

NEW DIRECTIONS IN FUNCTION THEORY
FROM COMPLEX TO HYPERCOMPLEX TO NON-COMMUTATIVE
CHAPMAN UNIVERSITY, NOVEMBER 21-26, 2019

THURSDAY, NOVEMBER 21, 2019

9:00 – 9:30	Coffee	
9:30 – 9:55	<i>Chapman University Welcome:</i> <i>Dr. Glenn Pfeiffer, Provost of CU, Dr. Jason Keller, Dean of SCST,</i> <i>Dr. Adrian Vajiac, Math Program Director</i>	
10:00 – 10:55	<i>An Overview of Complex Fractal Dimensions:</i> <i>from Fractal Strings to Fractal Drums and Back</i>	Michel Lapidus
11:00 – 11:15	Coffee Break	
11:15 – 11:40	<i>Zero Structure and Some Characterizations of Finite Blaschke Products over Quaternions</i>	Vladimir Bolotnikov
11:45 – 12:10	<i>The Role of Schur Functions in the Study of Quantum Walks</i>	Alberto Grünbaum
12:10 – 1:45	Lunch	
2:00 – 2:25	<i>Salem Conditions in the Non-Periodic Case</i>	Elijah Lifyand
2:30 – 2:55	<i>On a Function of G.H. Hardy and J.E. Littlewood</i>	Ahmed Sebbar
3:00 – 3:25	<i>A Generalized Fourier Hyperfunction Theory and its Applications to Physics</i>	Daniele Struppa
3:30 – 3:45	Coffee Break	
3:45 – 4:10	<i>Transfinite Apollonian Metric</i>	Zair Ibragimov
4:15 – 4:40	<i>On Various Notions of Slice Hyper-holomorphic Functions in Several Variables</i>	Irene Sabadini

FRIDAY, NOVEMBER 22, 2019

9:00 – 9:30	Coffee	
9:30 – 9:55	<i>An Application of the Noncommutative Metric to a Functional Equation on the Noncommutative Half Plane over a Finite Von Neumann Algebra</i>	Victor Vinnikov
10:00 – 10:25	<i>Proximal Actions</i>	Guy Salomon
10:30 – 10:55	<i>Matrix Convexity, Choquet Boundaries and Tsirelson Problems</i>	Adam Dor On
11:00 – 11:15	Coffee Break	
11:15 – 11:40	<i>Nevanlinna Functions, Operator Representations and Spectral Theory</i>	Jussi Behrndt
11:45 – 12:10	<i>Vortex Motion and Geometric Function Theory: the Role of Connections</i>	Björn Gustafsson
12:10 – 1:45	Lunch	
2:00 – 2:25	<i>Representations and Multi-Resolutions Associated with Endomorphisms</i>	Palle Jorgensen
2:30 – 2:55	<i>Direct and Inverse Fueter-Sce-Qian Mapping Theorem and Spectral Theories</i>	Fabrizio Colombo
3:00 – 3:25	<i>The Moment Problem on Curves with Bumps</i>	David Kimsey
3:30 – 3:45	Coffee Break	
3:45 – 4:10	<i>New Developments in Journal Publishing at Springer Nature</i>	Jan Holland
6:00 – 8:00	<i>Dinner with the President</i>	

SATURDAY, NOVEMBER 23, 2019

9:00 – 9:30	Coffee	
9:30 – 9:55	<i>Banach Space Operators Acting on Semicircular Elements Induced by p-adic Number Fields on p-adic Semicircular Elements</i>	Ilwoo Choo
10:00 – 10:25	<i>Orthogonal Polynomials on Fractals</i>	Kasso Okoudjou



10:30 – 10:55	<i>The Topology of Harmonic Mappings with Finite Blaschke Dilatations</i>	Daoud Bshouty
11:00 – 11:15	Coffee Break	
11:15 – 11:40	<i>The Kaczmarz Algorithm: A Confluence of Complex Function Theory and Numerical Analysis</i>	Eric Weber
11:45 – 12:10	<i>On Conformality in Finite-Dimension Modules over Hyperbolic Numbers</i>	Anatoly Golberg
12:10 – 1:45	Lunch	
2:00 – 2:25	<i>Towards Clifford Infinite Dimensional Analysis</i>	Swanhild Bernstein
2:30 – 2:55	<i>A Data-Driven Fourier Transform-Like Method</i>	Mamadou Mboup
3:00 – 3:25	<i>A Spinor Representation of Acoustic Field Theory</i>	Lucas Burns
3:30 – 3:45	Coffee Break	

SUNDAY, NOVEMBER 24, 2019

9:00 – 9:30	Coffee	
9:30 – 9:55	<i>Positive Extension Problem for Matrices Indexed by Homogenous Trees</i>	Dan Voloč
10:00 – 10:25	<i>A Functional Analytic Approach to Singular Perturbation Problems</i>	M. L. de Cristoforis
10:30 – 10:55	<i>Atoms of Distributions of Free Convolutions of Operator-Valued Self-adjoint Random Variables</i>	Serban Belinschi
11:00 – 4:40	<i>Discussions</i>	

MONDAY, NOVEMBER 25, 2019

9:00 – 9:30	Coffee	
9:30 – 9:55	<i>On the Geometry of Optimal Mass Transport: Advances and Applications in Engineering and Sciences</i>	Tryphon Georgiou

10:00 – 10:25	<i>Noncommutative Plurisubharmonic Functions on NC Convex Sets</i>	William Helton
10:30 – 10:55	<i>Passive Linear Systems Matrix-Convex Invertible Cones Point of View</i>	Izchak Lewkowicz
11:00 – 11:15	Coffee Break	
11:15 – 11:40	<i>Techniques to Derive Estimates for Integral Means and Other Geometric Quantities Related to Conformal Mappings</i>	Ronen Peretz
11:45 – 12:10	<i>On Ternary Analysis, Commutative and Not</i>	Mihaela Vajiac
12:10 – 1:45	Lunch	
2:00 – 2:25	<i>On the Integration of Bicomplex Functions and its Relation with Hyperbolic Curves</i>	M.E. Luna-Elizararras
2:30 - 2:55	<i>Theory of Hyperholomorphic Functions in Banach Algebras</i>	Ismael Paiva
3:00 – 3:25	<i>On the Foundations of the Penrose Transformation</i>	J.-Jacques Szczeciniarz
3:30 – 3:45	Coffee Break	
3:45 – 4:10	<i>Polynomial Approximation in Slice Regular Fock Spaces</i>	Kamal Diki
5:30 – 8:00	<i>Conference Dinner</i>	

TUESDAY, NOVEMBER 26, 2019

9:00 – 9:30	Coffee	
9:30 – 9:55	<i>Lelong-Poincaré Formula at the Crossroad of Geometry Analysis, and Arithmetic</i>	Alain Yger

10:00 – 10:25	<i>Quantum Contextuality as Erasure</i>	Justin Dressel
10:30 – 10:55	<i>Carathéodory Functions and Herglotz Theorem over Compact Riemann Surfaces and the Associated De Branges Spaces</i>	Ariel Pinhas
11:00 – 11:15	Coffee Break	
11:15 – 11:40	<i>A New Type of Quaternionic Regularity</i>	Adrian Vajiac
11:45 – 12:10	<i>Super-oscillations and Analytic Extension</i>	Daniel Alpay
12:10 – 1:45	Lunch	