

HARMONIC AND COMPLEX ANALYSIS: MODERN AND CLASSICAL

DEDICATED TO THE MEMORY OF PROFESSOR LAWRENCE ZALCMAN

June 18–23, 2023
Bar-Ilan University, Ramat Gan, Israel

PROGRAM



June 18, Sunday

16:00 - 17:00 Registration

17:00 - 17:10 Welcome

17:10 – 17:50 Bernard Pinchuk, Hershel Farkas, Steven Shnider

17:50 – 18:30 Mark Agranovsky, Shahar Nevo, Dmitry Khavinson

18:30 – 20:00 Cocktail (get together)

June 19, Monday

09:30 - 10:00 Registration and welcome

10:00 - 10:40 Barry Simon, Caltech

A tale of three coauthors: comparison of Ising models

10:40 - 11:00 Coffee break

11:00 - 11:40 Aleksandr Logunov, Unige/MIT

Sign of Laplace eigenfunctions

11:50 - 12:30 Oliver Roth, University of Würzburg

Function theory off the complexified unit circle: Möbius-invariant differential operators, strict deformation quantization, and spectral synthesis

12:40 - 14:00 Lunch

14:00 - 14:40 Dmitry Ryabogin, Kent State University

On bodies floating in equilibrium in every orientation

14:40 - 15:00 Coffee break

Parallel sessions

Session 1

15:00 - 15:30 Arthur Danielyan, University of South Florida

On the boundary behavior of analytic functions

15:40 - 16:10 Pavel Gumenyuk, Politecnico di Milano

Commuting univalent self-maps and embeddability

16:10 - 16:40 Coffee break

16:40 - 17:10 Alexander Brudnyi, University of Calgary

Properties of the maximal ideal space of H -infinity

17:20 - 17:50 Myrto Manolaki, University College Dublin

Holomorphic functions on the unit disc with chaotic radial behaviour

Session 2

15:00 - 15:30 Oleksiy Karlovich, NOVA University Lisbon

When are the norms of the Riesz projection and the backward shift operator equal to one?

15:40 - 16:10 Christopher Felder, Indiana University

Interpolating sequences for ℓ_A^p

16:10 - 16:40 Coffee break

16:40 - 17:10 Valerii Pchelintsev, Tomsk State University

Spectral stability estimates for the Dirichlet-Laplacian

17:20 - 17:50 Stanislaw Kanas, University of Rzeszow

Generalized Zalcman conjecture and Chebyshev Polynomials

Session 3

15:00 - 15:30 Alexander Koldobsky, University of Missouri-Columbia

Comparison problems for the Radon transform

15:40 - 16:10 Todd Quinto, Tufts University

Microlocal properties of novel Ellipsoidal and hyperbolic Radon transforms

16:10 - 16:40 Coffee break

16:40 - 17:10 Boris Rubin, Louisiana State University

Shifted Radon transforms in Zalcman's Offbeat Integral Geometry

17:20 - 17:50 Venky Krishnan, TIFR Centre for Applicable Mathematics, Bangalore

UCP and counterexamples to UCP involving some generalized Radon transforms

June 20, Tuesday

10:00 - 10:40 Xavier Tolsa, ICREA - Univesitat Autònoma de Barcelona - CRM

Carleson's ϵ^2 -conjecture in higher dimensions and the Alt-Caffarelli-Friedman formula

10:40 - 11:00 Coffee break

11:00 - 11:40 Matti Vuorinen, University of Turku

Mobile disks, conformal capacity, and metrics

11:50 - 12:30 David Kalaj, University of Montenegro

Gaussian curvature conjecture for minimal graphs

12:40 - 14:00 Lunch

14:00 - 14:40 Oleg Ivrii, Tel Aviv University

Critical values of inner functions

14:50 - 15:30 Shahaf Nitzan, Georgia Tech

The uncertainty principle in finite dimensions

15:30 - 15:50 Coffee break

Parallel sessions

Session 1

15:50 - 16:20 Vladimir Kadets, Holon Institute of Technology

Norm attaining functionals and operators

16:30 - 17:00 Galyna Livshyts, Georgia Institute of Technology

The universal lower bound in the dimensional Brunn-Minkowski conjecture

17:00 - 17:20 Coffee break

17:20 - 17:50 Lucian Beznea, Simion Stoilow Institute of Mathematics of the
Romanian Academy

