss convergence results and time step control, and present some examples.

C. T. (Tim) Kelley has been working in numerical methods for optimization and nonlinear equations for over 25 years. After graduating from Purdue University, he was a postdoctoral associate at the US Army Mathematics Research Center in Madison, Wisconsin for a year. He then moved to the Mathematics Department at North Carolina State University, where he is now Drexel Professor of Mathematics. He is the author of three books, over 100 papers, and has supervised 14 PhD students. He is currently serving on several editorial boards, and is the Vice President for publications of SIAM.

✦ ✦ ✦ All are welcome ✦ ✦ ✦

For enquires, please contact Ms. Claudia Chui at 3411 2348.

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