

Thursday, March 21, 2019	
19:00 - 22:00	Reception with appetizers (Streeterville room)
Friday, March 22, 2019	
08:45 - 09:00	Opening remarks
09:00 - 11:00	Tutorial 1: Exploration-Exploitation in Reinforcement Learning Alessandro Lazaric, Matteo Pirodda and Ronan Fruit
11:00 - 11:30	Break
11:30 - 13:00	Session 1: Sequential Learning
11:30	Online Non-Additive Path Learning under Full and Partial Information Corinna Cortes, Vitaly Kuznetsov, Mehryar Mohri, Holakou Rahmanian and Manfred Warmuth
11:48	Dynamic Pricing with Finitely Many Unknown Valuations Nicolo Cesa-Bianchi, Tommaso Renato Cesari and Vianney Perchet
12:06	Online Influence Maximization with Local Observations Julia Olkhovskaya, Gergely Neu and Gabor Lugosi
12:24	Competitive ratio vs regret minimization: achieving the best of both worlds Amit Daniely and Yishay Mansour
12:42	Average-Case Information Complexity of Learning Ido Nachum and Amir Yehudayoff
13:00 - 14:00	Lunch break
14:00 - 15:00	Plenary talk 1: Why is fair machine learning hard and how can theory help? Jennifer Wortman Vaughan
15:00 - 15:15	Break
15:15 - 17:03	Session 2: Learning theory I
15:15	Adaptive Exact Learning of Decision Trees from Membership Queries Nader Bshouty and Catherine Haddad-Zaknoon
15:33	Limit Learning Equivalence Structures Ekaterina Fokina, Timo Kötzing and Luca San Mauro
15:51	Generalize Across Tasks: Efficient Algorithms for Linear Representation Learning Brian Bullins, Elad Hazan, Adam Kalai and Roi Livni
16:09	Attribute-efficient learning of monomials over highly-correlated variables Alexandr Andoni, Rishabh Dudeja, Daniel Hsu and Kiran Vodrahalli
16:27	A Sharp Lower Bound for Agnostic Learning with Sample Compression Schemes Steve Hanneke and Aryeh Kontorovich
16:45	Improved generalization bounds for robust learning Idan Attias, Aryeh Kontorovich and Yishay Mansour
17:03 - 17:30	Walk to boat trip departure point at 401 N Michigan Ave, Chicago, IL 60611
17:30 - 19:00	Boat trip
Saturday, March 23, 2019	
09:00 - 11:00	Tutorial 2: Structured Random Matrices Ramon van Handel
11:00 - 11:30	Break
11:30 - 13:00	Session 3: Bandits, partial feedback, privacy, fairness
11:30	Cleaning up the neighborhood: A full classification for adversarial partial monitoring Tor Lattimore and Csaba Szepesvári
11:48	PAC Battling Bandits in the Plackett-Luce Model Aadirupa Saha and Aditya Gopalan
12:06	Differentially Private Empirical Risk Minimization in Non-interactive Local Model via Polynomial of Inner Product Approximation Di Wang, Adam Smith and Jinhui Xu

12:24	Old Techniques in Differentially Private Linear Regression Or Sheffet
12:42	PeerReview4All: Fair and Accurate Reviewer Assignment in Peer Review Ivan Stelmakh, Nihar Shah and Aarti Singh
13:00 - 14:00	Lunch break
14:00 - 15:00	Plenary talk 2: Theory for Representation Learning Sanjeev Arora
15:00 - 15:15	Break
15:15 - 16:45	Session 4: Optimization
15:15	Two-Player Games for Efficient Non-Convex Constrained Optimization Andrew Cotter, Heinrich Jiang and Karthik Sridharan
15:33	General parallel optimization without metric Xuedong Shang, Emilie Kaufmann and Michal Valko
15:51	Online Linear Optimization with Sparsity Constraints Chi-Jen Lu, Jun-Kun Wang and Shou-De Lin
16:09	Stochastic Nonconvex Optimization with Large Minibatches Weiran Wang and Nathan Srebro
16:27	A simple parameter-free and adaptive approach to optimization under a minimal local smoothness assumption Peter Bartlett, Victor Gabillon and Michal Valko
16:45 - 17:00	Break
17:00 - 18:48	Session 5: Statistics and Learning I
17:00	Interplay of minimax estimation and minimax support recovery under sparsity Mohamed Ndaoud
17:18	Uniform regret bounds over R^d for the sequential linear regression problem with the square loss Pierre Gaillard, Sebastien Gerchinovitz, Malo Huard and Gilles Stoltz
17:36	Ising Models with Latent Conditional Gaussian Variables Frank Nussbaum and Joachim Giesen
17:54	Exploiting geometric structure in mixture proportion estimation with generalised Blanchard-Lee-Scott estimators Henry Reeve and Ata Kaban
18:12	A minimax near-optimal algorithm for adaptive rejection sampling Juliette Achdou, Joseph Lam, Alexandra Carpentier and Gilles Blanchard
18:30	An Exponential Efron-Stein Inequality for L_q Stable Learning Rules. The Deleted Estimate Case Karim Abou-Moustafa and Csaba Szepesvári
18:48 - 19:00	Break
19:00 - 19:30	Business meeting
19:30 - 22:30	Banquet at the conference hotel (Lakeshore East room)
Sunday, March 24, 2019	
09:00 - 11:00	Tutorial 3: Computation and the Brain Christos Papadimitriou
11:00 - 11:30	Break
11:30 - 13:00	Session 6: Learning theory II
11:30	Hardness of Improper One-sided Learning of Conjunctions For All Uniformly Falsifiable CSPs Alexander Durgin and Brendan Juba
11:48	Optimal Collusion-Free Teaching David Kirkpatrick, Hans Simon and Sandra Zilles

12:06	Sample Compression for Real-Valued Learners Steve Hanneke, Aryeh Kontorovich and Menachem Sadigurschi
12:24	On Learning Graphs with Edge-Detecting Queries Hasan Abasi and Nader Bshouty
12:42	Can Adversarially Robust Learning Leverage Computational Hardness? Saeed Mahloujifar and Mohammad Mahmoody
13:00 - 14:00	Lunch break
14:00 - 15:30	Session 7: Statistics and Learning II
14:00	Sequential change-point detection: Laplace concentration of scan statistics and non-asymptotic delay bounds Odalric-Ambrym Maillard
14:18	Dimensionality Reduction and (Bucket) Ranking: a Mass Transportation Approach Mastane Achab, Anna Korba and Stéphan Clémentçon
14:36	Minimax Learning of Ergodic Markov Chains Geoffrey Wolfer and Aryeh Kontorovich
14:54	A Generalized Neyman-Pearson Criterion for Optimal Domain Adaptation Clayton Scott
15:12	A Tight Excess Risk Bound via a Unified PAC-Bayesian–Rademacher–Shtarkov–MDL Complexity Peter Grünwald and Nishant Mehta
15:45 - 16:00	Break
16:00 - 18:30	Workshop: When Smaller Sample Sizes Suffice for Learning