

The 15th international conference
Analytic and algebraic methods in physics

September 10 - 13, 2018, Trojanova street 13, lecture hall 301

→ **programme** ←

final version

The first day, September 10th, Monday

13:00 - 13:45	the last minute registrations
14:00 - 14:05	OPENING
session I: CPT symmetry chair: Uwe Guenther	
14:05 - 14:35	Carl Bender (St. Louis) <i>PT-symmetric quantum field theory in $D < 2$</i>
14:40 - 15:10	Sergii Kuzhel (Cracow) <i>Mathematical aspects of C-symmetries</i>
15:15 - 15:45	coffee break
session II: quasi-hermitian quantum models chair: Carl Bender	
15:45 - 16:15	Mustapha Maamache (Setif) <i>Mending the broken PT-symmetry via a non unitary time-dependent transformation</i>
16:20 - 16:50	J. Gonzalo Muga (Bilbao) <i>Symmetries of non-Hermitian Hamiltonians</i>
16:55 - 17:15	break
session III: bound-state constructions chair: Sergii Kuzhel	
17:15 - 17:45	Günter Wunner (Stuttgart) <i>Computing eigenfunctions and eigenvalues of boundary-value problems with the orthogonal spectral renormalization method</i>
17:50 - 18:20	Diana Barseghyan (Ostrava) <i>A magnetic version of the Smilansky-Solomyak model</i>
18:25 - 18:55	Jacek Karwowski (Toruń) <i>Semi-exact solutions of radial Schrödinger equations</i>
19:00	THE END OF THE FIRST DAY

September 11th: Tuesday

Morning programme

session IV: physics of graphene chair: Mustapha Maamache	
9:30 - 10:00	Erik Díaz-Bautista (Valladolid) <i>Coherent states in graphene</i>
10:05 - 10:35	Alfredo Raya Montaña (Morelia) <i>Supersymmetric electronic states in graphene under uniaxial strain</i>
10:40 - 11:10	coffee break
session V: Schrödinger operators chair: Ali Mostafazadeh	
11:10 - 11:40	Artur Ishkhanyan (Ashtarak) <i>The second Exton potential for the Schrödinger equation</i>
11:45 - 12:15	Andrii Khrabustovskyi (Graz) <i>Singular Schroedinger operators with predefined spectrum</i>
12:20 - 14:00	LUNCHTIME

POSTER SESSION	
put on display, from September 11th on, in the lecture hall Nr. 301	
Tereza Kurimaiová (Prague)	
<i>What is the optimal geometry for vibrating membranes?</i>	

September 11th: Tuesday, afternoon programme

session VI: quantization methods chair: Li Ge	
14:00 - 14:30	Gregory Natanson (Lanham) <i>On Quantization of the Bagchi-Quesne-Roychoudhury Potential by a Finite X-Orthogonal Sequence of Heun Eigenpolynomials</i>
14:35 - 15:05	Fabio Bagarello (Palermo) <i>Recent results on deformed commutation rules</i>
15:10 - 15:40	coffee break
session VII: supersymmetry chair: Gregory Natanson	
15:40 - 16:10	Alonso Contreras-Astorga (Gary) <i>Photonic systems with two-dimensional landscapes of complex refractive index via time-dependent supersymmetry</i>
16:15 - 16:45	Satoshi Ohya (Tokyo) <i>Supersymmetry and Non-Abelian Geometric Phase</i>
16:50 - 17:15	break
session VIII: analytic solutions chair: Fabio Bagarello	
17:15 - 17:45	Alexander Moroz (Berlin) <i>Constraint polynomial approach, an alternative to the functional Bethe Ansatz method</i>
17:50 - 18:20	Géza Lévai (Debrecen) <i>PT - symmetrization of Natanzon-class potentials</i>
18:25 - 18:55	Biagio Cassano (Řež) <i>Self-adjointness for the Dirac operator with Coulomb-type spherically symmetric perturbations via boundary conditions</i>
19:00	THE END OF THE SECOND DAY

September 12th: Wednesday

Morning programme

session IX: scattering theory chair: Günter Wunner	
9:30 - 10:00	W. Dieter Heiss (Stellenbosch) <i>It looks like an Exceptional Point but it isnt</i>
10:05 - 10:35	Iana Van-Iun-Sian (St. Petersburg) <i>On the scattering on star-like metric graph with fourth-order operator at the edges</i>
10:40 - 11:10	coffee break
session X: linear and nonlinear optics chair: W. Dieter Heiss	
11:10 - 11:40	Li Ge (New York) <i>Complex mirror symmetry and its realization in photonics</i>
11:45 - 12:15	Ali Mostafazadeh (Istanbul) <i>Nonlinear transfer matrix and blowing up light</i>
12:20 - 14:00	LUNCHTIME

September 12th: Wednesday

Afternoon programme

session XI: Schrödinger operators II chair: Oktay Veliev	
14:00 - 14:30	Manuel Gadella (Valladolid) <i>Point potentials in one and two dimensions</i>
14:35 - 15:05	Jussi Behrndt (Graz) <i>Spectral shift function for Schrödinger operators with delta-interactions on hypersurfaces</i>
15:10 - 15:40	Lyonell Boulton (Edinburgh) <i>Perturbations of Gibbs semigroups and non-selfadjoint Schrödinger operators</i>
15:45 - 16:15	coffee break
session XII: linear and nonlinear optics II chair: Géza Lévai	
16:15 - 16:45	Axel Pérez-Obiol (Kochi) <i>Stationary real solutions of the nonlinear Schrödinger equation on a ring with a defect</i>
16:50 - 17:20	Peter Schlosser (Graz) <i>Propagators of the Schrödinger equation and the time evolution of superoscillations</i>
17:25 - 17:50	break
session XIII: quasicrystals chair: Jussi Behrndt	
17:50 - 18:20	Petr Ambrož (Prague) <i>Palindromic length and morphisms in class P</i>
18:25 - 18:55	Jan Mazáč (Prague) <i>Linear mappings on model sets</i>
19:00	THE END OF THE THIRD DAY

September 13th: Thursday

Morning programme

session XIV: mathematical physics chair: Boris Shapiro	
9:30 - 10:00	Uwe Guenther (Dresden) <i>The IR-truncated PT-symmetric ix^3 model and its asymptotic spectral scaling graph</i>
10:05 - 10:35	Oktay Veliev (Istanbul) <i>On the finite-zone potentials</i>
10:40 - 11:10	coffee break
session XV: applications of spectral theory chair: Lyonell Boulton	
11:10 - 11:40	Markus Holzmann (Graz) <i>Self-adjoint realizations of Dirac operators with boundary conditions on domains in \mathbb{R}^3</i>
11:45 - 12:15	Anton Boitsev (St. Petersburg) <i>Operator extensions theory model for quantum dot radiation</i>
12:20 - 12:30	CLOSING
12:30	THE END OF THE CONFERENCE