IWOTA 2021
Chapman University

Schedule by Session

Plenary talks

Room: BK[1] 104
Zoom: `https://chapman.zoom.us/s/97678633890`

Monday, August 9

10-10.55am	Voiculescu	*Invariance of absolutely continuous spectra and quasicentral modulus*
11-11.55am	Tretter	*Spectral Inclusions for Operators with Spectral Gaps*

Tuesday, August 10

10-10.55am	Triggiani	*Boundary Feedback Stabilization of Fluids in Besov Spaces of Low Regularity by Means of Finite Dimensional Controllers: 3D Navier-Stokes Equations and Boussinesq Systems*
11-11.55am	Grünbaum	*Time-and-band limiting: finding differential operators that commute with naturally appearing integral operators*

Wednesday, August 11

10-10.55am	Struppa	*An Overview of the Mathematics of Superoscillations*
11-11.55am	Vaes	*Rigidity for II_1 factors*

Thursday, August 12

10-10.55am	Lasiecka	*Semigroups arising in third order in time dynamics with applications to nonlinear acoustics*
11-11.55am	Georgiou	*Principles of Energy Harvesting in Stochastic Thermodynamic Engines*

Friday, August 13

10-10.55am	Behrndt	*Spectral theory for Dirac operators with singular potentials*
11-11.55am	Colombo	*Hyperholomorphic spectral theories and applications*

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[1]BK (Beckman Hall) is building nr. 03 on the campus map.

Semi-plenary talks

(1) Room: BK 104
    Zoom: `https://chapman.zoom.us/s/95588075839`

Monday, August 9

| 1.30-2.20pm | Vasilevski | *Toeplitz operators on the Bergman space* |

Tuesday, August 10

| 1.30-2.20pm | Blower | *Linear systems and differential equations in random matrix theory* |

Wednesday, August 11

| 1.30-2.20pm | Mancinska | *Certification of quantum devices via operator-algebraic techniques* |

Thursday, August 12

| 1.30-2.20pm | Yger | *Integral representation formulae and residue calculus, with applications to interpolation* |

Friday, August 13

| 1.30-2.20pm | Sebbar | *On a function of G.H. Hardy and J.E. Littlewood* |

(2) Room: BK 107
    Zoom: `https://chapman.zoom.us/s/99427502392`

Monday, August 9

| 1.30-2.20pm | Kaptanoglu | *Shift Operators on Harmonic Hilbert Function Spaces on Real Balls and von Neumann Inequality* |

Tuesday, August 10

| 1.30-2.20pm | McCullough | *Bianalytic mappings between free spectrahedra* |

Wednesday, August 11

| 1.30-2.20pm | Kähler | *Quaternionic non-selfadjoint operators and their spectral theory* |

Thursday, August 12

| 1.30-2.20pm | Trunk | *Perturbations of periodic Sturm–Liouville operators* |

Friday, August 13

| 1.30-2.20pm | Skripka | *Lipschitzness of operator functions* |

Special Session 1

Organizers: Justin Dressel and Cai Waegell

Room: BK 204
Zoom: `https://chapman.zoom.us/s/93495167417`

Tuesday, August 10

2.30-2.55pm	Wilce	*Some categories of euclidean Jordan algebras*
2.55-3.20pm	Trapasso	*Pointwise convergence of integral kernels for Feynman path integrals*
3.30-3.55pm	Samad	*Euclidean Green's function for relativistic N particle system*
3.55-4.20pm	Capel	*Functional inequalities in non-commutative Lp spaces for quantum many-body systems*
4.30-4.55pm	John	*A Common Parametrization for Finite Mode Gaussian States, their Symmetries and associated Contractions with some Applications*

Special Session 3

Organizer: Javad Mashreghi

Room: BK 204
Zoom: https://chapman.zoom.us/s/97873967629

Monday, August 9

2.30-2.55pm	Sola	*Clark measures for rational inner functions*
2.55-3.20pm	Volok	*Discrete analytic Schur functions*
3.30-3.55pm	Thompson	*Spectra of Weighted Composition Operators with Quadratic Compositional Symbol*
3.55-4.20pm	Curto	*The Douglas-Shapiro-Shields factorization for matrix functions of bounded type*
4.30-4.55pm	Ross	*Square Roots of Some Classical Operators*

