

XXX International Workshop on  
Operator Theory and Applications

# PROGRAM

IWOTA 2019

Lisbon, July 22-26

Monday, July 22

## Plenary Lectures

Aula Magna (Rectorate Building)

8:00-9:00	Registration	
9:00-9:30	Opening	
9:30-10:30	Rien Kaashoek	Inverting structured operators and solving related inverse problems
10:30-11:00	Coffee break	
11:00-12:00	Albrecht Böttcher (ILAS lecture)	Lattices from equiangular tight frames
12:00-13:00	Joseph Ball	Input/state/output linear systems and their transfer functions: from single-variable to multivariable to free noncommutative function theory
13:00-14:30	Lunch break	
14:30-19:30	Special Sessions will take place on the campus of Instituto Superior Técnico (Avenida Rovisco Pais).	

Tuesday, July 23

## Plenary Lectures

Aula Magna (Rectorate Building)

8:30-9:30	Hans Feichtinger	Classical Fourier Analysis and the Banach Gelfand Triple
9:30-10:30	Lars-Erik Persson	My life with Hardy and his inequalities
10:30-11:00	Coffee break	
11:00-12:00	Christiane Tretter	Spectra and essential spectra of nonselfadjoint operators
12:00-13:00	Bernd Silbermann	Invertibility Issues for Toeplitz plus Hankel operators
13:00-14:30	Lunch break	
14:30-19:30	Special Sessions will take place on the campus of Instituto Superior Técnico (Avenida Rovisco Pais).	

Wednesday, July 24

## Plenary Lectures

Aula Magna (Rectorate Building)

8:30-9:30	Kenneth Davidson	Noncommutative Choquet theory
9:30-10:30	Ruy Exel	Statistical Mechanics on Markov spaces with infinitely many states
10:30-11:00	Coffee break	
11:00-12:00	Peter Semrl	Automorphisms of effect algebras
12:00-13:00	Igor Klep	Bianalytic maps between matrix convex sets
13:00-14:30	Lunch break	
15:00-19:00	Lisbon Tour	

Thursday, July 25

## Semi-Plenary Lectures A

Anfiteatro QA (Chemistry Building, IST Campus)

9:00-9:45	Stefanie Petermichl	Change of measure
9:45-10:30	Pedro Freitas	Spectral determinants of elliptic operators: dependence on spatial dimension and order of the operator
10:30-11:00	Coffee break	
11:00-11:45	Roland Duduchava	Boundary value problems on hypersurfaces and $\Gamma$ -convergence
11:45-12:30	António Caetano	Function spaces techniques in problems of scattering by fractal screens
12:30-13:15	Frank-Olme Speck	Advances in general Wiener-Hopf factorization
13:15-14:30	Lunch break	
14:30-19:30	Special Sessions will take place on the campus of Instituto Superior Técnico (Avenida Rovisco Pais).	
20:00-22:30	Conference Dinner	

Thursday, July 25

## Semi-Plenary Lectures B

Anfiteatro Abreu Faro (Complexo Interdisciplinar, IST Campus)

9:00-9:45	Ilya Spitkovsky	One hundred years of... numerical range
9:45-10:30	Eva Gallardo	Invariant subspaces for Bishop operators and beyond
10:30-11:00	Coffee break	
11:00-11:45	Pere Ara	Separated graphs and dynamics
11:45-12:30	Orr Moshe Shalit	Dilation theory: fresh directions with new applications
12:30-13:15	Steffen Roch	On quasifractal algebras
13:15-14:30	Lunch break	
14:30-19:30	Special Sessions will take place on the campus of Instituto Superior Técnico (Avenida Rovisco Pais).	
20:00-22:30	Conference Dinner	

Friday, July 26

9:00-13:00	Special Sessions will take place on the campus of Instituto Superior Técnico (Avenida Rovisco Pais).
13:00-14:30	Lunch break

## Semi-Plenary Lectures C

Anfiteatro QA (Chemistry Building, IST Campus)

14:30-15:15	Nikolai Vasilevski	Algebras generated by Toeplitz operators on the Hardy space $H^2(S^{2n-1})$
15:15-16:00	Nina Zorboska	Toeplitz operators on the Bergman space with BMO <sub>p</sub> symbols and the Berezin transform
16:00-16:30	Coffee break	
16:30-17:15	Yuri Karlovich	Algebras of singular integral operators with piecewise quasicontinuous coefficients and non-smooth shifts

## Semi-Plenary Lectures D

Anfiteatro Abreu Faro (Complexo Interdisciplinar, IST Campus)

14:30-15:15	Serban Belinschi	Analytic transforms of noncommutative distributions
15:15-16:00	Ana Bela Cruzeiro	On some stochastic partial differential equations obtained by a variational approach
16:00-16:30	Coffee break	
16:30-17:15	Gordon Blower	Linear systems in random matrix theory
17:15-17:45	Closing Ceremony	

# Session 1: Analysis and Algebraic Geometry for Operator Variables

Organizers: Igor Klep, Victor Vinnikov

Monday, July 22

Room P8 (Mathematics Building)

14:30-15:00	Bill Helton	Noncommutative convex algebraic geometry
15:00-15:30	Ben Passer	Compressions and the matrix range
15:30-16:00	Eric Evert	The noncommutative Waring problem
16:00-16:30	Jakob Cimpric	Local linear dependence in enveloping algebras of some Lie algebras
16:30-17:00	Coffee break	
17:00-17:30	Orr Moshe Shalit	Maps on noncommutative algebraic subvarieties of the nc unit ball and their similarity envelopes
17:30-18:00	Ryan Tully Doyle	Recent results on Loewner's theorem
18:00-18:30	Michael Jury	A noncommutative Lebesgue decomposition and function theory in the row ball
18:30-19:00	James Eldred Pascoe	The column-row property fails for the multipliers of the Fock space



## Session 1: Analysis and Algebraic Geometry for Operator Variables

Organizers: Igor Klep, Victor Vinnikov

Tuesday, July 23

Room P8 (Mathematics Building)

14:30-15:00	Victor Vinnikov	TBA
15:00-15:30	Stephan Weis	Kippenhahn's theorem for joint numerical ranges and quantum states
15:30-16:00	Aljaz Zalar	The singular bivariate quartic tracial moment problem
16:00-16:30	Michael Dritschel	Factoring nonnegative operator values trigonometric polynomials in two variables
16:30-17:00	Coffee break	
17:00-17:30	Jurij Volcic	Germs of analytic noncommutative functions
17:30-18:00	Meric Augat	The free Grothendieck theorem
18:00-18:30	Baruch Solel	Matricial reproducing kernel correspondences
18:30-19:00		

## Session 2: Analysis and Synthesis for Operator Algebras

Organizers: Adam Dor-On, Ruy Exel, Elias Katsoulis, David Pitts

Monday, July 22

Room 3.10 (Mathematics Building)

14:30-15:10	Jean Renault	Groupoid extensions, group bundles and weights
15:10-15:50	Lisa Orloff Clark	Ample groupoids and Kirchberg algebras
15:50-16:30	David Milan	On non-Hausdorff étale groupoids
16:30-17:00	Coffee break	
17:00-17:40	Bartosz Kwasniewski	Noncommutative Cartan $C^*$ -subalgebras and aperiodicity
17:40-18:20	Jonathan Brown	Dense subalgebras of purely infinite simple groupoid $C^*$ -algebras
18:20-19:00	Pedro Resende	Generalized $C^*$ -diagonals via maps of quantales

## Session 2: **Analysis and Synthesis for Operator Algebras**

Organizers: Adam Dor-On, Ruy Exel, Elias Katsoulis, David Pitts

Tuesday, July 23

Room 3.10 (Mathematics Building)

14:30-15:10	David Pitts	Weak Cartan Inclusions
15:10-15:50	Vrej Zarikian	Unique Extension Properties for $C^*$ -Inclusions
15:50-16:30	Pere Ara	Graded K-Theory, Filtered K-theory and the classification of graph algebras
16:30-17:00	Coffee break	
17:00-17:40	Marcelo Laca	Ground states of groupoid $C^*$ -algebras, phase transitions, and Hecke algebras
17:40-18:20	Evgenios Kakariadis	Using entropy to compute phase transitions for Pimsner algebras
18:20-19:00	Alcides Buss	Amenability of (partial) actions and Fell bundles

