**COLLOQUIUM**

Department of Computer Science and Engineering

University of South Carolina

**Model-based Neural Networks for Robot Control**

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Date: **March 17, 2017**

Time: **9:30-10:45am**

Place: **Swearingen 1A03 (Faculty Lounge)**

# Abstract

With the advances of mechanics, electronics, computer engineering, using autonomous robots, or a collection of them, to perform various tasks is becoming increasingly popular in both industry and our daily lives. Control plays an important role for stable and accurate task execution while learning is outstanding in dealing with unknowns or uncertainties. Recent advances in machine learning provide us with an opportunity to employ innovative learning structures for efficient adaptation. However, it remains challenging on how to efficiently integrate learning with control efficiently to reach provable and guaranteed stability even in the worst case. This talk will present our recent results along this research direction.

**Shuai Li** received the B.E. degree in electrical engineering from the Hefei University of Technology, Hefei, China, in 2005, the M.E. degree in control engineering from the University of Science and Technology of China, Hefei, in 2008, and the Ph.D. degree in electrical and computer engineering from the Stevens Institute of Technology, Hoboken, NJ, USA, in 2014. He joined Hong Kong Polytechnic University after graduation and directed his group to do research in robotics, cyber physical systems, intelligent control, etc. Dr. Li is an associate editor of the International Journal of Advanced Robotic Systems, Frontiers in Neurorobotics, and Neural Processing Letters.