
Mathematics Opportunities

Program on Algorithms and Application Libraries

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) has announced a new program solicitation called OPAAL (Optimized Portable Algorithms and Application Libraries). The competition will focus on algorithms and libraries for virtual prototyping and simulation in advanced materials. Fresh ideas, approaches, techniques, the formation of new teams, and the participation of researchers new to such problem areas will be encouraged. Areas of mathematics which are not currently considered "applied" are a likely source of such fresh ideas, approaches, and techniques.

This activity is in collaboration with the Defense Advanced Research Projects Agency (DARPA) and with other units and directorates within NSF. They plan jointly to support research and development of new approaches to the design and creation of efficient algorithms and optimized libraries for large-scale numerical modeling and simulation of physical phenomena arising in industrial applications.

The deadlines are **May 22, 1998**, for an e-mail letter of intent and **July 1, 1998**, for proposal receipt.

The solicitation is available electronically on the Web at <http://www.nsf.gov/cgi-bin/getpub?nsf9864/>; there will not be a printed version of the solicitation. Questions about the program may be addressed to representatives from the participating agencies. Within the DMS the representatives are A. I. Thaler, telephone 703-306-1880, e-mail: thaler@nsf.gov; and J. Strikwerda, telephone 703-306-1870, e-mail: jstrikwe@nsf.gov. The DARPA representative is Anna Tsao, telephone 703-696-2287, e-mail: atsao@darpa.mil.

—DMS Announcement

Grants for Collaborations on Complex Biological Systems

The National Institute of General Medical Sciences (NIGMS), a component of the National Institutes of Health (NIH), has announced a new, ongoing program to support quantitative approaches to the study of complex biological processes by encouraging nontraditional collaborations across disciplinary lines. The collaborations will be funded

through supplements to existing NIGMS grants to support the salary and expenses of investigators who have expertise in physics, engineering, mathematics, and other fields involving quantitative skills relevant to the analysis of complex systems. It is expected that the collaborations will result in new directions for the existing projects or in new research projects that will compete for independent funding.

Examples of research that could be supported by this program include modeling and simulation approaches for the analysis of genetic regulatory circuitry, the development of techniques to obtain complex kinetic data from living cells, methods to study the dynamics of cellular substructure assembly, and approaches to analyzing complex physiological interactions of clinical significance.

An application must include a specific research project that is based on the aims of the parent grant but that expands the scope of the grant to incorporate new quantitative approaches. The applicant must be the principal investigator of an active, investigator-initiated NIGMS research grant (R01, R37, or P01) that will have at least one year of support remaining at the time of the supplemental award. To find the names of NIGMS principal investigators for possible collaborations, use the NIGMS-specific grants database on the World Wide Web at <http://cos.gdb.org/best/fedfund/nih-select/gm.html>. The collaborator need not have prior experience with biological problems, but should have expertise that does not substantially overlap that of the principal investigator. A grant may have only one supplemental award at a time under this program.

Application receipt dates are **March 1, July 1**, and **November 1**. Details on this program are published in the *NIH Guide for Grants and Contracts* as Program Announcement PA-98-024. The program announcement and additional information for applicants can be found on the NIGMS Web site at <http://www.nih.gov/nigms/funding/pa/comsupp.html>.

Questions may also be directed to any of the following individuals at the NIH: James C. Cassatt, Division of Cell Biology and Biophysics, telephone 301-594-0828, e-mail: czj@nih.gov; Judith H. Greenberg, Division of Genetics and Developmental Biology, telephone 301-594-0943, e-mail: greenbej@nigms.nih.gov; Michael E. Rogers, Division of Pharmacology, Physiology, and Biological Chemistry, telephone 301-594-3827, e-mail: rogersm@nigms.nih.gov.

—NIH Announcement