

## Quantitative Linear Algebra Reunion Conference I

## Tuesday December 3, 2019

1:30 *Bus Departs UCLA/Faculty Center*  
4:30 *Check in at Lake Arrowhead*  
6:30–8:00 *Dinner*  
8:00–8:30 *MLP2019 Long Program Graduation Ceremony (Iris)*  
8:30–9:30 *Social Hour (Iris)*

## Wednesday December 4, 2019

8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*  
9:00–9:40 **Archit Kulkarni** (University of California, Berkeley (UC Berkeley))  
*The Lanczos Algorithm Under Few Iterations: Concentration and Location of the Ritz Values*  
9:50–10:10 *Break*  
10:10–10:50 **Vishesh Jain** (Massachusetts Institute of Technology)  
*Quantitative invertibility of random matrices: a combinatorial view*  
12:00–1:00 *Lunch (on your own)*  
1:30–2:10 **Dima Shlyakhtenko** (University of California, Los Angeles (UCLA))  
*Monotonicity of Entropy and Free Compressions*  
2:20–2:35 *Break*  
2:35–3:15 **Jorge Garza Vargas** (University of California, Berkeley (UC Berkeley))  
*Spectra of infinite graphs via freeness with amalgamation*  
6:30–8:00 *Dinner*  
8:00–9:00 *Joint Session (Iris): Programs Overview by Cecilia Clementi (Rice University) and Nikhil Srivastava (UC Berkeley)*  
9:00–10:00 *Social Hour (Iris)*



## Thursday December 5, 2019

8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*

9:00–9:40 **Dan-Virgil Voiculescu** (University of California, Berkeley (UC Berkeley))  
*Some non-commutative hydrodynamic Euler equations in free probability*

9:50–10:05 *Break*

10:05–10:45 **David Jekel** (University of California, Los Angeles (UCLA))  
*An  $L^2$ -continuous Functional Calculus for Tracial von Neumann Algebras*

10:55–11:10 *Break*

11:10–11:40 **Daniel Hoff** (University of California, Los Angeles (UCLA))  
*Maximal Rigid Subalgebras of  $s$ -Malleable Deformations*

12:00–1:00 *Lunch (on your own)*

1:00–6:00 *Afternoon Free*

6:30–8:00 *Dinner*

8:00–9:00 *Joint Session (Iris): Talk by Olga Holtz (UC Berkeley)*

9:00–10:00 *Social Hour (Iris)*

## Friday December 6, 2019

8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*

9:00–9:40 **Olga Holtz** (University of California, Berkeley (UC Berkeley))  
*Total positivity of structured matrices and zero localization of entire functions*

9:50–10:05 *Break*

10:05–10:45 **Nikhil Srivastava** (University of California, Berkeley (UC Berkeley))  
*Gaussian Regularization of the Pseudospectrum and Davies' Conjecture*

10:55–11:10 *Break*

11:10–11:30 **Therese Landry** (University of California, Riverside (UC Riverside))  
*Propinquity, Spectral Triples, and the Sierpinski Gasket*

12:00–1:00 *Lunch (on your own)*

1:30–2:10 **Theo McKenzie** (University of California, Berkeley (UC Berkeley))  
*Connecting Types of Expansion in High Dimensional Simplicial Complexes*

2:20–2:35 *Break*

*(Friday schedule continued on next page)*

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2:35–3:15 **Ben Hayes** (University of Virginia)  
*A multiplicative ergodic theorem for von Neumann algebra valued cocycles*

6:30–8:00 *Dinner*

8:00–9:00 *Joint Session (Iris): Talk by Frank Noe (Freie Universität Berlin): Deep learning for physics many-body problems*

9:00–10:00 *Social Hour (Iris)*

## Saturday December 7, 2019

8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*

9:00–9:40 **Tobe Deprez** (KU Leuven)  
*Ozawa's class  $\mathcal{S}$  for locally compact groups and unique prime factorization of group von Neumann algebras*

9:50–10:05 *Break*

10:05–10:45 **Rolando de Santiago** (University of California, Los Angeles (UCLA))  
*Maximal Rigid Subalgebras and Applications to  $L^2$  Rigidity*

10:55–11:10 *Break*

11:10–11:30 **Benjamin Mirabelli** (Princeton University)  
*Finite Free Non-Hermitian Convolutions and Central Limit Theorems*

12:00–1:00 *Lunch (on your own)*

1:30–2:10 **Shravas Rao** (New York University)  
*An Improved Lower Bound for Sparse Reconstruction from Subsampled Hadamard Matrices*

2:20–2:35 *Break*

2:35–3:15 **Roy Araiza** (Purdue University)  
*Tensor Products of Matrix Convex Sets*

6:30–8:00 *Dinner*

8:00–9:00 *Social Hour (Iris)*

## Sunday December 8, 2019

8:00–9:00 *Check-In/Breakfast (Hosted by IPAM)*

9:00–9:40 **Igor Pak** (University of California, Los Angeles (UCLA))  
*Random contingency tables*

10:00–12:00 *Checkout*

12:00–1:00 *Lunch (on your own)*

1:00 *Bus Departs Lake Arrowhead (LAX/Marriott/UCLA)*

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