## Session 2: Analysis and Synthesis for Operator Algebras

Organizers: Adam Dor-On, Ruy Exel, Elias Katsoulis, David Pitts

Thursday, July 25

Room 3.10 (Mathematics Building)

14:30-15:10	Shirly Geffen	Classification of reversible and irreversible Pimsner operator algebras
15:10-15:50	Elias Katsoulis	The non-selfadjoint approach to the Hao-Ng isomorphism
15:50-16:30	Daniel Markiewicz	$E_0$ -semigroups arising from boundary weight maps
16:30-17:00	Coffee break	
17:00-17:40	Baruch Solel	Homomorphisms of noncommutative Hardy algebras
17:40-18:20	Raphael Clouatre	Residual finite-dimensionality for general operator algebras
18:20-19:00	Michael Hartz	Dilations in finite dimensions and matrix convexity

## Session 2: **Analysis and Synthesis for Operator Algebras**

Organizers: Adam Dor-On, Ruy Exel, Elias Katsoulis, David Pitts

Friday, July 26

Room 3.10 (Mathematics Building)

9:00-9:40	Dimitrios Andreou	Crossed products of dual operator spaces and the approximation property
9:40-10:20	Aristides Katavolos	Ideals, bimodules, synthesis, and boundaries
10:30-11:00	Coffee break	
11:00-11:40	Rachid El Harti	The amenability to algebraic and analytical perspective
11:40-12:20	Arundhathi Krishnan	Markovianity and Representations of the Thompson monoid $F_+$
12:20-13:00	Ahmed Al Rawashdeh	On the Extension of Unitary Group Isomorphisms of $C^*$ -Algebras

## Session 3: Free Analysis and Free Probability

Organizers: Serban Belinschi, Mihai Popa, Roland Speicher

Thursday, July 25

Room P8 (Mathematics Building)

14:30-15:00	David Jekel	Operator-valued Loewner Chains and Non-commutative Probability
15:00-15:30	Marwa Banna	Operator-Valued Matrices with Free or Exchangeable Entries
15:30-16:00	Sheng Yin	Realization of free field
16:00-16:30	Tobias Mai	Regularity properties of spectral distributions: from free probability to random matrix theory
16:30-17:00	Coffee break	
17:00-17:30	Mihai Popa	Permutations of entries and asymptotic free independence for several classes of random matrices: older results and new developments
17:30-18:00	Natasha Blitvic	Type B Gaussian Statistics and Noncommutative Central Limits
18:00-18:30	Paul Skoufranis	Non-Microstate Bi-Free Entropy
18:30-19:00	Georgios Katsimpas	The analogue of R-diagonal operators in Bi-Free Probability
19:00-19:30	Kenjiro Yanagi	Generalized quasi-metric adjusted skew information based uncertainty relations for quantum channels

[Changed date for presentation](#)

## Session 3: Free Analysis and Free Probability

Organizers: Serban Belinschi, Mihai Popa, Roland Speicher

Friday, July 26

Room P8 (Mathematics Building)

9:00-9:30		
9:30-10:00	Kenjiro Yanagi	Generalized quasi-metric adjusted skew information based uncertainty relations for quantum channels
10:00-10:30	Mohamed Sifi	Discrete harmonic functions in Lipschitz domains
10:30-11:00	Coffee break	
11:00-11:30	Nicholas Young	Newton-Girard and Waring-Lagrange theorems for two non-commuting variables
11:30-12:00	Benjamin Russo	C*-algebras and the Category of Stochastic Maps
12:00-12:30	Julien Sazadaly	Non-commutative geometry of some non-commutatives spheres of some results about quantum isometry groups
12:30-13:00		

Changed date for presentation

## Session 4: **Functional Calculus, Spectral Sets and constants**

Organizers: Lukasz Kosinski, Felix Schwenninger, Michał Wojtylak

Monday, July 22

Room P12 (Mathematics Building)

14:30-15:00		
15:00-15:30		
15:30-16:00		
16:00-16:30		
16:30-17:00	Coffee break	
17:00-17:30	Michel Crouzeix	Spectral sets: numerical range and beyond
17:30-18:00	John McCarthy	The Oka Extension theorem and the Crouzeix conjecture
18:00-18:30	Pawel Pietrzycki	The Crouzeix conjecture and deformations of the numerical range
18:30-19:00	Cesar Palencia	On Crouzeix's conjecture



## Session 4: **Functional Calculus, Spectral Sets and constants**

Organizers: Lukasz Kosinski, Felix Schwenninger, Michał Wojtylak

Tuesday, July 23

Room P1 (Mathematics Building)

14:30-15:00	Janusz Wysoczanski	Fock representations of the generalized commutation relations (including the anyon case)
15:00-15:30	Michael Hartz	A multiplier functional calculus
15:30-16:00	Alberto Dayan	Interpolating Matrices
16:00-16:30	Monire Hajmohamadi	Improvements and extensions of Berezin number inequalities
16:30-17:00	Coffee break	
17:00-17:30	Holger Langenau	Extending Markov-type inequalities to new norms
17:30-18:00	Shigeru Furuichi	Inequalities for operator means and operator entropies of convex functionals
18:00-18:30	Glenier Bello	Operator inequalities, Agler models of linear operators and Ergodicity
18:30-19:00	Kousik Dhara	The $(n, \epsilon)$ -pseudospectra in reduced Banach algebras

## Session 5: **Gabor Analysis and Noncommutative Geometry**

Organizers: Franz Luef, Igor Nikolaev

Monday, July 22

Room P3 (Mathematics Building)

14:30-15:00	Marc Aristide Rieffel	Cotangent bundles for “matrix algebras converge to the sphere” (part 1)
15:00-15:30	Marc Aristide Rieffel	Cotangent bundles for “matrix algebras converge to the sphere” (part 2)
15:30-16:00	Andronick Arutyunov	Derivations in group algebras
16:00-16:30	Deguang Han	Duality for Gabor and group representation frames
16:30-17:00	Coffee break	
17:00-17:30	Hans Feichtinger	Gabor Analysis between continuous variables and finite dimensional computations (part1)
17:30-18:00	Hans Feichtinger	Gabor Analysis between continuous variables and finite dimensional computations (part 2)
18:00-18:30	Are Austad	Gabor Bimodules and Projections in Matrix $C^*$ -Algebras
18:30-19:00	Ulrik Efstad	Heisenberg modules, vector bundles and the Balian-Low Theorem

## Session 5: Gabor Analysis and Noncommutative Geometry

Organizers: Franz Luef, Igor Nikolaev

Tuesday, July 23

Room P3 (Mathematics Building)

14:30-15:00	Kucerovsky	Tensor products and Pedersen ideals (part 1)
15:00-15:30	Kucerovsky	Tensor products and Pedersen ideals (part 2)
15:30-16:00	Sooran Kang	Yang-Mills connections on quantum Heisenberg manifolds
16:00-16:30	Rosario Corso	Orbits of bounded bijective operators and Gabor frames
16:30-17:00	Coffee break	
17:00-17:30	Masayoshi Kaneda	Quasi-multipliers and algebrizations of operator spaces
17:30-18:00	Ewa Matusiak	Gabor frames for model sets
18:00-18:30	Michael Speckbacher	Kernel Theorems in Coorbit Theory
18:30-19:00	Franz Luef	From Gabor frames to Heisenberg modules

Presentation cancelled (in this session)

## Session 6: **Geometry of Linear Operators and Operator Algebras**

Organizers: Kallol Paul, Debmalya Sain

Monday, July 22

Room Q 4.1 (Chemistry Building)

