<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>19:00 - 22:00</td>
<td>Reception with appetizers (Streeterville room)</td>
<td></td>
</tr>
<tr>
<td>08:45 - 09:00</td>
<td>Opening remarks</td>
<td></td>
</tr>
<tr>
<td>09:00 - 11:00</td>
<td>Tutorial 1: Exploration-Exploitation in Reinforcement Learning</td>
<td>Alessandro Lazaric, Matteo Pirotta and Ronan Fruit</td>
</tr>
<tr>
<td>11:00 - 11:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>11:30 - 13:00</td>
<td>Session 1: Sequential Learning</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>Online Non-Additive Path Learning under Full and Partial Information</td>
<td>Corinna Cortes, Vitaly Kuznetsov, Mehryar Mohri, Holakou Rahmanian and Manfred Warmuth</td>
</tr>
<tr>
<td>11:48</td>
<td>Dynamic Pricing with Finitely Many Unknown Valuations</td>
<td>Nicolo Cesa-Bianchi, Tommaso Renato Cesari and Vianney Perchet</td>
</tr>
<tr>
<td>12:06</td>
<td>Online Influence Maximization with Local Observations</td>
<td>Julia Olkhovskaya, Gergely Neu and Gabor Lugosi</td>
</tr>
<tr>
<td>12:24</td>
<td>Competitive ratio vs regret minimization: achieving the best of both worlds</td>
<td>Amit Daniely and Yishay Mansour</td>
</tr>
<tr>
<td>12:42</td>
<td>Average-Case Information Complexity of Learning</td>
<td>Ido Nachum and Amir Yehudayoff</td>
</tr>
<tr>
<td>13:00 - 14:00</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>14:00 - 15:00</td>
<td>Plenary talk 1: Why is fair machine learning hard and how can theory help?</td>
<td>Jennifer Wortman Vaughan</td>
</tr>
<tr>
<td>15:00 - 15:15</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>15:15 - 17:03</td>
<td>Session 2: Learning theory I</td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td>Adaptive Exact Learning of Decision Trees from Membership Queries</td>
<td>Nader Bshouty and Catherine Haddad-Zaknoon</td>
</tr>
<tr>
<td>15:33</td>
<td>Limit Learning Equivalence Structures</td>
<td>Ekaterina Fokina, Timo Kötzing and Luca San Mauro</td>
</tr>
<tr>
<td>16:09</td>
<td>Attribute-efficient learning of monomials over highly-correlated variables</td>
<td>Alexandr Andoni, Rishab Dudeja, Daniel Hsu and Kiran Vodrahalli</td>
</tr>
<tr>
<td>16:27</td>
<td>A Sharp Lower Bound for Agnostic Learning with Sample Compression Schemes</td>
<td>Steve Hanneke and Aryeh Kontorovich</td>
</tr>
<tr>
<td>16:45</td>
<td>Improved generalization bounds for robust learning</td>
<td>Idan Attias, Aryeh Kontorovich and Yishay Mansour</td>
</tr>
<tr>
<td>17:03 - 17:30</td>
<td>Walk to boat trip departure point at 401 N Michigan Ave, Chicago, IL 60611</td>
<td></td>
</tr>
<tr>
<td>17:30 - 19:00</td>
<td>Boat trip</td>
<td></td>
</tr>
<tr>
<td>09:00 - 11:00</td>
<td>Tutorial 2: Structured Random Matrices</td>
<td>Ramon van Handel</td>
</tr>
<tr>
<td>11:00 - 11:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>Session 3: Bandits, partial feedback, privacy, fairness</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>Cleaning up the neighborhood: A full classification for adversarial partial monitoring</td>
<td>Tor Lattimore and Csaba Szepesvári</td>
</tr>
<tr>
<td>11:48</td>
<td>PAC Battling Bandits in the Plackett-Luce Model</td>
<td>Aadirupa Saha and Aditya Gopalan</td>
</tr>
<tr>
<td>12:06</td>
<td>Differentially Private Empirical Risk Minimization in Non-interactive Local Model via Polynomial of Inner Product Approximation</td>
<td>Di Wang, Adam Smith and Jinhui Xu</td>
</tr>
<tr>
<td>12:30</td>
<td>Walk to boat trip departure point at 401 N Michigan Ave, Chicago, IL 60611</td>
<td></td>
</tr>
<tr>
<td>13:00 - 14:00</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>14:00 - 15:00</td>
<td>Plenary talk 2: Why is fair machine learning hard and how can theory help?</td>
