

Tensor Methods and Emerging Applications to the Physical and Data Sciences

Monday March 8, 2021

8:00 *Note: The Seminar Series talks are open only to TM2021 program participants. Please see the "Activities" tab to register for the open workshops.*

Monday March 22, 2021

8:15–9:15 **Joseph Landsberg** (Texas A&M University - College Station)
Clay Lecture Series: Introduction to Border Rank Lower Bounds (Part 1 of 3)

Wednesday March 24, 2021

9:00–9:40 **Ziang Chen** (Duke University)
Tensor ring decomposition

Friday March 26, 2021

10:00–11:00 **Frank Verstraete** (Ghent University)
Mathematical Aspects of Tensor Networks (Part 3)

Monday April 5, 2021

8:15–9:15 **Joseph Landsberg** (Texas A&M University - College Station)
Clay Lecture Series: Introduction to Border Rank Lower Bounds (2 of 3)

Tuesday April 6, 2021

9:30–10:10 **Harm Derksen** (Northeastern University)
Notions of Orthogonality for Tensors



Wednesday April 7, 2021

9:30–10:15 **Edinah Gngang** (John Hopkins University)
Boolean Circuit Lower Bounds via Tensor rank and Partial Differential Encoding Boolean Functions

Thursday April 8, 2021

9:30–10:10 **Runshi Geng** (Texas A&M University - College Station)
On the geometry of geometry rank

Monday April 12, 2021

8:15–9:15 **Joseph Landsberg** (Texas A&M University - College Station)
Clay Lecture Series: Introduction to Border Rank Lower Bounds (3 of 3)

9:30–10:20 **Benjamin Lovitz** (University of Waterloo)
A generalization of Kruskal's theorem

Wednesday April 14, 2021

9:30–10:30 **Eric Evert** (Katholieke Universiteit Leuven, Campus Kortrijk)
Existence of best low rank tensor approximations

Thursday April 15, 2021

9:30–10:30 **Giorgio Ottaviani** (University of Florence)
Eigenvectors and singular t -ples of tensors lie on critical space

Friday April 16, 2021

8:15–9:15 **Joseph Landsberg** (Texas A&M University - College Station)
Clay Lectures Homework Problem Session 3 (Led by Chia-Yu Chang, Runshi Geng, and Arpan Pal)

Wednesday April 28, 2021

9:00–9:30 **Ettore Teixeira Turatti** (Università di Firenze)
On tensors which are determined by their singular tuples

Monday May 10, 2021

9:30–10:30 **Luca Chiantini** (Università di Siena)
Geometry of configurations of points and symmetric rank.

Tuesday May 11, 2021

8:00–8:50 **Micheline Soley** (Yale University)
Iterative Power Algorithm for Global Optimization with Quantics Tensor Trains

Wednesday May 12, 2021

8:00–9:00 **Paul Breiding** (Technische Universität Berlin)
The condition number of tensor CPD - Probabilistic analysis (40 min + discussion)

9:00–10:00 **Nick Vannieuwenhoven** (KU Leuven)
Riemannian optimization for the tensor rank decomposition (40 min + discussion)

Tuesday May 25, 2021

9:30–10:15 **Joshua Grochow** (University of Colorado Boulder)
Tensor Isomorphism in its various incarnations (50 min + discussion)

Wednesday May 26, 2021

8:00–9:00 **Tim Seynnaeve** (Universität Bern)
The linear span of cyclically invariant matrix product states

Thursday May 27, 2021

9:30–10:30 **Edinah Gnang** (John Hopkins University)
Expanding the Spectral Toolkit to third order hypermatrices (45 mins + discussion)

Monday May 31, 2021

8:00–9:00 **Joe Kileel** (University of Texas at Austin)
Symmetric Tensor Decomposition with Subspace Power Method (50 mins + Q&A)