

Marden Lecture on Mathematics

The Department of Mathematical Sciences at the University of Wisconsin-Milwaukee invites you to the eighteenth annual Marden Lecture on Mathematics.

Scientific Discovery through Advanced Computing

presented by

Professor David E. Keyes

Friday, April 27, 2007, 4:00 PM-5:00 PM

Lapham Hall, Room 162

University of Wisconsin-Milwaukee

3209 N. Maryland Avenue

Milwaukee, WI

This program is free and open to the public.

Reception 5:15-6:00 PM in EMS E495A



The Scientific Discovery through Advanced Computing (SciDAC) initiative is a set of interconnected projects--science, software development, and research directed toward the latter--designed to support simulation, data exploration, and collaboration in many thrust areas of the U.S. Department of Energy, including: climate modeling, fusion energy, chemistry and materials science, astrophysics, and high energy and particle physics. Lab and university-based SciDAC participants are creating a new generation of scientific simulation codes for terascale systems. This lecture briefly reviews the sweep of SciDAC and then focuses on some particular advances in the U.S. magnetic fusion energy program enabled by the introduction of solver software from the speaker's SciDAC project, Towards Optimal Petascale Simulations (TOPS, <http://www.scidac.gov/math/TOPS.html>).

Professor Keyes is the Fu Foundation Professor of Applied Mathematics in the Department of Applied Physics and Applied Mathematics at Columbia University, an affiliate of the Computational Science Center (CSC) at Brookhaven National Laboratory, and Acting Director of Institute for Scientific Computing Research (ISCR) at Lawrence Livermore National Laboratory. He graduated summa cum laude with a B.S.E. in Aerospace and Mechanical Sciences and a Certificate in Engineering Physics from Princeton University in 1978. He received his Ph.D. in Applied Mathematics from Harvard University in 1984.

The Marden Lecture was established by Morris and Miriam Marden. Dr. Marden was a Distinguished Professor of Mathematics at UWM and was responsible for the inauguration of its graduate program, the first at the University. The lectures are designed to bring distinguished mathematicians to UWM to speak to a general audience on a topic of mathematical interest. They have been given annually since 1989.

The lecture is sponsored by the Miriam and Morris Marden Fund and co-sponsored by the Department of Mathematical Sciences and the College of Letters and Science.