Masatoshi Uehara.

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Education

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

Research Interests

Reinforcement learning, Online learning, Causal Inference

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

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

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

Fast Rates for the Regret of Offline Reinforcement Learning
Y Hu, N Kallus, M Uehara https://arxiv.org/abs/2102.00479

Optimal Off-Policy Evaluation from Multiple Logging Policies
Kallus, N. Saito, Y. Uehara, M*. https://arxiv.org/abs/2010.11002

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
N Kallus, M Uehara*. https://arxiv.org/abs/1909.05850.pdf

Information Criteria for Non-normalized Models
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

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

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