USC LABS TOUR

MARCH 3RD
4PM-5:30PM

For USC's interactive map, click on this link!

Visit our website! https://dare2023.usc.edu/

For more information email us at dare2023@usc.edu

VIRTUAL LAB TOUR VIDEOS

Some of the participating labs are in the Health Sciences Campus and will be showing a video of some of the projects they're currently working on. The videos will be shown in **Ronald Tutor Campus Center, TCC450 at 4:00 PM.**

- **MOTOR DEVELOPMENT LAB**
- **LOCOMOTOR CONTROL LAB**

MOTOR DEVELOPMENT LAB

PI: Stacey Dusing PhD, PT, FAPTA

The mission of the Motor Development Lab is to investigate the development of motor control and coordination in infants and young children with and without disabilities as well as the impact of physical therapy treatment on motor and cognitive development.

https://sites.usc.edu/mdl/

LOCOMOTOR CONTROL LAB

PI: James M. Finley, Ph.D

In our Lab, we seek to understand how walking is controlled and adapted in both the healthy and injured neuromuscular systems. We develop models and experiments based on principles of neuroscience, biomechanics, engineering, and exercise physiology to identify the factors that guide locomotor learning and rehabilitation. Ultimately, the goal of our work is to design novel and effective interventions to improve walking ability in individuals with damage to the nervous system.

https://sites.usc.edu/lcl/

RONALD TUTOR HALL

Ronald Tutor Hall,
3710 S. McClintock Ave
Los Angeles, CA 90089

VALERO LAB RTH-316A

HARVI LAB RTH-416

ICAROS LAB RTH-417

VALERO LAB

PI: Francisco Valero-Cuevas, Ph.D.

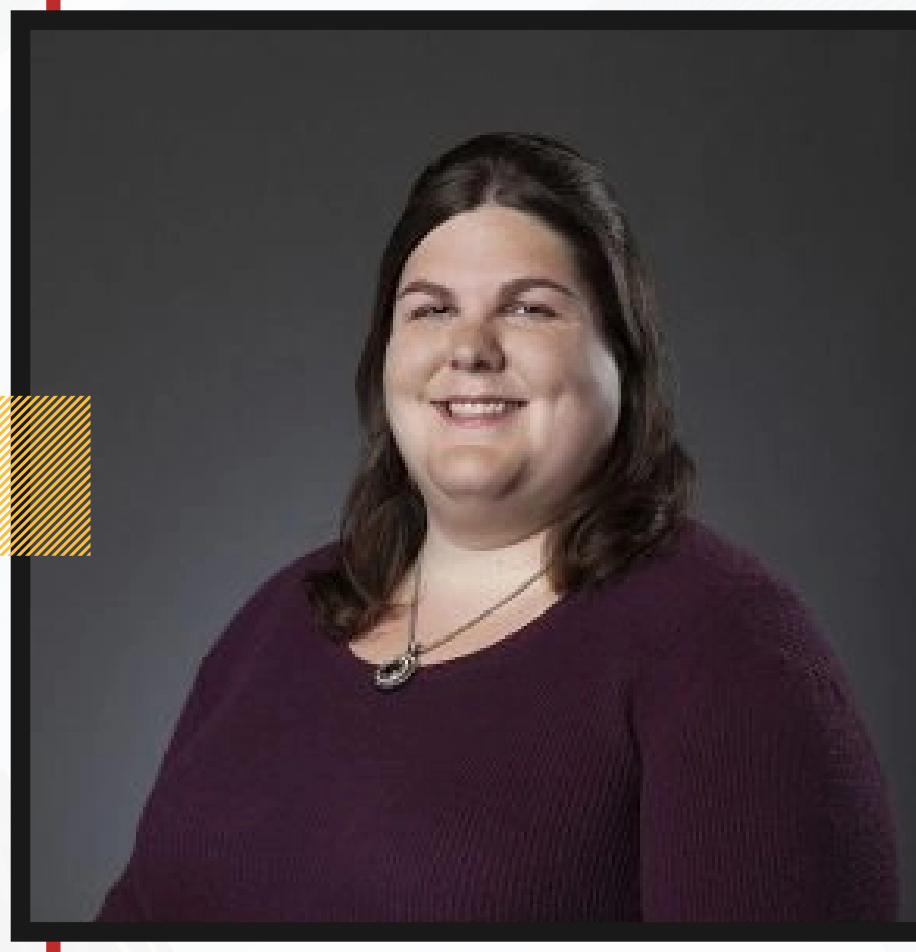
Our laboratory is dedicated to understanding the biomechanics, neuromuscular control, and clinical rehabilitation of human mobility, with an emphasis on translation to robotics and Artificial Intelligence. The Valero Lab will be presenting our bio-inspired robotics and AI projects. This will include a quadrupedal and bipedal robot, two robotic hands, as well as their creators.

Ronald Tutor Hall,
Third Floor, RTH-316A
3710 S. McClintock Ave
Los Angeles, CA 90089

https://valerolab.org/

HAPTICS ROBOTICS AND VIRTUAL INTERACTION (HARVI)

PI: Heather Culbertson, Ph.D.