14:30-15:00	Jacek Chmielinski	Approximate orthogonality in normed spaces
15:00-15:30	Aleksandr Alekseev	Complex of n-groupoids and derivations of group algebras
15:30-16:00	Debmalya Sain	The norm attainment problem for bounded linear operators
16:00-16:30	Sk Monowar Hossein	Solution of a class of matrix equation as an application of matrix inequalities
16:30-17:00	Coffee break	
17:00-17:30	Arpita Mal	Numerical radius inequalities through orthogonality
17:30-18:00	Chellali Cherifa	Class of $(A;n)$ -power-hyponormal operators
18:00-18:30	Anubhab Ray	Extreme contractions on polygonal Banach spaces
18:30-19:00	Salvatore Triolo	A note on invariant biorthogonal sets

Presentation cancelled

## Session 6: **Geometry of Linear Operators and Operator Algebras**

Organizers: Kallol Paul, Debmalya Sain

Tuesday, July 23

Room Q 4.6 (Chemistry Building)

14:30-15:00	Nikos Yannakakis	The angle along a curve and range-kernel complementarity
15:00-15:30	Krzysztof Piszczek	Amenable Köthe co-echelon algebras
15:30-16:00	Priyanka Grover	Orthogonality and distance problems in $C^*$ -algebras
16:00-16:30	Tanvi Jain	The Bures-Wasserstein distance on the space of positive definite matrices and the related barycentre
16:30-17:00	Coffee break	
17:00-17:30	Lajos Molnar	Isometries of positive definite cones in $C^*$ -algebras
17:30-18:00	Victor Manuel Mendez Salinas	A discrete operator for approximation of continuous periodic functions
18:00-18:30	Binayak Samadder Choudhury	Quantum communication protocol by applications of unitary operations
18:30-19:00	Ricardo García	Extension bilinear maps and Ext <sup>2</sup> -problem in Banach spaces
19:00-19:30	Faeem Ali	Approximation of common fixed points and the solution of image recovery problem

## Session 7: Hypercomplex Analysis and Operator Theory

Organizers: Daniel Alpay, Fabrizio Colombo, Uwe Kähler

Thursday, July 25

Room P3 (Mathematics Building)

14:30-15:00	Guangbin Ren	Function theory in slice analysis
15:00-15:30	Matteo Santacesaria	Calderon's inverse problem and quaternionic analysis
15:30-16:00	Marco Peloso	Fractional Bernstein spaces in several complex variables
16:00-16:30	Dmitrii Legatiuk	Interpolation of monogenic functions by using reproducing kernel Hilbert spaces
16:30-17:00	Coffee break	
17:00-17:30	Ali Guzman Adan	Integration over manifolds of higher co-dimension embedded in $\mathbb{R}^m$ using distribution theory
17:30-18:00	Milton Ferreira	Fractional Borel-Pompeiu formula and a related hypercomplex fractional operator calculus
18:00-18:30	Irene Sabadini	Perturbation of normal quaternionic operators
18:30-19:00	Astrid Massé	Discrete Heat Equation

direct exchange with another presentation

## Session 7: Hypercomplex Analysis and Operator Theory

Organizers: Daniel Alpay, Fabrizio Colombo, Uwe Kähler

Friday, July 26

Room P3 (Mathematics Building)

9:00-9:30	Michael Shapiro	On the interplay between real and quaternionic structures on linear spaces
9:30-10:00	Daniel Alpay	Distribution spaces and a new construction of stochastic processes associated with the Grassmann algebra
10:00-10:30	Maria Elena Luna Elizarraras	On some properties of the set of bicomplex numbers seen as a module over hyperbolic numbers
10:30-11:00	Coffee break	
11:00-11:30	Nelson Faustino	Bayesian Probability Formulation of Hypercomplex Fock States
11:30-12:00	Teppo Mertens	Radon-Type transforms for holomorphic functions in the Lie ball
12:00-12:30	Ren Hu	Bargmann-Radon transform for axially monogenic functions
12:30-13:00	Masayoshi Kaneda	Quasi-multipliers and algebrizations of operator spaces

Changed date for presentation

direct exchange with another presentation

## Session 8: Integral Operators and Applications

Organizers: Raffael Hagger, Karl-Mikael Perfekt, Jani Virtanen

Monday, July 22

Room Q 4.7 (Chemistry Building)

14:30-15:00	Claeys	Generalisation of the Neumann-Poincaré operator for the solution to multi-diffusion problems
15:00-15:30	Wei Li	Embedded eigenvalues for the Neumann Poincaré operator
15:30-16:00	Somayeh Nemati	A numerical approach for approximating variable-order fractional integral operator
16:00-16:30	Noe Angelo Caruso	Krylov solutions and infinite-dimensional linear inverse problems on Hilbert space
16:30-17:00	Coffee break	
17:00-17:30	Christian Seifert	Limit Operator Techniques for Toeplitz Operators on Metric Measure Spaces of Bounded Geometry
17:30-18:00	Robert Fulsche	Deformation estimates for Toeplitz operators on spaces of pluriharmonic functions
18:00-18:30	Santeri Miihkinen	On the Hilbert matrix operator on analytic function spaces
18:30-19:00		



## Session 8: Integral Operators and Applications

Organizers: Raffael Hagger, Karl-Mikael Perfekt, Jani Virtanen

Tuesday, July 23

Room Q 5.1 (Chemistry Building)

14:30-15:00	Oscar Bandtlow	New approach to a problem of Kolmogorov on width asymptotics in holomorphic function spaces
15:00-15:30	Nazar Miheisi	Restriction theorems for Hankel operators
15:30-16:00	Akbota Abylayeva	Two-weighted Hardy type inequalities with logarithmic singularities
16:00-16:30	Neggal Bilel	Convergence of the Regularized Sinc Collocation Method Applied to Fredholm Integral Equation
16:30-17:00	Coffee break	
17:00-17:30	Stephen Paul Shipman	Embedded eigenvalues and (a)symmetry
17:30-18:00	Monika Singh	Extrapolation results on generalized Iwaniec Sbordone spaces with infinite measure
18:00-18:30	Faiçal Ndairou	Distributed-order fractional optimal control
18:30-19:00		

## Session 9: Linear Operators and Function Spaces

Organizers: Maria Cristina Câmara, Marek Ptak

Monday, July 22

Room QA 1.2 (Chemistry Building)

14:30-15:00	William T. Ross	Inner vectors on Hilbert spaces
15:00-15:30	Zinaida Lykova	Algebraic aspects of rational inner functions from the unit disc to the tetrablock
15:30-16:00	Andrzej Soltysiak	Toeplitz operators on backward shift invariant subspaces of $H_p$
16:00-16:30	Alexander Helemskii	A general frame-work for the $p$ -convex tensor product of multinormed spaces
16:30-17:00	Coffee break	
17:00-17:30	David Krejcirik	From functional inequalities to spectral properties of Schrödinger and Dirac operators
17:30-18:00	Shailesh Trivedi	Analytic $m$ -isometries without the wandering subspace property
18:00-18:30	Adam Dor-On	Self-adjoint irreversibly generated graph algebras
18:30-19:00	Benali Abdelkader	Generalizations of Kaplansky's Theorem Involving Unbounded Linear Operators

## Session 9: Linear Operators and Function Spaces

Organizers: Maria Cristina Câmara, Marek Ptak

Tuesday, July 23

Room QA 1.2 (Chemistry Building)

14:30-15:00	Raul E. Curto	The Extended Aluthge Transform
15:00-15:30	Daniel Girela	Multipliers and integration operators between conformally invariant spaces
15:30-16:00	Eungil Ko	Remark on truncated Toeplitz operators
16:00-16:30	Gabriel Kantun Montiel	Fredholm theory relative to an homomorphism between Banach algebras
16:30-17:00	Coffee break	
17:00-17:30	Maria Nowak	On kernels of Toeplitz operators
17:30-18:00	Joanna Jurasik	Asymmetric truncated Toeplitz operators on infinite-dimensional spaces
18:00-18:30	Lourdes Palacios	On some algebras of functions with values in certain topological algebras
18:30-19:00	Maria Stella Adamo	Representable and continuous functionals on Banach quasi $*$ -algebras and applications to tensor products

## Session 9: Linear Operators and Function Spaces

Organizers: Maria Cristina Câmara, Marek Ptak

Thursday, July 25

Room QA 1.2 (Chemistry Building)

