



Fellowships in Geophysical Fluid Dynamics at the Woods Hole Oceanographic Institution

June 21 to August 27, 2004

Since 1959 the GFD program has promoted an exchange of ideas among researchers in the many distinct fields that share a common interest in the nonlinear dynamics of fluid flows (including oceanography and meteorology, as well as astrophysics, applied mathematics, engineering, geophysics and physics). Each year, the program is organized around a ten-week course of study and research for a small group of competitively selected graduate-student fellows. The overall philosophy is to bring together researchers from a variety of backgrounds, to provide a vigorous discussion of concepts that span different disciplines, and to create an intense research experience. For the student fellows, the centerpiece of the program is a research project, pursued under the supervision of the staff. At the end of the program, the fellow presents a lecture and a written report for the GFD proceedings volume. Over its history, the GFD Program has produced numerous alumni, many of whom are prominent scientists at universities throughout the world. The interdisciplinary atmosphere of the Program is the ideal place for young scientists to learn the habits of broad inquiry, of speaking to others with very different backgrounds and viewpoints, and of seeking answers in unfamiliar places.

The Program commences with two weeks of Principal Lectures. In 2004, the theme will be **Tides**, and the Lectures given by Professors Myrl Hendershott (Scripps Institution of Oceanography) and Chris Garrett (University of Victoria). While the foundations of the subject date back to Newton and Laplace, tides remain a topic of active study because of their impact on many areas of oceanography, planetary science and astrophysics. Indeed, recent satellite observations have charted oceanic tides to an unprecedented precision, motivating many ongoing theoretical developments and casting a new light on the ocean's energetics. In astronomy, the discovery of extra-solar planets in relatively tight orbits poses many new tidally related problems, yet even some of the classical questions regarding tides inside stars and planets remain unanswered. The principal lectures will delve into some of these issues, reviewing classical theory, the underlying fluid mechanics, modern developments and their implications.

Up to ten competitive fellowships are available for graduate students. Successful applicants will receive stipends of \$4,500 and an allowance for travel expenses within the United States. A small number of unpaid fellowships may also be available for strongly qualified students who can support themselves financially. Fellows are expected to be in residence for the full ten weeks of the program. The application deadline is February 15, 2004. Awards will be announced by April 1, 2004. We particularly encourage applications from women and members of underrepresented groups. Further information and application forms may be obtained at <http://gfd.who.edu>, or by writing to:

The GFD Fellowship Committee
Academic Programs Office, Clark Laboratory, MS 31,
Woods Hole Oceanographic Institution,
360 Woods Hole Road, Woods Hole, MA 02543-1541 .

Telephone: (508) 289-2950
Fax: (508) 457-2188
E-mail: gfd@who.edu

*Prospective visitors should contact Stefan Llewellyn Smith, sgls@ucsd.edu,
or Neil Balmforth, njb@ams.ucsc.edu.*

WHOI is an Equal Employment Opportunity/Affirmative Action Organization
The GFD Program is funded by the National Science Foundation and the Office of Naval Research