Researcher Ling Lin studies how the brain adapts when what you see isn't what you get.

department of
COGNITIVE SCIENCES

cognitive scientists ask *questions* like:

✓ How do people perceive, learn and solve problems?

✓ How does the human brain organize and store information?

✓ How do we create and use language?

✓ How and why do people work the way they do?

their *findings* impact our scientific understanding of diseases and disorders including Alzheimers, schizophrenia and autism

The *Department of Cognitive Sciences* is uniquely positioned at the juncture of the brain and behavior. Combining innovative multidisciplinary approaches and modern tools and methods, UCI cognitive scientists are poised to discover the workings of fundamental human abilities, including attention, memory, language, decision making and problem solving.

Innovative studies take an interdisciplinary approach by integrating neuropsychological and behavioral methods and data, using large computational models, exploring brain– computer interfaces, and designing robots to understand how we perceive and act in the world.
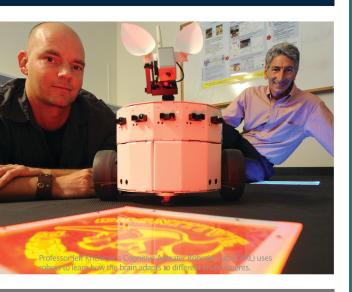
More than 1000 undergraduates, 50 graduates and 25 faculty are involved in cognitive sciences programs at UCI. The cognitive psychology graduate program is ranked 13th in the nation.

The research of UCI cognitive scientists impacts our understanding of memory and language disorders, such as Alzheimer's and aphasia; potentially improves our ability to deal with the information age, suggesting new approaches to online search systems and collaborative decision making; and can enhance education practices, including the development of children's literacy and numeracy skills.

UCI cognitive sciences alumni have gone on to pursue careers in some of the best research universities in the world, as well as in government and industry.

Cognitive science skills are valued in applied settings including high-tech startups, research consultancy companies, and government science and technology laboratories.

Professor Jeff Krichmar's Cognitive Anteater Robotics Lab (CARL) uses robots to learn how the brain adapts to different environments.

interested?

Ramesh Srinivasan, Department Chair
r.srinivasan@uci.edu | 949.824.2969

Emily Grossman, Graduate Director
Cog Neurosci Concentration
grossman@uci.edu | 949.824.1530

Geoff Iverson, Graduate Director
giverson@uci.edu | 949.824.4053

Lisa Pearl, Undergrad Director
Psychology
lpearl@uci.edu | 949.824.0153

Joachim Vandekerckhove
Undergrad Director – Cognitive Sciences
joachim@uci.edu | 949.824.5958

Rosemarie Swatez, Alumni and
Development Associate Director
rswatez@uci.edu | 949.824.2511

949.824.3771 | cogsci@uci.edu
www.cogsci.uci.edu

faculty

William Batchelder (Ph.D., Stanford University) mathematical models of learning and memory, mathematical psychology and measurement

Bruce Berg (Ph.D., Indiana University) audition, auditory attention, psychophysics of complex sounds, computational models of hearing

Alyssa A. Brewer (M.D., Ph.D., Stanford University) neuro-imaging of visual perception, visual deficits, neurological disorders

Charles Chubb (Ph.D., New York University) visual perception, mathematical modeling, histogram contrast analysis

Barbara Dosher (Ph.D., University of Oregon) human information processing, memory retrieval, attention, visual perception

Michael D'Zmura (Ph.D., University of Rochester) vision, hearing, language

Emily D. Grossman (Ph.D.,Vanderbilt University) visual perception, neuroimaging

Gregory Hickok (Ph.D., Brandeis University) neuroanatomy of language, neural plasticity, neuroimaging, cognitive neuroscience

Donald Hoffman (Ph.D., MIT) machine and human vision, visual recognition, artificial intelligence, virtual reality, consciousness and cognition, shape from motion

Geoffrey Iverson (Ph.D., New York University) mathematical psychology, psychophysics, statistics

Jeffrey L. Krichmar (Ph.D., George Mason University) computational neuroscience, robotics

Michael D. Lee (Ph.D., University of Adelaide, Australia) mathematical and computational models of stimulus representation, categorization, memory decision making, problem solving

Mimi Liljeholm (Ph.D., University of California, Los Angeles) neural and computational bases of cognition, perception and action

Virginia Mann (Ph.D., MIT) reading ability: phoneme awareness, developmental dyslexia, phonological skills, early intervention, precocious readers; speech perception: context effects, cross-linguistic comparisons

Louis Narens (Ph.D., UCLA) measurement, logic metacognition

Lisa Pearl (Ph.D., University of Maryland) linguistics, computational linguistics, language development, language change, bayesian models

Virginia Richards (Ph.D., UC Berkeley) auditory perception and cognition, human psychophysics

Kourosh Saberi (Ph.D., UC Berkeley) signal detection, psychophysics, cortical neuroscience, sensory genetics

Barbara Sarnecka (Ph.D., University of Michigan) cognitive development, language development, number concepts, conceptual change parallels between individual, cognitive development

George Sperling (Ph.D., Harvard University) short-term visual memory systems, attention, visual perception, 3d object recognition, light adaptation, temporal sensitivity contrast, detection motion and texture, perception, stereopsis and attention, brain imaging

Ramesh Srinivasan (Ph.D., Tulane University) cognitive neuroscience, brain development, consciousness, perception, eeg, brain dynamics

Mark Steyvers (Ph.D., Indiana University) semantic influences in recognition and recall, computational models for knowledge extraction, processing dynamic decision making models, causal reasoning, bayesian networks

Jennifer Trueblood (Ph.D., Indiana University) human judgment, decision-making, mathematical modeling

Joachim Vandekerckhove (Ph.D., University of Leuven, Belgium) response time modeling, model fitting, computational statistics, model evaluation

Charles E. (Ted) Wright (Ph.D., University of Michigan) cognitive psychology, human motor control, fitts task, aimed movements, handwriting immersive, virtual reality, 1/f noise, quantitative models