14:30-15:00	Andreas Hartmann	Random interpolating sequences in Dirichlet spaces
15:00-15:30	Zbigniew Burdak	On joint invariant subspaces under pairs of commuting isometries
15:30-16:00	Il Ju An	Krein space adjoint operators and their Aluthge transform
16:00-16:30	Miguel Monsalve	Spectral decomposition arising from Atzmon
16:30-17:00	Coffee break	
17:00-17:30	Malgorzata Michalska	Characterizations of Asymmetric Truncated Toeplitz and Hankel Operators
17:30-18:00	Ayse Sandikci	Multilinear $\tau$ -Wigner Transform
18:00-18:30	Jesús Ocáriz	On the dual of variable Lebesgue spaces
18:30-19:00		

## Session 9: Linear Operators and Function Spaces

Organizers: Maria Cristina Câmara, Marek Ptak

Friday, July 26

Room QA 1.2 (Chemistry Building)

9:00-9:30	Alexei Poltoratski	Toeplitz methods in spectral problems for canonical Hamiltonian systems
9:30-10:00	Bartosz Łanucha	Conjugations on $L_2(T)$ preserving shift invariant subspaces of $H_2$
10:00-10:30	Alexander Kheifets	Hardy Spaces of Fuchsian Groups in the Upper Half-plane
10:30-11:00	Coffee break	
11:00-11:30	Dijana Ilisevic	An inverse eigenvalue problem for isometries
11:30-12:00	Fernanda Botelho	Projections on spaces of vector valued continuous functions
12:00-12:30	Dong-O Kang	Some properties of Block Hankel operator kernels
12:30-13:00	Marek Ptak	Conjugations in $L_2$ spaces of vector valued functions

## Session 10: **Matrix Theory and Control**

Organizers: Marija Dodig, Susana Margarida Furtado

Monday, July 22

Room QA 1.4 (Chemistry Building)

14:30-15:00	Charles Johnson	Tridiagonal Matrices
15:00-15:30	Fernando de Terán	Low-rank perturbations of canonical forms of matrix pencils
15:30-16:00	Jean Jacques Loiseau	Controlled invariance for systems over rings or semirings
16:00-16:30	João Xavier	Distributed Learning Algorithms for Big Data
16:30-17:00	Coffee break	
17:00-17:30	Enide Andrade	Bottleneck matrices and combinatorial Perron parameters for trees
17:30-18:00	Katerina Sklyar	Mappability of control systems to linear systems with analytic matrices
18:00-18:30	Paião	Sufficient optimality conditions for delayed optimal control problems
18:30-19:00	Michal Wojtylak	Linear algebra properties of dissipative Hamiltonian descriptor systems

Presentation cancelled

## Session 10: **Matrix Theory and Control**

Organizers: Marija Dodig, Susana Margarida Furtado

Tuesday, July 23

Room QA 1.4 (Chemistry Building)

14:30-15:00	Natália Bebiano	Maximum entropy principle for certain non-Hermitian Hamiltonians
15:00-15:30	Ivica Nakic	Structured Lyapunov Functions and Dissipativity in LTI dynamical networks
15:30-16:00	David Wenzel	What is the shape of an operator acting on matrices?
16:00-16:30	Izhar Uddin	Proximal Point Algorithm in Geodesic Spaces
16:30-17:00	Coffee break	
17:00-17:30	Luca Gemignani	Accelerating the Sinkhorn-Knopp iteration by Arnoldi-type methods
17:30-18:00	Eleftherios Kastis	The first order flexibility of a crystal framework
18:00-18:30	Anam Zahra	Fractional Electrical Circuits under controllability and observability
18:30-19:00	Vinod Kumar	Application of $f$ -lacunary statistical convergence to approximation theorems

## Session 11: **Multivariable Operator Theory**

Organizers: Joseph Ball, Vladimir Bolotnikov

Monday, July 23

Room Q 5.1 (Chemistry Building)

14:30-15:00	Raul E. Curto	Quasnormality of powers of commuting pairs of bounded operators
15:00-15:30	George Exner	Subnormality and infinite divisibility of weighted shifts
15:30-16:00	Dmitry Yakubovich	Perturbations of normal operators, their Sobolev space models and questions of geometric measure theory
16:00-16:30		
16:30-17:00	Coffee break	
17:00-17:30		
17:30-18:00		
18:00-18:30		
18:30-19:00		



## Session 11: **Multivariable Operator Theory**

Organizers: Joseph Ball, Vladimir Bolotnikov

Thursday, July 25

Room QA 1.4 (Chemistry Building)

14:30-15:00	Edward John Timko	Spectral Properties of Constrained Row Contraction
15:00-15:30	Dominik Schillo	A Beurling Theorem for Spaces with a CNP Factor
15:30-16:00	Vladimir Bolotnikov	On a characterization of shift operator tuples on certain weighted Bergman-Fock spaces
16:00-16:30	Jörg Eschmeier	Bergman spaces and m-hypercontractions
16:30-17:00	Coffee break	
17:00-17:30	Joseph Ball	TBA
17:30-18:00	Michael Dritschel	The rational dilation problem on distinguished varieties
18:00-18:30	Zinaida Lykova	The construction of rational tetra-inner functions
18:30-19:00	Estiaan Klem	Cauchy-Riemann equations for free noncommutative functions

## Session 11: **Multivariable Operator Theory**

Organizers: Joseph Ball, Vladimir Bolotnikov

Friday, July 26

Room QA 1.4 (Chemistry Building)

9:00-9:30	Meredith Sargent	Escaping Non-Tangential Approach
9:30-10:00	David Shoikhet	TBA
10:00-10:30	Anatoly Golberg	Mappings with integrally controlled moduli
10:30-11:00	Coffee break	
11:00-11:30	Surjit Kumar	TBA
11:30-12:00	Leila Nasiri	The reverses of Young type inequalities
12:00-12:30		
12:30-13:00		

## Session 12a: Operators of Harmonic Analysis, Related Function Spaces and Applications

*(Dedicated to Lars-Erik Persson on his 75th Birthday)*

Organizers: Humberto Rafeiro, Natasha Samko

Monday, July 22

Room QA 1.3 (Chemistry Building)

14:30-15:00	Shoshana Abramovich	Heinz Inequality, Superquadracity and Rearrangements
15:00-15:30	Katsuo Matsuoka	Generalized fractional integrals on $B\sigma$ -function spaces
15:30-16:00	Stefan Samko	Boundedness of fractional operators from variable exponent Morrey spaces to BMO or VMO in the limiting case
16:00-16:30	Javier Duoandikoetxea	Boundedness of operators on weighted Morrey spaces
16:30-17:00	Coffee break	
17:00-17:30	Ferenc Weisz	Variable Hardy spaces and Fourier analysis
17:30-18:00	Tao Qian	Results and extreme examples of Blaschke products and impacts to operator theory and signal analysis
18:00-18:30	George Tephnadze	Convergence and Summability of the Two-dimensional Walsh-Fourier Series
18:30-19:00	Harpal Singh	Recent Trends in Signal Processing Techniques for Structural Health Monitoring
19:00-19:30	Daher Radouan	Some results on Hausdorff operator

## Session 12a: Operators of Harmonic Analysis, Related Function Spaces and Applications

*(Dedicated to Lars-Erik Persson on his 75th Birthday)*

Organizers: Humberto Rafeiro, Natasha Samko

Tuesday, July 23

Room QA 1.3 (Chemistry Building)

14:30-15:00	Anders Holmbom	On connections between some concepts of convergence with multiple scales
15:00-15:30	Júlio Neves	Besov spaces involving only slowly varying smoothness, embeddings and optimality
15:30-16:00	Sebastian Król	The identification of trace spaces via boundedness properties of the Hardy operator
16:00-16:30	Bae Jun Park	Equivalences of (quasi-)norms in certain vector-valued function spaces and their applications to multilinear operators
16:30-17:00	Coffee break	
17:00-17:30	Vladimir Stepanov	Characterization of associate function spaces
17:30-18:00	Staffan Lundberg	Mixed Hardy-type operators in anisotropic Morrey spaces and some applications
18:00-18:30	Elena Ushakova	Images of integration operators in weighted function spaces
18:30-19:00	Pankaj Jain	Bilinear Hardy-type inequalities: continuous, discrete and quantum versions
19:00-19:30	Saikat Kanjilal	Weighted bilinear inequalities of Hardy-type

