

# 2008 CNA Summer School

## Contemporary Topics in Nonlinear PDEs

### Center for Nonlinear Analysis

Carnegie Mellon University, Pittsburgh, PA  
May 29 – June 7, 2008



### Lecturers and Topics:

**Ivar Ekeland**, University of British Columbia

- ▶ Demand functions and the structure of economic theory

**Robert Kohn**, Courant Institute, New York University

- ▶ Energy-driven pattern formation

**Claude Le Bris**, École Nationale des Ponts et Chaussées

- ▶ From molecular theories to continuum elasticity: a possible track

**Felix Otto**, University of Bonn

- ▶ Some PDE problems from materials science

**Benoit Perthame**, Université Pierre et Marie Curie

- ▶ Growth processes and physiologically structured dynamics

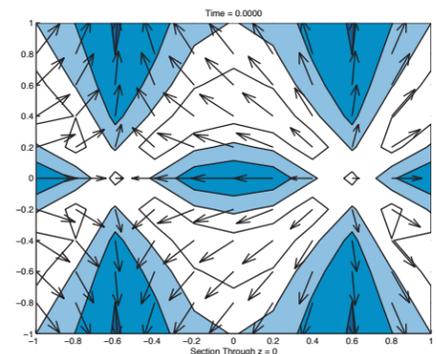
### Center for Nonlinear Analysis

Carnegie Mellon University  
Department of Mathematical Sciences  
Pittsburgh, PA 15213

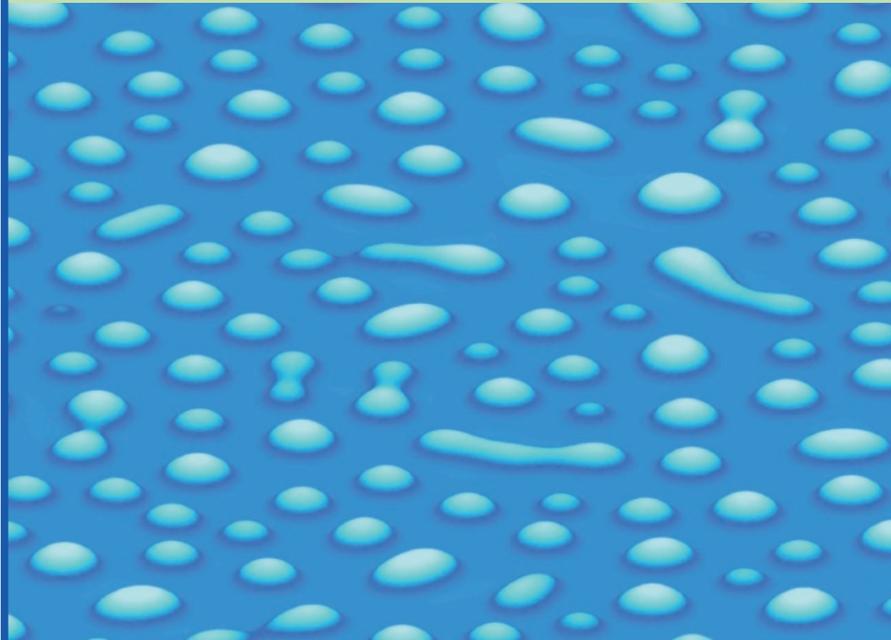
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Simulation of singularities in a nematic liquid crystal. Director field superimposed upon the view through cross polarizers (Walkington).



Model of coarsening in thin liquid films; a configuration early in the coarsening stage (Otto, Rump, and Slepcev).

The Summer School will be held concurrently with the “Heath Lectures on Probability and Mathematical Finance” given by **Goran Peskir**, University of Manchester and **Albert Shiryaev**, Moscow University.

### Organizers:

Irene Fonseca, David Kinderlehrer,  
Dmitry Kramkov, Giovanni Leoni,  
Robert Pego, Dejan Slepčev,  
Shlomo Ta’asan, Noel Walkington

Graduate students and postdocs are encouraged to contribute a presentation for this conference. **The deadline for submission of contributed abstracts is March 1, 2008.**

Advanced undergraduate students, graduate students, and postdoctoral fellows are encouraged to apply for financial support. **The deadline for applications is March 15, 2008.**

<http://www.math.cmu.edu/cna/Summer08>



A grain of brass, diameter about 1 cm, separated from an ingot. From the collection of W.W. Mullins.

This conference is sponsored by the Department of Mathematical Sciences and Center of Computational Finance at Carnegie Mellon University and the National Science Foundation.

**Carnegie Mellon**

**CNA** Center for Nonlinear Analysis