SIAM
Society for Industrial and Applied Mathematics

4th Front Range Applied Mathematics Student Conference

University of Colorado at Denver

Saturday
March 1st, 2008

Sponsors:
The SIAM Student Chapters at
University of Colorado at Boulder, Colorado Springs and Denver campuses

The Front Range SIAM Student Chapters are sponsoring the 4th Annual Applied Mathematics Regional Student Conference. This event will allow students from all universities along the Front Range to learn about new developments in Applied Mathematics and will promote interest in the field. The conference is open to both undergraduates and graduate students.

Registration Information

We are requesting a $5 donation per person to help defray the cost of the breakfast and lunch that will be provided at the conference. To register before the day of the conference, please send the name of the conference attendee and their university affiliation along with a check made out to the "University of Colorado" (also write "donation to APPM" on the check) to:

Undergraduate SIAM Student Chapter
Department of Applied Mathematics
526 UCB
University of Colorado at Boulder
Boulder, CO 80309-0526

Call for Presentations

There will be 20-minute student presentations. A special MCM/ICM session will also be organized. *Abstract submission deadline is Monday, Feb. 25th*. Please send abstracts in any appropriate format (PDF, text file, word doc, etc.) to: FRAMSC.abstracts@gmail.com For more information, please check the conference website or contact the organizers.

Plenary Speaker

Dr. Harry L. Swinney
Center for Nonlinear Dynamics
University of Texas at Austin

"Emergence of Spatial Patterns in Physical, Chemical, and Biological Systems"

We consider macroscopic systems driven away from thermodynamic equilibrium by an imposed gradient, for example, a gradient in temperature, velocity, or concentration. The equation of motion for such systems is generally a nonlinear partial differential equation for the fields (e.g., temperature, velocity, and/or concentration field). For a sufficiently small imposed gradient, these fields will have the same symmetry as the system geometry; this solution is called the base state. We will consider the general principles for the loss of stability of the base state and the formation of ordered spatial patterns. For strong forcing, the patterns can become chaotic or even turbulent, yet some order often persists. The general principles of pattern formation will be illustrated with examples from physics, chemistry, and biology.

Contact Information

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Conference Web site: http://amath.colorado.edu/siam/conference/