SYNOPSIS

We invite proposals for workshops that will bring together scholars from across different disciplines and different units of the University who, through their collaborations and interactions, will generate novel insights into existing topics and issues or address wholly new questions in the science of learning. The Institute supports workshops focused at all levels of scientific inquiry, from changes at the level of synapses to the nature of cognitive change over the life-span, connections between these and technological innovations, and the implications of these for education and learning in formal and informal settings. The workshop grant program is open to full-time faculty members of JHU. Applications are due March 21, 2016 at 11:59 EST.

I. INTRODUCTION

The mission of the Science of Learning Institute (SLI) is to understand and optimize the most essential part of our human capital: the ability to learn. Learning is a complex process that spans biological, psychological, sociological, and technological systems. There is growing recognition that we must create synergies across disciplines to truly unlock the complexities of learning and optimize learning for all. To this end, the goal of the SLI’s workshop grant program is to promote discussions and collaborations about learning through interdisciplinary collaborations that span within and across the basic and applied sciences at Johns Hopkins University. We seek to create an integrated understanding of the cellular and molecular mechanisms of learning, how learning varies as a function of basic learner characteristics (e.g. under genetic change, over the life span, across individual differences), how these characteristics interact with different environments to produce variation in learning outcomes, and how interactions with intelligent artificial learning systems can enhance and optimize human learning.

This call invites proposals for workshops that will bring together scholars from across different disciplines and units of the University who, through their collaborations and interactions, will generate novel insights into existing topics and issues or address wholly new questions in the science of learning. The previously funded workshop supported the 2014 Mindfulness & Learning Symposium, which highlighted theories, perspectives, and research methods from Education, Medicine, Public Health, Neuroscience, Psychology, Psychiatry, Human Development, and Policy. The workshop provided an overview of the state of the research, identified gaps, and outlined next steps in the emerging field, as well as resulted in several products. More information about the previously funded workshop is available on our website. For more information about the Institute’s mission and goals, please see: http://scienceoflearning.jhu.edu.

II. ELIGIBILITY AND AWARD INFORMATION

We invite workshop proposals for funding up to $20,000. Workshop organizers must be full-time faculty members at JHU who are eligible to serve as PIs/Co-PIs in their division. Faculty from any division within the University are eligible to apply. Divisions include Krieger School of Arts and Sciences, Whiting School of Engineering, Carey Business School, School of Education, School of Medicine, School of Nursing, Peabody Institute, Bloomberg School of Public Health, and School of Advanced International Studies (for more information about JHU schools, see https://www.jhu.edu/academics/). The PIs and Co-PIs must be from (a) at least two different disciplines and (b) two departments or divisions from Johns Hopkins University. We especially welcome proposals that include PIs and Co-PIs who are in the early stages of their careers. Priority
will be given to those who have not received funding during the previous workshop cycles. Priority will be given to those who have not received funding during the previous grant cycles.

**Please note that applications will be returned without review if:**
1. The applicants do not meet the stated eligibility requirements above.
2. The workshop does not align with the mission of the Science of Learning Institute.
3. The workshop proposal does not adhere to the formatting guidelines or include all relevant application materials (described in section IV, below).

**III. APPLICATION REVIEW CRITERIA**

Priority will be given to proposals that are strongest in meeting the following criteria, which will be explicitly evaluated in the review process:

1. **Innovation:** The workshop addresses a novel question in the science of learning or will generate novel insight into an existing learning topic or issue that will break traditional barriers.
2. **Interdisciplinarity:** The workshop includes participants that are drawn from a range of disciplines and are likely to attract broad participation, including faculty from within and outside the University, postdoctoral fellows, graduate and undergraduate students. The proposal clearly states how new collaborations and interactions in the science of learning will be fostered among participants through the workshop, and how they will generate novel, interdisciplinary insights into the topics, issues, or questions addressed.
3. **Strength of Program:** The workshop program represents a logical flow of events and/or activities (e.g., presentations, breakout groups) that are appropriate to the aims of the workshop and development of final product(s).
4. **Strength of Organizers and Workshop Team:** The Organizer and team members display content knowledge and methodological expertise to organize and facilitate the workshop, produce high quality final product(s), and disseminate information to appropriate target audiences. Team members are uniquely qualified to create new synergies across traditional disciplines.
5. **Value of Product(s):** Workshops yield specific products of value to the science of learning, such as a review article, a white paper, or an outline of a demonstration project.

