Dear All：

The Applied Reinforcement Learning (ARL) Seminar is an online seminar that presents the latest advances in reinforcement learning applications and theory, organized by Drs. Rui Song, Hongtu Zhu, Tony Qin, Jieping Ye and Michael R. Kosorok.

Reinforcement Learning (RL) learns how the agents should take actions when interacting with the environment to obtain the highest reward. Due to many successful applications in robotics, games, precision health, e-commerce and ride-sharing industries, Reinforcement Learning (RL) has gained great popularity among various scientific fields. Our goal is to bring you a virtual seminar (approximately) featuring the latest work in applying reinforcement learning methods in many exciting areas (e.g., health sciences,  ecommerce, medical imaging, and  two-sided markets).

This time, the ARL Seminar is excited to welcome \*Michael R. Kosorok\* from the University of North Carolina at Chapel Hill who will talk about “Off-Policy Reinforcement Learning for Estimation of Optimal Treatment Regime”. The seminar is on \*Thursday, September 24th, 2020\* at \*8:00 AM PT / 10:00 AM CT / 11:00 AM ET / 4:00 PM London  / 11:00 PM Beijing\*. Details about the talk can be found on our website <[https://arlseminar.com](https://arlseminar.com/)>.

If you are interested, you can register on our website <<https://www.arlseminar.com/registration-form/>>. We will send the detailed information to your email address.

We look forward to seeing you on Thursday, Sept 24th.

Best,

ARL Seminar

\*Title: Off-Policy Reinforcement Learning for Estimation of Optimal Treatment Regime

\*Abstract: In this presentation, we introduce off-policy reinforcement learning in the context of estimating an optimal treatment regime for a finite sequence of decision times. We introduce and discuss dynamic treatment regimes in this context, backward induction, Q-learning and A-learning.