

# Friday, July 16

## Plenary Lecture MA 001

9:00	<b>A. Shkalikov</b> On perturbations of self-adjoint or normal operators
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10:00 *Coffee break*

### MA 004

### Semiplenary Lectures

### MA 005

10:30	<b>L. Rodman</b> Higher rank numerical ranges	<b>J. Rovnyak</b> The operator Fejér-Riesz theorem
11:15	<b>L. Weis</b> Spectral theoretic methods for stochastic partial differential equations	<b>N. Vasilevski</b> Commutative algebras of Toeplitz operators, hyperbolic geometry, and Berezin quantization
12:00	<b>A.E. Frazho</b> Optimal $H^2$ solutions to a rational Bezout type equation	<b>J. Leiterer</b> Estimates for the Cartan lemma on holomorphic matrices, and generalization

12:45 *Lunch break*

## Special Sessions and Contributed Talks

	MA 004	MA 001	MA 649	MA 650	MA 651	MA 749	MA 750
14:45	Douglas	Lotoreichik	Katsnelson	Giribet	Strauss	Serra-Capizzano	Latushkin
15:10	Bart	Arlinskii	Hanzon	Pessoa	Tapdigođlu	Ovall	Korotyayev
15:35	Upmeier	Rasulov	Pivovarchik	Ioannidis	Vlasov	Grubišic	Tyaglov
16:00	Kaashoek		Katkova	Bhattacharya	Trapani		
16:25			Derevyagin	Braeutigam	Planeta		

16:50 *Coffee break*

17:30	Silbermann	Sasane	Holtz	Fragoulopoulou	Raghupathi	Carvalho	
17:55	Ehrhardt	Buyukliev	MartínezFinkelshtein	Helemskii	Cohen	Sharma	
18:20	Karlovych	Gohm	Stahl	Rojas	Gürdal	Rozhenko	
18:45	Bastos		Vishnyakova	Choque Rivero	Olofsson		
19:10			Tyaglov				

### MA 001

19:45	<b>CLOSING</b>
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# Friday Room 004

## *Operator Theoretical Methods in Mathematical Physics, on the Traces of Erhard Meister*

**Chair: B. Silbermann**

- 14:45 – 15:10 **R. Douglas**  
Essential spectrum of multivariable matrix-valued Toeplitz operators
- 15:10 – 15:35 **H. Bart**  
The state space method in analysis and Schur complements
- 15:35 – 16:00 **H. Upmeyer**  
Vector-valued Bergman spaces and intertwining operators
- 16:00 – 16:25 **M.A. Kaashoek**  
Canonical factorization of rational matrix functions on the unit circle revisited

## *Operator Theoretical Methods in Mathematical Physics, on the Traces of Erhard Meister*

**Chair: R. Douglas**

- 17:30 – 17:55 **B. Silbermann**  
Banach algebras generated by Toeplitz and Hankel operators with piecewise continuous generating functions
- 17:55 – 18:20 **T. Ehrhardt**  
Szegő-Widom Limit theorems for band-dominated operators with almost periodic diagonals
- 18:20 – 18:45 **Yu. Karlovych**  
An algebra of convolution type operators with discontinuous data
- 18:45 – 19:10 **A. Bastos**  
Representations of non local  $C^*$  algebras of singular operators and  $C^*$  crossed products

# Friday      Room 001

## *Extension Theory and Applications*

**Chair: S. Hassi**

- 14:45 – 15:10      **V. Lotoreichik**  
Spectral asymptotic of elliptic operators with non-local boundary conditions
- 15:10 – 15:35      **Yu. Arlinskii**  
Bounded quasi-selfadjoint operators, their Weyl functions, and special block operator Jacobi matrices
- 16:00 – 16:25      **T.H. Rasulov**  
Asymptotics of the discrete spectrum of a model operator associated with a system of three particles on a lattice

## *Contributed Talks*

**Chair: M. Wojtylak**

- 17:30 – 17:55      **A. Sasane**  
Projective free Banach algebras and the stabilization problem in control theory
- 17:55 – 18:20      **N. Buyukliev**  
The  $C^*$ -algebra of Toeplitz operators associated with a polyhedral cone
- 18:20 – 18:45      **R. Gohm**  
Noncommutative Markov chains and multivariate operator theory

# Friday      Room 649

## *Structured Matrices, Total Positivity and Problems of Function Theory*

**Chair: O. Holtz**

- 14:45 – 15:10      **V. Katsnelson**  
Stieltjes functions and stable entire functions
- 15:10 – 15:35      **B. Hanzon**  
Non-negativity analysis for exponential-polynomial-trigonometric functions
- 15:35 – 16:00      **V. Pivovarchik**  
Existence of a tree of Stieltjes strings corresponding to given spectra of Dirichlet and Neumann problems
- 16:00 – 16:25      **O. Katkova**  
Total positivity and the Riemann zeta-function
- 16:25 – 16:50      **M. Derevyagin**  
Borg-type theorems for finite generalized Jacobi matrices

