

We seek highly motivated and creative students in our efforts to understand the brain.

A unique and intensive program of study followed by advanced research in a world class Princeton laboratory.

- Pioneer new experimental techniques
- Develop cutting-edge analytical tools
- Discover how the brain works

MOLECULAR
DEVELOPMENTAL
BEHAVIORAL
COMPUTATIONAL
COGNITIVE
NEUROSCIENCES

PNI FACULTY RESEARCH INTERESTS

MICHAEL BERRY

Neural computation in the retina

WILLIAM BIALEK

Interface between physics and biology

MATTHEW BOTVINICK

Neural foundations of human behavior

CARLOS BRODY

Quantitative and behavioral neurophysiology

LISA BOULANGER

Neuronal functions of immune molecules

JONATHAN COHEN

Neural bases of cognitive control

JONATHAN EGGENSWILER

Mouse neural development

LYNN ENQUIST

Neurovirology

LIZ GAVIS

Neural development and mRNA localization in *Drosophila*

ALAN GELPERIN

Learning, memory and olfaction

ASIF GHAZANFAR

Neurobiology of primate social agents

ELIZABETH GOULD

Neurogenesis and hippocampal function

MICHAEL GRAZIANO

Sensorimotor integration

CHARLES GROSS

Functions of the cerebral cortex in behavior

URI HASSON

Temporal scales of neural processing

BARTLEY HOEBEL

Behavioral neuroscience

PHILIP HOLMES

Mathematical modeling

BARRY JACOBS

Brain monoamine neurotransmitters

SABINE KASTNER

Neural mechanisms for visual perception

MALA MURTHY

Neurophysiology of olfactory and auditory perception in *Drosophila*

COLEEN MURPHY

Molecular mechanisms of aging

Yael Niv

Reinforcement learning and decision making

KEN NORMAN

Neural bases of episodic memory

DANIEL OSHERSON

How does the brain reason?

DAVID TANK

Neural circuit dynamics

SAMUEL WANG

Dynamics and learning in neural circuits

FOR MORE INFORMATION ON OUR DOCTORAL PROGRAM IN NEUROSCIENCE, PLEASE CONTACT THE FOLLOWING:

MEGAN LINTOTT

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Program in Neuroscience
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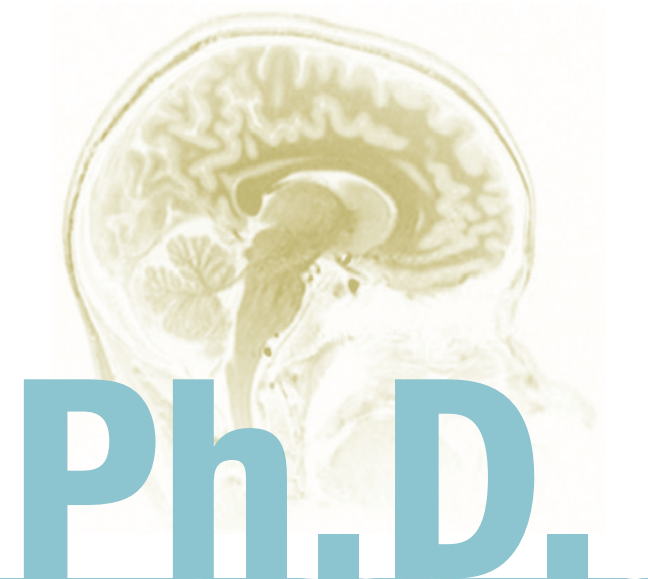
PROFESSOR CARLOS BRODY