## Session 12a: Operators of Harmonic Analysis, Related Function Spaces and Applications

*(Dedicated to Lars-Erik Persson on his 75th Birthday)*

Organizers: Humberto Rafeiro, Natasha Samko

Thursday, July 25

Room QA 1.3 (Chemistry Building)

14:30-15:00	Dorothee Haroske	Compact embeddings of Smoothness Morrey spaces on bounded domains
15:00-15:30	Peter Hästö	Maximal regularity for local minimizers of non-autonomous functionals
15:30-16:00	Susana Moura	Some embeddings of Morrey spaces with critical smoothness
16:00-16:30	Alexandre Almeida	Classical operators on different vanishing Morrey spaces
16:30-17:00	Coffee break	
17:00-17:30	Ryskul Oinarov	Oscillation and non-oscillation conditions of a class of fourth order differential equation
17:30-18:00	Yonggeun Cho	A Sobolev estimate for the adjoint restriction operator
18:00-18:30	Oznur Ozkan Kilic	On a subclass of the Janowski $\lambda$ -spirallike functions of complex order
18:30-19:00	Kordan Ospanov	$L_p$ -theory of a second order differential operator with unbounded drift

## Session 12a: Operators of Harmonic Analysis, Related Function Spaces and Applications

*(Dedicated to Lars-Erik Persson on his 75th Birthday)*

Organizers: Humberto Rafeiro, Natasha Samko

Friday, July 26

Room QA 1.3 (Chemistry Building)

9:00-9:30	Ahmet Turan Gurkanli	New Properties of Grand Amalgam Spaces
9:30-10:00	Umme Zainab	Lacunary Generating Function for 2-variable and 3-variable Hermite Polynomial: Umbral and Operational Formalism
10:00-10:30	Rizwan Anjum	Rearrangement-Invariant Function and Interpolation Spaces
10:30-11:00	Coffee break	
11:00-11:30	Alexey Karapetyants	A class of Hausdorff-Berezin operators on the unit disc
11:30-12:00	Saludin Umarkhadzhiev	Grand Lebesgue spaces on sets of infinite measure
12:00-12:30	Oscar Mauricio Guzmán Fonseca	Weighted norm inequalities for the bilinear maximal operator on variable Lebesgue spaces
12:30-13:00	Douadi Drihem	Spline representations of Triebel-Lizorkin spaces with general weights

## Session 12b: **Operators of Harmonic Analysis, Related Function Spaces and Applications**

*(Dedicated to Lars-Erik Persson on his 75th Birthday)*

Organizers: Humberto Rafeiro, Natasha Samko

Monday, July 22

Room Q 5.1 (Chemistry Building)

14:30-15:00		
15:00-15:30		
15:30-16:00		
16:00-16:30		
16:30-17:00	Coffee break	
17:00-17:30	Igor Sheipak	On Hölder exponents of fractal functions. Application to some spectral problems
17:30-18:00	Francesco Tschinke	Distributions frames and bases
18:00-18:30	Haifa Bin Jebreen	Fuzzy twisted sums of quasi-normed spaces
18:30-19:00	Rumen Uluchev	On Hardy L2 Inequality in Certain Finite Dimensional Spaces

## Session 13: Operators on Reproducing Kernel Hilbert Spaces

Organizers: Nikolai Vasilevski, Kehe Zhu

Monday, July 22

Room P9 (Mathematics Building)

14:30-15:00	Raul Quiroga-Barranco	Toeplitz operators with $U(2) \times T^2$ -invariant symbols on the domain $D^{\wedge}_{\{2,2\}}$
15:00-15:30	Jari Taskinen	Solid hulls, multipliers and Toeplitz operators
15:30-16:00	Maria Cristina Câmara	Dual truncated Toeplitz operators
16:00-16:30	Zengjian Lou	Embedding of Möbius invariant function spaces into tent spaces
16:30-17:00	Coffee break	
17:00-17:30	Kehe Zhu	TBA
17:30-18:00	Armando Sánchez Nungaray	Algebras generated by Toeplitz operators with $T^q_m$ -invariant on weakly pseudoconvex domains
18:00-18:30	Ana Maria Telleria Romero	Radial operators on poly-analytic Segal-Bargmann-Fock spaces
18:30-19:00	Gerardo Ramos	Translation-invariant operators in reproducing kernel Hilbert spaces



## Session 13: Operators on Reproducing Kernel Hilbert Spaces

Organizers: Nikolai Vasilevski, Kehe Zhu

Tuesday, July 23

Room P9 (Mathematics Building)

14:30-15:00	Friedrich Haslinger	The $\partial$ -complex on the Segal-Bargmann space
15:00-15:30	Elizabeth Strouse	A Szego theorem for truncated Toeplitz operators
15:30-16:00	Hyungwoon Koo	Difference of weighted composition operators
16:00-16:30	Hyunkyong Kwon	A Subclass of the Cowen-Douglas Class
16:30-17:00	Coffee break	
17:00-17:30	Raffael Hagger	Compact Hankel operators via limit operator theory
17:30-18:00	Karl-Mikael Perfekt	Carleson measures for the Dirichlet space of the bidisc
18:00-18:30	Thomas Peebles	Determinantal Varieties and Characters of Affine Coxeter Groups
18:30-19:00		

## Session 14: Operator Theoretical Methods in Mathematical Physics

Organizers: Luís Castro, Frank-Olme Speck

Tuesday, July 23

Room Q 4.7 (Chemistry Building)

14:30-15:00	Wolfgang Wendland	Potential methods and solution spaces of Stokes and Brinkman problems
15:00-15:30	David Natroshvili	Investigation of interfacial crack problems of the thermo-electro-magneto-elasticity theory by the potential method
15:30-16:00	Anatoli Merzon	Time-dependent approach to the uniqueness of the Sommerfeld solution of the diffraction problem by a half-plane
16:00-16:30	Petr Zhevandrov	Rayleigh-Bloch waves trapped by a periodic perturbation and resonances
16:30-17:00	Coffee break	
17:00-17:30	Alberto Manuel Tavares Simões	Hyers-Ulam-Rassias stabilities for classes of integral equations with oscillatory kernels
17:30-18:00	Anabela de Sousa e Silva	New convolutions for Fourier sine and cosine transforms involving Hermite weights, and their applicability
18:00-18:30	Rita Catarina Correia Guerra	New convolutions weighted by multi-dimensional Hermite functions and their applications
18:30-19:00		

## Session 14: Operator Theoretical Methods in Mathematical Physics

Organizers: Luís Castro, Frank-Olme Speck

Thursday, July 25

Room Q 4.7 (Chemistry Building)

14:30-15:00	Harm Bart	How small can a sum of idempotents be?
15:00-15:30	Andre Ran	Inner-outer factorization of wide rational matrix valued functions
15:30-16:00	Sanne Ter Horst	Does equivalence after extension imply Schur coupling for Banach space operators?
16:00-16:30	Maria Fragoulopoulou	Bounded and unbounded generalizations of Gelfand-Naimark type theorems
16:30-17:00	Coffee break	
17:00-17:30	Lorenzo Zanelli	Periodic coherent states decomposition and quantum dynamics on the flat torus
17:30-18:00	Nuno António	Separation of Variables in Integrable Systems
18:00-18:30	Angeliki Kaiafa	Mixed Impedance Problems in Elasticity: The Case of a Non-Penetrable Partially Coated Cavity
18:30-19:00		

## Session 14: Operator Theoretical Methods in Mathematical Physics

Organizers: Luís Castro, Frank-Olme Speck

Friday, July 26

Room Q 4.1 (Chemistry Building)