<td>Jennifer Wortman Vaughan</td>
</tr>
<tr>
<td>15:00 - 15:15</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>15:15 - 17:03</td>
<td>Session 4: Learning theory II</td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td>Adaptive Exact Learning of Decision Trees from Membership Queries</td>
<td>Nader Bshouty and Catherine Haddad-Zaknoon</td>
</tr>
<tr>
<td>15:33</td>
<td>Limit Learning Equivalence Structures</td>
<td>Ekaterina Fokina, Timo Kötzing and Luca San Mauro</td>
</tr>
<tr>
<td>16:09</td>
<td>Attribute-efficient learning of monomials over highly-correlated variables</td>
<td>Alexandr Andoni, Rishab Dudeja, Daniel Hsu and Kiran Vodrahalli</td>
</tr>
<tr>
<td>16:27</td>
<td>A Sharp Lower Bound for Agnostic Learning with Sample Compression Schemes</td>
<td>Steve Hanneke and Aryeh Kontorovich</td>
</tr>
<tr>
<td>16:45</td>
<td>Improved generalization bounds for robust learning</td>
<td>Idan Attias, Aryeh Kontorovich and Yishay Mansour</td>
</tr>
<tr>
<td>17:03 - 17:30</td>
<td>Walk to boat trip departure point at 401 N Michigan Ave, Chicago, IL 60611</td>
<td></td>
</tr>
<tr>
<td>17:30 - 19:00</td>
<td>Boat trip</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Session/Activity</td>
<td></td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>12:24</td>
<td>Old Techniques in Differentially Private Linear Regression</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Or Sheffet</td>
<td></td>
</tr>
<tr>
<td>12:42</td>
<td>PeerReview4All: Fair and Accurate Reviewer Assignment in Peer Review</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ivan Stelmakh, Nihar Shah and Aarti Singh</td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>Plenary talk 2: Theory for Representation Learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sanjeev Arora</td>
<td></td>
</tr>
<tr>
<td>15:00</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td>Session 4: Optimization</td>
<td></td>
</tr>
<tr>
<td>15:15</td>
<td>Two-Player Games for Efficient Non-Convex Constrained Optimization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Andrew Cotter, Heinrich Jiang and Karthik Sridharan</td>
<td></td>
</tr>
<tr>
<td>15:33</td>
<td>General parallel optimization without metric</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Xuedong Shang, Emilie Kaufmann and Michal Valko</td>
<td></td>
</tr>
<tr>
<td>15:51</td>
<td>Online Linear Optimization with Sparsity Constraints</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Jen Lu, Jun-Kun Wang and Shou-De Lin</td>
<td></td>
</tr>
<tr>
<td>16:09</td>
<td>Stochastic Nonconvex Optimization with Large Minibatches</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weiran Wang and Nathan Srebro</td>
<td></td>
</tr>
<tr>
<td>16:27</td>
<td>A simple parameter-free and adaptive approach to optimization under a minimal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>local smoothness assumption</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peter Bartlett, Victor Gabillon and Michal Valko</td>
<td></td>
</tr>
<tr>
<td>16:45</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td>Session 5: Statistics and Learning I</td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td>Interplay of minimax estimation and minimax support recovery under sparsity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mohamed Ndaoud</td>
<td></td>
</tr>
<tr>
<td>17:18</td>
<td>Uniform regret bounds over $R^d$ for the sequential linear regression problem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with the square loss</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pierre Gaillard, Sebastien Gerchinovitz, Malo Huard and Gilles Stoltz</td>
<td></td>
</tr>
<tr>
<td>17:36</td>