Director of Graduate Studies,
Program in Neuroscience
609-258-7645
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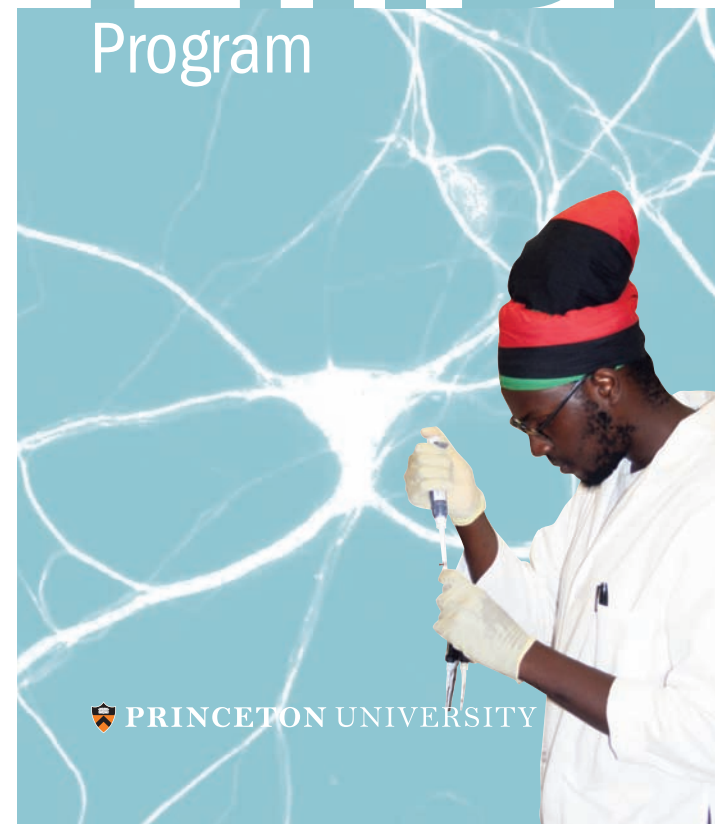
<http://neuroscience.princeton.edu/PhD>



