Masatoshi Uehara.

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Education

2020- Department of Computer Science, PhD program, Cornell University (I transferred my PHD status)
2017- 2020 Department of Statistics, PHD program, Harvard University
2013-2017 Department of applied mathematics and information science, The University of Tokyo

Research Interests

Reinforcement learning, Causal Inference, Online Learning

Publications (* indicates I am the corresponding author or co-first author, ** indicates the alphabetical order)

Optimal Off-Policy Evaluation from Multiple Logging Policies
N Kallus, Y Saito, M Uehara*
In Proceedings of the 33rd International Conference on International Conference (ICML 2021)
Fast Rates for the Regret of Offline Reinforcement Learning
Y Hu, N Kallus, M Uehara **
COLT 2021
Off-Policy Evaluation and Learning for External Validity under a Covariate Shift
M Uehara, M Kato, S Yasui
In Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS 2020)
Doubly Robust Off-Policy Value and Gradient Estimation for Deterministic Policies
N Kallus, M Uehara *
In Thirty-fourth Conference on Neural Information Processing Systems (NeurIPS 2020)
Statistically Efficient Off-Policy Policy Gradients
N Kallus, M Uehara *
In Proceedings of the 33rd International Conference on International Conference (ICML 2020)
Minimax Weight and Q-Function Learning for Off-Policy Evaluation
M Uehara, J Huang, N Jiang
In Proceedings of the 33rd International Conference on International Conference (ICML 2020)
Double Reinforcement Learning for Efficient Off-Policy Evaluation in Markov Decision Processes
N Kallus, M Uehara *
In Proceedings of the 33rd International Conference on International Conference (ICML 2020)
Journal of Machine Learning Research (Longer Version)
Imputation Estimators for Unnormalized Models with Missing Data
M Uehara, T Matsuda, JK Kim
In 23nd International Conference on Artificial Intelligence and Statistics *(AISTATS 2020)*
Unified Estimation Framework for Unnormalized Models with Statistical Efficiency
M Uehara, T Kanamori, T Takenouchi, T Matsuda
In 23nd International Conference on Artificial Intelligence and Statistics *(AISTATS 2020)*
Intrinsically Efficient, Stable, and Bounded Off-Policy Evaluation for Reinforcement Learning
N Kallus, M Uehara *
In Thirty-third Conference on Neural Information Processing Systems (NeurIPS 2019)

Preprints
Mitigating Covariate Shift in Imitation Learning via Offline Data Without Great Coverage
JD Chang, M Uehara *, D Sreenivas, R Kidambi, W Sun
Causal Inference Under Unmeasured Confounding With Negative Controls: A Minimax Learning Approach
N Kallus, X Mao, M Uehara ** https://arxiv.org/abs/2103.14029
Finite sample analysis of minimax offline reinforcement learning: Completeness, fast rates and first-order efficiency
M Uehara, M Imaizumi, N Jiang, N Kallus, W Sun, T Xie https://arxiv.org/abs/2102.02981
Efficient Evaluation of Natural Stochastic Policies in Offline Reinforcement Learning
N Kallus, M Uehara*. https://arxiv.org/abs/2006.03886
Localized Debiased Machine Learning: Efficient Estimation of Quantile Treatment Effects, Conditional Value at Risk, and Beyond
N Kallus, X Mao, M Uehara ** https://arxiv.org/abs/1912.12945
Efficiently Breaking the Curse of Horizon: Double Reinforcement Learning in Infinite-Horizon Processes
Major revision in Operations research

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N Kallus, M Uehara*. https://arxiv.org/abs/1909.05850.pdf
Information Criteria for Non-normalized Models
Minor revision in *Journal of Machine Learning Research*
T Matsuda, M Uehara, A Hyvarinen. https://arxiv.org/pdf/1905.05976.pdf
Semiparametric Response Model with Nonignorable Nonresponse
M Uehara, JK Kim https://arxiv.org/pdf/1810.12519.pdf
Generative Adversarial Nets from a Density Ratio Estimation Perspective,
M Uehara, I Sato, M Suzuki, K Nakayama, Y Matsuo   https://arxiv.org/abs/1610.02920.pdf

Coding skills
Languages: Python (+Tensorflow, Torch), C, C++ (Open MP, MPI, Open CV), R

Services
Conferences: ICML (2020,2021), Neurips (2020), AISTATS (2020,2021)
Journals: Journal of Machine Learning Research, Annals of Statistics, Journal of the American Statistical Association, Biometrika, Annals of the Institute of Statistical Mathematics