MICHIGAN NEUROSCIENCE INSTITUTE
UNIVERSITY OF MICHIGAN

BERNARD W. AGRANOFF LECTURESHIP IN NEUROSCIENCE

Thursday, April 11, 2024

3:30 p.m. Presentation
5:00 p.m. Reception

KAHN AUDITORIUM, BSRB

IMAGING BRAIN DYNAMICS WITH LIGHT:

New technologies and studies of large-scale cortical coding

FEATURING

Mark J. Schnitzer, Ph.D.
Howard Hughes Medical Institute
Stanford University

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Howard Hughes Medical Institute | Stanford University

Professor, Department of Biology
Professor, Applied Physics
Member, Bio-X
Member, Wu Tsai Neurosciences Institute

Dr. Mark Schnitzer is a Professor of Biology and Applied Physics and an Investigator of the Howard Hughes Medical Institute. He is the Co-Director of the Cracking the Neural Code (CNC) Program at Stanford and a faculty member of the Neuroscience, Biophysics, and Molecular Imaging Programs at the Stanford School of Medicine.

His research group invents optical technologies for imaging brain activity at cellular resolution. The group uses these innovations to study the principles of neural circuit operation and how the activity patterns of large ensembles of individual neurons underlie sensory perception, memory, and motor control in healthy and diseased brain states.

Dr. Schnitzer earned his bachelor's degree in Physics from Harvard University and a certificate in Mathematics from Cambridge University. He then attended Princeton University, earning his master's and doctoral degrees in Physics in 1994.

In the past ten years, the Schnitzer lab has created several technologies that are now commercially available, including tiny microscopes small enough to be mounted on the head of a freely behaving mouse. This technology won The Scientist's Top Innovation of 2013 and 2019 Method of the Year from Nature Methods.

Schnitzer was a member of the NIH Director's Advisory Committee that wrote the BRAIN 2025 report, the blueprint for the NIH BRAIN Initiative, and the National Academy of Sciences Committee that authored the 2022 Decadal Survey of Biological Physics. His lab's former trainees include 2 CEOs and 21 professors or junior group leaders who are now leading their research teams at prestigious universities and research institutes in the USA, China, Israel, and Europe.

Bernard W. Agranoff, M.D.

University of Michigan

Bernard Agranoff, M.D. was a distinguished member of the Department of Psychiatry and the Mental Health Research Institute (now named the Michigan Neuroscience Institute). Dr. Agranoff received his B.S. degree from the University of Michigan in 1946 and his M.D. degree from Wayne State University in 1950. In 1960, he joined the University of Michigan faculty as a Research Scientist, was appointed Associate Professor in the Department of Biological Chemistry in 1961, and was promoted to Professor in 1965 and Senior Research Scientist in 1997.

In 1983, Dr. Agranoff was named Professor of Biological Chemistry in the Department of Psychiatry. From 1991–2001, he held the title of Ralph Waldo Gerard Professor of Neurosciences. Dr. Agranoff was Director of the Mental Health Research Institute (MHRI) from 1985–1995 and Director of the Neuroscience Laboratory from 1983–2002. As MHRI Director, he greatly strengthened the Neuroscience focus of the Institute, while also emphasizing translational research and the interface with Biological Psychiatry. Dr. Agranoff's own interest in neuroimaging, both in animals and in humans, and in fundamental neurochemical research formed an important new focus and led to the recruitment of new MHRI faculty that remain key members of the Institute today. Dr. Agranoff retired from active faculty status in 2003.

Dr. Agranoff was the recipient of several prestigious honors at U-M, including the Distinguished Faculty Achievement Award (1984), Distinguished Faculty Lectureship in Biomedical Research (1986), and Henry Russel Lectureship (1988). He was a member of the National Academy of Medicine, served as Fogarty Scholar-in-Residence at the National Institutes of Health, and was a fellow of the American Academy of Arts and Sciences.

BERNARD W. AGRANOFF LECTURESHIP IN NEUROSCIENCE

This annual lectureship, first held in 2003, honors the late

Bernard W. Agranoff

an internationally recognized leader and innovator in Biochemistry and the Neurosciences

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Connecting neuroscience throughout the U-M and Michigan Medicine campus