

## EnCORE Workshop on Computational vs Statistical Gaps in Learning and Optimization

### Monday February 26, 2024

- 8:00–8:55 *Check-In/Breakfast (Hosted by IPAM)*
- 8:55–9:00 *Welcome and Opening Remarks*
- 9:00 *SESSION CHAIR: Raghu Meka (UCLA)*
- 9:00–9:50 **Ankur Moitra** (Massachusetts Institute of Technology)  
*Learning from Dynamics*
- 10:00–10:15 *Break*
- 10:15–11:05 **Ravi Kumar** (Google Inc.)  
*learning-Augmented Online Optimization*
- 11:15–11:30 *Break*
- 11:30–12:20 **Jelani Nelson** (University of California, Berkeley (UC Berkeley))  
*New local differentially private protocols for frequency and mean estimation*
- 12:30–2:30 *Lunch (on your own)*
- 2:30 *SESSION CHAIR: Arya Mazumdar*
- 2:30–3:20 **Adel Javanmard** (University of Southern California (USC))  
*Learning from Aggregate Responses*
- 3:30–4:00 *Break*
- 4:00–4:50 **Omer Reingold** (Stanford University)  
*Learn Now, Optimize Later: Algorithmic Fairness, Loss Minimization and Outcome Indistinguishability*
- 5:00–5:15 *Lightning Poster Session*
- 5:15–6:30 *Reception (Location: IPAM Lobby)*

### Tuesday February 27, 2024

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50 **Vasilis Kotonis** (University of Texas at Austin)  
*Smoothed Analysis for Learning Concepts with Low Intrinsic Dimension*
- 10:00–10:15 *Break*

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- 10:15–11:05 **Pasin Manurangasi** (Google Thailand)  
*The Complexity of Adversarially Robust Proper Learning of Halfspaces with Agnostic Noise*
- 11:15–11:30 *Break*
- 11:30–12:20 **Abhineet Agarwal** (University of California, Berkeley (UC Berkeley))  
*Understanding and overcoming the statistical limitations of decision trees*
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Thien Le** (Massachusetts Institute of Technology)  
*On the hardness of learning under symmetries*
- 3:30–4:00 *Break*
- 4:00–4:30 **Rachel Ward** (University of Texas at Austin)  
*TBA*

### Wednesday February 28, 2024

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00 *SESSION CHAIR: Rachel Ward*
- 9:00–9:50 **Andrea Montanari** (Stanford University)  
*Solving overparametrized systems of nonlinear equations*
- 10:00–10:15 *Break*
- 10:15–11:05 **Cynthia Rush** (Columbia University)  
*Is It Easier to Count Communities Than Find Them?*
- 11:15–11:30 *Break*
- 11:30–12:20 **Matus Telgarsky** (Courant Institute of Mathematical Sciences)  
*A Perceptron Trio*
- 12:30 *Group Photo*
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Wasim Huleihel** (Tel Aviv University)  
*Testing Dependency of Databases*
- 3:30–4:00 *Break*
- 4:00–4:50 **Giang Tran** (University of Waterloo)  
*Fast Multipole Attention: A Divide-and-Conquer Attention Mechanism for Long Sequences*

## Thursday February 29, 2024

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00 *SESSION CHAIR: Matus Telgarsky (Courant Institute, NYU)*
- 9:00–9:50 **Jelena Diakonikolas** (University of Wisconsin-Madison)  
*Robust Learning of a Single Neuron: Bridging Computational Gaps Using Insights from Optimization*
- 10:00–10:15 *Break*
- 10:15–11:05 **Sitan Chen** (Harvard University)  
*Provably learning a multi-head attention layer*
- 11:15–11:30 *Break*
- 11:30–12:20 **Vatsal Sharan** (University of Southern California (USC))  
*Memory as a lens to understand efficient learning and optimization*
- 12:30–2:30 *Lunch (on your own)*
- 2:30 *SESSION CHAIR: Raghu Meka (UCLA)*
- 2:30–3:20 **Arya Mazumdar** (University of California, San Diego (UCSD))  
*Sample complexity of estimation in logistic regression*
- 3:30–4:00 *Break*
- 4:00–4:50 *TBD*

## Friday March 1, 2024

- 8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50 **Pravesh Kothari** (Princeton University)  
*Efficiently Finding Planted Cliques in Semirandom Graphs*
- 10:00–10:15 *Break*
- 10:15–11:05 **Surbhi Goel** (University of Pennsylvania)  
*Beyond Worst-case Guarantees for Sequential Prediction: Robustness via Abstention*
- 11:15–11:30 *Break*
- 11:30–12:20 **Raghu Meka** (University of California, Los Angeles (UCLA))  
*Complexity of Sparse Linear Regression*

