Mathematics Opportunities

NSF Announces Program on Large Scientific and Software Data Set Visualization

The National Science Foundation (NSF) has announced a research initiative on large-scale visualization for scientific data sets and for assisting software development. This program will support research to improve the ability to understand large data sets, simulation results, and software systems. It encourages use of these improved methods on data sets from experiments and simulations of real scientific interest and on large software systems.

The initiative focuses on two specific areas:

1. Very large visualizations. The overall goal is to develop general, extensible methods that enable understanding of very large (multigigabyte to terabyte) data sets from simulations, experiments, and data collections from the natural and social world. Subtopics of particular interest include interactive exploration of very large data sets; processing and presentation of real-time data from high-bandwidth sources; access and visualization of distributed data sets; extraction of features and behaviors, including uncertainty, for study; and building scalable software systems for visualization. Applicants should have at least 100 gigabytes of data or simulation output available for visualization.

2. Visualization as a tool for assisting software robustness and usability. The overall goal is to provide new techniques and tools for program understanding and development. Subtopics of particular interest include online and a posteriori visualization of program states; performance measurement and visualization; new depictions of program behaviors; and use of visualization in program development, debugging, and performance analysis. Applicants should be doing research work in graphical programming tools and similar topics.

Proposals may be submitted only by U.S. universities and U.S. nonprofit research institutions not part of the United States Government on behalf of individual investigators or small groups of investigators. Only one proposal may be submitted by a principal investigator, and he or she may collaborate on only one other proposal as a coinvestigator.

It is anticipated that 12 to 18 awards in the form of three-year standard grants will be given in fiscal year 1999. A total of approximately $10 million is available for awards. The awards are expected to be given in September 1999. The deadline for full proposals is **July 6, 1999.**

The program officer overseeing this program for Mathematical and Physical Sciences is James Rosenberger, Division of Mathematical Sciences, Room 1025, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230; telephone: 703-306-1883; e-mail: `jrosenbe@nsf.gov`. For further information consult the NSF's Web site at `http://www.nsf.gov/cgi-bin/getpub?nsf99105/`.

—From an NSF announcement

CAREER/PECASE Program Guidelines on Web

Program guidelines for the National Science Foundation (NSF) CAREER/PECASE programs are now available on the World Wide Web. The new CAREER program announcement can be found at `http://www.nsf.gov/home/crssprgm/career/guide.htm`. The announcement number is NSF 99-110. Note that proposals must be submitted electronically via FastLane.

The CAREER program is intended for the support of excellent proposals from junior faculty who combine strong research activity with a genuine and substantive involvement in education. Proposals will be evaluated on the basis of both research and education. The duration of the awards will be at least four but not more than five years. The total award, including administrative costs, will not be less than

$200,000 for a five-year award. The deadline for proposals is **July 22, 1999.**

The NSF will select from the most meritorious awardees supported by the CAREER program the nominees for Presidential Early Career Awards for Scientists and Engineers (PECASE). PECASE awards recognize outstanding scientists and engineers who, early in their careers, show exceptional potential for leadership at the frontiers of knowledge. This presidential award is the highest honor bestowed by the United States government on scientists and engineers beginning their independent careers.

It is expected that the Division of Mathematical Sciences (DMS) will make a small number of CAREER awards. In previous years, either four or five awards were made. The division continues to encourage proposals to its "traditional" research grant programs that integrate research and education activity or that have significant education components. Applicants are encouraged to confer with program directors.

Before preparing a CAREER proposal, applicants are strongly urged to consult the CAREER "Frequently Asked Questions (FAQ)" document (CAREER-FAQ) available on the CAREER Web page, as well as the program announcement, for more extensive information. The mailing address for the NSF is National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230. The telephone number for the DMS is 703-306-1870.

—National Science Foundation Announcement

AWM Workshops for Women Graduate Students and Postdocs

Over the past eleven years, the Association for Women in Mathematics (AWM) has held a series of workshops for women graduate students and recent Ph.D.'s in conjunction with major mathematics meetings. The workshops are also supported by the Office of Naval Research and the National Science Foundation.

The next AWM workshop to be held in conjunction with the annual Joint Mathematics Meetings will be in Washington, DC, January 19–22, 2000. The workshop is scheduled to be held on Saturday, January 22, 2000, with an introductory dinner tentatively scheduled for Thursday evening, January 20, 2000.

Twenty women will be selected in advance of the workshop to present their work; the selected graduate students will present posters, and the postdocs will give 20-minute talks. AWM will offer funding for travel and two days' subsistence for the selected participants. The workshop will also include a panel discussion on issues of career development, a luncheon, and a dinner with a discussion period. Participants will have the opportunity to meet with other women mathematicians at all stages of their careers. All mathematicians (female and male) are invited to attend the program. Departments are urged to help graduate stu-

dents and postdocs who do not receive funding to obtain some institutional support to attend the workshop presentations and the associated meetings.

The AWM also seeks volunteers to lead discussion groups and to act as mentors for workshop participants. Anyone interested in volunteering should contact the AWM office.