Tuesday, August 10

8-8.25am	Roth	*On the squeezing function for finitely connected planar domains*
8.25-8.50am	Fueyo	*Stability of periodic delay systems and harmonic transfer function*
9-9.25am	Karapetrović	*Hadamard product and volume integral means over spherical shell*
9.25-9.50am	Ptak	*The characterization of (asymmetric) dual truncated Toeplitz operators*

Wednesday, August 11

8-8.25am	Štampach	*On the Hilbert L-matrix*
8.25-8.50am	Golberg	*Teichmüller's theorem in higher dimensions*
9-9.25am	N. Alpay	*Generalized Fock space and fractional derivative*
9.25-9.50am	Mashreghi	*Approximation by modified Taylor polynomials*

Special Session 4

Organizers: Palle Jorgensen, Myung-Sin Song, and James Tian

Room: BK 205
Zoom: `https://chapman.zoom.us/s/93681270575`

Tuesday, August 10

8-8.25am	Dutkay	*Parseval frames generated by row co-isometries*
8.25-8.50am	Han	*Duality for Representation Frames*
9-9.25am	Sanadnhya	*Bratteli-Vershik models for substitutions on a infinite alphabet*
9.25-9.50am	Bezuglyi	*Cantor dynamics, C^*-algebras, and K-theory*
2.30-2.55pm	Sun	*Random sampling and reconstruction of concentrated signals in a reproducing kernel space*
2.55-3.20pm	Loreaux	*The orbit closed C-numerical range and majorization*
3.30-3.55pm	Tian	*A Kaczmarz algorithm for sequences of projections*
3.55-4.20pm	Song	*Data Dimension Reduction Using Principal Component Analysis*
4.30-4.55pm	Samad	*Euclidean Green's function for relativistic N particle system*

Thursday, August 12

8-8.25am	Gehér	*Isometric embeddings of p-Wasserstein spaces, $p \geq 1$*
8.25-8.50am	Singla	*Orthogonality and Gateaux derivative of C^* norm*
9-9.25am	Ansari	*Supermixing and hypermixing operators*
9.25-9.50am	Cho	*Operators whose free distributions are dictated by the semicircular law*
2.30-2.55pm	Roopaei	*Commutants of the infinite Hilbert operator*

Special Session 5

Organizers: Gregory Berkolaiko and Uzy Smilansky

Room: BK 206
Zoom: `https://chapman.zoom.us/s/94041199472`

Tuesday, August 10

8-8.25am	Malinnikova	*On Dirichlet Laplace eigenfunctions in Lipschitz domains*
9-9.25am	Wigman	*On the defect ("signed area") of toral Laplace eigenfunctions and exponential sums*
9.25-9.50am	Beck	*A Friedland-Hayman inequality for convex subsets of the sphere*

Wednesday, August 11

8-8.25am	Helffer	*Spectral flow for pair compatible equipartitions*
8.25-8.50am	Cox	*Nodal deficiency via equipartitions and Dirichlet-to-Neumann maps*
9-9.25am	Kuchment	*Spectral shift via "lateral" perturbations*
9.25-9.50am	Suktayev	*A bound for the eigenvalue counting function for Krein—von Neumann and Friedrichs extensions of elliptic operators*

Thursday, August 12

7.30-7.55am	Logunov	*Sign of Laplace eigenfunctions and quasi-symmetry conjecture*
8-8.25am	Jung	*Boundedness of the number of nodal domains of equivariant eigenfunctions*
8.25-8.50am	Zelditch	*Spherical harmonics on spheres S^N of dimension N with exactly 2 nodal domains*
9-9.25am	Band	*Neumann domains*
9.25-9.50am	Charron	*Level sets and critical points of eigenfunctions*

Friday, August 13

8-8.25am	Kennedy	*Spectral minimal partitions of metric graphs*
8.25-8.50am	Alon	*Universality of nodal count distribution in large metric graphs*
9-9.25am	Lena	*Pleijel-type upper bound for the nodal count*
9.25-9.50am	Rohleder	*A new approach to the hot spots conjecture*

