

# **XXII GEOMETRICAL SEMINAR**

**May 26- May 31, 2024, Vrnjačka Banja, Serbia**

# **PROGRAM**

**XXII Geometrical seminar is dedicated to professor Stana Nikčević**

<b>Sunday, May 26, 2024</b>	
<b>9<sup>00</sup>-17<sup>00</sup></b>	<b>ARRIVAL DAY</b>
<b>17<sup>00</sup>-19<sup>00</sup></b>	<b>REGISTRATION</b>
	<b>DINNER</b>

## Monday, May 27, 2024

<b>7<sup>30</sup>-13<sup>00</sup></b>	<b>Registration</b>	
<b>9<sup>00</sup>-10<sup>00</sup></b>	<b>Opening ceremony (Zoran Rakić, Ljubica Velimirović, Eduardo Garcia-Rio)</b>	
<b>10<sup>00</sup>-10<sup>30</sup></b>	<b>Coffee break</b>	
<b>CHAIR</b>	<i>Zoran Rakić</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Miloš Đorić</i>	
<b>10<sup>30</sup>-11<sup>00</sup></b>	Stefan Ivanov	<i>The Riemannian curvature identities on Almost Complex Calabi-Yau with torsion 6-manifold and generalized Ricci solitons</i>
<b>11<sup>00</sup>-11<sup>30</sup></b>	Vladimir Rovenski	<i>Weak nearly Sasakian and weak nearly cosymplectic manifolds</i>
<b>11<sup>30</sup>-12<sup>00</sup></b>	Vladimir Dragović	<i>How to connect two most beautiful geometric theorems?</i>
<b>12<sup>00</sup>-12<sup>30</sup></b>	FAN Huijun	<i>Spectrum problem of Schrödinger operators related to Landau-Ginzburg models</i>
<b>12<sup>30</sup>-15<sup>00</sup></b>	<b>LUNCH BREAK</b>	
<b>CHAIR</b>	<i>Ljubica Velimirović</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Ana Velimirović</i>	
<b>15<sup>00</sup>-15<sup>30</sup></b>	Božidar Jovanović, Tijana Šukilović, Srđan Vukmirović	<i>Polynomial integrability of sub-Riemannian geodesic flows on compact Lie groups</i>
<b>15<sup>30</sup>-16<sup>00</sup></b>	Velichka Milousheva	<i>Timelike Surfaces with Parallel Normalized Mean Curvature Vector Field and their Canonical Parameters</i>
<b>16<sup>00</sup>-16<sup>30</sup></b>	Theodore Popelensky	<i>On certain new results on the Steenrod algebra \$mod p\$</i>
<b>16<sup>30</sup>-17<sup>00</sup></b>	Dmitri Alekseevsky	<i>Hopf Bundle, Listing's Law and Saccades 1</i>
<b>17<sup>00</sup>-17<sup>30</sup></b>	<b>COFFEE BREAK</b>	
<b>CHAIR</b>	<i>Srđan Vukmirović</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Milan Zlatanović</i>	
<b>17<sup>30</sup>-17<sup>50</sup></b>	İrem Küpeli Erken	<i>Some Remarks on Quasi-para-Sasakian Manifolds</i>
<b>17<sup>50</sup>-18<sup>10</sup></b>	Anton Vakhrov	<i>Geodesics in Gromov-Hausdorff class</i>
<b>18<sup>10</sup>-18<sup>30</sup></b>	Craig van Coevering	<i>Extremal Kahler metrics and the moment map</i>
<b>18<sup>30</sup>-18<sup>50</sup></b>	Admir Huseini	<i>Shape morphing using interpolation between implicit functions</i>
<b>CHAIR</b>	<i>Ivan Limonchenko</i>	<b>ROOM 2</b>
<b>Tech. Asst.</b>	<i>Miroslav Maksimović</i>	
<b>17<sup>30</sup>-17<sup>50</sup></b>	Jelena Stojanov	<i>Geometrical eigenproblem of various types higher order tensors in Riemannian space</i>
<b>17<sup>50</sup>-18<sup>10</sup></b>	Milica Stojanović	<i>3-Triangulation of polyhedra and their connection graphs</i>
<b>18<sup>10</sup>-18<sup>30</sup></b>	Andrijana Dedić	<i>Almost Kahler structures on complex hyperbolic space</i>
<b>18<sup>30</sup>-18<sup>50</sup></b>	Katarina Lukić	<i>The Jacobi-orthogonality and Osserman tensors</i>
<b>18<sup>50</sup>-19<sup>10</sup></b>	Đorđe Kocić	<i>The shape operator of real hypersurfaces in <math>S6(1)</math></i>
<b>DINNER</b>		

