CIDSE Invited Talk

with Roberto Calandra

Arizona State University

Rethinking Model-based Reinforcement Learning

Tuesday, October 8, 2019
1:30 pm
Brickyard Artisan Court (BYAC) 110

Abstract:

Model-based Reinforcement Learning (MBRL) is a promising approach for autonomously learning to control complex real-world systems with minimal expert knowledge. In this talk, I will first provide an overview of recent work on MBRL, including our state-of-the-art algorithm PETS. Following, I will present a new work which identifies a critical flaw in the way that MBRL is currently conceived. Identifying and addressing this issue is an important step towards better understanding and design of MBRL algorithms.

BIO

Roberto Calandra is a Research Scientist at Facebook AI Research. Previously, he was a Postdoctoral Scholar at the University of California, Berkeley (US) in the Berkeley Artificial Intelligence Research Laboratory (BAIR) working with Sergey Levine. His education includes a Ph.D. from TU Darmstadt (Germany) under the supervision of Jan Peters and Marc Deisenroth, a M.Sc. in Machine Learning and Data Mining from the Aalto University (Finland), and a B.Sc. in Computer Science from the Università degli studi di Palermo (Italy). His interests focus at the conjunction of Machine Learning and Robotics, in what is known as Robot Learning. Some of the research topics that he is currently developing include: Deep Reinforcement Learning, Model-based RL, Tactile Sensing, Dynamics Modeling, and Bayesian Optimization.

Hosted by: Heni Ben Amor

school of computing, informatics, & decision systems engineering