Special Session 6

Organizer: Izchak Lewkowicz

Room: BK 209
Zoom: `https://chapman.zoom.us/s/99183128599`

Thursday, August 12

8-8.25am	Lewkowicz	*Passive Linear Time-invariant Systems Characterization through Structure*
8.25-8.50am	ter Horst	*The convex invertible cone structure of positive real odd rational matrix functions (Passive and Dissipative Linear Systems session)*
9-9.25am	Salguero Alarcón	*When Kalton and Peck met Fourier*
9.25-9.50am	van der Schaft	*TBA*
2.30-2.55pm	Ball	*The infinite-dimensional continuous-time standard and strict bounded real lemma*
2.55-3.20pm	Helton	*Some algebraic aspects of quantum games*

Friday, August 13

8-8.25am	Pilipović	*Modulation spaces associated to tensor products of amalgam spaces*
8.25-8.50am	Kirstein	*The Weyl matrix balls corresponding to the matricial truncated Hamburger moment problem*
9-9.25am	Djordjević	*The spectral decomposition of a linear relation*
9.25-9.50am	El Aïdi	*On sufficient density conditions for interpolation and sampling in a weighted Hilbert Bargmann-Fock space*

Special Session 7

Organizers: Joseph Ball and Vladimir Bolotnikov

Room: BK 210
Zoom: https://chapman.zoom.us/s/94819047629

Wednesday, August 11

8-8.25am	Popescu	*Bergman spaces over noncommutative varieties and commutant lifting*
8.25-8.50am	Klep	*Positivity of noncommutative polynomials with traces*
9-9.25am	Volčič	*Noncommutative Hermite interpolation*
9.25-9.50am	ter Horst	*Realization formulas for noncommutative rational Herglotz-Agler functions*

Thursday, August 12

8.25-8.50am	Tully-Doyle	*Noncommutative realizations*
9-9.25am	Pascoe	*Realizations for special classes of noncommutative functions*
2.30-2.55pm	Martin	*Factorization of positive Toeplitz operators on Fock space*
2.55-3.20pm	Augat	*TBA*

Friday, August 13

8-8.25am	Clouâtre	*Analytic functionals for Popescu's multivariate disc algebra*
8.25-8.50am	Sarkar	*Beurling quotient modules on the polydisc*
9-9.25am	Bandtlow	*Sharp width asymptotics in spaces of holomorphic functions*
9.25-9.50am	Kumar	*Distinguished varieties and the Nevanlinna-Pick interpolation problem on the symmetrized bidisk*

Special Session 8

Organizers: Paula Cerejeiras and Irene Sabadini

Room: BK 211
Zoom: https://chapman.zoom.us/s/97174799505

Tuesday, August 10

8.25-8.50am	Chang	*Hardy Spaces on a Family of Model Domains in C^{n+1}*
9-9.25am	Kimsey	*The spectral theorem for a normal operator on a Clifford module*
9.25-9.50am	Pinton	*The Fractional Powers of Quaternionic Vector Operator in Bounded and Unbounded Domains*

Wednesday, August 11

8-8.25am	Legatiuk	*Stochastic PDEs in Clifford analysis: Wick product approach and related results*
8.25-8.50am	De Bie	*Solutions and representation theory of the Lévy-Leblond operator*
9-9.25am	Ferreira	*Symbol calculus of pseudo-differential operators on the group Spin(4)*
9.25-9.50am	Mertens	*Inverting Radon-type transforms over the Lie sphere using Clifford analysis*

Thursday, August 12

8.25-8.50am	Bernstein	*The Segal-Bargmann transform in Cliord analysis*
9-9.25am	De Martino	*On the polyanalytic short-time Fourier transform in the quaternionic setting*
9.25-9.50am	Pombo	*Inverse Conductivity Problem: a quaternionic approach*

Friday, August 13

8-8.25am	Qian	*Kernel Approximation in Hypercomplex Spaces*
8.25-8.50am	Diki	*Poly slice monogenic functions, Cauchy formulas and the PS-functional calculus*
9-9.25am	Luna Elizarrarras	*Singularities of bicomplex holomorphic functions*
9.25-9.50am	Guzmán Adán	*On the connection between Fueter's theorem and the generalized CK extension*