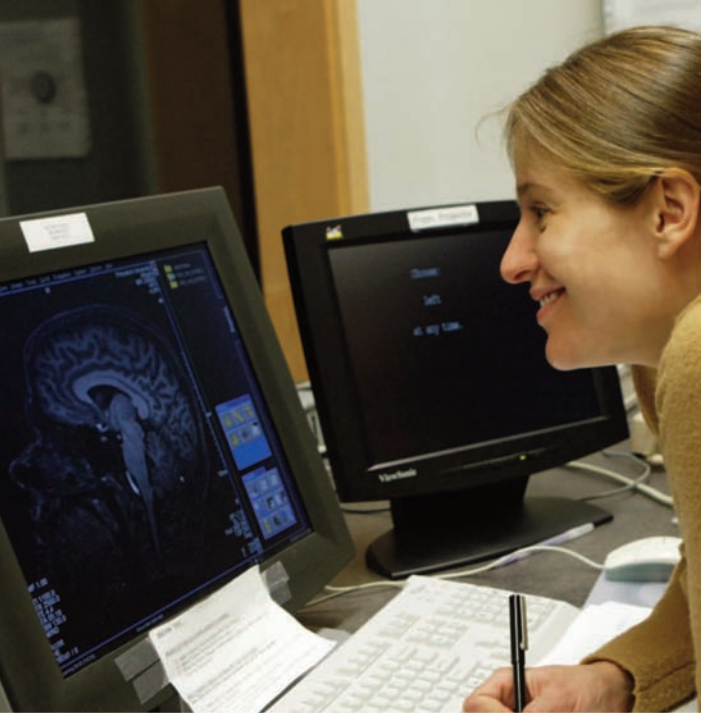
PRINCETON
Neuroscience
INSTITUTE



Ph.D.
Program

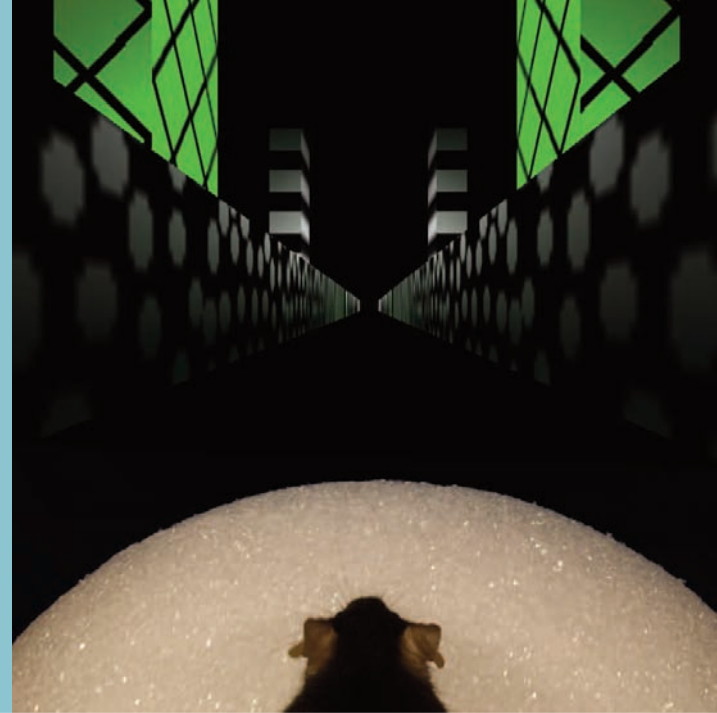


 PRINCETON UNIVERSITY



QUANTITATIVE/COMPUTATIONAL TRACK

Across the board, from molecular biology to physics to psychology, and including neuroscience, Princeton research is particularly strong in theoretical and quantitative approaches. In recognition of this, a Quantitative and Computational Neuroscience track exists within the Neuroscience Ph.D. Students in this track take elective courses in quantitative disciplines, and perform Ph.D. research in quantitative and/or computational neuroscience. Faculty within PNI and within Mathematics, Physics, Electrical Engineering, and Computer Science are part of the QCN track. Students from quantitative fields wishing to enter neuroscience are strongly encouraged to apply to our Ph.D.

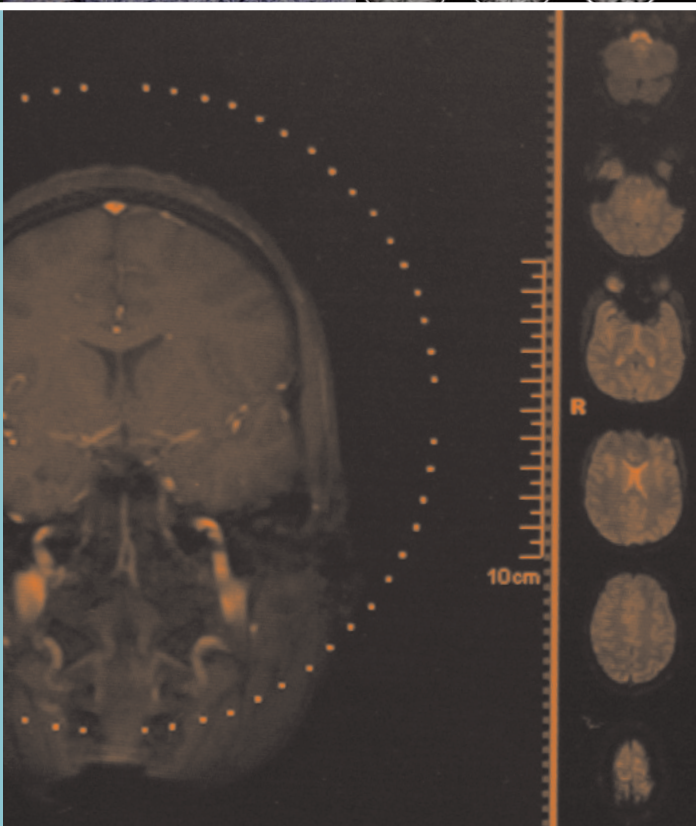


A UNIQUE COURSE OF STUDY

The core course in the new Princeton Neuroscience Ph.D. program is designed to give students a solid, hands-on grounding in advanced neuroscience before they specialize in their research. This in-depth course is unique in its emphasis on combining experiments and computation with lectures. All students carry out experiments themselves: from single neurons and patch clamp, to in vivo electrophysiology in behaving animals, to computational modeling, to human neurophysiology and functional MRI, this course guides and teaches students about the brain as they learn to design, perform, analyze, and critique their own experiments.

CUTTING-EDGE RESEARCH

Coursework is followed by Ph.D. thesis research in one of the PNI faculty labs. Students rotate in up to three labs before choosing one in which to do their research.



STRONG FINANCIAL SUPPORT

All admitted students receive full financial support for the duration of their Ph.D., including tuition, a competitive stipend, and health benefits. This support is made possible through a combination of funds from Princeton University, federal grants to PNI, private donations, and grants to faculty members.

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