

**Call for Proposals for Seed Grants in High-Performance Computing
Research
Minnesota Supercomputing Institute
Due Date: February 1, 2008**

Overview

The University of Minnesota Supercomputing Institute (MSI) is a key component in the University's broad-based research and education in digital technology. To further increase the local, national, and international visibility of the University in this critically important area, and to make University researchers substantially more competitive for external funding in this area, MSI is soliciting proposals for seed grants in high-performance computing research. Proposals are encouraged in areas including, but not limited to, algorithms, applications, system software, system architectures, and issues of scaling to thousands of processors. Proposals from interdisciplinary teams of researchers are very strongly encouraged.

Funding Level and Duration

Seed grants of up to \$100,000 will be provided, although most grants are expected to be around \$50,000. Requests that exceed \$50,000 will require additional explanation and budget justification. Funds will be available beginning July 1, 2008, and are to be expended within one year. Requests for no-cost extensions will be considered only in extraordinary circumstances.

The ultimate goal of these grants is to elevate the status of the applicant's research to allow them to compete more effectively for more substantial funding from extramural sources. Consequently, the Institute expects that the proposing group will seek new external funds to support the work beyond the seed grant. Applicants should sign a letter of commitment to submit a grant within a year of completion of the award. Also within a year of completion of the award, applicants should submit a 1-page report summarizing the work accomplished under the seed grant, and the external funding applications that have been submitted as a result. The information contained in the report will be a factor in the determination of future levels of computing and research support provided by the MSI in its mission to become a national leader in digital technology and scientific computation.

Eligibility

The project PI must be a regular faculty member at the University of Minnesota. Collaborations with external organizations are encouraged. A detailed explanation and justification is required, however, if any of the funds are to be expended on non-University of Minnesota employees.

Evaluation Criteria and Review Process

Proposals are due by noon on **February 1, 2008**, at the Institute offices (499 Walter Library). Late proposals and proposals that fail to meet the basic criteria will be returned without review. Proposals that meet these guidelines will be sent for both external and internal review. External reviewers will be chosen based on their expertise in the proposed project and will judge the following factors:

- 1) Technical quality, including novelty and competitiveness with respect to other researchers working in the area.
- 2) The potential for significant external support. This will be a heavily weighted factor in the proposal selection process. Applicants must provide clear and convincing evidence that external agencies have significant, and preferably increasing, funding for the research topic.

The internal review will evaluate the following factors:

- 1) The project's plans for participating in the process of increasing the visibility of high-performance computing at the University of Minnesota. A necessary requirement in this area is the preparation of scholarly papers, conference talks, and proposals for external support.
- 2) The distribution of projects by area and disciplines.
- 3) The level of interdisciplinarity of the proposed project. Projects that are both interdisciplinary and collaborative will receive the highest priority. Applicants should provide a brief statement explaining the interdisciplinary nature of the proposed work.

Proposal Format

All proposals should include the following information in the order specified.

1. Cover sheet with
 - a. Project title
 - b. Contact information for the PI
 - c. Names and departmental affiliations for the PI and all co-PIs
 - d. Total amount requested
2. Technical Proposal (Not to exceed **three pages** using the standard NSF format for margins, font sizes, etc. Figures are included in this page limit; references are not included in this page limit.)
 - a. A clear description of the problem to be addressed along with sufficient background information to put the importance of the problem into an

- appropriate context.
- b. A brief description of the technical approach to be used, including an evaluation of novelty and competitive assessment.
3. Outlook for external support for this work, including potential funding agencies and evidence from the agency of interest that there is the potential for future funding for the proposed work. (Not to exceed **one page**.)
 4. Two-page resumes for all investigators in NSF format.
 5. Supporting Material for Internal Review
 - a. Budget in standard NSF style. Except in unusual circumstances, funds are intended primarily to support graduate student and postdoctoral researchers. Funds typically may not be used for faculty salary or to support persons not employed by the University of Minnesota. A detailed explanation and justification is required if any of the funds are to be expended on non-University of Minnesota employees.
 - b. Letters of commitment from companies and funding agencies, if applicable.
 - c. A list of current and pending support for the investigators. Potential overlap with the proposed project should be specified.
 - d. Names and contact information for 4-6 potential external reviewers who would be qualified to review the proposed work. (These individuals may or may not be contacted for a review.)