

Sunday, June 19

MORNING SESSION 09:00–12:00

Chairman: Alice Barbora Tumpach

08:00–09:00 Registration

09:00–09:10 Opening

09:10–10:05 *Quantizing real semisimple Lie groups*
Kenny DE COMMER, Vrije Universiteit Brussel, Belgium

10:05–10:35 Coffee break

10:35–11:30 *Quantum correlations on quantum spaces: RFD, LP, HR and SEP*
Paweł KASPRZAK, Uniwersytet Warszawski, Poland

11:35–12:00 *Asymmetric harmonic oscillator*
Goce CHADZITASKOS, Czech Technical University in Prague, Czech Republic

AFTERNOON SESSION 14:30–16:50

Chairman: Jaromir Tosiek

14:30–14:55 *On partial Banach-Lie algebroid structure: some motivations*
Fernand PELLETIER, Université de Savoie Mont Blanc, France

15:00–15:25 *Simplicity of L_p -operator algebra crossed products*
Krzysztof BARDADYN, Uniwersytet w Białymstoku, Poland

15:25–15:55 Coffee break

15:55–16:20 *Quantum particle on G_2 dual weight lattice*
Petr NOVOTNÝ, Czech Technical University in Prague, Czech Republic

16:25–16:50 *Quadratic algebras and spectrum of superintegrable systems*
Md Fazlul HOQUE, Czech Technical University in Prague, Czech Republic

Monday, June 20

MORNING SESSION 09:00–12:55

Session in honour of prof. Bogdan Mielnik

Chairman: Nora Breton

- 09:00–09:10** Opening: **David Fernández**: Bogdan Mielnik — the person and the scientist
- 09:10–10:05** *Phenomenon of Backflow*
Iwo BIAŁYNICKI-BIRULA, Centrum Fizyki Teoretycznej, PAN, Poland
- 10:10–10:35** *Memories about Bogdan Mielnik*
Andrzej KRASIŃSKI, N. Copernicus Astronomical Center, Polish Academy of Sciences, Poland
- 10:40–11:05** *Arrival time in quantum mechanics: my long-standing disputes with Bogdan Mielnik*
Jerzy KIJOWSKI, Center for Theoretical Physics, Poland
- 11:05–11:30** Coffee break
- 11:30–11:55** *Title to be announced*
Andrzej DRAGAN, Uniwersytet Warszawski, Poland
- 12:00–12:25** *Extremal quantum states & combinatorial designs*
Karol ŻYCZKOWSKI, Jagiellonian University / CTP PAS, Poland
- 12:30–12:55** *Quantum state reduction, and Newtonian twistor theory*
Maciej DUNAJSKI, University of Cambridge, United Kingdom

AFTERNOON SESSION 14:00–17:10

Session in honour of prof. Bogdan Mielnik

Chairman: Jerzy Kijowski

- 14:00–14:25** *Factorization method: Bogdan Mielnik's contributions*
David FERNÁNDEZ, CINVESTAV, Mexico
- 14:30–14:55** *Factorization method and new potentials from the inverted oscillator*
David BERMÚDEZ, CINVESTAV, Mexico
- 15:00–15:25** *Canonical photon position operator with commuting components*
Maciej PRZANOWSKI, Politechnika Łódzka, Poland
- 15:25–15:45** Coffee break
- 15:45–16:10** *Malignant and non-malignant nonlinearity in quantum mechanics*
Marek CZACHOR, Politechnika Gdańska, Poland
- 16:15–16:40** *Darboux transformations for the design of gradient-index optical waveguides*
Sara CRUZ Y CRUZ, Instituto Politécnico Nacional, Mexico
- 16:45–17:10** *Factorization: Little or great algorithm?*
Oscar ROSAS-ORTIZ, CINVESTAV, Mexico

17:30–22:00 Campfire: Folwark Nadawki

Tuesday, June 21

MORNING SESSION 09:00–11:50

Chairman: Anatolij Prykarpatski

- 09:00–09:55** *Cheeger–Simons differential character-valued momentum maps and applications*
Tudor RATIU, Shanghai Jiao Tong University, China
- 10:00–10:55** *Stokes phenomenon in geometry and physics*
Xiaomeng XU, Peking University, China
- 10:55–11:25** Coffee break
- 11:25–11:50** *Positive Energy Representations of Gauge Groups With Support at a Fixed Point*
Milan NIESTIJL, Delft University of Technology, Netherlands

12:30 Group photo

AFTERNOON SESSION 14:30–17:20

Session in honour of prof. Bogdan Mielnik

Chairman: David Bermúdez

- 14:30–14:55** *Personal conversations with Bogdan and the manipulation of Schrödinger's particle by time dependent potentials*
Gerardo HERRERA CORRAL, CINVESTAV, Mexico
- 15:00–15:25** *When knowledge of one integral of motion is sufficient for integrability?*
Stefan RAUCH-WOJCIECHOWSKI, Linköping University, Sweden
- 15:25–15:55** Coffee break
- 15:55–16:20** *Two aspects of Klein tunneling in graphene: supersymmetry and Dirac structure beyond the linear approximation*
Alonso CONTRERAS-ASTORGA, CINVESTAV, Mexico
- 16:25–16:50** *1-D Dirac equation in phase space quantum mechanics*
Jaromir TOSIEK, Łódź University of Technology, Poland
- 16:55–17:20** *Hidden Symmetries of the type D solutions of the Einstein Equations*
Nora BRETON, CINVESTAV, Mexico