Special Session 9

Organizers: Raul Quiroga and Nikolai Vasilevski

Room: BK 209
Zoom: https://chapman.zoom.us/s/98104137567

Tuesday, August 10

8-8.25am	Taskinen	*Recent results on Bergman kernel estimates and Toeplitz operators in weighted Bergman-type spaces*
8.25-8.50am	Hagger	*On the Boundedness of Toeplitz Operators*
9-9.25am	Virtanen	*Fredholm properties of Toeplitz operators on doubling Fock spaces*
9.25-9.50am	Čučković	*Berezin regularity of domains in $\mathbb{C}^n$ and the essential norms of Toeplitz operators*
2.30-2.55pm	Olafsson	*C^*-algebras generated by quasi-invariant symbols acting on the Fock space on C^n*
2.55-3.20pm	Quiroga-Barranco	*Toeplitz operators on the unit ball and moment maps of Abelian groups*
3.30-3.55pm	Sánchez-Nungaray	*Toepliz operators with isotropic invariant symbols on the Fock space*
3.55-4.20pm	Dawson	*Using Representation Theory to Calculate the Spectrum of a Toeplitz Operator*
4.30-4.55pm	Koo	*Compact difference of composition operators on Hardy space*

Wednesday, August 11

2.30-2.55pm	Zorboska	*Localization of Toeplitz operators with BMO symbols*
2.55-3.20pm	Le	*When does $T_f T_g - T_h$ have finite rank?*
3.30-3.55pm	Maximenko	*Radial operators on polyanalytic weighted Bergman spaces*
3.55-4.20pm	Leal-Pacheco	*Homogeneously polyanalytic kernels on the unit ball and the Siegel domain*
4.30-4.55pm	Jabbari	*p-Summable commutators in Bergman spaces on egg domains*

Special Session 10

Organizers: Sandro Coriasco, Nenad Teofanov, Joachim Toft, and Patrik Wahlberg

Room: BK 212
Zoom: https://chapman.zoom.us/s/93226062396

Tuesday, August 10

8-8.25am	Israelsson	*Boundedness of FIOs with Amplitudes in General Hörmander Classes*
8.25-8.50am	Teofanov	*Analytic pseudo-differential operators, some classical and recent considerations*
9-9.25am	Pravda-Starov	*Uncertainty principles and null-controllability of evolution equations enjoying Gelfand-Shilov smoothing effects*
9.25-9.50am	Seiler	*Parametric pseudodifferential operators with point-singularity in the covariable*
2.30-2.55pm	Okoudjou	*The Hartree-Fock equations in modulation spaces*
2.55-3.20pm	Portal	*Hardy spaces for generalized Fourier Integral Operators*

Wednesday, August 11

8-8.25am	Vindas	*The nuclearity of Gelfand-Shilov spaces and kernel theorems*
8.25-8.50am	Prangoski	*Characterisation of the Weyl-Hormander Classes Via Growth Estimates of Time-Frequency Shifts*
9-9.25am	Pfeuffer	*Invariance of the Fredholm Index of Non-Smooth Pseudodifferential Operators*
9.25-9.50am	Abdeljawad	*Bilinear PDOs with Gevrey-Hormander symbols*
2.30-2.55pm	Karlovich	*Mellin pseudodifferential operators with quasicontinuous symbols and their applications.*
2.55-3.20pm	Sharma	*Pseudodifferential calculi using Weyl pairs in L^p*

Thursday, August 12

8-8.25am	Manna	*On Fourier integral operators and maximal operators*
8.25-8.50am	Gumber	*Fourier multipliers, the mixed frame operator and reproducing formulas for generalized shift-invariant systems*
9-9.25am	Cordero	*Wigner Analysis of Operators*
9.25-9.50am	Üster	*Gabor Analysis of Quasi Orlicz Modulation Spaces*
2.30-2.55pm	Benyi	*Boundedness of maximal singular operators via the LGC-method*
2.55-3.20pm	Öztop Kaptanoglu	*Disjoint dynamics on weighted Orlicz spaces*

Friday, August 13

8-8.25am	Wang	*Scaling Limit of Modulation Spaces and Their Applications*
8.25-8.50am	Aris	*Weighted Orlicz Amalgam Spaces on Locally Compact Groups*
9-9.25am	Viola	*The spectral decomposition and the Schrödinger evolution for non-self-adjoint degree-2 Hamiltonians*
9.25-9.50am	White	*Propagation of Global Analytic Singularities for Schrodinger Equations with Quadratic Hamiltonians*
2.30-2.55pm	de Ávila Silva	*Globally hypoelliptic time-periodic evolution equations*
2.55-3.20pm	Ebert	*Estimates for time-dependent multipliers with oscillatory and diffusive components*

