

NSF Perception, Action, and Cognition Program Fall 2018 Newsletter

Heartfelt Thanks

We would like to extend our thanks to the many members of our research communities who contributed time and expertise to the merit review process in the last year. Maintaining a rigorous review process while streamlining proposal management requires a large number of ad hoc reviewers and we greatly appreciate the effort of our reviewers and panelists. It would be impossible to evaluate these proposals without all of you giving so freely of your time and expertise. If you would be interested in reviewing for PAC, or have a colleague who might be interested, please complete the survey for our reviewer database (https://www.surveymonkey.com/r/PAC_Reviewer_Registration).

Updates for the Research Community

1. The **Science of Learning Program** has just completed its second year as a core program within Behavioral and Cognitive Sciences. "The goals of the SL Program are to develop basic theoretical insights and fundamental knowledge and learning principles, processes and constraints."

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5567

2. **Mind, Machine and Motor Nexus (M3X)**, a program in the Engineering directorate, seeks to fund research that addresses questions of "human intent, perception, and behavior in interaction with embodied and intelligent engineered systems and as mediated by motor manipulation."

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505402

3. The **Dear Colleague Letter, Stimulating Integrative Research in Computational Cognition (CompCog)** may be of interest: <https://www.nsf.gov/pubs/2016/nsf16122/nsf16122.jsp>

4. The solicitation on **Integrative Strategies for Understanding Neural and Cognitive Systems (NCS)** is likely to be of interest to members of the PAC community:

https://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=505132&ods_key=nsf18533

5. **Keep watch for updates on the solicitation "The Future of Work at the Human-Technology Frontier"**

For more funding opportunities within the Social, Behavioral, and Economic Sciences Directorate, check out the following website:

https://www.nsf.gov/sbe/additional_info/sbe_opportunities_key.jsp

As always, you can check the PAC website for updates to our program description as well as links to the other opportunities for funding at NSF that may be of interest to our broad research community. Please note that the PAC program has requirements for submission in addition to those in the PAPPG (listed on our website: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5686).

Before submitting any proposal to NSF, check the program description or solicitation AND the Proposal and Award Policies and Procedures Guide, which updates every year:

https://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf18001&org=NSF

Fiscal Year 2018 PAC Awards

We are excited to announce a new group of research awards for the PAC portfolio from fiscal year 2018. You can find a list of all the awards that PAC made or contributed to on the following pages. If you would like to know more about any of the awards, simply go to <http://nsf.gov/awardsearch/> and enter the 7-digit Award Number in the search field. That will bring up a link to the award. Click on the title to see the public abstract.

1753611 ***Vedran Dronjic***

Collaborative Research: NSF/SBE-BSF: The neural mechanisms of language transfer in morphological learning

1753626 ***James Booth***

Collaborative Research: NSF/SBE-BSF: The neural mechanisms of language transfer to morphological learning

1753808 ***Karen Gunther***

RUI: Stimulus Characteristics Influencing Non-Cardinal Color Mechanisms

1753846 ***Robert Shapley***

Mechanisms of Color Perception: Dependences on Color Contrast and Spatial Pattern

1753915 ***Hannah Block***

Reciprocal effects of adaptation in the brain's motor and sensory systems

1754205 ***Joachim Vandekerckhove; Michael Lee***

RR: Workshop on Robust Social and Behavioral Sciences

1754211 ***Ning Qian***

Visual Perception as Retrospective Bayesian Decoding from High- to Low-level Features in Working Memory

1754284 ***James Magnuson; Jay Rueckl***

Computational approaches to human spoken word recognition

1822232 ***David Balota***

Rejuvenating the English Lexicon Project

1824737 ***Robert Jacobs***

CompCog: A Machine Learning Approach to Human Perceptual Similarity

1827182 ***William Hirst***

Forming Collective Memories: From local influences to global mnemonic convergence

1827361 ***Robert Remez***

Temporal dynamics of phonetic perceptual organization

1827374 ***Keith Holyoak; Hongjing Lu***

1827427 ***Alan Yuille***

Collaborative Research: CompCog: Achieving Analogical Reasoning via Human and Machine Learning

1827591 ***Rachel Theodore; Paul Allopenna; James Magnuson***

1827598 **Stefanie Shattuck-Hufnagel; Jeung-Yoon Choi**

Collaborative research: An integrated model of phonetic analysis and lexical access based on individual acoustic cues to features

1827601 **James Lackner; Paul DiZio**

Motion sickness: The role of control in prediction and prevention

1827725 **Andrew Gordon**

1827752 **Marco Santello; Justin Fine**

Collaborative Research: Effector and Task Neural Representations of Hand-Object Interactions

1829434 **Timothy Brady; Viola Stoermer**

Familiarity and Meaning in Visual Working Memory

1834323 **Woojae Kim**

EAGER: Toward a General Framework for Optimal Experimentation in Computational Cognition

Promoting Diversity and Inclusion; Workshops

1832581 **Suparna Rajaram; Judith Kroll; Laurie Feldman; Natasha Tokowicz**

Women in Cognitive Science: International Collaboration, Scientific Advancement, Workplace Culture

1836619 **Ayanna Thomas; Jean Fox Tree; Duane Watson; Alejandro Lleras**

Inclusion across the Nation of Communities of Learners of Underrepresented Discoverers in Engineering and Science

1836996 **Pamela Tsang**

International Symposium on Aviation Psychology: May 7-10, 2019 in Dayton, Ohio

PAC contributions to awards made by other programs:

Cognitive Neuroscience

1752355 **Jan Wessel**

CAREER: Human motor inhibition: a neural race between motor emission and cognitive control

1756403 **Karen Emmorey; Phillip Holcomb**

Neural tuning of the reading system

1756417 **Sean Polyn**

Neural Mechanisms of Semantic and Episodic Memory

1840699 **Hari Bharadwaj**

NeuroDataRR. Collaborative Research: Testing the relationship between musical training and enhanced neural coding and perception in noise

BIO: Animal Behavior

1755089 **Kay Holekamp; Elise Zipkin**

Selection for general intelligence in carnivores by novel environments

Decision, Risk, and Management Science

1757269 **Thomas Griffiths**

CompCog: Helping people make more future-minded decisions using optimal gamification

Developmental Sciences

1749507 ***David Lewkowicz***

Development of Selective Attention to Multisensory Information in Human Infants

Science of Learning

1753026 ***Julia Choi***

CAREER: Adaptation and learning processes in human locomotion

SBE Postdoctoral Research Fellowships

1808571 ***Nadia Brashier; Daniel L. Schacter***

Contributions of Episodic Retrieval to Problem Solving

1810498 ***Lace Padilla; Steven Franconeri***

Improving Graph Literacy and Numeracy