Probabilistic characterisation for the differences of superharmonic functions

18:00 - 18:30 Nathan Hayford, University of South Florida

Painlevé equations and critical phenomena in random matrix theory

Session 2

15:50 - 16:20 Anna Vishnyakova, Holon Institute of Technology

Entire functions from the Laguerre-Polya class

16:30 - 17:00 Alon Nishry, Tel Aviv University

Zeros of the deformed exponential function

17:00 - 17:20 Coffee break

17:20 - 17:50 Lior Hadassi, Tel Aviv University

Entire functions of exponential type: Taylor coefficients and zeroes

18:00 - 18:30 Anna Kononova, Tel Aviv University

Random zero sets for Fock-type spaces

Session 3

15:50 - 16:20 Samuel Krushkal, Bar-Ilan University; University of Virginia

The Grunsky norm of univalent functions and abelian holomorphic differentials

16:30 - 17:00 Arkady Poliakovsky, Ben-Gurion University of the Negev

Jumps in Besov spaces and fine properties of Besov and fractional Sobolev functions

17:00 - 17:20 Coffee break

17:20 - 17:50 Antti Rasila, Guangdong Technion - Israel Institute of Technology

Boundary behavior of quasiregular and harmonic mappings

18:00 - 18:30 Alexander Ukhlov, Ben-Gurion University of the Negev

On the non-linear Neumann eigenvalue problem in Hölder domains

19:00 Conference dinner

June 21, Wednesday

8:00 - 20:00 Excursion to Jerusalem

June 22, Thursday

10:00 - 10:40 Ben Jaye, Georgia Tech

Uncertainty principles associated to sets satisfying the geometric control condition

10:40 - 11:00 Coffee break

11:00 - 11:40 Gady Kozma, Weizmann Institute of Science

Luzin's problem on Fourier convergence and homeomorphisms

11:50 - 12:30 Oleksiy Klurman, University of Bristol

An update on Fekete polynomials

12:40 - 14:00 Lunch

Parallel sessions

Session 1

14:00 - 14:30 Serhii Favorov, Jagiellonian University

Crystalline measures and Fourier quasicrystals

14:40 - 15:10 Oren Yakir, Tel Aviv University

Approximately half of the roots of a random Littlewood polynomial are inside the disk

15:10 - 15:40 Coffee break

15:40 - 16:10 Elijah Liflyand, Bar-Ilan University

L^1 convergence of Fourier transforms

16:20 - 16:50 Guy Cohen, Ben-Gurion University of the Negev

Convolution powers of moment-improving measures on the circle

Session 2

14:00 - 14:30 Kirill Lazebnik, University of North Texas

A geometric approach to polynomial and rational approximation

14:40 - 15:10 Toshiyuki Sugawa, Tohoku University

Uniformly perfect sets and conformal capacities

15:10 - 15:40 Coffee break

15:40 - 16:10 Sean Perry, University of South Florida

On the valence of logharmonic polynomials

16:20 - 16:50 Eran Igra, Technion

Chaotic dynamics in the Rössler system

Session 3

14:00 - 14:30 Marina Prokhorova, Technion

Unbounded Fredholm operators

14:40 - 14:10 Jonathan Nurielyan, Ben-Gurion University of the Negev

Projection distance on finite dimensional complete Pick kernels

15:10 - 15:40 Coffee break

15:40 - 16:10 Andrea Sartori, Tel Aviv University

The growth of harmonic functions and their nodal volume

16:20 - 16:50 Dan Mangoubi, Hebrew University of Jerusalem

The inner radius of nodal domains in high dimensions

June 23, Friday

10:00 - 10:40 Haakan Hedenmalm, KTH, Stockholm; St. Petersburg State University;
University of Reading

Hyperbolic Fourier series and the Klein-Gordon equation

10:40 - 11:00 Coffee break

11:00 - 11:40 Aleksei Kulikov, Tel Aviv University

Fourier uniqueness and non-uniqueness pairs

11:50 - 12:30 Walter Bergweiler, University of Kiel

Zalcman's lemma and radially distributed values

12:40 Closing