9:00-9:30	Klaus Gürlebeck	On some boundary value problems in the micropolar theory of elasticity
9:30-10:00	Anastasiia Legatiuk	Application of the discrete potential theory to numerical modelling of the induction heating process
10:00-10:30	Maria Manuela Fernandes Rodrigues	Time-fractional telegraph equation and its first and second fundamental solutions
10:30-11:00	Coffee break	
11:00-11:30		
11:30-12:00		
12:00-12:30		
12:30-13:00		

## Session 15: Order Preserving Operators on Cones and Applications

Organizers: Marianne Akian, Stéphane Gaubert, Aljosa Peperko, Guillaume Vigerál

Monday, July 22

Room Q 4.6 (Chemistry Building)

14:30-15:00	Brian Lins	Detecting fixed points of nonexpansive maps by illuminating the unit ball
15:00-15:30	Antoine Hochart	A game-theory approach to nonlinear Perron-Frobenius theory
15:30-16:00	Guillaume Vigerál	Zero-sum stochastic games with varying stage duration
16:00-16:30	Marianne Akian	The operator approach to entropy games
16:30-17:00	Coffee break	
17:00-17:30	Aljosa Peperko	Bonsall's and lower cone spectral radius of suprema preserving mappings and approximate point spectrum
17:30-18:00	Cormac Walsh	For which ordered vector spaces are all order isomorphisms affine linear?
18:00-18:30	Antoine Gautier	A Perron-Frobenius theorem for the nonlinear eigenvectors and singular vectors of nonnegative tensors
18:30-19:00	Stéphane Gaubert	Dynamic programming operators over noncommutative spaces: an approach to optimal control of switched systems

## Session 16: Preserver Problems in Operator Theory and Functional Analysis

Organizers: Fernanda Botelho, Gyorgy Geher

Monday, July 22

Room P1 (Mathematics Building)

14:30-15:00	Ying-Fen Lin	Isomorphisms of $C^*$ -algebras on Lie groups
15:00-15:30	Takeshi Miura	Surjective isometries on a Lipschitz space of analytic functions
15:30-16:00	Hironao Koshimizu	Surjective isometries on spaces of $n$ -times continuously differentiable functions
16:00-16:30	Yuta Enami	Maps preserving range of difference of continuous functions with values in a locally convex space
16:30-17:00	Coffee break	
17:00-17:30	Mustapha Sarih	Maps leaving the pseudo spectra of operators invariant
17:30-18:00	Aziz Lahssaini	On the pseudospectrum preservers
18:00-18:30	Monika	Quotient operators on tensor product spaces
18:30-19:00	Priyadarshi Dey	Bicircular projections on some Operator spaces

## Session 16: Preserver Problems in Operator Theory and Functional Analysis

Organizers: Fernanda Botelho, Gyorgy Geher

Thursday, July 25

Room P1 (Mathematics Building)

14:30-15:00	Michiya Mori	Order isomorphisms of von Neumann algebras
15:00-15:30	Zsigmond Tarcsay	Maps preserving absolute continuity and singularity of positive operators
15:30-16:00	Dijana Ilisevic	Isometries, projections and related maps on $JB^*$ -triples
16:00-16:30	Ilja Gogic	The $cb$ -norm approximation of derivations and automorphisms by elementary operators
16:30-17:00	Coffee break	
17:00-17:30	Tamás Titkos	Isometric maps on spaces of measures I. - Banach-Stone type theorems
17:30-18:00	Daniel Viosztek	Isometric maps on spaces of measures II. - Wasserstein spaces over the interval
18:00-18:30	Gyorgy Geher	Isometric maps on spaces of measures III. - Wasserstein spaces over the real line
18:30-19:00		

## Session 16: Preserver Problems in Operator Theory and Functional Analysis

Organizers: Fernanda Botelho, Gyorgy Geher

Friday, July 26

Room P1 (Mathematics Building)

9:00-9:30	Mohamed Bendaoud	Radial unitary similarity functions on operators and preservers problems
9:30-10:00	Lajos Molnar	Maps preserving means on positive definite or positive semidefinite cones in operator algebras
10:00-10:30	Maliheh Hosseini	Reflexivity of The Isometry Group of Bounded Variation Function Spaces
10:30-11:00	Coffee break	
11:00-11:30		
11:30-12:00		
12:00-12:30		
12:30-13:00		

Presentation cancelled



## Session 17: **Random Matrix Theory**

Organizers: Håkan Hedenmalm, Jani Virtanen

Thursday, July 25

Room P9 (Mathematics Building)

14:30-15:00		
15:00-15:30		
15:30-16:00		
16:00-16:30		
16:30-17:00	Coffee break	
17:00-17:30	Torsten Ehrhardt	Asymptotics of a determinant of a Hankel-like operator
17:30-18:00	Jordi Marzo	Transport Plans and Equidistribution
18:00-18:30		
18:30-19:00		

## Session 17: **Random Matrix Theory**

Organizers: Håkan Hedenmalm, Jani Virtanen

Friday, July 26

Room P9 (Mathematics Building)

9:00-9:30	Miguel Tierz	Schur and Chebyshev expansions of reproducing kernels
9:30-10:00	Meng Yang	Planar orthogonal polynomials with logarithmic singularities in the external potential
10:00-10:30	David Garcia Garcia	Toeplitz+Hankel determinants and matrix models for the classical groups
10:30-11:00	Coffee break	
11:00-11:30	Alexei Poltoratski	Type alternative for Frostman measures
11:30-12:00	Jani Virtanen	Double-scaling limits of Toeplitz determinants
12:00-12:30	Nam Gyu Kang	Scaling limits for a family of 2D-Coulomb gas ensembles at soft/hard edges
12:30-13:00	Håkan Hedenmalm	Planar orthogonal polynomials and related random processes: random normal matrices and arithmetic jellium

## Session 18: Representation Theory of Algebras and Groups

Organizers: Carlos André, Samuel Lopes, Ana Paula Santana

Thursday, July 25

Room P2 (Mathematics Building)

14:30-15:00	Alison Parker	TBA
15:00-15:30	Jorge Vitoria	Quantity and size: Auslander-type results for torsion pairs
15:30-16:00	Inês Rodrigues	The cactus group and symmetries of the shifted Littlewood-Richardson coefficients
16:00-16:30	Lewis Topley	Restricted Yangians and restricted finite W-algebras
16:30-17:00	Coffee break	
17:00-17:30	Ivan Yudin	Borel-Schur algebras and their representation type
17:30-18:00		
18:00-18:30		
18:30-19:00		

## Session 18: Representation Theory of Algebras and Groups

Organizers: Carlos André, Samuel Lopes, Ana Paula Santana

Friday, July 26

Room P2 (Mathematics Building)

9:00-9:30		
9:30-10:00	Kais Smaoui	On Theorems of Morgan and Cowling-Price for Selected Nilpotent Lie Groups
10:00-10:30	Chris Bowman	Complex reflection groups and their Cherednik algebras
10:30-11:00	Coffee break	
11:00-11:30	Paula Carvalho	Essential extensions of simple modules for skew polynomial rings
11:30-12:00	João Dias	Smooth representations of Groups associated to Algebras over non-archimedean fields
12:00-12:30	Raquel Coelho Simoes	A geometric model for the module category of a gentle algebra
12:30-13:00	Stéphane Launois	Representation theory of quantum determinantal varieties at roots of unity

## Session 19: **Semigroups and Evolution Equations**

Organizers: Christian Budde, Christian Seifert

Monday, July 22

Room P2 (Mathematics Building)

14:30-15:00	David Seifert	Energy decay of damped waves
15:00-15:30	Dmytro Baidiuk	Robustness of polynomial stability for generalized wave equations
15:30-16:00	Grigory Sklyar	Hardy Inequality in Estimation of Semigroups Growth
16:00-16:30	Piotr Polak	Decay/growth rate estimation for certain class of strongly continuous semigroups
16:30-17:00	Coffee break	
17:00-17:30	Jorge Gonzalez Camus	Fundamental solutions for dynamical systems involving the fractional Laplacian
17:30-18:00	El Gantouh Yassine	Controllability of Network Systems
18:00-18:30	Christian Seifert	On Observability Estimates in Banach Spaces
18:30-19:00	Marco Peruzzetto	On Eventual Regularity Properties of Operator Valued Functions

