Learning Methods for Control of Communications Networks
RLDM Satellite Meeting
June 14-15 2017
University of Michigan, Ann Arbor

Learning methods have been successfully applied to various control problems in communications networks for more than four decades. Nevertheless, there has yet to be a concerted effort to systematically explore the potential performance benefits to be reaped by using learning methods in this domain. Given the continued growth in the size and dynamics of communications networks, in the number and location of communicating devices, and in the volume of traffic to be transported and the types of applications to be supported, the algorithms for controlling the behavior of a network should scale accordingly yet do so under uncertainty about the current state of the entire network. Learning methods hold promise for enabling large dynamic communications networks to effectively, efficiently, and autonomously accommodate increasing and varied user demand. Communications networks also offer in return a rich experimental domain for research on learning and decision making.

The goal of this meeting is to foster collaboration between the communications networks and learning communities, bringing to bear powerful learning algorithms for control of communications networks and exposing a complex domain for research on learning methods. We welcome original research describing theoretical or empirical results using learning methods for network control. Here, the term 'network control' encompasses decision making at all time scales, ranging from processing individual packets and flows to network planning and design. Learning methods that require neither a detailed model of the network nor supervisory input to make appropriate decisions are of particular interest for this meeting.

All participants should come prepared to present their ideas and to engage in group discussion. You may also prepare an extended abstract describing your ideas. The abstract should consist of at most four pages, inclusive of figures and references, and should be submitted to the organizers. Each abstract will be made available electronically as part of the record of the meeting, provided the participant explicitly grants permission to do so.

Abstract formatting:
LaTex template: rldmsubmit.sty
LaTex example: rldm.tex
Abstract samples: rldm.pdf, rldm.rtf

Organizers:
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