

Cognitive Science and Learning

United States Department of Defense-Army Research Laboratory (ARL) Broad Agency Announcement (DAAD19-03-R-0017)—Neurophysiology and Cognitive Neurosciences

Continuous Deadline (September 30, 2006)

Research in the perception and cognition subfields of neurophysiology and the cognitive neurosciences, covering several or all areas of electrophysiology, psychophysiology, sensory and perceptual physiology, computational neurobiology, psychophysics, neuropsychology, and integrative neurobiology is of interest. specific examples can include physiological, neuropsychological and/or cortical/cognitive mechanisms underlying successful completion of complex task behaviors applicable to non-laboratory environments under non-ideal conditions, to include both amelioration of induced losses as well as enhancement in defined perceptual, cognitive and/or motor abilities. Investigations can span the gamut from multi-unit recordings through evoked potentials and neuro-imaging technologies to humoral and psychological correlates of both central and peripheral nervous system function. Non-medically oriented research designed to elucidate the fundamental physiology underlying cognition and possible non-invasive methods of monitoring cognitive states and processes during normal activity is appropriate. Perceptual and/or psycho/physiological implications of mind-machine interfaces ranging from optimizing auditory, visual and/or somatosensory display and control systems based on physiological or psychological states through modeling of individual cognitive dynamics and decision making is appropriate to this research area.

James S. McDonnell Foundation Bridging Brain, Mind, and Behavior—21st Century Scientist Awards

Continuous Deadline

The Brain, Mind, and Behavior (BMB) Program supports research studying how neural systems are linked to and support cognitive functions and how cognitive systems are related to an organism's (preferably human) observable behavior. Aspects of proposals appropriate to the JSMF BMB program would include, but are not limited to

- studying how the brain extracts and uses relevant information from complicated environments
- re-examining 'common wisdom' assumptions (such as the existence of critical periods in human learning)
- applying approaches and knowledge from cognitive psychology or cognitive science to important problems in education, training, or rehabilitation.

**National Institute of Health
Director's Pioneer Award**

Deadline—January/February 2007

A unique aspect of the NIH Roadmap for Medical Research is the NIH Director's Pioneer Award (NDPA) Program, a high-risk research initiative of Research Teams of the Future. First announced in Fiscal Year 2004, nine awards were made in September 2004, and 13 awards were made in 2005. The NDPA is designed to support individual scientists of exceptional creativity who propose pioneering approaches to major challenges in biomedical research. The term “pioneering” is used to describe highly innovative approaches that have the potential to produce an unusually high impact, and the term “award” is used to mean a grant for conducting research, rather than a reward for past achievements. Biomedical research is defined broadly in this announcement as encompassing scientific investigations in the biological, behavioral, clinical, social, physical, chemical, computational, engineering, and mathematical sciences. The NDPA is meant to support individuals who intend to pursue new research directions that are not already supported by other mechanisms. This RFA announces a third NPDA competition for approximately 5–10 new awards of \$500,000 in direct costs per year for five years that will be made in Fiscal Year 2006. Awardees are required to commit the major portion (at least 51%) of their research effort to activities supported by the NDPA.

**Department of Education-Institute of Education Sciences
Cognition and Student Learning (CASL) Research Grant Program (84.305H)**

Currently Closed.

The purpose of the Cognition research program is to improve student learning by bringing recent advances in cognitive science to (1) develop interventions – instructional approaches, practices, and curriculum – for improving student learning, (2) establish the efficacy of existing interventions and approaches for improving student learning with efficacy or replication trials, and (3) develop measurement tools that can be used to improve student learning and achievement. The long-term outcome of this program will be an array of tools and strategies (e.g., instructional approaches, computer tutors) that are based on principles of learning and information processing gained from cognitive science and that have been documented to be efficacious for improving learning in education delivery settings.

Unsolicited Applications

Deadline—May 1, 2006 for FY 2006

The Institute of Education Sciences announces its interest in considering unsolicited applications for research, evaluation, statistics, and dissemination projects that would make significant contributions to the mission of the Institute. The Institute's mission is to conduct and support rigorous education statistics, research, and evaluation in order to provide reliable information about the condition of education, education practices that improve academic achievement, and the effectiveness of federal and other education programs. Unsolicited applications are defined as those that are not eligible for funding under the Institute's current grant competitions.

**National Science Foundation—Directorate for Social, Behavioral and Economic Sciences
Perception, Action, and Cognition**

Deadlines: July 15, 2006 and January 15, 2007

Supports research on perception, action and cognition including the development of these capacities. Emphasis is on research strongly grounded in theory. Research topics include vision, audition, haptics, attention, memory, reasoning, written and spoken discourse, motor control, and developmental issues in all topic areas. The program encompasses a wide range of theoretical perspectives, such as symbolic computation, connectionism, ecological, nonlinear dynamics, and complex systems, and a variety of methodologies including both experimental studies and modeling. Research involving acquired or developmental deficits is appropriate if the results speak to basic issues of perception, action, and cognition.

Developmental and Learning Sciences

Deadlines: July 15, annually

This program supports studies that increase our understanding of cognitive, linguistic, social, cultural, and biological processes related to children's and adolescents' development and learning. Additional priorities are to support developmental research that: incorporates multidisciplinary, multi-method, microgenetic, and longitudinal approaches; develops new methods and theories; examines transfer of knowledge from one domain to another and from one situation to another; assesses peer relations, family interactions, social identities, and motivation; examines the impact of family, school, and community resources; assesses adolescents' preparation for entry into the workforce; and investigates the role of demographic characteristics and cultural influences on children's development. Research supported by this program will add to our basic knowledge of how people learn and the underlying developmental processes that support learning, with the objective of leading to better educated children and adolescents who grow up to take productive roles as workers and as citizens.