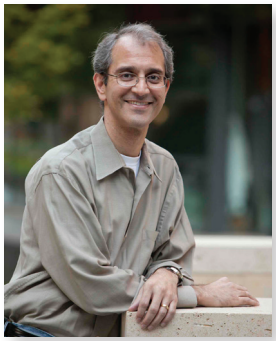
The Institute for Neural Computation
2016 ROCKWOOD MEMORIAL LECTURE



Krishna Shenoy, PhD
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Professor, Stanford University
Investigator, Howard Hughes Medical Institute

BRAIN-MACHINE INTERFACES: FROM BASIC SCIENCE AND ENGINEERING TO CLINICAL TRIALS

WHEN: December 15, 2016 - 4:00-6:00 p.m.
LOCATION: MET - Medical Education and Telemedicine Building - Lower Auditorium (Google Map)
Light reception to follow across the courtyard in MET – MedEd Room 141 (Learning Center)
HOSTS: Terry Sejnowski, Ph.D., and Gert Cauwenberghs, Ph.D.

Millions of people worldwide suffer from neurological disease and injury leading to paralysis, which is often so severe that people are unable to feed themselves or communicate. Cortically-controlled brain-machine interfaces (BMIs) aim to restore some of this lost function by converting neural activity from the brain into control signals for prosthetic devices. I will describe some of our group's recent investigations into basic motor neurophysiology focused on understanding neural population dynamics, pre-clinical BMIs focused on high-performance control algorithm design, and translational BMI development and pilot clinical trial results focused on helping establish clinical viability.

BIOGRAPHY

Krishna Shenoy, Ph.D., is a Professor of Electrical Engineering, Bioengineering and Neurobiology at Stanford University. He is also a Howard Hughes Medical Institute Investigator. Prof. Shenoy holds a B.S. in Electrical and Computer Engineering from UC Irvine (1987-1990), a Ph.D. in Electrical Engineering and Computer Science from MIT (1990-1995), was a postdoctoral fellow in Neurobiology at Caltech (1995-2001), and has been on faculty at Stanford since then (Assistant Prof. 2001-2008, Associate Prof. 2008-2012, Full Prof. 2012 to present). Prof. Shenoy directs the Stanford Neural Prosthetic Systems Lab and co-directs the Stanford Neural Prosthetics Translational Laboratory, which aim to help restore lost motor function to people with paralysis.

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INC presents the H. Paul Rockwood Memorial Lectureship held annually. The Rockwood Memorial Lectureship Fund was gifted to the Institute by Mr. and Mrs.Jerome Rockwood in memory of their late son's interest, studies, and work in the neural computation field. The Rockwood Memorial Lectures are endowed by Mr. and Mrs. Jerome Rockwood in memory of their late son, Paul, who received a B.S. in Computer Science from UCSD in 1980 and then obtained a second degree B.A. in Psychology in 1981. In 1983, he started a company, Integral Solutions, to develop a universal language translation, but died tragically in a mountaineering accident before he could fulfill his promise.

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