

Monday, June 30

MORNING SESSION 09:30–12:30

Chairman: Gerald Goldin

09:00–09:30 Registration

09:30–09:40 Opening

09:40–10:35 *Twisted Araki–Woods Algebras: structure and inclusions*
Ricardo CORREA DA SILVA, FAU Erlangen–Nürnberg
Germany

10:35–11:05 Coffee break

11:05–12:00 *From local nets to Euler elements*
Vincenzo MORINELLI, Tor Vergata University of Rome
Italy

12:05–12:30 *Topological quantum field theory and the odd graph complex*
Paul-Hermann BALDUF, University of Oxford, Mathematical Institute
United Kingdom

Lunch: 12:30–13:30

AFTERNOON SESSION 14:30–17:05

Chairman: Jen-Hsu Chang

14:30–15:10 *Integrable systems from Poisson reductions of generalized Hamiltonian torus actions*
Laszlo FEHER, University of Szeged / Wigner RCP, Budapest
Hungary

15:15–15:40 *Conservation laws for Extended Generalized Cahn–Hilliard–Kuramoto–Sivashinsky Equation in Any Dimension*
Pavel HOLBA, Silesian University in Opava
Czech Republic

15:40–16:10 Coffee break

16:10–16:35 *Integrable and superintegrable classical systems in magnetic fields and Poisson algebras of their integrals of motion*
Md Fazlul HOQUE, Pabna University of Science and Technology
Bangladesh

16:40–17:05 *Kepler problem in the harmonic oscillator setting: recursion operator and relevant properties*
Mahougnon Justin LANDALIDJI, Polytechnic University of San-Pedro
Ivory Coast

Tuesday, July 1

MORNING SESSION 09:00–12:20

Chairman: Jean-Pierre Gazeau

- 09:00–09:55** *The restricted Grassmannian and its cotangent space from various points of view*
Alice Barbara TUMPACH, Wolfgang Pauli Institut
Austria
- 09:55–10:25** Coffee break
- 10:25–11:20** *Metriplectic Geometries: Definitions and Applications*
Philip MORRISON, University of Texas at Austin
USA
- 11:25–11:50** *Nijenhuis operators on Banach homogeneous spaces*
Tomasz GOLIŃSKI, University of Białystok
Poland
- 11:55–12:20** *Diffeological generalized formal series: an overview*
Jean-Pierre MAGNOT, LAREMA — Université d'Angers
France

Lunch: 12:30–13:30

AFTERNOON SESSION 14:30–16:20

Chairman: Paul-Hermann Balduf

- 14:30–14:55** *Dynamics of Jellet's Egg. Asymptotic solutions revisited*
Stefan RAUCH, Linköping University
Sweden
- 15:00–15:25** *On the electron Hamiltonian, the mass term and its $SU(2) \times SU(2)$ -gauge symmetry structure*
Anatolij PRYKARPATSKI, Cracow University of Technology
Poland
- 15:25–15:55** Coffee break
- 15:55–16:20** *Construction of totally non-negative pfaffian*
Jen-Hsu CHANG, National Defense University
Taiwan

17:00 Campfire: Majątek Howieny (by bus from campus)

Wednesday, July 2

MORNING SESSION 09:00–12:20

Chairman: Piotr Stachura

09:00–09:55 *Levi-Civita Connections for the Irreducible Quantum Flag Manifolds*
Réamonn Ó BUACHALLA, Charles University
Czech Republic

09:55–10:25 Coffee break

10:25–11:20 *Geometric Deep Learning meets Quantum Groups: a quantum differential calculus approach to differential geometry on graphs for machine learning*
Rita FIORESI, Università di Bologna
Italy

11:25–11:50 *Type semigroups and a dichotomy for groupoid C^* -algebras*
Bartosz KWAŚNIEWSKI, University of Białystok
Poland

11:55–12:20 *On the Banach–Lamperti Theorem*
Krzysztof BARDADYN, University of Białystok
Poland

Lunch: 12:30–13:30

13:30–14:00 Poster session

14:00–17:00 Excursion: walking tour of the city, starting from campus

Thursday, July 3

MORNING SESSION 08:30–11:20

Arno Bohm Memorial Session

Chairman: Haydar Uncu

- 08:30–09:00** Opening
- 09:00–09:25** *Rigged Hilbert Spaces: A Contribution in Honor of Arno Bohm*
Manuel GADELLA, University of Valladolid
Spain
- 09:30–09:55** *On some recent developments in scattering theory: Fundamental transfer matrix and exactness of N -th order Born approximation*
Ali MOSTAFAZADEH, Koc University
Turkey
- 09:55–10:25** Coffee break
- 10:25–10:50** *The relationship between the Berry connection and orbital magnetism: First principles calculation of magnetic shielding*
Josef ZWANZIGER, Dalhousie University
Canada
- 10:55–11:20** *The Geometric Phase Controls Ultracold Chemistry*
Brian KENDRICK, Los Alamos National Laboratory
USA

