
Mathematics Opportunities

News from DIMACS

DIMACS, the Center for Discrete Mathematics and Theoretical Computer Sciences, will hold its 1998–1999 Special Year on Large Scale Discrete Optimization.

This special year is motivated by developments in the past ten years. There have been three simultaneous advances: at the algorithmic level, with new and interesting algorithms for solving large scale discrete problems both exactly and approximately; at the implementation level, providing codes and systems for solving such problems; and at the practical level, with interests in the fast solution of real world problems. Examples of such applications include airline crew scheduling, chemical process design, and telecommunication network design. The goal in this year is to unite these groups. The confluence of exciting recent work on approximation and other algorithms and greatly improved software/hardware for optimization makes large scale discrete optimization a practical, useful approach to solving problems of practical interest.

The special year organizers hope to provide forums to increase research contacts between groups not frequently in contact—for example, practitioners and academics, operations research and computer science researchers, theoretically oriented researchers (in areas such as interior point IP methods, combinatorial geometry approaches, approximation methods, and group formulations) and computationally oriented researchers, including those interested in AI techniques such as constraint programming.

A variety of workshop and mini-workshop topics are under consideration. A pre-special-year workshop on Large

Scale Discrete Optimization organized by R. Ravi and Vijay Vazirani is already planned for May 27–29, 1998. Among the topics under consideration are large scale discrete optimization in engineering, in production and scheduling, in transportation, in robotics and vision, and in data mining, as well as algorithms for large scale discrete optimization, semidefinite programming, and constraint programming. In addition, there will be at least one Computational Challenge, addressing one or more problems in large scale discrete optimization. Those with suggestions for workshops or who are interested in aiding the organization of workshops should contact the organizing committee.

Applications for research and graduate student visits to the center are invited. Some funds are available for travel and local support. Two postdoctoral positions will be offered in this area.

Organizers for the special year are: Endre Boros (Rutgers/DIMACS) (local chair), William Pulleyblank (IBM), Michael Trick (Carnegie Mellon) (general chair), Bob Vanderbei (Princeton/DIMACS), and Vijay Vazirani (Georgia Tech). Researchers interested in early discussions about visiting are encouraged to contact the organizing committee by sending e-mail to dimacs98@mat.gsia.cmu.edu. Information about workshops and other activities will be made available on the DIMACS Web site at <http://dimacs.rutgers.edu/>. The mailing address is DIMACS Center, Rutgers University, P.O. Box 1179, Piscataway, NJ 08855-1179. The telephone number is 732-445-5928.

—*from DIMACS Announcement*

ICM-98 Grants for Mature Mathematicians from Developing Countries

The International Congress of Mathematicians will be held August 17–27, 1998, in Berlin, Germany. The Organizing Committee of ICM-98 has set up programs whereby young mathematicians from developing countries and mathematicians from Eastern Europe can attend ICM-98. The Organizing Committee has received a number of requests for support for mature mathematicians (age 35 or older) from developing countries who are not eligible for support under the other ICM-98 grant programs. To meet this need, the ICM-98 Committee for Support of Mathematicians from Developing Countries (CSMDC) was established.

This committee will consider applications from mature mathematicians (older than 35 years of age at the occasion of the Congress) with residence in developing countries for grants to attend ICM-98. The funds for financial support are very limited. To secure the participation of as many persons as possible, only local costs in Berlin (registration, board and lodging) will be supported. Travel grants can only be provided in exceptional cases.

The deadline for the submission of applications is **January 1, 1998**. All applications will be reviewed and all applicants will be informed about the result immediately after May 1, 1998.

For further information and application forms, visit the ICM-98 Web site at <http://elib.zib.de/ICM98/>. There is a mirror site at the AMS at <http://www.emis.ams.org/mirror/ICM98/>. One may also write to: Freie Universität Berlin, Fachbereich Mathematik und Informatik, ICM-CSMDC, Arnimallee 2-6, 14195 Berlin, Germany. E-mail requests may be directed to Gerhard Berendt, berendt@math.fu-berlin.de, or to Eberhard Letzner, letzner@math.fu-berlin.de.

— from ICM-98 Announcement

NRC-Ford Foundation Postdoctoral Fellowships for Minorities

The National Research Council (NRC) administers the Ford Foundation Postdoctoral Fellowships for Minorities. This program enables teacher-scholars to engage in postdoctoral research and scholarship in an environment free from the interference of their normal professional duties and helps them to achieve greater recognition in their respective fields and to develop the professional associations that will make them more effective and productive in academic employment.

To be eligible, applicants must be U.S. citizens or nationals who are members of one of the following ethnic minority groups: Alaskan Natives (Eskimo or Aleut),

Black/African Americans, Mexican Americans/Chicanas/Chicanos, Native American Indians, Native Pacific Islanders (Polynesian or Micronesian), or Puerto Ricans. Applicants are required to have earned the Ph.D. or Sc.D. degree by March 10, 1998, from a U.S. educational institution and may not have held the degree for more than seven years as of the deadline date.

Approximately 25 one-year postdoctoral fellowships are given each year. The total amount of the fellowship is \$35,000, which includes a \$25,000 stipend. The deadline to apply is **January 5, 1998**, and awards will be announced in early April 1998.

For further information, consult the NRC Web site <http://www2.nas.edu/fo/> or contact: Fellowship Office, National Research Council, 2101 Constitution Avenue, NW, Washington, DC 20418; telephone 202-334-2860.

— from NRC Announcement

Society of Women Engineers

The Society of Women Engineers is seeking applicants for 56 scholarships in amounts varying from \$1,000 to \$5,000 and totaling more than \$75,000. Scholarships are available for reentry, undergraduate, and graduate students. While none of the scholarships is for mathematics students, mathematics faculty may wish to refer mathematically inclined computer science and engineering students to this program. The deadline to apply is **February 1, 1998**.

For further information, contact: Society of Women Engineers, 120 Wall Street, 11th Floor, New York, NY 10005-3902; telephone 212-509-9577; fax 212-509-0224; e-mail hq@swe.org.

— Allyn Jackson