## Session 19: **Semigroups and Evolution Equations**

Organizers: Christian Budde, Christian Seifert

Tuesday, July 23

Room P2 (Mathematics Building)

14:30-15:00	Wha-suck Lee	Evolution operators in empathy with a convolution semigroup
15:00-15:30	Tom ter Elst	The Dirichlet-to-Neumann operator on $C^{1+\kappa}$ -domains
15:30-16:00	Jan Meichsner	Description of fractional powers via Caferelli-Silvestre extension
16:00-16:30	Christian Budde	Bi-Continuous Flows for Flows in Networks
16:30-17:00	Coffee break	
17:00-17:30	Karsten Kruse	Subordination for bi-continuous semigroups
17:30-18:00	Jesús Oliva Maza	Subordination of the generalized Stieltjes operator in terms of $C_0$ -groups
18:00-18:30	Felix Schwenninger	Around Baillon's theorem on maximal regularity
18:30-19:00	Kamal Khalil	Compact almost automorphic solutions to semilinear parabolic evolution equations
19:00-19:30	Nikita Artamonov	Solvability of an Operator Riccati Integral Equation in a Reflexive Banach Space

## Session 20a: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Monday, July 22

Room QA 1.1 (Chemistry Building)

14:30-15:00	Harm Bart	The logarithmic residue theorem in higher dimensions: a multifaceted issue
15:00-15:30	Mohammed Berkani	On the B-Discrete spectrum
15:30-16:00	Sameer Chavan	Rank one perturbations
16:00-16:30	Benrabah Abderafik	Multiparameter regularization method for an ill-posed homogeneous biharmonic problem
16:30-17:00	Coffee break	
17:00-17:30	Carla Farsi	Spectral triples and wavelets for k-graphs
17:30-18:00	Lina Oliveira	Hermitian projections on a $JB^*$ -triple
18:00-18:30	Anton Kutsenko	Finite PDEs and finite ODEs are isomorphic
18:30-19:00	Frantisek Stampach	New explicitly diagonalizable Hankel matrices
19:00-19:30	Jordan Makwana	A characterisation of the positive, self-adjoint extensions of a class of Jacobi operators

direct exchange with another presentation

## Session 20a: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Tuesday, July 23

Room QA 1.1 (Chemistry Building)

14:30-15:00	Martin Klaus	Asymptotics for the number and moments of eigenvalues of Zakharov-Shabat systems with long-range potentials
15:00-15:30	Harald Woracek	Limit behaviour of Nevanlinna functions
15:30-16:00	Petr Zemanek	On linear relations associated with discrete symplectic systems
16:00-16:30	Raphael Pruckner	Bounds for the Weyl coefficient of a canonical system
16:30-17:00	Coffee break	
17:00-17:30	Miron Bekker	Self-adjoint extensions of symmetric scale-invariant operators
17:30-18:00	V B Kiran Kumar	Spectral Approximation of Family of Operators
18:00-18:30	Gerald Wanjala	Spectral theory and stability of index for linear relations
18:30-19:00	Hakima Bouhadjera	More general common fixed point theorems under a new concept
19:00-19:30	Preeti Dharmarha	On $\alpha$ -Weyl operators and $\alpha$ -Weyl Spectrum



## Session 20a: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Thursday, July 25

Room QA 1.1 (Chemistry Building)

14:30-15:00	Valery Serov	Spectral problems for elliptic operators with singular coefficients
15:00-15:30	Matthew Fury	Source identification for non-homogeneous ill-posed problems associated with generators of holomorphic semigroups
15:30-16:00	Atsuhide Ishida	Propagation property and inverse scattering for fractional powers of negative Laplacian
16:00-16:30	Igor Popov	Potential supported by line with small window in a quantum waveguide: resonance asymptotics
16:30-17:00	Coffee break	
17:00-17:30	Christian Wyss	Selfadjointness in rigged Hilbert and Krein spaces
17:30-18:00	Friedrich Philipp	Spectral bounds on J-selfadjoint operator matrices and perturbations of J-nonnegative operators
18:00-18:30	Giorgia Bellomonte	Continuous frames for unbounded operators
18:30-19:00	Ali Shukur	Spectral analysis of linear chaotic operators
19:00-19:30		

direct exchange with another presentation

## Session 20a: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Friday, July 26

Room QA 1.1 (Chemistry Building)

9:00-9:30	Sergey Belyi	Perturbations of Donoghue classes
9:30-10:00	Mohammed Hichem Mortad	Matrices of Unbounded Operators and Applications to Counterexamples
10:00-10:30	Rúben Azevedo de Sousa	Product formulas and convolutions for solutions of Sturm-Liouville equations
10:30-11:00	Coffee break	
11:00-11:30	Rudi Weikard	Spectral Theory for Systems of Ordinary Differential Equations with Distributional Coefficients
11:30-12:00	Carsten Trunk	Invariance of the essential spectra of operator pencils
12:00-12:30	Andrii Khrabustovskyi	Construction of differential operators with prescribed spectral properties
12:30-13:00		

## Session 20b: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Monday, July 22

Room Q 4.2 (Chemistry Building)

14:30-15:00	Malcolm Brown	Uniqueness for an inverse boundary value problem in electromagnetism
15:00-15:30	Ian Wood	Essential Spectrum for Maxwell's equations
15:30-16:00	Graham Cox	Spectral flow, nodal deficiency, and the Dirichlet-to-Neumann map
16:00-16:30	Marcus Waurick	The Dirichlet-to-Neumann operator on general domains
16:30-17:00	Coffee break	
17:00-17:30	Orif Ibrogimov	Eigenvalue enclosures for singular indefinite Sturm-Liouville operators
17:30-18:00	Andrey Badanin	Spectral theory of third order operator associated with the good Boussinesq equation
18:00-18:30	Hiroaki Niikuni	Embedded eigenvalues in the spectral bands for carbon nanotubes with impurities
18:30-19:00	Dale Frymark	Boundary Triples and Weyl m-functions for Powers of Some Classical Sturm-Liouville Operators
19:00-19:30	Madi Muratbekov	Maximum regularity and two-sided estimates for the approximation numbers of solutions of the nonlinear Sturm-Liouville equation with rapidly oscillating coefficients in $L^2(\mathbb{R})$

## Session 20b: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Tuesday, July 23

Room Q 4.2 (Chemistry Building)

14:30-15:00	Fabrizio Colombo	Applications of Spectral theory on the S-spectrum to fractional diffusion problems
15:00-15:30	Stephen Fulling	Spectral Asymptotics in Renormalization
15:30-16:00	Rafael Tiedra de Aldecoa	Ruled strips with asymptotically diverging twisting
16:00-16:30	Diana Barseghyan	Spectral geometry in a rotating frame: properties of the ground state
16:30-17:00	Coffee break	
17:00-17:30	Jari Taskinen	Spectra of the Robin-Laplace- and Steklov-problems in bounded, cuspidal domains
17:30-18:00	Albert Mas	Periodic solutions of integro-differential equations
18:00-18:30	Tereza Kurimaiová	Spectral properties of the damped wave equation
18:30-19:00	Michal Tichý	Large time and analytic solutions of reaction-diffusion problem on a growing domain using symmetry methods
19:00-19:30	Irina Blinova	Scattering, spectrum and resonance states completeness for quantum graph with Rashba Hamiltonian

## Session 20b: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Thursday, July 25

Room Q 4.2 (Chemistry Building)

