
**Message from the Director:**

In 1908, Vladimir Bekhterew describes the superior nucleus of the vestibular nerve; Willem Einthoven makes string galvanometer recordings from the vagus nerve; Oberga introduces the cisterna puncture, a method to access the cerebrospinal fluid through the cistena magna; Victor Alexander Haden Horsley and Robert Henry Clarke design stereotaxic instrument; and, the Chicago Cubs won the World Series. In 2016, Purdue welcomes three new faculty members Hari Bharadwaj, Mark Sayles, and Ray Munguia with expertise in neural aspects of hearing. Bharadwaj and Sayles are assistant professors with joint appointments in the Weldon School of Biomedical Engineering and the Department of Speech language and Hearing Sciences. Hari investigates human electrophysiology in complex environments using sophisticated analytical methods. Mark explores brainstem auditory neurophysiology with extensions to implantable devices for both recording and stimulation. Ray Munguia, M.D. assumed dual roles in the Department of Speech, Language, and Hearing Sciences and the Indiana University School of Medicine – West Lafayette. Ray employs electrophysiological measures with an interest in tinnitus and central auditory processing disorders. Hari, Mark, and Ray join 19 Purdue faculty already engaged in research on and clinical treatment of hearing. These 22 Purdue faculty comprise one of the premier groups of hearing experts in the country. Few institutions in the world compare with Purdue's combination of pioneering research, leadership in graduate and clinical education, and a full array of clinical services. 2016 is a very good year for hearing research at Purdue, and yeah, the Cubs won the World Series.

- Keith Kluender
Integrative Neuroscience Leadership Team Member
Department Head - Speech, Language, and Hearing Science

PURDUE INSTITUTE FOR
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## Featured Faculty Member:

Mark Sayles is an Assistant Professor, with a joint appointment in Biomedical Engineering and Speech, Language and Hearing Sciences. He is a neurophysiologist and a member of the Center for Implantable Devices in the Weldon School of Biomedical Engineering. Mark received a B.A. degree in Natural Sciences from the University of Cambridge (UK) in 2003. He then completed a joint M.D./Ph.D. program at the University of Cambridge, graduating in 2009. His Ph.D. research focused on neural coding of speech and musical sounds in the mammalian brainstem under realistic acoustic conditions; i.e., listening environments where our ears are challenged by background noise and reverberation. He undertook surgical residency training in the UK, specializing in otorhinolaryngology and head and neck surgical oncology. Mark's post-doctoral work was in the Department of Neuroscience at the University of Leuven, Belgium, where he evaluated the role of cochlear mechanics in binaural hearing by recording from highly specialized neurons in the superior olivary complex and applying innovative systems-identification techniques to the analysis of neural data. He was a Fulbright post-doctoral fellow at Purdue, working on auditory neural coding following hearing impairment. In 2016, he joined the faculty at Purdue as an Assistant Professor, where his laboratory investigates the relationship between brainstem single-neuron physiology and perception in normal-hearing and hearing-impaired listeners. He teaches classes in BME and SLHS. He is a member of the Association for Research in Otolaryngology, the Royal College of Surgeons of England, the Society for Neuroscience, and the Acoustical Society of America. To learn more about Dr. Sayles, please visit his website.

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## Neuroscience & Physiology Area Seminars

**11/8 Dr. Ed Bartlett:** "Overcompensation and startling responses: the active life of the aging auditory system"

**11/29 Dr. Donna Fekete:** "Developing from a hollow sphere to an inner ear: morphogens matter"

**LILY 1-117 @ 1:30 PM**

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Li Yuan (Luanne) Bermel, Ph.D.
Managing Director
Women's Global Health Institute & Oncological Sciences Center
Discovery Park and College of Health and Human Sciences
Purdue University
Hall for Discovery and Learning Research, Room 395

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Purdue University Chorafas Foundation Awards

**Purdue University**
**Chorafas Foundation Awards**

**Deadline: February 3, 2017**

Purdue University will nominate one young PhD graduate student researcher for the 2017 Chorafas Foundation Award. The **$5,000** award, made available by the Dimitris N. Chorafas Foundation, is intended as a prize for advanced studies and/or research during or shortly after graduation. The Dimitris N. Chorafas Foundation was founded in 1992 under the leadership of Prof. Dimitris N. Chorafas. Each year, the Foundation awards prizes to more than 20 universities, with the goal of stimulating promising young researchers.

**Process:**

- Selection of a Purdue nominee will be a two-phase process. Students are invited to submit pre-proposals for the Chorafas Foundation award by **Friday, February 3, 2017.** A maximum of 5 finalists will be selected to submit a full nomination package. The deadline for submitting full nomination packets is **March 24, 2017.**
- The requirements and criteria for pre-proposals and final proposals are provided on page 2.
- All pre-proposals should be sent to the **attention of Donna Young, Office of Research, College of Engineering (ARMS 2000),** or electronically as one PDF File to dsyoung@purdue.edu.

**Subject Areas for the Chorafas Award:**

Research projects in the following areas are eligible for the Chorafas prize:

- Research, Development and Applications in Advanced Technology
- Life sciences and Medicine
- Physics, Chemistry, Sciences of the Very Small and the Very Large
- Formal sciences: Mathematics, Logic, Statistics and their Applications
- Hard Science Solutions to Millennium Problems
- Interdisciplinary Scientific Research

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## ***PULSe Computational and Systems Biology Training Group***

It is our pleasure to inform you that PULSe is forming Computational and Systems Biology training group. The training group has been approved by the PULSe executive committee and as a final step in the process we need to finalize the membership of the group. We will be posting information on the PULSe website regarding the training group and membership. Prospective students will be informed regarding opportunities within this training group as they are recruited and admitted to the PULSe program starting this fall.

