

## Workshop III: Statistical and Numerical Methods for Non-commutative Optimal Transport

**Monday May 19, 2025**

- 8:00            *SESSION CHAIR: Quentin Berthet*
- 8:00–8:55      *Check-In/Breakfast (Hosted by IPAM)*
- 8:55–9:00      *Welcome and Opening Remarks*
- 9:00–9:50      **Jean Lasserre** (Université de Toulouse III (Paul Sabatier))  
*Gaussian mixtures closest to a given measure via optimal transport*
- 10:00–10:15   *Break*
- 10:15–11:05   **Venkat Chandrasekaran** (California Institute of Technology)  
*Any-dimensional polynomial optimization*
- 11:15–11:30   *Break*
- 11:30–12:20   **Dávid Papp** (North Carolina State University)  
*Nonsymmetric conic optimization and dual certificates for sums-of-squares*
- 12:30–2:00    *Lunch (on your own)*
- 2:00            *SESSION CHAIR: Therese Landry*
- 2:00–2:50      **Giulia Luise** (Microsoft)  
*Learning to optimize transport plans*
- 3:00–3:15      *Break*
- 3:15–4:05      **Cesar Uribe** (Rice University)  
*Decentralized Optimal Transport and Barycenters: Algorithms, Quantization, and Equity*
- 4:15–4:45      *Break*
- 5:00–6:00      **Alessio Figalli** (ETH Zurich)  
*Green Family Lecture #1: Optimal Transport: From A to B... and Beyond*
- 6:15–7:15      *Reception (Location: IPAM Lobby)*



## Tuesday May 20, 2025

- 8:00            *SESSION CHAIR: Shmuel Friedland*
- 8:00–8:55      *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50      **Ziv Goldfeld** (Cornell University)  
*Gromov-Wasserstein Alignment: Statistics, Computation, and Geometry*
- 10:00–10:15   *Break*
- 10:15–11:05   **Ricardo Baptista** (California Institute of Technology)  
*Conditional simulation via entropic optimal transport*
- 11:15–11:30   *Break*
- 11:30–12:20   **Tudor Manole** (Massachusetts Institute of Technology)  
*Discrete Signal Recovery under the Wasserstein Distance*
- 12:30–2:30    *Lunch (on your own)*
- 2:30            *SESSION CHAIR: Ricardo Baptista*
- 2:30–3:20      **Bodhisattva Sen** (Columbia University)  
*Constrained denoising, optimal transport, and empirical Bayes*
- 3:30–4:00      *Break*
- 4:30–5:30      **Alessio Figalli** (ETH Zurich)  
*Green Family Lecture #2: Exploring Stability in Geometric and Functional Inequalities: OT and Beyond*

## Wednesday May 21, 2025

- 8:00            *SESSION CHAIR: Jean Lasserre*
- 8:00–8:55      *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50      **Alessio Figalli** (ETH Zurich)  
*On the regularity of optimal transport maps*
- 10:00–10:15   *Break*
- 10:15–11:05   **Joel Tropp** (California Institute of Technology)  
*Scalable semidefinite programming*
- 11:15–11:30   *Break*

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- 11:30–12:20 **Tyler Maunu** (Brandeis University)  
*Subspace Langevin Monte Carlo*
- 12:30–12:45 *Group Photo*
- 12:45–2:30 *Lunch (on your own)*
- 2:30 *SESSION CHAIR: Giulia Luise*
- 2:30–3:20 **Didier Henrion** (Centre National de la Recherche Scientifique (CNRS))  
*Solving moment and polynomial optimization problems on Sobolev spaces*
- 3:30–3:45 *Break*
- 3:45–4:00 *Lightning Poster Round*
- 4:00–5:30 *Poster Session & Reception (Hosted by IPAM)*

## Thursday May 22, 2025

- 8:00 *SESSION CHAIR: Tyler Maunu*
- 8:00–8:55 *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50 **Jason Altschuler** (Massachusetts Institute of Technology)  
*Near-Linear Runtime for a Classical Matrix Preconditioning Algorithm*
- 10:00–10:15 *Break*
- 10:15–11:05 **Sivaraman Balakrishnan** (Carnegie Mellon University)  
*Stability Bounds for Smooth Optimal Transport Maps and their Statistical Implications*
- 11:15–11:30 *Break*
- 11:30–12:20 *Discussions*
- 12:30–2:30 *Lunch (on your own)*
- 2:30 *SESSION CHAIR: Fanch Coudreuse*
- 2:30–3:20 **Anna Korba** (École Nationale de la Statistique et de l'Administration Économique)  
*Some novel kernel-based divergences between probability distributions*
- 3:30–4:00 *Break*
- 4:00–4:50 **Promit Ghosal** (University of Chicago)  
*Convergence, Geometry, and Selection Principles in Entropic Optimal Transport*

## Friday May 23, 2025

- 8:00            *SESSION CHAIR: Rolando De Santiago*
- 8:00–8:55      *Check-In/Breakfast (Hosted by IPAM)*
- 9:00–9:50      **Shmuel Friedland** (University of Illinois at Chicago)  
*Barrier relaxations of the classical and quantum optimal transport problems*
- 10:00–10:15   *Break*
- 10:15–11:05   **Therese Landry** (University of California, Santa Barbara (UCSB))  
*Quantum Wasserstein Distance on the Quantum Permutation Group*
- 11:15–11:30   *Break*
- 11:30–12:20   *Discussions*