Wednesday, June 22

MORNING SESSION 09:00–12:20

Chairman: Almut Beige

- 09:00–09:55** *On integrability, geometrization and knots*
Alexander VESELOV, Loughborough University, United Kingdom
- 10:00–10:25** *On the Dark Equations, the related integrability theory and applications*
Anatolij PRYKARPATSKI, Cracow University of Technology, Poland
- 10:25–10:55** Coffee break
- 10:55–11:20** *Symplectic realizations of $\mathfrak{e}(3)^*$*
Elwira WAWRENIUK, Uniwersytet w Białymstoku, Poland
- 11:25–11:50** *Integrable systems in higher dimensions: a new perspective*
Artur SERGYEYEV, Silesian University in Opava, Czech Republic
- 11:55–12:20** *Hamiltonians of the Painlevé and quasi-Painlevé equations*
Galina FILIPUK, Uniwersytet Warszawski, Poland

13:45–21:00 Excursion to Tykocin town (includes dinner)

Thursday, June 23

MORNING SESSION 09:00–12:20

Chairman: Paweł Kasprzak

- 09:00–09:55** *Geometric aspects of the modular theory of operator algebras*
Karl-Hermann NEEB, Friedrich-Alexander University, Department of Mathematics, Germany
- 10:00–10:55** *Elliptic Quantum Toroidal Algebra $U_{q,t,p}(gl_{1,tor})$ and affine quiver gauge theories*
Hitoshi KONNO, Tokyo University of Marine Science and Technology, Japan
- 10:55–11:25** Coffee break
- 11:25–11:50** *Deformation quantization on the cotangent bundle of a Lie group*
Ziemowit DOMAŃSKI, Poznań University of Technology, Institute of Mathematics, Poland
- 11:55–12:20** *Reproducing kernels and minimal solutions of elliptic equations*
Tomasz ŻYŃDA, Warsaw Military University of Technology, Poland

AFTERNOON SESSION 14:30–17:05

Chairman: David Fernández

- 14:30–15:10** *Unifying Classical and Quantum Physics + Quantum Fields and Gravity*
John KLAUDER, University of Florida, United States
- 15:15–15:40** *Precanonical Quantum Teleparallel Gravity*
Igor KANATTSIKOV, University of Exeter, United Kingdom
- 15:40–16:10** Coffee break
- 16:10–16:35** *Chebyshev dynamics, isoharmonic deformations, and constrained Schlesinger systems*
Vladimir DRAGOVIĆ, The University of Texas at Dallas, United States
- 16:40–17:05** *Donagi–Witten construction and a graded covering of a supermanifold*
Elizaveta VISHNYAKOVA, Universidade Federal de Minas Gerais, Brazil

18:00–22:00 Conference dinner: restaurant Maciejówka

Friday, June 24

MORNING SESSION 09:00–12:05

Chairman: Kenny De Commer

- 09:00–09:40** *Predicting “Anyons”: Implications of History for Science*
Gerald GOLDIN, Rutgers University, United States
- 09:45–10:10** *Klein paradox in the Wigner phase space formalism*
Luca CAMPOBASSO, Łódź University of Technology, Poland
- 10:10–10:40** Coffee break
- 10:40–11:05** *Electron in triangular graphene dots*
Jiří HRIVNÁK, Czech Technical University in Prague, Czech Republic
- 11:10–11:35** *Generalized Transforms of Affine Weyl Groups*
Tomasz CZYŻYCKI, Uniwersytet w Białymstoku, Poland
- 11:40–12:05** *Pedal coordinates, solar sail orbits and other force problems*
Petr BLASCHKE, Silesian University in Opava, Czech Republic

AFTERNOON SESSION 14:30–16:50

Chairman: Daniel Belitiță

- 14:30–15:25** *Reflection positivity on the sphere and related topics*
Gestur OLAFSSON, Louisiana State University, USA
- 15:25–15:55** Coffee break
- 15:55–16:50** *Integrable transformations on centroaffine polygons*
Sergei TABACHNIKOV, Pennsylvania State University, USA

Saturday, June 25

MORNING SESSION 09:00–11:50

Chairman: Jiří Hrivnák

- 09:00–09:55** *A fresh perspective on local photons and the Casimir effect*
Almut BEIGE, University of Leeds, United Kingdom
- 09:55–10:25** Coffee break
- 10:25–10:50** *Generalization of the concept of classical r -matrix to Lie algebroids*
Alina DOBROGOWSKA, Uniwersytet w Białymstoku, Poland
- 10:55–11:20** *The Poisson spectrum of the first part of the second case of the classification*
Maram ALOSSAIMI, Sheffield University, UK
- 11:25–11:50** *A further analysis of a $(2 + 1)$ -dimensional combined cosmological model in $f(R, T)$ gravity*
Safiqul ISLAM, King Faisal University, Saudi Arabia

AFTERNOON SESSION 14:30–17:20

Session on Infinite Dimensional Geometry

Chairman: Milan Niestijl

- 14:30–15:25** *Grassmann geometry in spaces of functions*
Esteban ANDRUCHOW, Universidad Nacional de General Sarmiento and Instituto Argentino de Matemática “Alberto P. Calderón”, Argentina
- 15:30–15:55** *Differentiable and Kähler geometry of the coadjoint orbit of a nuclear operator*
Gabriel LAROTONDA, Universidad de Buenos Aires and CONICET, Argentina
- 15:55–16:25** Coffee break
- 16:25–16:50** *Banach Poisson Lie groups*
Alice Barbora TUMPACH, Laboratoire Painlevé & Pauli Institut, Austria
- 16:55–17:20** *On the solvable Lie groups whose regular representation is a factor representation*
Daniel BELTIȚĂ, Institute of Mathematics “Simion Stoilow” of the Romanian Academy, Romania