October 26th, 2020
Zoom Meeting
2:00 P.M. - 3:00 P.M.

Prof. Tao Chen

(University of Michigan)

Nonparametric Adaptive Bayesian Optimal Control

Abstract: In this work, we use a nonparametric Bayesian approach to address the issue of Knightian uncertainty in optimal control problems. To handle model misspecification and estimation error in learning the unknown underlying model dynamics, we propose to use the Dirichlet process to model the unknown distribution of the underlying model in a nonparametric manner. Such framework integrates the optimization and online learning of the model without restricting it to any specific family of distributions. We will also present some numerical results to show the comparison between our approach and other classical control methods

Zoom link:

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