



Neural Prosthesis Seminar

"Neural Adaptations To a Brain-Machine Interface"

Thursday, September 20, 2012 • 9:30 AM Wolstein 1413 Case Western Reserve University



Jose M. Carmena, Ph.D.

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Associate Professor, Helen Wills Neuroscience Institute Dept. of Electrical Engineering & Computer Sciences University of California, Berkeley

Abstract:

Brain-machine interface (BMI) systems have enormous potential to improve the quality of life for large numbers of neurological patients. BMIs also provide a framework for studying cortical dynamics and the neural correlates of learning neuroprosthetic skills, i.e. accurate, readily-recalled control of disembodied actuators irrespective of natural physical movements. In this talk I will present recent results showing that: 1) the brain can consolidate neuroprosthetic motor skill in a way that resembles that of natural motor learning; 2) proficient neuroprosthetic control reversibly reshapes cortical networks through local effects; 3) learned neuroprosthetic actions are intentional and goal-directed, rather than habitual; and 4) corticostriatal plasticity is necessary for neuroprosthetic skill learning. This will be followed by discussion on BMI systems design with the goal of developing neuroprosthetic devices for the impaired.

For more information please contact Cheryl Dudek at (216) 707-6490.

Live stream video link for each lecture at www.FEScenter.org/Seminar