**Tuesday, May 28, 2024**

<b>CHAIR</b>	<i>Miroslava Petrović Torgašev</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Dorđe Kocić</i>	
<b>9<sup>00</sup>-9<sup>30</sup></b>	Alexandr Mishchenko	<i>Maslov index and infinitesimal Lagrangian manifolds</i>
<b>9<sup>30</sup>-10<sup>00</sup></b>	Dmitri Alekseevsky	<i>Hopf Bundle, Listing's Law and Saccades 2</i>
<b>10<sup>00</sup>-10<sup>30</sup></b>	Dmitry Millionshchikov	<i>Minimal models of nilmanifolds and complex structures</i>
<b>10<sup>30</sup>-11<sup>00</sup></b>	Alexey Tuzhilin	<i>Gromov-Hausdorff Distance and Geometric Optimization Problems</i>
<b>11<sup>00</sup>-11<sup>30</sup></b>		<b>COFFEE BREAK</b>
<b>CHAIR</b>	<i>Mancho Manev</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Miroslav Maksimović</i>	
<b>11<sup>30</sup>-12<sup>00</sup></b>	Cornelia-Livia Bejan	<i>Almost complex manifolds with Norden metrics</i>
<b>12<sup>00</sup>-12<sup>30</sup></b>	Anton Savin	<i>On the Index Problem On Manifolds with Group Actions. Contributions of Fixed Points</i>
<b>12<sup>30</sup>-13<sup>00</sup></b>	Ilja Gogić	<i>Applications of algebraic topology to operator algebras: Homogeneous C*-algebras</i>
<b>13<sup>00</sup>-13<sup>30</sup></b>	Miloš Arsenović	<i>Convergence theorems for sequences of operator valued functions</i>
<b>13<sup>30</sup>-15<sup>00</sup></b>		<b>LUNCH BREAK</b>
<b>CHAIR</b>	<i>Vladica Andrejić</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Miloš Dorić</i>	
<b>15<sup>00</sup>-15<sup>30</sup></b>	Ivan Limonchenko	<i>Persistent homology theory and toric topology</i>
<b>15<sup>30</sup>-16<sup>00</sup></b>	Handan Yıldırım	<i>Legendrian dual surfaces, lying in the 3-dimensional de Sitter space, of a spacelike curve in the 3-dimensional lightcone</i>
<b>16<sup>00</sup>-16<sup>30</sup></b>	Gleb Nosovskiy	<i>Implementation of Postprocessing Procedure of a Rapid Algorithm of Geometric Coding of Digital Images Using CUDA Architecture</i>
<b>16<sup>30</sup>-17<sup>00</sup></b>	Filip Živanović	<i>(Non) existence of Lagrangians in hyperkahler manifolds</i>
<b>17<sup>00</sup>-17<sup>30</sup></b>		<b>COFFEE BREAK</b>
<b>CHAIR</b>	<i>Ilja Gogić</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Ivan Dimitrijević</i>	
<b>17<sup>30</sup>-17<sup>50</sup></b>	Alexander Petkov	<i>Li-Yau sub-gradient estimates and Perelman-type entropy formulas for the heat equation in quaternionic contact geometry</i>
<b>17<sup>50</sup>-18<sup>10</sup></b>	Ekaterina Zhikhareva	<i>Semisimple algebraic Nijenhuis operators on small dimensional Lie algebras</i>
<b>18<sup>10</sup>-18<sup>30</sup></b>	Daniil Ilyukhin	<i>The Fermat-Torricelli problem in normed spaces</i>
<b>18<sup>30</sup>-18<sup>50</sup></b>	Khalifa Al Shaqsi	<i>Neutrosophic Touchard Polynomials for Subclass of Analytic Functions</i>
<b>CHAIR</b>	<i>Ljiljana Radović</i>	<b>ROOM 2</b>
<b>Tech. Asst.</b>	<i>Marko Stefanović</i>	
<b>17<sup>30</sup>-17<sup>50</sup></b>	Ljubica Velimirović	<i>Curvature based shape consideration</i>
<b>17<sup>50</sup>-18<sup>10</sup></b>	Marija Najdanović	<i>On deformations preserving dual arc length in dual 3-space</i>
<b>18<sup>10</sup>-18<sup>30</sup></b>	Lidija Rančić and Svetozar Rančić	<i>Basins of attractions of a new iterative method for finding simple zeros</i>
<b>18<sup>30</sup>-18<sup>50</sup></b>	Dušan Simjanović, Nenad Vesić	<i>Invariants for geometric mappings</i>
<b>18<sup>50</sup>-19<sup>10</sup></b>	Milica D. Cvetković, Ana D. Mitrović	<i>The Willmore energy variations and energy efficient architecture</i>
<b>DINNER</b>		

