Speaker: Prof. Tomoko Matsui

Talk Title: Climate change mitigation management using reinforcement learning

Talk Abstract:

We investigate a method to optimize the climate change mitigation cost in each year using reinforcement learning. Recently global worming becomes a world-wide serious problem and in the Paris Agreement in 2015, the 2 temperature degrees above pre-industrial levels was set out to achieve the carbon emission reduction target for 2030. In the method, double Q-learning is utilized to minimize both damage and mitigation costs associated with the global warming. In the experiments, it is shown that early stopping of carbon emission should be crucial for climate mitigation.

Speaker Bio:

Tomoko Matsui received the Ph.D. degree from the Computer Science Department, Tokyo Institute of Technology, Tokyo, Japan, in 1997. She was with NTT, where she worked on speaker and speech recognition until 2002. She is currently a Professor in the Institute of Statistical Mathematics, Tokyo, working on statistical machine learning for a wide-range of applications including climate change problems.