Please inform Tony Hazburn, Associate Professor, if you are interested in participating in the CSB training group and if you would like to be an administrative or a participatory member. Please note that we you can be an administrative member of one training group and be a participatory member of two training groups.

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## Meet Paul Sturm

Paul Sturm is the Director of Strategic Development for Discovery Park and the Office of the EVPRP. He works with research center directors and senior administrative staff to identify and pursue funding opportunities across the entire private-sector

spectrum – including individuals, corporations, and foundations. Paul assists research centers and institutes with gift solicitations and gift-in-kind processing, as well as sponsored research contract proposals and negotiations, and he regularly meets with center leadership to help them craft and implement overarching business development strategies to increase funding in support of various functions, research projects, and center initiatives.

Paul was on the development team that worked with John & Donna Krenicki on their multimillion-dollar gift to endow the John and Donna Krenicki Director of the Purdue Institute for Integrative Neuroscience (PIIN), as well as the team that worked with Arden Bement Jr. to endow the annual Arden L. Bement Jr. Award for research and scholarship distinction in the pure or applied science or engineering disciplines.

Paul meets regularly with Kaethe Beck (EVPRP Operations Manager for Major Projects) to discuss development efforts for the two Pillars of Excellence in the Life Sciences institutes, and he's very interested in supporting the research needs of our Pillars institutes.

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## CASIS and NCATS Announce International Space Station Funding Opportunity Focused on Human Physiology Research

*Part of a new four-year, $12 million partnership to fund research onboard the International Space Station U.S. National Laboratory. To view the funding opportunity, learn how to submit your proposal, and get the latest information on this initiative, please visit:* www.casistissuechip.blogspot.com

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## ATTENTION GRADUATE STUDENTS

Human Motor Behavior Group is looking for motivated students to become team members in their labs. Please visit the following link for additional information.

https://www.purdue.edu/hhs/hk/Biomechanics-MotorBehavior/get-involved/

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## Funding Opportunities

| Opportunity | Award Amount | Deadline |
|---|---|---|
| ***Parkinson's Focused Idea Award*** | Varies | November 9, 2016 |
| ***Parkinson's Impact Award*** | Varies | November 9, 2016 |
| ***NIH-NINDS Institutional Center Core Grants to Support Neuroscience Research (P30)*** | Varies | November 14, 2016 |
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| ***NIH BRAIN Initiative: Foundations of Non-Invasive Functional Human Brain Imaging and Recording – Bridging Scales and Modalities (R01*** | Varies | November 23, 2016 |
| ***NIH BRAIN Initiative: Non-Invasive Neuromodulation – New Tools and Techniques for Spatiotemporal Precision (RO1)*** | Varies | November 23, 2016 |
| ***NSF/NIH Smart and Connected Health (SCH)*** | 500,000 | December 8, 2016 |
| ***Indiana Spinal Cord & Traumatic Brain Injury Research Fund*** | 160,000 | December 9, 2016 |
| ***American Federation for Aging Research Grants for Junior Faculty*** | Varies | December 15, 2017 |
| ***New Technologies and Novel Approaches for Large-Scale Recording and Modulation in the Nervous System (U01)*** | Varies | December 21, 2016 |
| ***NIH/BARDA Antimicrobial Resistance Diagnostic Challenge*** | Varies | January 9, 2017 |
| ***Standards to Define Experiments Related to the BRAIN Initiative (R24)*** | Varies | January 10, 2017 |
| ***Data Archives for the BRAIN Initiative (R24)*** | Varies | January 17, 2017 |
| ***Integration and Analysis of BRAIN Initiative Data (R24)*** | Varies | January 19, 2017 |
| ***NIH BRAIN Initiative: Development of Next Generation Human Brain Imaging Tools and Technologies (UO1)*** | Varies | January 20, 2017 |
| ***NIH-NCI Program Project Applications (P01)*** | Varies | January 25, 2017 |
| ***NIH Animal and Biological Material Resource Centers (P40)*** | Varies | January 25, 2017 |
| ***NIH BRAIN Initiative: Research on the Ethical Implications of Advancements in Neurotechnology and Brain Science (RO1)*** | Varies | January 30, 2017 |
| ***HHS-AHRQ Developing Measures of Shared Decision Making (R01)*** | 500,000 | February 5, 2017 |
| ***NIH Common Mechanisms and Interactions Among Neurodegenerative Diseases (R01)*** | Varies | February 5, 2017 |
| ***NIH Perinatal Stroke (R01)*** | 324,000 | February 7, 2017 |
| ***NIH High Impact Neuroscience Research Resource Grants (R24)*** | Varies | February 14, 2017 |
| ***Simons Foundation Autism Research (SFARI) Initiative 2017 Pilot and Research Awards*** | 70,000-275,000 | March 22, 2017 |
| ***NIH BRAIN Initiative: Research Career Enhancement Award for Investigators to Build Skills in a Cross-Disciplinary Area (K18)*** | Varies | April 14, 2017 |
| http://www.grants.gov/searchgrants.html?agencyCode%3DDOD | Varies | Varies |

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