

Thursday, August 26

18:00–24:00

Grand Opening and Welcome Party

Continental Hotel

Invited plenary talks

FRIDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Michael G. Eastwood

- *Shun-ichi Amari* 9:00–9:50
Information Geometry Derived from Divergence Functions
- *Gudlaugur Thorbergsson* 10:00–10:50
Singular Riemannian foliations without horizontally conjugate points



FRIDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Michael G. Eastwood

- *Joseph M. Landsberg* 11:30–12:20
Differential geometry of orbit closures and P v. NP



Riemannian Geometry and Submanifolds

FRIDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Masami Sekizawa

- *Ilka Agricola* 14:00–14:40
Geometries with torsion and their Dirac operators
- *Teresa Arias-Marco* 14:50–15:20
About the audibility of closed symmetric-like Riemannian manifolds



FRIDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Ilka Agricola

- *Albert Borbely* 16:10–16:40
Curve shrinking flow on graphs of bounded functions
- *Georges Habib* 16:50–17:20
Basic Cohomology for Riemannian foliations

Friday, August 27

Room 1

- *Steven Verpoort* 17:30–18:00
On Elastic Deformation Metrics.

Natural Operations and General Geometric Structures

FRIDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 2

chaired by I. Kolar

- *Sandra Gavino-Fernandez* 15:00–15:20
Three-dimensional homogeneous Lorentzian Ricci solitons
- *Manuel Fernández-López* 15:30–15:50
Some results on gradient Ricci solitons



FRIDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 2

chaired by I. Kolar

- *Liviu Octavian Popescu* 16:00–16:30
Metric connections on Lie Algebroids
- *David Brander* 16:40–17:10
Solving geometric Cauchy problems via infinite dimensional techniques
- *Omer Peksen* 17:20–17:40
On Invariants of Null Curves in the Pseudo-Euclidean Geometry

Representation Theory in Differential Geometry

FRIDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 3

chaired by Andreas Čap

- *Simon G. Gindikin* 15:00–15:50
Complex analysis on symmetric spaces



FRIDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 3

chaired by Andreas Čap

- *Yuryi Nikolayevsky* 16:00–16:40
Conformal relatives of symmetric spaces and conformal Osserman Conjecture

Riemannian Geometry and Submanifolds

SATURDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Franki Dillen

- *Giovanni Calvaruso* 9:00–9:40
Contact pseudo-metric geometry
- *Giulia Dileo* 9:50–10:10
On the geometry of almost contact metric manifolds of Kenmotsu type
- *SunHyang Chun* 10:15–10:35
The harmonic Reeb vector field on unit tangent sphere bundles
- *Jungchan Lee* 10:40–11:00
Some variational problems for almost Hermitian structures



SATURDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Giovanni Calvaruso

- *Sadahiro Maeda* 11:10–11:40
Geometry of the horosphere in a complex hyperbolic space
- *Hitoshi Furuhata* 11:50–12:20
Statistical submanifolds and spaces of constant Hessian sectional curvature



SATURDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Hitoshi Furuhata

- *Toshiaki Adachi* 14:00–14:40
On trajectory-spheres for Kähler manifolds
- *Mitsuhiro Itoh* 14:45–15:25
Fisher Information Geometry, Poisson Kernel and Asymptotical Harmonicity I
- *Hiroyasu Satoh* 15:30–16:00
Fisher Information Geometry, Poisson Kernel and Asymptotical Harmonicity II



SATURDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Teresa Arias-Marco

- *Andreas Arvanitoyeorgos* 16:10–16:50
Einstein metrics on Lie groups which are not naturally reductive
- *Ioannis Chrysikos* 17:00–17:20
Homogeneous Einstein metrics on generalized flag manifolds
- *Kazuyuki Hasegawa* 17:30–18:00
Surfaces of genus zero in self-dual Einstein manifolds and their twistor lifts

Natural Operations and General Geometric Structures

SATURDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 2

chaired by Jaroslav Hrdina

- *Van Hong Le* 9:00–9:30
Smooth structures on pseudomanifolds with conical singularities
- *Mancho Hristov Manev* 9:40–10:10
On the Geometry of Connections with Totally Skew-Symmetric Torsion on Manifolds with Complementary Tensor Structures and Indefinite Metrics
- *Dr Goo Ishikawa* 10:20–10:50
Geometry and singularity of framed curves in space forms and projective duality



SATURDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 2

chaired by Miroslav Kureš

- *Ivan Kolář* 11:10–11:40
On the fiber product preserving bundle functors
- *Josef Janyška* 11:50–12:20
Reduction theorem for general connections
- *Miroslav Doupovec* 12:30–13:00
On higher order connections



SATURDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 2

chaired by Miroslav Doupovec

- *Petr Vašík* 16:30–16:50
On the properties of higher order semiholonomic connections
- *Miroslav Kureš* 17:00–17:20
Remarks to semiholonomic jets and Cosserat media
- *Javier Seoane Bascoy* 17:30–17:50
Killing spinors and the Dirac operator on the Berger manifold $B^7 = Sp(2)/SU(2)$