Applications are welcome from graduate students who have made substantial progress toward their theses and from women who have received their Ph.D.'s within approximately the last five years. (The word "postdoc" refers to recent Ph.D.'s, whether or not they currently hold a postdoctoral or other academic position.) Women with grants or other sources of support are still welcome to apply. All non-U.S. citizens must have a current U.S. address. All applications should include a curriculum vitae, a concise description (two to three pages) of research, and the title of the proposed talk/poster. All applications should also include at least one letter of recommendation; in particular, graduate students should include a letter of recommendation from their thesis advisors. Nominations by other mathematicians (along with the information described above) are also welcome.

Send *five* complete copies of the application materials (including the cover letter) to: Workshop Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461; telephone: 301-405-7892; e-mail: awm@math.umd.edu.

Please note that nominations via e-mail or fax are not acceptable. The deadline for receipt of nominations at the AWM office is **September 1, 1999.**

—AWM announcement

Fulbright Awards for 2000–2001 for U.S. Faculty and Professionals

The Fulbright Scholar Program offers opportunities for lecturing or advanced research in nearly 130 countries to college and university faculty and professionals outside academe. U.S. citizenship and a Ph.D. or comparable professional experience are required. For lecturing awards, university or college teaching experience is expected. Foreign language skills are needed in some countries, but most lecturing assignments are in English.

The deadlines are: **August 1, 1999,** for lecturing and research grants in the academic year 2000–01; **November 1, 1999,** for international education and academic administrator seminars; and **January 1, 2000,** for NATO advanced research fellowships and institutional grants.

For further information contact the USIA Fulbright Scholar Program, Council for International Exchange of Scholars, 3007 Tilden Street, NW, Suite 5L, Box GNEWS, Washington, DC 20008-3009; telephone: 202-686-7877; World Wide Web: http://www.cies.org/. Requests for ap-

plication materials only may be sent by e-mail to `apprequest@ies.iie.org`.

—CIES announcement

Call for Nominations for AWM Hay Award

The Executive Committee of the Association for Women in Mathematics (AWM) has established the Louise Hay Award for Contributions to Mathematics Education, to be awarded annually to a woman at the Joint Prize Session at the Joint Mathematics Meetings every January. The purpose of this award is to recognize outstanding achievements in any area of mathematics education, to be interpreted in the broadest possible sense.

Louise Hay was widely recognized for her contributions to mathematical logic and for her strong leadership as head of the Department of Mathematics, Statistics, and Computer Science at the University of Illinois at Chicago. Her devotion to students and her lifelong commitment to nurturing the talent of young women and men secure her reputation as a consummate educator. The annual presentation of this award is intended to highlight the importance of mathematics education and to evoke the memory of all that Hay exemplified as a teacher, scholar, administrator, and human being.

The nomination document(s) should include: 1) a one- to three-page letter of nomination highlighting the exceptional contributions of the candidate to be recognized, 2) a curriculum vitae of the candidate not exceeding three pages, and 3) three letters supporting the nomination. It is strongly recommended that the letters represent a range of constituents affected by the nominee's work.

Send *five* complete copies of nomination material for this award to: The Hay Award Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461. For further information call the AWM at 301-405-7892 or send e-mail to `awm@math.umd.edu`.

Please note that nominations via e-mail or fax are not acceptable. The deadline for nominations to be received at the AWM office is **October 1, 1999.**

—AWM announcement

Call for Nominations for AWM Schafer Prize

The Executive Committee of the Association for Women in Mathematics (AWM) calls for nominations for the Alice T. Schafer Mathematics Prize, to be awarded to an undergraduate woman for excellence in mathematics. All members of the mathematical community are invited to submit nominations for the prize. The nominee may be at any level in her undergraduate career, but must either be a U.S. cit-

izen or have a school address in the United States. The prize will be awarded at the Joint Prize Session at the Joint Mathematics Meetings in Washington, DC, in January 2000.

The Schafer Prize was established in 1990 by the Executive Committee of the AWM and is named for AWM former president and one of its founding members, Alice T. Schafer, who has contributed a great deal to women in mathematics throughout her career.

A letter of nomination should include, but not be limited to, an evaluation of the nominee on the following criteria: (1) quality of performance in advanced mathematics courses and special programs, (2) demonstration of real interest in mathematics, (3) ability to do independent work in mathematics, and (4) performance in mathematical competitions at the local or national level, if any. A copy of transcripts and an indication of the candidate's undergraduate level should be included with a letter of nomination. Supporting materials (e.g., reports from summer work using mathematics, copies of talks given in student chapters, recommendations, etc.) should be enclosed with the nomination, if applicable.

Send *five* complete copies of nominations for this award to: The Alice T. Schafer Award Selection Committee, Association for Women in Mathematics, 4114 Computer & Space Sciences Building, University of Maryland, College Park, MD 20742-2461. For further information call the AWM at 301-405-7892 or send e-mail to `awm@math.umd.edu`.

Please note that nominations via e-mail or fax are not acceptable. The deadline for receipt of nominations at the AWM office is **October 1, 1999.**

—AWM announcement