

**The International Conference "Perspectives in Modern Analysis" in honor of
Dov Aharonov, Samuel Krushkal, Simeon Reich, and Lawrence Zalcman**

Holon, May 28-31, 2018

Schedule

Monday, May 28

15:00 – 16:00 **Registration**

16:15 – 16:45 **Welcome**

Chairperson: **Anatoly Golberg**

17:00 – 18:00 Plenary lecture **David Shoikhet**, Holon Institute of Technology, Israel

Resolvent Methods, Starlike Functions and Backward Flow Invariant Domains

18:30 – Get together

Tuesday, May 29

Chairperson: **Mitsuhiro Shishikura**

10:00 – 10:40 Plenary lecture **Anthony G. O'Farrell**, National University of Ireland, Ireland

Boundary values of holomorphic distributions

10:40 – 11:00 *Coffee break*

11:00 – 11:40 Plenary lecture **Toshiyuki Sugawa**, Tohoku University, Japan

Aharonov invariants revisited

11:50 – 12:30 Plenary lecture **Fedor Pakovich**, Ben-Gurion University of the Negev, Israel

Commuting rational functions revisited

12:30 – 14:00 *Lunch*

Chairperson: **Toshiyuki Sugawa**

14:00 – 14:40 Plenary lecture **Lucian Beznea**, Simion Stoilow Institute of Mathematics of the
Romanian Academy and University of Bucharest, Romania

Connections between the Dirichlet and the Neumann problem

14:50 – 15:20 **Samuel L. Krushkal**, Bar-Ilan University, Israel

Quasiconformal features and Fredholm eigenvalues of convex polygons

15:30 – 16:00 **Vladimir Bolotnikov**, The College of William and Mary, USA

Carathéodory-Fejér type interpolation problems for Stieltjes functions

16:10 – 16:40 **Gilles Zémor**, Université de Bordeaux, France

Computing critical probabilities for percolation on regular tilings of the hyperbolic plane

16:40 – 17:00 Coffee break

Session 1

Chairperson: **Arthur A. Danielyan**

17:00 – 17:30 **Valerii Pchelintsev**, Tomsk Polytechnic University, Russia

Applications of the quasiconformal geometry to the Neumann eigenvalue problem

17:40 – 18:10 **Alexander Ukhlov**, Ben-Gurion University of the Negev, Israel

Spectral estimates of degenerate p -Laplace operators in non-convex domains

Session 2

Chairperson: **Eva Kopecká**

17:00 – 17:30 **Daniel Reem**, Technion, Israel

Fixed points of Legendre-Fenchel type transforms and polarity type operators

17:40 – 18:10 **Vadim Derkach**, Technion, Israel

Equilibria in Thin Polycrystalline Systems: Surface Diffusion and Mean Curvature Motion

Wednesday, May 30

Chairperson: **Anthony G. O'Farrell**

10:00 – 10:40 Plenary lecture **Mitsuhiro Shishikura**, Kyoto University, Japan

Quasiconformal variation of cross-ratios and applications

10:40 – 11:00 Coffee break

11:00 – 11:40 Plenary lecture **Victor Palamodov**, Tel Aviv University, Israel

An analytic method of reconstruction for X-ray phase contrast imaging

11:50 – 12:30 Plenary lecture **Marek Bożejko**, Institute of Mathematics Polish Academy of Sciences, Poland

Generalized Gaussian processes and relations with random matrices and positive definite functions on permutation groups

12:30 – 14:00 *Lunch*

Chairperson: **Lucian Beznea**

14:00 – 14:40 Plenary lecture **Eva Kopecká**, University of Innsbruck, Austria

Orthogonal projections: slow convergence and divergence of their products

Session 1

14:50 – 15:20 **Arthur A. Danielyan**, University of South Florida, USA

On bounded analytic functions

15:30 – 16:00 **Sergey Favorov**, Karazin's Kharkiv National University, Ukraine

Quasicrystals Fourier and tempered distributions

Session 2

Chairperson: **Jonathan Breuer**

14:50 – 15:20 **Avraham Feintuch**, Ben Gurion University of the Negev, Israel

Serial Pursuit, Shift Operators on l^∞ and Borel Summability

15:30 – 16:00 **Vladimir Rabinovich**, Instituto Politécnico Nacional, Israel

Fredholm theory and essential spectrum of quantum graphs with general vertex conditions

16:00 – 16:20 *Coffee break*

Session 1

Chairperson: **Alekos Vidras**

16:20 – 16:50 **Ritva Hurri-Syrjänen**, University of Helsinki, Finland

On Neumann eigenvalues and quasiconformal mappings

17:00 – 17:30 **M. Elena Luna-Elizarrarás**, Holon Institute of Technology, Israel

On fractal-like constructions in four dimensions using bicomplex numbers

17:40 – 18:10 **Yakov Krasnov**, Bar-Ilan University, Israel

Elements of Spectral Theory in Algebras

Session 2

Chairperson: **Marek Bożejko**

16:20 – 16:50 **Vladimir Rovenski**, University of Haifa, Israel

Variations of the Godbillon-Vey invariant of a foliated manifold

17:00 – 17:30 **Bochen Liu**, Bar-Ilan University, Israel

An L^2 identity and pinned distance problem

17:40 – 18:10 **Rafal Zalas**, Technion, Haifa

Regular operators in fixed point problems

19:00 **Conference dinner**

Thursday, May 31

Chairperson: **Ritva Hurri-Syrjänen**

9:30 – 10:10 Plenary lecture **Hiroshige Shiga**, Tokyo Institute of Technology, Japan

The quasiconformal prolongation of Riemann surfaces

10:20 – 10:50 **Tomoki Kawahira**, Tokyo Institute of Technology, Japan

On dynamical and parametric Zalcman functions

10:50 – 11:10 *Coffee break*

11:10 – 11:40 **Alekos Vidras**, University of Cyprus, Cyprus

Cauchy-Fantappie formula on tube domain in C^2

11:40 **Closing**

12:00 **Excursion**