Special Session 11

Organizers: Jussi Behrndt and Carsten Trunk

Room: BK 213
Zoom: https://chapman.zoom.us/s/91279677340

Tuesday, August 10

8-8.25am	Grothaus	*Strong mixing with rate of convergence for operator semi-groups with non-sectorial generator*
8.25-8.50am	Kutsenko	*Isomorphism between one-dimensional and multidimensional finite difference operators*
9-9.25am	Taskinen	*Spectra of the Steklov- and Robin-Laplace-problems in bounded, cuspidal domains*
9.25-9.50am	Glück	*Maximum and anti-maximum principles - an operator theoretic approach*
2.30-2.55pm	Weder	*Dispersive Estimates for Schrödinger Equations*
2.55-3.20pm	Weikard	*Rough coefficients in ordinary differential equations*
3.30-3.55pm	Chugunova	*Applications of spectral theory in blood flow modeling problems*
3.55-4.20pm	Fury	*A regularization technique for ill-posed problems associated with strong strip-type operators*
4.30-4.55pm	Allan	*On Critical Dipoles in Dimensions $n \geq 3$*

Wednesday, August 11

8-8.25am	Siegl	*The spectrum of the Ekman boundary layer problem*
8.25-8.50am	Arnal	*Resolvent estimates for Schrodinger operators with complex potentials*
9-9.25am	Borisov	*Uniform convergence for operators in domains perforated along manifold*
9.25-9.50am	Semorádová	*Diverging eigenvalues in domain truncations of Schrödinger operators with complex potentials*

Thursday, August 12

8-8.25am	Markin	*On Spectral Inclusion and Mapping Theorems and Asymptotics for C_0-Semigroups*
8.25-8.50am	Malamud	*Trace formulas for pairs of nonselfadjoint operators with trace class resolvent differences*
9-9.25am	Arora	*Locally eventually positive evolution equations*
9.25-9.50am	Lunyov	*Stability of spectral characteristics of boundary value problems for 2×2 Dirac type systems*

Friday, August 13

8-8.25am	Currie	*Inverse problems for first order differential systems with periodic 2×2 matrix potentials and quasi-periodic boundary conditions*
8.25-8.50am	Gernandt	*Differential-algebraic equations in Hilbert spaces*
9-9.25am	Watson	*Sturm-Liouville problems with eigenparameter dependent transmission conditions; The Pontryagin space case*

Special Session 12

Organizer: Daniele Struppa

Room: BK 214
Zoom: `https://chapman.zoom.us/s/96354668341`

Wednesday, August 11

8-8.25am	Jordan	*Supergrowth as the dual of superoscillations: Implications for enhanced optical imaging*
8.25-8.50am	Popescu	*On conservation laws in quantum mechanics*

Thursday, August 12

8-8.25am	Sabadini	*Superoscillations, supershifts and infinite order differential operators*
8.25-8.50am	Shushi	*A new method to generate superoscillating functions and supershifts*
9-9.25am	Yger	*Superoscillations and supershifts, facing optics or time - dependent Schrödinger evolution*
9.25-9.50am	Aharonov	*Superoscillations of solutions of arbitrary Schrödinger equations*

Friday, August 13

8-8.25am	Zheludev	*The Technology of Optical Superoscillations*
8.25-8.50am	Bondar	*Optical superoscillations in time domain*
9-9.25am	Schlosser	*Schrödinger evolution of superoscillations and supershifts. A unified approach*
9.25-9.50am	Berry	*Superoscillations: six recent developments*

Special Session 13

Contributed Papers

Room: BK 204
Zoom: `https://chapman.zoom.us/s/92177695397`

Friday, August 13

2.30-2.55pm	Singh	*Liouville Weighted Composition Operators over the Fock space*
2.55-3.20pm	Singh	*The trifecta of Hilbert spaces on Unit Disc*
3.30-3.55pm	Rizwan	*An introduction to interpolation Spaces*