## Wednesday, May 29, 2024

<b>CHAIR</b>	<i>Mirjana Đorić</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Milan Pavlović</i>	
<b>9<sup>00</sup>-9<sup>30</sup></b>	Eduardo Garcia-Rio	<i>Critical metrics for quadratic curvature functionals</i>
<b>9<sup>30</sup>-10<sup>00</sup></b>	Branko Dragovich	<i>Nonlocal de Sitter Gravity <math>\sqrt{dS}</math> and the Dark Side of the Universe</i>
<b>10<sup>00</sup>-10<sup>30</sup></b>	Ivan Dimitrijević	<i>The Schwarzschild-de Sitter Metric of Nonlocal <math>\sqrt{dS}</math> Gravity</i>
<b>10<sup>30</sup>-11<sup>00</sup></b>	Đorđe Baralić	<i>The mod p Buchstaber invariant</i>
<b>11<sup>00</sup></b>	<b>GROUP PHOTO IN FRONT OF THE HOTEL</b>	
<b>11<sup>00</sup>-11<sup>30</sup></b>	<b>COFFEE BREAK</b>	
<b>CHAIR</b>	<i>Handan Yıldırım</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Jovana Ormanović</i>	
<b>11<sup>30</sup>-12<sup>00</sup></b>	Mancho Manev	<i>Ricci-Bourguignon Almost Solitons with Special Potential on Sasaki-like Almost Contact Complex Riemannian Manifolds</i>
<b>12<sup>00</sup>-12<sup>30</sup></b>	Josef Mikeš, Nadezda Guseva	<i>Geodesic mappings and their generalizations</i>
<b>12<sup>30</sup>-13<sup>00</sup></b>	Andronick Arutyunov	<i>On a coarse geometric approach to operator algebras</i>
<b>13<sup>00</sup>-13<sup>30</sup></b>	Muhittin Evren Aydin	<i>Pointwise rectifying submanifolds and anti-torqued vector fields</i>
<b>13<sup>30</sup>-15<sup>00</sup></b>	<b>LUNCH BREAK</b>	
<b>CHAIR</b>	<i>Velichka Milousheva</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Katarina Lukić</i>	
<b>15<sup>00</sup>-15<sup>20</sup></b>	Jelena Matović, Aleksandar Lipkovski	<i>Calculation of quiver representations of finite ring digraphs</i>
<b>15<sup>20</sup>-15<sup>40</sup></b>	Kaori Yamaguchi	<i>On statistics which are almost sufficient from the viewpoint of the Fisher metrics</i>
<b>15<sup>40</sup>-16<sup>00</sup></b>	Ariana Pitea	<i>Numerical algorithms on Hadamard manifolds</i>
<b>16<sup>00</sup>-16<sup>20</sup></b>	Nenad Đ. Lazarov	<i>The velocity of one dimension cosmos</i>
<b>16<sup>20</sup>-16<sup>40</sup></b>	Crina-Daniela Neacsu, Gabriel- Eduard Vilcu	<i>On the stability of the identity map of compact space forms</i>
<b>CHAIR</b>	<i>Alexander Petkov</i>	<b>ROOM 2</b>
<b>Tech. Asst.</b>	<i>Marko Stefanović</i>	
<b>15<sup>00</sup>-15<sup>20</sup></b>	Ljiljana Radović	<i>The geometrical personalization of human organs 3D models by using the Characteristic Product Features methodology</i>
<b>15<sup>20</sup>-15<sup>40</sup></b>	Milan Pavlović, Tijana Šukilović	<i>Integrability of the sub-Riemannian geodesic flow of the left-invariant metric on the Heisenberg group</i>
<b>15<sup>40</sup>-16<sup>00</sup></b>	Mustafa Özkan	<i>Fischer-Marsden Equation on Paracontact Geometry</i>
<b>16<sup>00</sup>-16<sup>20</sup></b>	Igor Uljarević	<i>Size in contact geometry</i>
<b>16<sup>20</sup>-16<sup>40</sup></b>	Miloš Petrović	<i>Composition of conformal and projective mappings of generalized Riemannian spaces in Eisenhart's sense preserving certain tensors</i>
<b>16<sup>40</sup>-17<sup>10</sup></b>	<b>COFFEE BREAK</b>	
<b>CHAIR</b>	<i>Cornelia-Livia Bejan</i>	<b>ROOM 1</b>
<b>Tech. Asst.</b>	<i>Milan Zlatanović</i>	
<b>17<sup>10</sup>-17<sup>30</sup></b>	Miroslav Maksimović, Milan Zlatanović	<i>Some curvature properties of quarter-symmetric metric connection</i>
<b>17<sup>30</sup>-17<sup>50</sup></b>	Vladislava Milenković	<i>New types of mappings of generalized Riemannian spaces</i>
<b>17<sup>50</sup>-18<sup>10</sup></b>	Miloš Đorić	<i>Yamabe CR solitons on Kahler manifolds</i>
	<b>DINNER</b>	