Geometric Analysis and Mathematical Physics

SATURDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 3

chaired by D. Krupka

- *Demeter Krupka* 9:00–9:40
The Cartan form and its generalizations
- *Serge Preston* 9:50–10:30
Balance systems, forms of Lepage type and the Entropy Principle
- *Ekkehart Winterroth* 10:40–11:00
Local variational problems and conservation laws



SATURDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 3

chaired by D. Krupka

- *Roman Matsyuk* 11:10–11:30
Covariant form of the fourth order variational equation in Riemannian space and relativistic test particle motion.
- *Ján Brajerčík* 11:40–12:00
Order reduction of the Euler-Lagrange equations of higher order invariant variational problems on frame bundles
- *Erico Tanaka* 12:10–12:30
Hamilton Equations of General Relativity
- *Aleš Paták* 12:40–13:00
Hamiltonian Structure of the Yang-Mills Functional



Finsler Geometry and its Applications

SATURDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 3

chaired by Z. Shen

- *Laszlo Kozma* 16:00–16:30
Facts and problems of sub-Finslerian geometry
- *Radu Ioan Peter* 16:40–17:10
A Morse Index Theorem with variable endpoints for generalized Finsler metrics.

- *Xinyue Cheng* 17:20–17:50
On locally dually flat Finsler metrics

Invited plenary talks

SUNDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 1

- *Anna Fino* 9:00–9:50
Special Hermitian metrics
- *Zhongmin Shen* 10:00–10:50
Projectively Flat Finsler Metrics with Constant Flag Curvature



SUNDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 1

- *Andreas Čap* 11:30–12:20
Projective BGG equations, polynomial systems, and compactifications of Einstein manifolds



SUNDAY • 14:00–20:00

Conference Trip



Riemannian Geometry and Submanifolds

MONDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Andreas Arvanitoyeorgos

- *Rafael Lopez* 9:00–9:40
Surfaces with constant mean curvature in Sol geometry
- *Masami Sekizawa* 9:50–10:20
On natural Riemann extensions
- *Ana Hurtado* 10:30–11:00
The isoperimetric problem in the sub-Riemannian three-sphere



MONDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Rafael Lopez

- *Eduardo Garcia-Rio* 11:10–11:40
Geometry of modified Riemannian extensions
- *Esteban Calvino-Louzao* 11:50–12:20
Symmetric-like three-dimensional Lorentzian manifolds
- *Zdeněk Dušek* 12:30–13:00
Existence of homogeneous geodesics in homogeneous pseudo-Riemannian manifolds



MONDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Eduardo Garcia-Rio

- *Franki Dillen* 14:00–14:40
Lagrangian submanifolds of complex space forms
- *Roberto De Leo* 14:50–15:20
Partially Isometric Immersions and Free Maps
- *Miguel Domínguez-Vázquez* 15:30–15:50
Real hypersurfaces with constant principal curvatures in complex space forms



MONDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Jiří Vanžura

- *Jin-ichi Itoh* 16:00–16:30
Cut locus structures on graphs
- *Anton Galaev* 16:40–17:10
Pseudo-Riemannian manifolds with recurrent spinor fields
- *María Asunción Jiménez Grande* 17:15–17:35
The Liouville equation with boundary corners.
- *Alena Vanžurová* 17:40–18:00
Curvature homogeneous spaces of type (1,3)

Representation Theory in Differential Geometry

MONDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 2

chaired by M.G. Eastwood

- *Colleen Robles* 9:00–9:30
Homological Rigidity of Schubert Varieties in Compact Hermitian Symmetric Spaces
- *Martin Kolář* 9:40–10:10
Chern-Moser operators and symmetries of Levi degenerate manifolds
- *Boris Doubrov* 10:20–10:50
On the integrability of symplectic Monge-Ampère equations



MONDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 2

chaired by M.G. Eastwood

- *Matthias Hammerl* 11:10–11:40
Coupling solutions of BGG-equations in conformal spin geometry
- *Alexandr Medvedev* 11:50–12:10
Geometry of systems of third order ODEs and conformal geometry
- *Dennis The* 12:20–12:40
Conformal geometry of surfaces in the Lagrangian-Grassmannian and 2nd order PDE



MONDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 2

chaired by M.G. Eastwood

- *Christof Puhle* 14:00–14:20
Riemannian manifolds with structure group PSU(3)
- *Mihaela Veronica Pilca* 14:25–14:45
A Representation-Theoretical Proof of Branson's Classification of Elliptic Generalized Gradients
- *Natalia Bezvinnaya* 14:55–15:15
Holonomy algebras of pseudo-quaternionic-Kählerian manifolds of non-zero scalar curvature

- *Josef Šilhan* 15:20–15:50
Symmetries of invariant operators in conformal geometry



MONDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 2

chaired by M.G. Eastwood

- *Yoshinori Machida* 16:00–16:20
Monge-Ampere systems with Lagrange pairs
- *Konrad P. Schöbel* 16:30–16:50
Algebraic Integrability Conditions for Killing Tensors on Constant Sectional Curvature Manifolds
- *Hironao Kato* 17:00–17:20
Invariant flat projective structures and prehomogeneous vector spaces
- *Irina Peterburgsky* 17:30–17:50
Generalization of I. Schur Algorithm for the case of Abstract Valued Functions and its Applications

Geometric Analysis and Mathematical Physics

MONDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 3

chaired by Serge Preston

- *Tom Mestdag* 9:00–9:40
The inverse problem for Lagrangian systems with certain non-conservative forces
- *Donghua Shi* 9:50–10:30
Engineering applications of discrete geometric mechanics: two examples
- *Nobutada Nakanishi* 10:40–11:00
Lie 3-algebras with invariant metric



MONDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 3

chaired by Serge Preston

- *Olga Krupková* 11:10–11:50
Recent results in nonholonomic dynamics
- *Jose Navarro* 12:00–12:40
The inverse problem for the calculus of variations on natural bundles
- *Vyacheslav Sedykh* 12:40–13:00
On the topology of singularities of wave fronts



Natural Operations and General Geometric Structures

MONDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 3

chaired by Josef Janyška

- *Jaroslav Hrdina* 14:00–14:30
Lagrangian contact and CR structures and their morphisms.
- *Abraham David Smith* 14:40–15:00
A (Proposed) Geometric Framework for Hydrodynamic Integrability
- *Hideya Hashimoto* 15:10–15:30
Orthogonal almost complex structures of hypersurfaces of purely imaginary octonions.
- *Kazuyoshi Kiyohara* 15:40–16:00
Singular semi-classical approximation on Liouville surfaces

Monday, August 30

Room 3



MONDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 3

chaired by Josef Janyška

- *Dávid Szeghy* 16:10–16:30
The Maslov index for semi-Riemannian manifolds and its applications

Invited plenary talks

TUESDAY • 9:00–11:00 • FACULTY OF SCIENCES • ROOM 1

- *Franz Pedit* 9:00–9:50
Integrable aspects of constant mean curvature surfaces
- *Lorenz Schwachhöfer* 10:00–10:50
Hyperbolic Monopoles



TUESDAY • 11:00–13:00 • FACULTY OF SCIENCES • ROOM 1

- *Vladimír Souček* 11:30–12:20
On splitting operators in parabolic geometries



Riemannian Geometry and Submanifolds

TUESDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Zdeněk Dušek

- *Antonio Alarcon* 14:00–14:40
Null Curves in C^3 and Calabi-Yau type problems
- *Takamichi Satoh* 14:50–15:20
Curvature of Tangent Hyperquadric Bundles
- *Michal Marvan* 15:30–16:00
Some classification results of integrable surfaces



TUESDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 1

chaired by Antonio Alarcon

- *Stefan Rosemann* 16:10–16:40
h-projective Kaehlerian metrics on compact complex manifolds
- *Bayram Sahin* 16:50–17:20
Anti-invariant Riemannian maps from almost Hermitian manifolds
- *Siraj Uddin* 17:30–17:50
Warped product pseudo-slant submanifolds of nearly Kaehler manifolds

Representation Theory in Differential Geometry

MONDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 2

chaired by M.G. Eastwood

- *Dmitri V. Alekseevsky* 14:10–15:00
Geometry of Lagrangian Grassmanian and Monge-Ampere equations associated with a subdistribution of the contact distribution
- *Svatopluk Krýsl* 15:15–15:45
Complex of symplectic twistor operators



TUESDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 2

chaired by M.G. Eastwood

- *Petr Somberg* 16:00–16:30
Distributive Fourier transform and singular vectors in generalized Verma modules
- *Vojtěch Žádník* 16:35–17:05
Lie sphere geometry in low dimensions
- *Jan Gregorovič* 17:15–17:35
General construction of symmetric parabolic contact structures
- *Lenka Zalabová* 17:40–18:00
Symmetries of parabolic geometries

Geometric Analysis and Mathematical Physics

TUESDAY • 14:00–16:00 • FACULTY OF SCIENCES • ROOM 3

chaired by D. Krupka

- *Marcella Palese* 14:00–14:40
Geometric aspects of Lagrangian field theories on gauge-natural bundles
- *Alberto Navarro* 14:50–15:10
Lovelock's theorem revisited
- *Zbyněk Urban* 15:20–15:40



TUESDAY • 16:00–18:00 • FACULTY OF SCIENCES • ROOM 3

chaired by D. Krupka

- *Hiroshi Matsuzoe* 16:10–16:30
Geometry for Tsallis statistics and centroaffine geometry
- *Radka Malíkova* 16:40–17:00
A Generalization of Helmholtz Conditions to Differential Forms of Higher Degree
- *Martina Stolařová* 17:10–17:30
Perpendicular pursuit motion as a model of nonholonomic mechanical system
- *Daisuke Tarama* 17:40–18:00
Eigenvector Mapping for Manakov Equation on $\mathfrak{so}(3)$ as a Branched Covering of $P^2(\mathbb{C})$