

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

Organizers: Ryan Tully-Doyle, James Pascoe, Kelly Bickel.

**MONDAY**, 11:10-11:40: **AULA 5**. On the minimum

number of Toeplitz factors of a matrix. peaker: Daniel Seco.

**MONDAY**, 11:40-12:10: **AULA 5**. The wonders of the Cesàro matrix. William T. Ross.

**MONDAY**, 12:10-12:40: **AULA 5**. Packages

of curves associated with the numerical range. Pamela Gorkin.

**MONDAY**, 12:40-13:10: **AULA 5**. A moment theoretic approach to

estimate the cardinality of certain algebraic varieties. Raúl E. Curto.

**TUESDAY**, 11:10-11:40: **AULA 5**. Contractive realizations of

rational functions on polynomially defined domains and contractive determinantal representations of stable polynomials. Victor Vinnikov.

**TUESDAY**, 11:40-12:10: **AULA 5**. Hankel forms over a free monoid. Michael T. Jury.

**TUESDAY**, 12:10-12:40: **AULA 5**. Realizations of rational

inner functions in the full Fock space. Robert T. W. Martin.

**TUESDAY**, 12:40-13:10: **AULA 5**. Spectrahedral Shadows

and Completely Positive Maps on Real Closed Fields. Mario Kummer.

**THURSDAY**, 11:10-11:40: **AULA 5**. Ranks of linear

matrix pencils separate simultaneous similarity orbits. Igor Klep.

**THURSDAY**, 11:40-12:10: **AULA 5**. Clark measures associated with RIFs. Linus Bergqvist.

**THURSDAY**, 12:10-12:40: **AULA 5**. Facial structure of matrix convex sets. Tea Streljelj.

**THURSDAY**, 12:40-13:10: **AULA 5**. Free Extreme points of

free spectrahedra and generalized free spectrahedra. Eric Evert.

**FRIDAY**, 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.

**FRIDAY**, 11:40-12:10: **AULA 5**.

Projection Theorems in Free Semialgebraic Geometry. Tim Netzer.

**FRIDAY**, 12:10-12:40: **AULA 5**. Positivity

of state polynomials with applications. Jurij Volcic.

Updated: 02 June 2023