

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 *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 *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 *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))
Proximity, 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*

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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 *Breakfast (hosted by IPAM)*
- 9:00–9:40 **Tobe Deprez** (KU Leuven)
Ozawa's class 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 *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 (Ontario Airport/LAX/Marriott/UCLA)*

