Audition – from neural circuits to perception

An intensive advanced graduate-level course on auditory neuroscience, spanning cellular and circuit neurophysiology, animal behavior, and human perception. Interact with four distinguished visiting scientists, learn about their ground-breaking research, and understand novel approaches to sensory neuroscience.

**Prof. Philip X. Joris** (University of Leuven, Belgium).
February 22nd & 23rd
In-vivo electrophysiological and neuroanatomical approaches to studying rapid temporal processing for sound localization and spatial hearing in mammalian brainstem neural circuits.

**Prof. Daniel B. Polley** (Harvard Medical School).
April 12th & 13th
Optogenetic, electrophysiological and behavioral approaches to studying the fundamental mechanisms and clinical implications of auditory brain plasticity in animals and humans.

**Prof. Laurence Trussell** (Oregon Health & Science University).
April 19th & 20th
Electrophysiological and optical approaches to studying how microcircuits, synapses and biophysical properties of neurons guide the processing of auditory signals.

**Prof. Torsten Dau** (Technical University of Denmark).
May 3rd & 4th
Behavioral and computational modeling approaches to dissecting fundamental aspects of temporal processing in human hearing and their relevance for understanding speech in noisy environments.

To register, follow the appropriate links from myPurdue. This course is cross listed in Biomedical Engineering (BME 695, CRN: 22456 / 22457), and in Speech, Language and Hearing Sciences (SLHS 619, CRN: 22436 / 22440). Thursday 10:30-11:20 (LYLE 1150) & Friday 09:30-11:20 (ABE 205); spring semester, 2018.

Purdue Faculty Instructors: Prof. Mark Sayles, Prof. Hari Bharadwaj, Prof. Michael G. Heinz.

Generously sponsored by the Purdue Institute for Integrative Neuroscience.