Our laboratory explores how humans interact with our world, robots, and technology through touch. During this tour, you will learn about our research on assistive technology, social touch, and haptic rendering. Several haptic devices will be available for you to try in hands-on demos, including our wearable system for sending touch messages across a distance.

Ronald Tutor Hall,
Fourth Floor, RTH-416
3710 S. McClintock Ave
Los Angeles, CA 90089

https://sites.usc.edu/culbertson/

INTERACTION LAB

PI: Maja Mataric, Ph.D.

A phenomenon called arm nonuse, which is common in stroke survivors. This refers to the tendency to rely on the less-affected limb for functional tasks, even when the paretic limb has recovered some capacity. To accurately evaluate this our lab developed the Bimanual Arm Reaching Test with a Robot (BARTR), which uses a robot to quantitatively assess arm nonuse in chronic stroke survivors.

Ronald Tutor Hall,
Fourth Floor, RTH-417
3710 S. McClintock Ave
Los Angeles, CA 90089

https://uscinteractionlab.web.app/

MICHELSON CENTER FOR CONVERGENT BIOSCIENCE

Michelson Center for
Convergence Biosciences (MCB)
1002 Childs Way, Los Angeles,
CA 90089

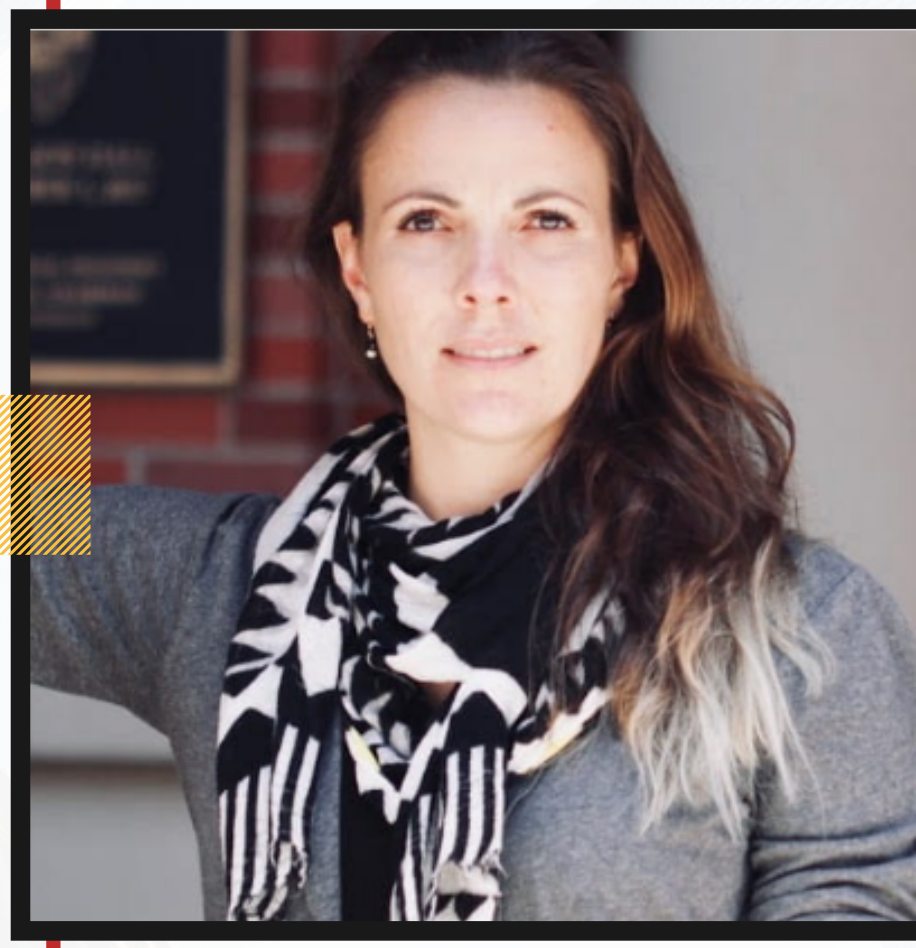
TREWEEK LAB 253A

CHUNG LAB 377

TREWEEK LAB

PI: Jennifer Treweek, Ph.D.

The Treweek lab is the intersection of neuroscience and engineering. Our works focus on understanding the CNS and PNS pathways and physiological responses to the external stimuli on nerves and neurons to develop body worn or implantable medical devices to address some of the most pressing issues in neurological diseases.



