Boulder School for Condensed Matter and Materials Physics Hydrodynamics July 5-July 29, 2011

Hydrodynamic phenomena play critical roles in condensed matter physics, from the motion of vortices in superfluids to the statistical properties of turbulent fluids, to the complex ways in which biological systems use and manipulate fluids. Hydrodynamic theories are applied well beyond the fluid mechanical origins where they were originally developed and are now quantitatively applied to active systems of all types. This school will provide the scientific underpinnings of modern applications of hydrodynamics. The school will be divided into four weeks. Themes for each week: 1) Introduction and foundations; 2) Turbulence; 3) Active Matter; and 4) Biological Fluid Mechanics Scientific Organizers: Michael Brenner (Harvard) Anette (Peko) Hosoi (MIT) Dan Lathrop (U. Maryland) Tom Lubensky (U. Pennsylvania) Michael Shelley (Courant Institute) Local Organizer: Leo Radzihovsky (CU Boulder)

The school will pay for most local expenses, and there are travel grants available for participants from U.S. universities. Students and postdocs interested in participating should submit an electronic application by the February 27 deadline. The application form, and detailed information regarding housing, travel and financial support are available at

http://boulder.research.yale.edu/

The Boulder School in Condensed Matter and Materials Physics provides expert training, not usually available within the traditional system of graduate and postgraduate education, for advanced graduate students and postdoctoral researchers working in condensed matter physics, materials science and related fields. The School is supported by the National Science Foundation, with additional funding provided by the University of Colorado, and meets annually during July in Boulder, Colorado.

Michael Brenner, Harvard Bruno Eckhardt, Marburg Lisa Fauci, Tulane **Nigel Goldenfeld, UIUC** Peko Hosoi, MIT **Heinrich Jaeger, Chicago** JF Joanny, Curie Dan Lathrop, U. Maryland Eric Lauga, UCSD **Detlef Lohse, Twente Peter Palffy, Akron David Quere (ESPCI) Ayusman Sen, Penn State Mike Shelley, NYU** Kate Stebe, U. Pennsylvania Laurette Tuckerman, ESPCI **Greg Voth, Wesleyan**





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