14:30-15:00	Alexander Teplyaev	Spectral analysis and waves on fractals
15:00-15:30	Siegfried Beckus	Hunting the spectra via approximations
15:30-16:00	Francisco Martínez Pería	Spectral enclosures for a class of block operator matrices
16:00-16:30	Marat Markin	On the Smoothness of Weak Solutions of an Abstract Evolution Equation with a Scalar Type Spectral Operator on the Real Axis
16:30-17:00	Coffee break	
17:00-17:30	Lukasz Rzepnicki	On asymptotic behaviour of solutions of the Dirac system and applications
17:30-18:00	Jihed Hedhly	Upper Bound For The Ratios Of Eigenvalues Of Schrödinger Operators With Nonnegative Single-Barrier Potentials
18:00-18:30	Vsevolod Martseniuk	Implicit second order linear difference equations and infinite linear systems
18:30-19:00	Yagub Aliyev	Sturm-Liouville problems with eigenparameter dependent boundary conditions
19:00-19:30	Moletsane	TBA

## Session 20b: **Spectral Theory and Differential Operators**

Organizers: Andrii Khrabustovskyi, Olaf Post, Carsten Trunk

Friday, July 26

Room Q 4.2 (Chemistry Building)

9:00-9:30	Tatiana Suslina	Homogenization of hyperbolic equations with periodic coefficients
9:30-10:00	Lyonell Boulton	Spectral Properties of a Non-commutative Harmonic Oscillator
10:00-10:30	Yulia Meshkova	Variations on the theme of the Trotter-Kato theorem for homogenization of periodic hyperbolic systems
10:30-11:00	Coffee break	
11:00-11:30	Maria Faleeva	Distance between the transmission matrix and the subspace of tensor product, singular numbers and entangled qubits transmission through a turbulent atmosphere
11:30-12:00	Neeru Bala	Hyperinvariant subspace for AN and AM-operators
12:00-12:30	Damian Kolaczek	Error bounds for time evolution operator splitting. The Kato-Trotter and the Strang formula
12:30-13:00		

## Session 21: Toeplitz Operators, Convolution type Operators and Operator Algebras

*(Dedicated to Yuri Karlovich on his 70th Birthday)*

Organizers: M. Amélia Bastos, Alexei Karlovich

Monday, July 22

Room P12 (Mathematics Building)

14:30-15:00	Albrecht Böttcher	A short talk on a great adventure with Yuri Karlovich
15:00-15:30	Nikolai Vasilevski	Algebras generated by Toeplitz operators whose symbols are invariant under a group action
15:30-16:00	Viktor Didenko	Invertibility and Inverses of Wiener-Hopf plus Hankel Operators
16:00-16:30	Roland Duduchava	Mellin Convolution Operators in Bessel Potential Spaces
16:30-17:00	Coffee break	
17:00-17:30		
17:30-18:00		
18:00-18:30		
18:30-19:00		

## Session 21: Toeplitz Operators, Convolution type Operators and Operator Algebras

*(Dedicated to Yuri Karlovich on his 70th Birthday)*

Organizers: M. Amélia Bastos, Alexei Karlovich

Tuesday, July 23

Room P12 (Mathematics Building)

14:30-15:00	Vladimir Rabinovich	Fredholm property of band-dominated operators on periodic graphs
15:00-15:30	Markus Seidel	On the Eigenvalues of perturbed large Toeplitz matrices
15:30-16:00	Torsten Ehrhardt	Asymptotics of determinants for finite sections of operators with almost periodic diagonals
16:00-16:30	Peter Junghanns	Toeplitz operators in the numerical analysis of certain integral equations of elasticity theory
16:30-17:00	Coffee break	
17:00-17:30	Hadi Roopaei	Factorization of infinite Hilbert and Cesaro operators
17:30-18:00	Rahul Rajan	Korovkin-type Theorems for Toeplitz Operators
18:00-18:30	Peter Berkics	On self-adjoint linear relations
18:30-19:00	Narayanan Namboodiri Memana Neelakantan	Non Commutative Korovkin and Feller type Limit Theorems



## Session 21: Toeplitz Operators, Convolution type Operators and Operator Algebras

*(Dedicated to Yuri Karlovich on his 70th Birthday)*

Organizers: M. Amélia Bastos, Alexei Karlovich

Thursday, July 25

Room P12 (Mathematics Building)

14:30-15:00	Sergei Grudsky	On the trace class Hankel operators arising in the theory of the Korteweg-de Vries equation
15:00-15:30	Pawel Mleczko	Selected properties of Hankel operators acting between different Hardy spaces
15:30-16:00	Dmitry Ponomarev	Constructive asymptotic techniques for integral equations on a finite interval
16:00-16:30	Tony Hill	Regional fractional operators arising in the theory of Lévy processes
16:30-17:00	Coffee break	
17:00-17:30	Zhidong Pan	Reflexivity of bounded sets of operators
17:30-18:00	Bogdan Djordjević	On operator algebra generated by the general solution of Sylvester equation
18:00-18:30	Eduardo Brandani da Silva	Schur decomposition of bilinear operators
18:30-19:00	Zahra Moaayerizadeh	Essential norm of substitution vector-valued integral operators on Orlicz spaces

## Session 21: Toeplitz Operators, Convolution type Operators and Operator Algebras

*(Dedicated to Yuri Karlovich on his 70th Birthday)*

Organizers: M. Amélia Bastos, Alexei Karlovich

Friday, July 26

Room P12 (Mathematics Building)

9:00-9:30	Alexander Sakhnovich	On new Verblunsky-type coefficients and the structure of the inverse to Toeplitz-block Toeplitz matrices
9:30-10:00	Mario Alberto Moctezuma	On minors and cofactors of Toeplitz banded matrices via skew Schur polynomials
10:00-10:30	Raffael Hagger	Product expansion of Toeplitz operators on the Fock space
10:30-11:00	Coffee break	
11:00-11:30	Cláudio Fernandes	A $C^*$ -algebra of functional operators with PQC coefficients
11:30-12:00	Rui Marreiros	On an estimate for the dimension of the kernel of a singular integral operator with non-Carleman shift and conjugation
12:00-12:30	Ivan Loreto Hernandez	$C^*$ -algebra of nonlocal convolution type operators
12:30-13:00	Alexei Karlovich	Noncompactness of Fourier convolution operators on Banach function spaces

## Session 22: Truncated Moment Problems

Organizers: Maria Infusino, Salma Kuhlmann

Thursday, July 25

Room Q 4.6 (Chemistry Building)

14:30-15:00	Lawrence Fialkow	The core variety and conical representations
15:00-15:30	Raul E. Curto	Bivariate truncated moment problems with algebraic variety in the nonnegative quadrant of $\mathbb{R}^2$
15:30-16:00	David Kimsey	On a minimal solution of the indefinite multidimensional truncated moment problem
16:00-16:30	Swann Marx	A moment approach for entropy solutions to scalar conservation laws
16:30-17:00	Coffee break	
17:00-17:30	Didier Henrion	Tractable semi-algebraic approximation using Christoffel-Darboux kernel
17:30-18:00	Rajae Ben Taher	A combinatorial expression for the 2 variable moment sequence via Fibonacci sequence
18:00-18:30		
18:30-19:00		

## Session 22: **Truncated Moment Problems**

Organizers: Maria Infusino, Salma Kuhlmann

Friday, July 26

Room Q 4.6 (Chemistry Building)

9:00-9:30	Tobias Kuna	On truncated discrete moment problems
9:30-10:00	Martin Venker	On the Random Moment Problem
10:00-10:30	David de Laat	Pair correlation estimates for the zeros of the zeta function via sum-of-squares representations
10:30-11:00	Coffee break	
11:00-11:30	Jean Pierre Gabardo	A factorization problem related to the convolution of positive definite functions
11:30-12:00	Philipp Di Dio	Carathéodory Numbers and Reconstruction of Measures from Moments
12:00-12:30	Maria João Oliveira	Bogoliubov generating functionals for interacting particle systems in the continuum
12:30-13:00		

## Poster session

Thursday, July 25

Room P9 (Mathematics Building)

14:30-15:00	Elmehdi Zaouche	Local regularity of a weak solution of a class of non-stationary free boundary problems
15:00-15:30	Liudmila Novikova	Bifurcations of fixed points of smooth mappings in Banach spaces
15:30-16:00	Ahcene Merad	Solvability of fractional differential equations with boundary nonlocal conditions
16:00-16:30	Yun Huang	Paley--Wiener-type theorems for analytic functions in tubular domains.