**Thursday, May 30, 2024**  
**Online talks and poster session**

<b>8<sup>00</sup>-13<sup>00</sup></b>	<b>OPTIONAL EXCURSION</b>	
<b>13<sup>00</sup>-15<sup>00</sup></b>	<b>LUNCH BREAK</b>	
<b>CHAIR</b>	<i>Miroslava Antić</i>	<b>ROOM 1 (GMT+2)</b>
<b>Tech. Asst.</b>	<i>Dorđe Ivanović</i>	Zoom meeting link: <a href="https://zoom.us/j/96145958853?pwd=b3VRTjAxUlRIWVVxL2NIUmpvMGMzZz09">https://zoom.us/j/96145958853?pwd=b3VRTjAxUlRIWVVxL2NIUmpvMGMzZz09</a> Passcode:992360 
<b>15<sup>00</sup>-15<sup>30</sup></b>	Andrei Vesnin	<i>On Yamada polynomial of spatial graphs and Jones polynomial of related links</i>
<b>15<sup>30</sup>-16<sup>00</sup></b>	Qing Li	<i>A continuum space is the infinitely great</i>
<b>16<sup>00</sup>-16<sup>30</sup></b>	Yurii Nikonorov	<i>On geodesic orbit nilmanifolds</i>
<b>16<sup>30</sup>-17<sup>00</sup></b>	Bang-Yen Chen	<i>Great antipodal sets and applications</i>
<b>CHAIR</b>	<i>Tijana Šukilović</i>	<b>ROOM 2 (GMT+2)</b>
<b>Tech. Asst.</b>	<i>Dragan Đokić</i>	Zoom meeting link: <a href="https://zoom.us/j/92971565122?pwd=R25xY1dXUWVjOEM3dGIUNUdsRTBHZZ09">https://zoom.us/j/92971565122?pwd=R25xY1dXUWVjOEM3dGIUNUdsRTBHZZ09</a> Passcode:537056 
<b>15<sup>00</sup>-15<sup>30</sup></b>	Vitaly Balashchenko	<i>Left-invariant f-structures on low-dimensional solvable Lie groups</i>
<b>15<sup>30</sup>-16<sup>00</sup></b>	Sergey E. Stepanov	<i>New vanishing theorem of conformal Killing forms</i>
<b>16<sup>00</sup>-16<sup>30</sup></b>	Ryszard Deszcz etc.	<i>Curvature properties of pseudosymmetry type of some 2-quasi Einstein Manifolds</i>
<b>16<sup>30</sup>-17<sup>00</sup></b>	Sergei Agapov	<i>Integrable geodesic flows with rational first integrals</i>
