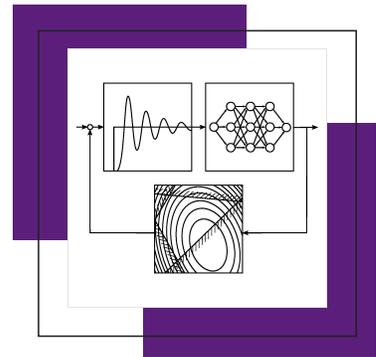


Intersections between Control, Learning and Optimization

February 24-28, 2020



Scientific Overview

Relationships between the areas of control, learning, and optimization have always been strong, but have recently been expanding and deepening in surprising ways. Optimization formulations and algorithms have historically been vital to solving problems in control and learning, while conversely, control and learning have provided interesting perspectives on optimization methods. Intersections that have been explored recently include relationships between reinforcement learning and model predictive control, and the use of control techniques to analyze the convergence of optimization algorithms. We will bring together researchers who work in Control, Learning, and Optimization to discuss current areas of interaction and explore possibilities for future areas of collaboration.

This workshop will include a poster session; a request for posters will be sent to registered participants in advance of the workshop.

This workshop is partially supported by the DOE-funded MACSER project.

Participation

Additional information about this workshop including links to register and to apply for funding, can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission, and we welcome their applications.

Organizers

Moritz Diehl (University of Freiburg), Ben Recht (UC Berkeley), Stephen Wright (University of Wisconsin-Madison), and Melanie Zeilinger (ETH Zürich, University of Freiburg)

Speakers

Dimitri Bertsekas (MIT), Francesco Borrelli (UC Berkeley), Stephen Boyd (Stanford University), Emma Brunskill (Carnegie Mellon University), Moritz Diehl (University of Freiburg), Anca Dragan (UC Berkeley), Maryam Fazel (University of Washington), Zico Kolter (Carnegie Mellon University), Andreas Krause (ETH Zurich), Daniel Kuhn (EPFL), Manfred Morari (University of Pennsylvania), Necmiye Ozay (University of Michigan), Ben Recht (UC Berkeley), Martin Riedmiller (DeepMind Technologies), Dorsa Sadigh (Stanford University), Angela Schoellig (University of Toronto), Csaba Szepesvari (DeepMind Technologies), Russ Tedrake (MIT), Lieven Vandenbergh (UCLA), Stephen Wright (University of Wisconsin-Madison), and Melanie Zeilinger (ETH Zürich, University of Freiburg).