**IV. APPLICATION PREPARATION AND SUBMISSION**

**A. Formatting Requirements**
All application materials must be formatted to fit on 8.5 x 11” paper with 1-inch margins, single line spacing, 12-point Times New Roman font, and consistent with the professional style guidelines of the applicant’s field. Please adhere to the specified page limit for each section (listed in parentheses below). **Applications will be returned without review if formatting guidelines are not followed.**

**B. Proposal Materials**
Workshop proposals should include the following items:
1. **Project Abstract:** A short description of the project in 300 words or less.
2. **Workshop Description (8 pages maximum):** This document must contain the following sections:
   a. **Background and Specific Aims (2 pages):** This should be a succinct statement describing the background, the objectives of the workshop, and the questions or major issues to be addressed. This section should end with a numbered list of the Workshop Aims.
b. Significance (1 page): This section should include 3 clearly-labeled subsections that briefly describe how the project addresses the innovation, interdisciplinarity, and products evaluation criteria listed above.

c. Proposed Participants (1 page): This should include the major participants (i.e. speakers, session leaders), and the broader audience that might be expected to attend the workshop. Participants should be listed by name; these may include people within JHU or from other universities and industry.

d. Program (1-2 pages): This should include a preliminary description of events and/or activities that will occur during the workshop, and should explicitly address the program evaluation criterion listed above.

e. Workshop Timeline (1 page): This section should include a brief workshop planning timeline (table format preferred) that identifies major activities and their projected completion dates (e.g., program planning, equipment/contractor planning, speaker recruitment, marketing, online registration, event launch, product completion).

f. References (1 page)

3. Budget and Budget Justification (1 - 2 pages): Funds may be requested for venue, custodial services, A/V support, travel accommodations for speakers, refreshments and meals for participants, and administrative support.

4. Brief Biographical Sketches of Organizer, Co-Organizer(s), and other Key Personnel: Include a brief, 2-page statement summarizing each individual’s qualifications for the proposed workshop as well as a list of their existing funding related to the workshop. Please download the biographical sketch template and instructions.

C. Application Deadline and Timeline for Review
Applications are due at 11:59pm EST, March 21, 2016, and should be submitted via the Science of Learning Institute’s grant application and review website (a link to the grant application site will be listed on the SLI’s website), which will open for submissions starting October 15, 2016. Evaluation of proposals will be carried out by a team of internal evaluators who are experts in the science of learning. Funding is expected to start on July 1, 2016. A progress report will be due 6 months into the funding year, and a final report will be due upon completion of the workshop.

V. QUESTIONS

Applicants who wish to discuss their project before applying are encouraged to contact SLI personnel or members of the steering committee with the most relevant expertise. Questions about the application process or review timeline should be directed to Mike Alexander, SLI Program Coordinator, malexander@jhu.edu.

SLI Personnel & Steering Committee

Personnel
- Barbara Landau, Director, Science of Learning Institute; Professor, Cognitive Science, landau@jhu.edu
- Kelly Fisher, Associate Director, Science of Learning Institute; Assistant Professor, School of Education, kelly.fisher@jhu.edu
- Kristin Gagnier, Outreach and Evaluation Specialist, Science of Learning Institute; Assistant Research Scientist, Cognitive Science; kristin.gagnier@jhu.edu

Steering Committee
- Randal Burns, Professor, Computer Science, randal@cs.jhu.edu
• Mark Chevillet, Program Manager, Applied Physics Laboratory, mark.chevillet@jhuapl.edu
• Charles E. Connor, Professor, Neuroscience, connor@jhu.edu
• Barry Gordon, Professor, Cognitive Neurology/Neuropsychology, bgordon@jhmi.edu
• Richard Huganir, Professor and Director, Neuroscience, rhuangir@jhmi.edu
• Patricia Janak, Professor, Psychology and Brain Sciences, patricia.janak@jhu.edu
• Sanjeev Khudapur, Associate Professor, Electrical and Computer Engineering, khudapur@jhu.edu
• Michael Miller, Professor, Center for Imaging Science, mim@cis.jhu.edu
• Tim Moran, Professor, Psychiatry and Behavioral Sciences, tmoran@jhmi.edu
• Amy Shelton, Professor and Associate Dean for Research, School of Education, ashelton@jhu.edu