<b>17<sup>00</sup>-17<sup>30</sup></b>	<b>COFFEE BREAK AND POSTER SESSION</b>	
<b>CHAIR</b>	<i>Ljubica Velimirović</i>	<b>ROOM 1 (GMT+2)</b>
<b>Tech. Asst.</b>	<i>Dorđe Ivanović</i>	Zoom meeting link: <a href="https://zoom.us/j/99152243291?pwd=K2dRVDIxZzUyVG5jempUZmdwMTJsdz09">https://zoom.us/j/99152243291?pwd=K2dRVDIxZzUyVG5jempUZmdwMTJsdz09</a> Passcode:359716

<b>17<sup>30</sup>-18<sup>00</sup></b>	Louis Kauffman	<i>Knot Dynamics and Vortex Reconnection</i>	
<b>18<sup>00</sup>-18<sup>30</sup></b>	Denis Ilyutko	<i>Weight systems of framed chord diagrams: the Circuit-Nullity formula and Lie algebras</i>	
<b>18<sup>30</sup>-19<sup>00</sup></b>	Miguel Brozos-Vázquez	<i>Remarks on weighted Einstein manifolds</i>	
<b>CHAIR</b>	<i>Milan Zlatanović</i>	<b>ROOM 2 (GMT+2)</b>	
Tech. Asst.	<i>Nenad Vesić</i>	<p>Zoom meeting link:  <a href="https://zoom.us/j/97445615172?pwd=N2cvcUVPUsxFOG1BVE5NeC82ak5zUT09">https://zoom.us/j/97445615172?pwd=N2cvcUVPUsxFOG1BVE5NeC82ak5zUT09</a>  Passcode:431662</p>	
<b>17<sup>30</sup>-17<sup>50</sup></b>	Anastasiia Shubert	<i>Geometric Properties of the Inertia Tensor of a Rigid Body</i>	
<b>17<sup>50</sup>-18<sup>10</sup></b>	Elena N. Makhrova	<i>The structure of dendrites and dynamics of continuous maps on them</i>	
<b>18<sup>10</sup>-18<sup>30</sup></b>	Elena Kudryavtseva	<i>Generic bifurcations of tori in 3D integrable Hamiltonian systems</i>	
<b>18<sup>30</sup>-18<sup>50</sup></b>	Victor Aguilar	<i>Geometry Notation</i>	
<b>18<sup>50</sup>-19<sup>10</sup></b>	Pooja Rani and M.K. Vemuri	<i>The Brylinski beta function of a double layer</i>	
<b>20<sup>00</sup>-24<sup>00</sup></b>	<b>FAREWELL PARTY AND CLOSING CEREMONY</b>		

**Friday, May 31, 2024**

**DEPARTURE OF PARTICIPANTS**