COLLEGE OF ENGINEERING, COMPUTER SCIENCE, & TECHNOLOGY

Seminar in Interdisciplinary STEM Research

October 24 – Thursday, 3:05-4:20 PM PST

Location: E&T C-256

HOSTED BY CREST-CATSUS AND SIKAND SITI CENTERS

Curtis Y. Wang, PhD



Y. Curtis Wang, PhD, is an Associate Professor in the Electrical and Computer Engineering department. His expertise is in the computer engineering fields, namely embedded systems and high-performance computing, with application to biomedical engineering. Currently, Prof. Wang leads the Bio-inspired Computing Laboratory, collaborating with neuroscientists and physiologists to develop methods to reverse engineer the computation that takes place in the mammalian spinal cord.

Applying computer engineering paradigms to the reverse engineering of biological spinal networks

Abstract: Nature is resilient, reliable, and simple, yet always seemingly bizarre at first. The mammalian spinal cord can process massive amounts of sensory inputs and derive massive amounts of motor outputs nearly instantly. In this talk, methods of leveraging existing electronics and computing methods in order to develop systems that can reverse engineer the mammalian spinal cord will be presented. The goal of this reverse engineering is to develop safe, resilient, reliable, yet structurally simple computing frameworks for applications including embedded control systems for medical devices and robotics, and electronics-based therapeutics for patients with spinal cord injuries.

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