11:30–12:45 Wigner medal ceremony

12:50 Group photo

Lunch: 13:00–14:00

AFTERNOON SESSION 14:00–17:50

Arno Bohm Memorial Session

Chairman: Manuel Gadella

- 14:00–14:25** *Geometric Phases and Exchange Statistics in One Dimension*
Nathan HARSHMAN, American University
USA
- 14:30–14:55** *The harmonic oscillator potential perturbed by a combination of linear and non-linear Dirac delta interactions with application to Bose–Einstein condensation*
Haydar UNCÜ, Turkish-German University
Turkey
- 15:00–15:25** *On the Completeness of Energy Eigenfunctions for Renormalized Quantum Systems*
Fatih ERMAN, İzmir Institute of Technology
Turkey
- 15:25–15:55** Coffee break
- 15:55–16:20** *Ideas of physics in finance*
Christoph PÜNTMANN, Head of Investment Consulting, Aon Pension Insurance Broker GmbH
Germany
- 16:25–16:50** *Particle View in Crystals*
Qian NIU, University of Science and Technology of China
China
- 16:55–17:20** *Semisimple Groups and Associated Semi-Direct Products by Way of Examples: $SO_0(1, 4)$, $SO_0(2, 3)$ and the Poincaré Group*
Patrick MOYLAN, Pennsylvania State University
USA

17:25–17:50 *A geometrical approach towards the Riemann Hypothesis*
Wolfgang SCHLEICH, Institut für Quantenphysik Universität Ulm
Germany

18:30-24:00 Conference dinner: hotel Pod Herbem, Wiejska str. 49

Friday, July 4

MORNING SESSION 09:00–12:20

Chairman: Sergei Shabanov

- 09:00–09:55** *Time observables, relational dynamics, and quantum time dilation*
Alexander SMITH, Saint Anselm College / Dartmouth College
USA
- 09:55–10:25** Coffee break
- 10:25–10:50** *The Kinematics of Anyon Multipole Configurations*
Gerald GOLDIN, Rutgers University
USA
- 10:55–11:20** *Quantum argument shift method for the universal enveloping algebra Ugl_n*
Yasushi IKEDA
Japan
- 11:25–11:50** *Convergent star product and application*
Akira YOSHIOKA, Tokyo University of Science
Japan
- 11:55–12:20** *Confluent supersymmetric algorithm for bilayer graphene*
David J. FERNANDEZ C., CINVESTAV
Mexico

Lunch: 12:30–13:30

AFTERNOON SESSION 14:30–17:20

Chairman: Fatih Erman

- 14:30–14:55** *A purely geometrical Aharonov–Bohm effect*
Jean-Pierre GAZEAU, University of Białystok
Poland
- 15:00–15:25** *Orbit space geometry in gauge systems and affine quantization*
Sergei SHABANOV, University of Florida
USA
- 15:25–15:55** Coffee break
- 15:55–16:20** *Noncommutative Geometry from the Perspective of Quantum Physics*
Otto KONG, National Central University
Taiwan
- 16:25–16:50** *The Dirac–Weyl equation in graphene*
Jaromir TOSIEK, Łódź University of Technology
Poland
- 16:55–17:20** *Wigner functions in heavy-ion Collisions*
Che-Ming KO, Texas A&M University
USA

Saturday, July 5

MORNING SESSION 09:00–12:35

Chairman: Jiří Hrivnák

- 09:00–09:55** *Infinite Dynkin diagrams and monoidal actions in Lie-theoretic context*
Volodymyr MAZORCHUK, Uppsala University
Sweden
- 10:00–10:25** *Hidden symmetries and their algebra structures on Courant algebroids*
Ümit ERTEM, Diyanet İşleri Başkanlığı
Turkey
- 10:25–10:55** Coffee break
- 10:55–11:35** *Quantum spaces of lines*
Piotr STACHURA, Warsaw University of Life Sciences
Poland
- 11:40–12:05** *A study of Casimir invariants in the context of the eigenvalue problem*
Marzena SZAJEWSKA, University of Białystok
Poland
- 12:10–12:35** *Cyclic Lie–Rinehart algebras*
Alina DOBROGOWSKA, University of Białystok
Poland

Lunch: 13:00–14:00

AFTERNOON SESSION 14:30–16:50

Chairman: Petr Novotný

- 14:30–14:55** *Parabolic cylinder functions as orthonormal bases on $L^2(\mathbb{R}^+)$ and $L^2(\mathbb{R})$*
Goce CHADZITASKOS, Czech Technical University in Prague
Czech Republic
- 15:00–15:25** *Dirac Quasinormal Modes in Noncommutative Reissner–Nordström Black Holes*
Naveena Kumara ATHITHAMOOLE, Ruđer Bošković Institute
Croatia
- 15:25–15:55** Coffee break
- 15:55–16:20** *Convex orderings on positive roots and quantum tangent spaces*
Alessandro CAROTENUTO, Università di Parma
Italy
- 16:25–16:50** *Nonlinear superposition principle for Riccati equation*
Tomasz CZYŻYCKI, University of Białystok
Poland