23rd International Summer School on Global Analysis and Applications

Braşov, Romania, August 20--24, 2018

Program

Monday, August 20

08:00 – 09:00   *Registration*

09:00 – 09:10   *Summer school opening*

Morning session

09:10 – 10:40   Yu. Sachkov, *Geometric control theory, sub-Riemannian geometry, and their applications in robotics and vision*

10:40 – 11:00   *Coffee break*

11:00 – 12:30   N. Voicu, *Foundations of Finsler geometry and its generalizations*

Afternoon session

14:30 – 15:10   D. Krupka, *Variational forces*

15:10 – 15:50   L. Popescu, *Lie algebroids framework for drift-less control affine systems*

15:50 – 16:10   *Coffee break*

16:10 – 16:30   G. Shan, *Hamel's field variational integrators for geometrically exact beam and Chaplygin-Timoshenko sleigh*

16:30 – 16:50   L. Huageng, *Discrete optimal control of a car on the sphere*

16:50 – 17:10   CTJ Dodson, *Information geometry as a possible control tool*

17:10 – 17:30   H. Tadano*, Some Myers-Type Theorems for Transverse Ricci Solitons on Sasaki Manifolds*

17:30 – 17:50   I. Harraki, *Controllability of the wave equation via bilinear control*

Tuesday, August 21

Morning session

09:00 – 10:30 Yu. Sachkov, *Geometric control theory, sub-Riemannian geometry, and their applications in robotics and vision*

10:30 – 11:00 *Coffee break*

11:00 – 12:30 N. Voicu, *Foundations of Finsler geometry and its generalizations*

Afternoon session

14:30 – 15:10 X. Cheng, *Einstein Finsler Metrics and S. S. Chern's Question*

15:10 – 15:50 T. Aikou, *Negativity of holomorphic vector bundles and complex Finsler structures*

15:50 – 16:10 *Coffee break*

16:10 – 16:30 L. Kozma, *On connections in sub-Finsler geometry*

16:30 – 16:50 R. Wolak, *Foliations on Finsler manifolds*

16:50 – 17:10 P. Walczak, *Integral formulae for codimension-one foliated Randers spaces*

17:10 – 17:30 B. Tiwari, *On Finsler spaces with spherically symmetric metric*

17:30 – 17:50 G. Prajapati, *On Semi C-Reducibility of general (α,β)-Finsler metrics*

17:50 – 18:10 S.K. Narasimhamurthy, *Einstein theory of Finsler-Randers Cosmological Model*

Wednesday, August 22

09.00-18:30 *Excursions:*

A) Trip to Bran castle and Rasnov Saxon fortress

B) Hiking trip in Piatra Craiului National Park (hiking shoes are necessary)

C) Tour of the city of Brasov

Thursday, August 23
Morning session

09:00 – 10:30 Yu. Sachkov, *Geometric control theory, sub-Riemannian geometry, and their applications in robotics and vision*

10:30 – 11:00 *Coffee break*

11:00 – 12:30 D. Krupka, *Foundations of Finsler geometry and its generalizations*

Afternoon session

14:30 – 15:10   K. Marathe, *What is Physical Mathematics?*

15:10 – 15:50   Z. Urban, *Global variational principle*

15:50 – 16:10   *Coffee break*

16:10 – 16:50   M.A. Javaloyes, *On the definition and examples of cones and Finsler spacetimes*

16:50 – 17:30   C. Pfeifer, *Finsler spacetime geometry in Physics*

17:30 – 18:10   M. Hohmann, *Harmonic d-tensors with spherical and cosmological symmetry*

Friday, August 24

Morning session

09:00 – 10:30   Yu. Sachkov, *Geometric control theory, sub-Riemannian geometry, and their applications in robotics and vision*

10:30 – 11:00   *Coffee break*

11:00 – 12:30   D. Krupka, *Foundations of Finsler geometry and its generalizations*

Afternoon session

14:30 – 15:10   E. Le Donne, *Tangents of sub-Riemannian geodesics*

15:10 – 15:50   Yu. Sachkov, *Sub-Finsler problems on the Cartan and Engel groups*

15:50 – 16:10   *Coffee break*

16:10 – 16:30   V. Kivioja, *Classification of Lie groups by metric geometry*

16:30 – 16:50   M. Romney, *Quasiconformal mappings on sub-Riemannian manifolds*

16:50 – 17:10   F. Tripaldi, *On the topology of surfaces with the simple lift property*

17:10 – 17:30   A. Pampano, *Criticality of Sub-Riemannian Geodesics Projections and Applications*

17:30 – 17:50   Y.H. Kim, *Application of Laplace operator on manifolds*

17:50 – 18:10   I. A. Alrhman, *Lagrangian Mechanical Systems with Four Almost Complex Structures on Symplectic Geometry*

18:30 – 22:00   **Summer School dinner**

Poster session:

Posters will be displayed in the conference room for the whole duration of the summer school.

- C.-W. Kim,   *Rigidity theorems in Finsler geometry*
- C. Pfeifer,   *Berwald extension of general relativity*
- C. MacLaurin,   *Time slicings of black holes*
- D. S. Patra,   *The Fisher-Marsden conjecture on contact manifold*
- L. M. Alabdulsada, *On non-positive curvature properties of the Hilbert metric*
- L. Balko,   *Some numerical homotopy invariants of certain classes of flag manifolds*
- P. Chalmovianský, *Envelopes of planar curves in applications*
- T. Moisala,   *Infinite-dimensional Carnot groups and Rademacher's theorem*