Michelson Center for Convergence (MCB), 253A
1002 Childs Way, Los Angeles, CA 90089

https://sites.usc.edu/treweek-lab/

CHUNG LAB

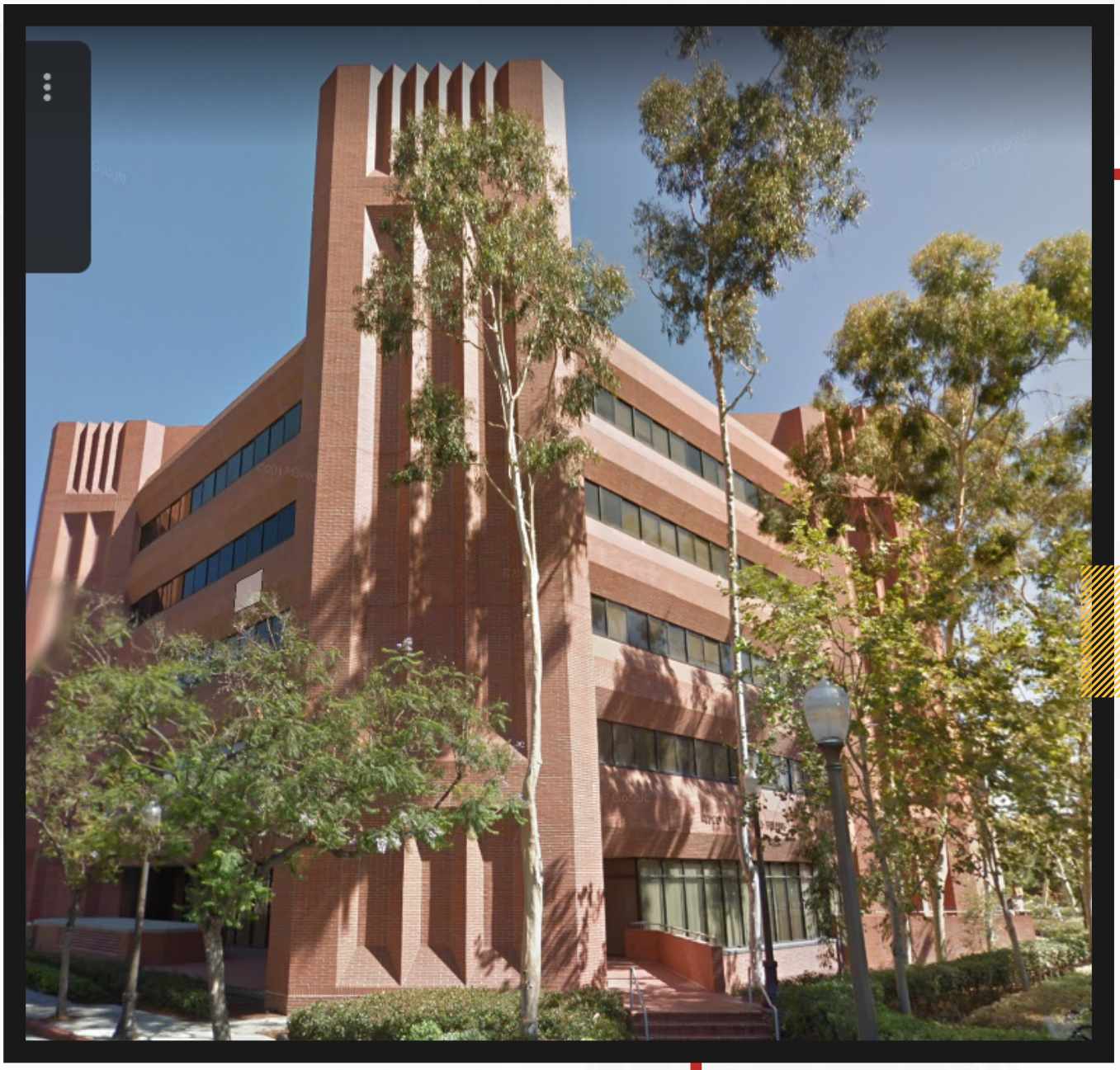
PI: Eun Ji Chung, Ph.D.

One primary focus of our research involves the design and application of bioinspired nanocarriers for theranostic applications. Through targeting elements, our platforms can be tailored to directly bind to sites of diseased tissue and to limit off-target side effects in healthy tissues. Another focus in our lab is to harness and scale up the therapeutic and targeting ability of endogenous nanoparticles such as extracellular vesicles.

Michelson Center for Convergence (MCB), 377 1002 Childs Way, Los Angeles, CA 90089

https://chunglaboratory.com/principal-investigator/

HEDCO NEUROSCIENCES BUILDING



Hedco Neuroscience Building (HNB)
3641 Watt Way, Los Angeles, CA 90089

NEURAL MODELING AND INTERFACE LAB

403

NEURAL MODELING AND INTERFACE LAB

PI: Dong Song, Ph.D.

Our mission is to build biomimetic devices that can be used to treat neurological disorders. During the tour, we will present our recently developed next-generation modeling and neural interface methodologies for investigating brain functions during naturalistic behaviors in order to (1) understand how brain regions such as the hippocampus perform cognitive functions, and (2) build cortical prostheses that can restore and enhance cognitive functions lost in diseases or injuries.

Hedco Neuroscience Building (HNB) room 403
3641 Watt Way, Los Angeles, CA 90089

https://slab.usc.edu/

NSF DARE CONFERENCE

WE CAN'T WAIT TO MEET YOU!