## *Structured Matrices, Total Positivity and Problems of Function Theory*

**Chair: M. Derevyagin**

- 17:30 – 17:55      **O. Holtz**  
Zeros of entire functions: from Rene Descartes to Mark Krein and beyond
- 17:55 – 18:20      **A. Martinez-Finkelshtein**  
Asymptotics of zeros of Heine-Stieltjes polynomials and critical measures
- 18:20 – 18:45      **H. Stahl**  
AAK approximants to functions with branch points
- 18:45 – 19:10      **A. Vishnyakova**  
On sufficient conditions for the total positivity of matrices and applications
- 19:10 – 19:35      **M. Tyaglov**  
On the location of roots of Hermite-Biehler polynomials

# Friday Room 650

## *Contributed Talks*

**Chair: F. Martinez-Peria**

- 14:45 – 15:10 **J. Giribet**  
Sampling problems and oblique projections
- 15:10 – 15:35 **L.V. Pessoa**  
Poly-Bergman spaces on domains Möbius equivalent to a disk
- 15:35 – 16:00 **A.D. Ioannidis**  
On a linear neutral integro-differential equation
- 16:00 – 16:25 **A. Bhattacharya**  
Coincidence of Schur multipliers of the Drury-Arveson space
- 16:25 – 16:50 **I. Braeutigam**  
Spectral analysis of an one-term irregular symmetric differential operator

## *Contributed Talks*

**Chair: A. Luger**

- 17:30 – 17:55 **M. Fragoulopoulou**  
Tensor products of  $GB^*$ -algebras and applications
- 17:55 – 18:20 **A.Ya. Helemskii**  
Hahn-Banach type theorems for normed modules
- 18:20 – 18:45 **E.M. Rojas**  
On the invertibility of paired operators within ordered groups
- 18:45 – 19:10 **A. Choque Rivero**  
Determinacy of the Hamburger moment problem of a determinate Stieltjes moment problem in the matrix case

# Friday      Room 651

## *Contributed Talks*

**Chair: I. Spitkovsky**

- 14:45 – 15:10      **V. Strauss**  
On the unicity of the integro-polynomial representation for  
definitizable moment problems
- 15:10 – 15:35      **M. Tapdigoglu**  
On some problems related with some special operator classes
- 15:35 – 16:00      **V. Vlasov**  
Spectral analysis for hyperbolic integrodifferential equations in Hilbert space
- 16:00 – 16:25      **C. Trapani**  
Operators on partial inner product spaces
- 16:25 – 16:50      **A. Planeta**  
One-dimensional and multidimensional spectral order

## *Contributed Talks*

**Chair: A. Baranov**

- 17:30 – 17:55      **M. Raghupathi**  
Interpolation and Fuchsian groups
- 17:55 – 18:20      **N. Cohen**  
Generic reflexivity for spaces of matrices
- 18:20 – 18:45      **M. Gürdal**  
On some questions of operator theory
- 18:45 – 19:10      **A. Olofsson**  
On the shift semigroup on the Hardy space of Dirichlet series

# Friday Room 749

## *Quantitative Spectral Theory of Block Matrix Operators*

**Chair: V. Kostrykin**

- 14:45 – 15:10 **S. Serra-Capizzano**  
From Toeplitz matrix-sequences to generalized locally Toeplitz sequences
- 15:10 – 15:35 **J. Owall**  
Exploiting the natural block-structure of hierarchically-decomposed variational discretizations of elliptic boundary value problems
- 15:35 – 16:00 **L. Grubišic**  
Reduced resolvent formula and weak operator equations, a bridge between block operator matrices and numerical linear algebra

## *Contributed Talks*

**Chair: A. Fleige**

- 17:30 – 17:55 **C. Carvalho**  
An index formula for classes of pseudodifferential operators on non-compact spaces
- 17:55 – 18:20 **P. Sharma**  
On invariant subspaces of an operator, some exterior power of which is positive
- 18:20 – 18:45 **N. Rozhenko**  
Passive impedance systems and stochastic realizations of stationary processes

# Friday      Room 750

## *Direct and Inverse Problems and their Applications*

**Chair: A. Sakhnovich**

- 14:45 – 15:10      **Yu. Latushkin**  
The index formula and the spectral shift function for relatively trace class perturbations
- 15:10 – 15:35      **E. Korotyaev**  
Direct and inverse problems for discrete Schrödinger operators on  $Z^d$ ,  $d \geq 2$
- 15:35 – 16:00      **M. Tyaglov**  
Spectral problem for a class of non-self-adjoint Jacobi matrices