

FRIDAY, June 16. Morning

MSI02. Low-rank matrices and tensors: algorithms and applications.

11:10-11:40: **AULA 10**. Low-rank tensor frames for the high-accuracy solution of elliptic and parabolic PDEs. Vladimir Kazeev.

11:40-12:10: **AULA 10**. Low-rank nonnegative matrix and tensor approximations: alternating projections and how to make them faster. Stanislav Budzinskiy.

12:10-12:40: **AULA 10**. Tensor product algorithms for Bayesian inference of networks from epidemiological data. Dmitry Savostyanov.

12:40-13:10: **AULA 10**. Deep Importance Sampling Using Tensor Approximations. Sergey Dolgov.

MSI05. Realization formulas, rational inner functions, and real algebraic geometry.

11:10-11:40: **AULA 5**. Nonnegative polynomials, sums of squares and sums of nonnegative circuit polynomials - a story of three convex cones. Moritz Schick.

11:40-12:10: **AULA 5**. Projection Theorems in Free Semialgebraic Geometry. Tim Netzer.

12:10-12:40: **AULA 5**. Positivity of state polynomials with applications. Jurij Volcic.

MSC09. Polynomial and rational matrices and applications.

11:10-11:40: **AULA 16**. On the Rellich eigendecomposition of para-Hermitian matrices on the unit circle. Giovanni Barbarino.

11:40-12:10: **AULA 16**. Computing the nearest (structured) singular matrix polynomial. Miryam Gnazzo.

12:10-12:40: **AULA 16**. Nearest singular pencil via Riemannian optimization. Lauri Nyman.

12:40-13:10: **AULA 16**. Computing a compact local Smith McMillan form. Paul Van Dooren.

MSC13. Linear algebra and quantum information theory.

11:10-11:40: **AULA 6F**. Quantum concentration inequalities. Daniel Stilck França.

11:40-12:10: **AULA 6F**. Thermalization in quantum spin systems. Antonio Pérez-Hernández.

12:10-12:40: **AULA 6F**. Spectral gap for AKLT models on arbitrary decorated graphs. Angelo Lucia.

MSC14. Advances in cospectrality.

11:10–11:40: **AULA 7**. The Degree–Distance and Transmission–Adjacency Matrices. Carlos Alfaro.

11:40–12:10: **AULA 7**. Cospectral graphs by edge deletion. Chris Godsil.

12:10–12:40: **AULA 7**. Phantom mates of strongly cospectral vertices. Krystal Guo.

12:40–13:10: **AULA 7**. Coalescing sets for a cospectral construction. Joel Jeffries.

MSC16. Orthogonal polynomials, matrix analysis and applications.

11:10–11:40: **AULA 15**. Linear systems of moment differential equations. Alberto Lastra.

11:40–12:10: **AULA 15**. A matrix approach to the linearization and connection coefficients of orthogonal polynomial sequences. Luis Verde-Star.

12:10–12:40: **AULA 15**. Eigenvalues of infinite Hermitian matrices and Sobolev orthogonal polynomials. Carmen Escribano.

12:40–13:10: **AULA 15**. A matrix approach to bounded point evaluation and zeros of Sobolev orthogonal polynomials. Raquel Gonzalo.

MSC17. Pattern restricted inverse eigenvalue problems.

11:10–11:40: **AULA 12**. Similarity via transversal intersection of manifolds. Zhongshan Li.

11:40–12:10: **AULA 12**. The bifurcation lemma for strong properties in the inverse eigenvalue problem of a graph. Jephian C.–H. Lin.

12:10–12:40: **AULA 12**. The liberation set of a graph. Polona Oblak.

MSC22. State-of-the-art in algorithms and applications.

11:10–11:40: **AULA 3**. Updating a Sequence of Orthogonal Rational Functions. Raf Vandebril.

11:40–12:10: **AULA 3**. Algorithmic aspects of the Bessmertny₁ realization theorem for multivariate rational matrix functions. Aaron Welters.

12:10–12:40: **AULA 3**. Structured Matrices Approach for Legendre Pairs. Ilias Kotsireas.

MSC25. Solving matrix and tensor equations.

11:10–11:40: **AULA 6**. Completion of operator matrices with application to solving operator equations. Dragana Cvetkovic-Ilic.

11:40–12:10: **AULA 6**. The η –(anti–)Hermitian solution to a constrained Sylvester-type matrix equation over the generalized commutative quaternions. Qing-Wen Wang.

12:10–12:40: **AULA 6**. Singular value decomposition of commutative quaternion tensors. Yang Zhang.

MSC26. Bohemian matrices and related topics in matrix theory.

11:10-11:40: **AULA 11**. Searching for
Rigidity in Algebraic Starscapes. Gabriel Dorsfman-Hopkins.

11:40-12:10: **AULA 11**. Eigenvectors of the block
Kronecker formulation of Mandelbrot matrices. Piers W. Lawrence.

12:10-12:40: **AULA 11**. Numerical Examples on
Backward Stability of Algebraic Linearizations. Eunice Y. S. Chan.

12:40-13:10: **AULA 11**. Bohemian Doubly Companion Matrices. Robert M. Corless.

Updated: 02 June 2023