<td>Ising Models with Latent Conditional Gaussian Variables</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frank Nussbaum and Joachim Giesen</td>
<td></td>
</tr>
<tr>
<td>17:54</td>
<td>Exploiting geometric structure in mixture proportion estimation with</td>
<td></td>
</tr>
<tr>
<td></td>
<td>generalised Blanchard-Lee-Scott estimators</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Henry Reeve and Ata Kaban</td>
<td></td>
</tr>
<tr>
<td>18:12</td>
<td>A minimax near-optimal algorithm for adaptive rejection sampling</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Juliette Achdou, Joseph Lam, Alexandra Carpentier and Gilles Blanchard</td>
<td></td>
</tr>
<tr>
<td>18:30</td>
<td>An Exponential Efron-Stein Inequality for Lq Stable Learning Rules. The Deleted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Case</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Karim Abou-Moustafa and Csaba Szepesvári</td>
<td></td>
</tr>
<tr>
<td>18:48</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>19:00</td>
<td>Business meeting</td>
<td></td>
</tr>
<tr>
<td>19:30</td>
<td>Banquet at the conference hotel (Lakeshore East room)</td>
<td></td>
</tr>
<tr>
<td>09:00</td>
<td>Tutorial 3: Computation and the Brain</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Christos Papadimitriou</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>Session 6: Learning theory II</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>Hardness of Improper One-sided Learning of Conjunctions For All Uniformly</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Falsifiable CSPs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alexander Durgin and Brendan Juba</td>
<td></td>
</tr>
<tr>
<td>11:48</td>
<td>Optimal Collusion-Free Teaching</td>
<td></td>
</tr>
<tr>
<td></td>
<td>David Kirkpatrick, Hans Simon and Sandra Zilles</td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>12:06</td>
<td>Sample Compression for Real-Valued Learners</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Steve Hanneke, Aryeh Kontorovich and Menachem Sadigurschi</td>
<td></td>
</tr>
<tr>
<td>12:24</td>
<td>On Learning Graphs with Edge-Detecting Queries</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hasan Abasi and Nader Bshouty</td>
<td></td>
</tr>
<tr>
<td>12:42</td>
<td>Can Adversarially Robust Learning Leverage Computational Hardness?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Saeed Mahloujifar and Mohammad Mahmoody</td>
<td></td>
</tr>
<tr>
<td>13:00 - 14:00</td>
<td>Lunch break</td>
<td></td>
</tr>
<tr>
<td>14:00 - 15:30</td>
<td>Session 7: Statistics and Learning II</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>Sequential change-point detection: Laplace concentration of scan statistics and non-asymptotic delay bounds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Odalric-Ambrym Maillard</td>
<td></td>
</tr>
<tr>
<td>14:18</td>
<td>Dimensionality Reduction and (Bucket) Ranking: a Mass Transportation Approach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mastane Achab, Anna Korba and Stéphan Clémençon</td>
<td></td>
</tr>
<tr>
<td>14:36</td>
<td>Minimax Learning of Ergodic Markov Chains</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Geoffrey Wolfer and Aryeh Kontorovich</td>
<td></td>
</tr>
<tr>
<td>14:54</td>
<td>A Generalized Neyman-Pearson Criterion for Optimal Domain Adaptation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clayton Scott</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peter Grünwald and Nishant Mehta</td>
<td></td>
</tr>
<tr>
<td>15:30 - 16:00</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>16:00 - 18:30</td>
<td>Workshop: When Smaller Sample Sizes Suffice for Learning</td>
<td></td>
</tr>
</tbody>
</table>