

## **Gregory Hickok, Ph.D.**

MIND Institute Distinguished Lecturer Series – December 9th, 2015

### ***Biographical Information***

Gregory Hickok received his Ph.D. in Psychology at Brandeis University in 1991 and did post-doctoral training in Cognitive Neuroscience at MIT and the Salk Institute. He joined the faculty at UC Irvine in 1996 where he is currently Professor of Cognitive Sciences. He was founding director of UC Irvine's Center for Cognitive Neuroscience and founder and current director of the Center for Language Science. He is the Editor-in-Chief of *Psychonomic Bulletin & Review* and the author of *The Myth of Mirror Neurons: The Real Neuroscience of Communication and Cognition*.

### ***Presentation Abstract (4:30 pm presentation)***

*The functional anatomy of language: Four things you need to know.*

Professor Hickok will present an overview of the functional anatomy of language emphasizing four organizational themes: (1) Language is more than Broca's and Wernicke's areas. (2) The system is organized into two broad computational/anatomic streams, a dorsal, auditory motor stream for speech production and a ventral, auditory conceptual stream for speech recognition. (3) Both left and right hemispheres are involved but differently for expressive (mostly left) and receptive (more bilateral) functions. (4) The system is hierarchically organized with a rough alignment between functional-anatomic circuits and levels of linguistic representation/processing. Recent progress in understanding some of the details of computational neuroanatomy of the dorsal stream in particular will be discussed including a proposed integration of psycholinguistic and motor control models of speech production and the role of the so-called mirror system.