

Collaborative Research in Computational Neuroscience (CRCNS)

Notice Number: NOT-NS-08-008

Update: The following update relating to this announcement has been issued:

- [September 4, 2009](#) - See Notice NOT-NS-09-017 Administrative Changes of the Joint NIH-NSF Initiative - Collaborative Research in Computational Neuroscience (CRCNS).

Key Dates

Release Date: December 7, 2007

Receipt Dates: February 26, 2008, October 30, 2008, and October 30, 2009

Issued by

National Science Foundation (NSF) (<http://www.nsf.gov>)

Directorate for Computer and Information Science and Engineering

Directorate for Biological Sciences

Directorate for Social, Behavioral, and Economic Sciences

Directorate for Mathematical and Physical Sciences

National Institutes of Health (NIH) (<http://www.nih.gov>)

National Institute of Neurological Disorders and Stroke (NINDS) (<http://www.ninds.nih.gov>)

National Institute of Mental Health (NIMH) (<http://www.nimh.nih.gov>)

National Institute on Drug Abuse (NIDA) (<http://www.nida.nih.gov>)

National Institute on Deafness and Other Communication Disorders (NIDCD) (<http://www.nidcd.nih.gov>)

National Institute on Alcohol Abuse and Alcoholism (NIAAA) (<http://www.niaaa.nih.gov>)

National Eye Institute (NEI) (<http://www.nei.nih.gov>)

National Institute of Biomedical Imaging and Bioengineering (NIBIB) (<http://www.nibib.nih.gov>)

This Notice replaces NOTICE: [NOT-NS-04-003](#)

Purpose

This Notice announces a joint initiative, *Collaborative Research in Computational Neuroscience (CRCNS)*, among four National Science Foundation (NSF) Directorates and seven participating National Institutes of Health (NIH) Institutes. The CRCNS announcement is released under NSF 08-514, <http://www.nsf.gov/pubs/2008/nsf08514/nsf08514.htm>. This announcement supersedes NSF 04-514: *Collaborative Research in Computational Neuroscience (CRCNS) – Innovative Approaches to Science and Engineering Research on Brain Function*. The new solicitation incorporates the following programmatic and administrative changes:

- Description of scientific areas has been updated;
- Proposals to enable sharing of data and other resources are solicited;
- Letters of intent are no longer required;
- An investigator may participate as PI or Co-PI in no more than one research proposal, and in no more than one data sharing proposal;
- Proposals submitted in response to this solicitation may not duplicate or be substantially similar to other proposals concurrently under consideration by other NSF or NIH programs or study sections;
- Budget limits are expressed in terms of direct costs and are common across agencies;
- A two-page coordination plan is required for research proposals;
- Human subjects protection and research on vertebrate animals should be addressed in supplementary documents.

Computational neuroscience provides a theoretical foundation and a rich set of technical approaches for understanding the functions of complex neurobiological systems, building on the theory, methods, and findings of computer science, neuroscience, and numerous other disciplines. Through the CRCNS program, participating NSF Directorates and NIH Institutes support innovative interdisciplinary collaborative research to make significant advances in the understanding of nervous system function, mechanisms underlying nervous system disorders, and computational strategies used by the nervous system.

Both agencies recognize the need for research that focuses on integrating computational models and methods with neuroscience. This solicitation is designed to encourage new collaborations at this interface. Appropriate scientific areas of

investigations are those that are currently supported by NSF and NIH, or related to the missions of the two agencies. By participating in this broadly based program of cooperation between agencies, the NIH will focus on creating new research teams of biomedical and quantitative scientists to explore questions directly relevant to the missions of participating NIH Institutes.

Two classes of proposals will be considered in response to this solicitation:

Research proposals describing new collaborative research projects, and
Data sharing proposals to enable sharing of data and other resources.

Appropriate scientific areas of investigations are those related to the participating funding organizations. Questions concerning a particular project's focus, direction and relevance to a participating funding organization should be addressed to the appropriate person in the list of agency contacts in the NSF Program Solicitation.

The computational research supported under this program must have impact on, and relate to biological processes, and optimally generate hypotheses that are testable in biological studies. It is expected that, (1) applications will include collaborations among computational and/or modeling experts, theorists, and experimental neuroscientists; (2) collaborations will involve a dynamic and, possibly, a protracted period of model or theory development and refinement, and intense interaction among scientists and engineers from different disciplines; (3) the development and testing of new models or theories will provide a framework for the design of experiments and the generation of new hypotheses that can help reveal mechanisms underlying normal or disease states of the nervous system, and (4) the development and distribution of professional quality software tools (e.g., modeling algorithms and analytic tools).

Award Information

Award sizes for research projects are expected to range from approximately **\$100,000 to \$250,000 per year in direct costs**, with durations of three to five years. Many awards will be on the smaller end of this range; no award will exceed \$250,000 per year in direct costs. Applicants are strongly discouraged from requesting greater budgets than are necessary for the activities being proposed. It is estimated that data sharing projects will range from approximately \$25,000 to \$100,000 in cumulative award size for a one- to three-year project. Estimated program budget, number of awards and average award size and duration are subject to the availability of funds.

Upon conclusion of the review process, meritorious applications may be recommended for funding by either the participating NSF Directorates or NIH Institutes, at the option of the agencies, not the applicant. Data sharing proposals will be funded only by NSF. Subsequent grant administration procedures will be in accordance with the individual policies of the awarding agency.

Proposal Preparation and Submission Instructions

Applications submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). Applications must be **submitted to the NSF, not to the NIH**. The complete text of the GPG is available electronically on the NSF Web Site at: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg. Applicants are reminded to identify the program announcement number (08-514) in the program announcement block on the NSF Cover Sheet for Proposal to the National Science Foundation. Compliance with this announcement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

Budgetary Information

Cost sharing is not required by NSF in proposals submitted under this Program Solicitation. Budgets should include travel funds for the PI and team members to attend an annual CRCNS Principal Investigators' meeting.

NIH Process

For those proposals that are selected for potential funding by participating NIH Institutes, the PI will be required to resubmit the proposal in an NIH-approved format directly to the Center for Scientific Review (<http://www.csr.nih.gov/>) of the NIH. PIs invited to resubmit to NIH will receive further information on resubmission procedures from NIH. An applicant will not be allowed to increase the proposed budget or change the scientific content of the application in the resubmission to the NIH. For applications where the principal investigators are at different institutions, the applicants will be expected to utilize the Multiple Principal Investigator mechanism at the NIH (http://grants.nih.gov/grants/multi_pi/). These NIH applications will be entered into the NIH IMPAC II system. The results of the review will be presented to the involved Institutes' National Advisory Councils for the second

level of review. Subsequent to the Council reviews, NIH Institutes will make their funding determinations and selected awards will be made. Subsequent grant administration procedures for NIH awardees will be in accordance with the policies of NIH.

Please note that applications submitted to the NSF on February 26, 2008, and selected for potential funding by the participating NIH Institutes, will have an extremely short conversion time. These applicants will be notified by April 8, 2008, and the resubmission will be due to the NIH on **April 14, 2008**. Applicants may wish to give their Grants Office an advance notice of this timetable.

Inquiries

Written and telephone inquiries are encouraged. Please see the NSF program announcement for names and contact information for each of the participating NSF Directorates and/or NIH Institutes at <http://www.nsf.gov/crcns/>.

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