

Faculty Excellence Speaker Series



NEURAL INTERFACES FOR CONTROL OF PROSTHESES: STATE-OF-THE-ART AND FUTURE DIRECTIONS

Presented by Dr. Alexander Leonessa

DATE

Wednesday,
March 30, 2016

TIME

2:30 – 3:30 p.m.

LOCATION

Harris Corporation
Engineering Center
(HEC), Room 101

HOSTED BY

Faculty Excellence,
the Office of
the Provost, and
the Department
of Mechanical
and Aerospace
Engineering

State-of-the-art prostheses are truly anthropomorphic and capable of performing functions beginning to approach those of natural limbs. However, in the absence of high-bandwidth, intuitive control interfaces for these limbs, they will not achieve their full potential. Recent advancements in science and technology have led to promising methods of accessing neural information for communication or control of prosthetic devices.

During this talk, Dr. Leonessa will describe how researchers are exploring methods of connecting with muscles, nerves or the brain to increase functionality for patients, and the ongoing technological advances that create new opportunities to solve traditional problems with neural interfaces.

MORE INFORMATION ABOUT THE SPEAKER SERIES AT WWW.FACULTYEXCELLENCE.UCF.EDU



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Alexander Leonessa, Ph.D., joined the Virginia Tech faculty in 2007. His research focuses on the complexity of modeling real-world physical systems and accounting for uncertainties in the control system design process exploring autonomous vehicle guidance and navigation, robotic systems design, and health and rehabilitation applications. He has published more than 60 peer-reviewed papers. He is also the director of the NSF General and Age Related Disability Engineering (GARDE) program, the program director of NSF's Engineering Research Center for Sensorimotor Neural Engineering, and a member of NSF's National Robotic Initiative and the Collaborative Research in Computational Neuroscience and the Integrative Strategies working groups.