



**19th Scientific-Professional Colloquium on
Geometry and Graphics
STARIGRAD - PAKLENICA
September 4–8, 2016**

ORGANIZER:

Croatian Society for Geometry and Graphics

PROGRAM

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SUNDAY, SEPTEMBER 4

17.00–19.00 Registration

19.00–21.00 DINNER

MONDAY, SEPTEMBER 5

7.00– 9.00 BREAKFAST

Morning session (Chairperson: M. Šimić Horvath)

9.00– 9.10 OPENING

9.10– 9.55 Plenary lecture
Ákos G. Horváth: *Constructive Curves in non-Euclidean Planes*

9.55–10.20 COFFEE BREAK

10.20–10.40 Z. Erjavec, J. Inoguchi: *Contact Constant Angle Surfaces in Sol₃*

10.40–11.00 Lj. Primorac Gajčić: *Minding Isometries of B–scrolls in Minkowski Space*

11.00–11.20 G. Csima, J. Szirmai: *Triangles in $\widetilde{\text{SL}}_2(\mathbb{R})$ Geometry*

11.20–11.30 PAUSE

11.30–11.50 E. Molnár, J. Szirmai: *Top Dense Ball Packings and Coverings by Hyperbolic Complete Orthoscheme Groups*

11.50–12.10 O. Röschel: *Polygons and Iteratively Regularizing Affine Transformations*

12.10–12.30 A. Joós: *On Nontriangulable 4-dimensional Polyhedra*

13.00–14.30 LUNCH



Afternoon session (Chairperson: E. Jurkin)

- 15.00–15.20 A. Gfrerrer, P. Zsombor-Murray: *Quadrics of Revolution on Given Points*
- 15.20–15.40 B. Odehnal: *On Algebraic Minimal Surfaces*
- 15.40–16.10 COFFEE BREAK
- 16.10–16.30 Z. Iljazović, B. Pažek: *Generalized Computable Intermediate Value Theorem*
- 16.30–16.50 L. Németh, L. Vörös: *Hypercube Models Constructed on Spherical Surfaces*
- 16.50–17.10 D. Velichová: *Minkowski Free-Form Laces*
- 17.10–17.20 PAUSE
- 17.20–17.40 J. Katona, G. Nagy KEM: *Some Simple Geometric Simulation*
- 17.40–18.00 S. B.-S. Béla, M. Szilvási-Nagy: *Adjusting Curvatures of B-spline Surfaces by Operations on Knot Vectors*
- 18.00–18.20 M. Glaurdić, J. Beban-Brkić: *Graph Colouring and its Application within Cartography*
- 19.00–21.00 DINNER

TUESDAY, SEPTEMBER 6

- 7.00– 9.00 BREAKFAST
- 9.00–19.00 EXCURSION - Paklenica, Zadar
- 19.00–21.00 DINNER



WEDNESDAY, SEPTEMBER 7

7.00– 9.00 BREAKFAST

Morning session (Chairperson: Z. Erjavec)

9.00– 9.45 Plenary lecture

Ž. Milin Šipuš: *On Mathematics Education in Croatia*

9.45–10.10 COFFEE BREAK

10.10–10.30 N. Kovačević: *Spatial Thinking and STEM*

10.30–10.50 B. Babály, A. Bölcskei, A. Kárpáti: *The Assessment of a Creative Design Course for the Development of Spatial Reasoning*

10.50–11.10 L. Cocchiarella: *A Glance at Stereotomy: a Key Step from Projective to Computational Cast*

11.10–11.30 D. Kušar, M. Volgemut: *Correlation Between Mental Rotation as one of the Spatial Abilities and Rotation as Individual Procedure in Descriptive Geometry*

11.30–11.40 PAUSE

11.40–12.00 B. Divjak, M. Maretić: *Geometrical Measurements in Learning Analytics*

12.00–12.20 D. Munđar, D. Horvat, J. Gusić: *Visualization and Prediction of Students' Course Progress*

12.20–12.40 I. Stipančić-Klaić: *Life and Work of Great Geometer Donald Coxeter*

13.00–14.30 LUNCH



Afternoon session (Chairperson: S. Gorjanc)

- 15.00–15.20 G. Glaeser: *From Lascaux over Fibonacci to the present: Geometry - Mathematics - Nature - Art*
- 15.20–15.40 J. Gunčaga, J. Zentko: *Folk Ornament as an Important Factor in Identifying a Plane Geometric Shape*
- 15.40–16.00 COFFEE BREAK
- 16.00–16.20 M. Zaiani, N. Powsner: *Inside-out Sphere: University Tram Station*
- 16.20–16.40 R. Gomez Müller, A. Mikhailova, L. Petersen, G. Ramirez: *Interchange Tram-Stop: a Stereotomic Design Experience*
- 16.40–17.00 E. Avramescu, L. Espinoza, D. A. F. Fernández: *Spherical Modulation Object, A Stereotomic Design Application for a Tram Stop at the Politecnico di Milano*
- 17.00–17.10 PAUSE
- 17.10–17.30 J. Gusić, D. Mundar, D. Horvat: *Visualization and Clustering of Population Pyramids*
- 17.30–17.50 I. Talata: *Examples of Convex Polytopes with Odd Translative Kissing Numbers*
- 17.50–18.10 I. Kodrnja: *Geometric Representation of η -quotients*
- 18.10–18.30 POSTER SESSION
- B. Divjak, D. Horvat, M. Maretić: *Searching for Patterns in the Learning of Mathematics with Help of Learning Analytics: A Tale of Two Cases*
- H. Halas: *Circular Curves of the 3rd Class in the Quasi-Hyperbolic Plane Obtained by a Projective Mapping*
- T. Hunjak, M. Jakuš, B. Žugec: *Sensitivity Analysis Based on Data Visualization*
- B. Jović, A. Čučaković, M. Nestorović: *Geometric Compositions in Art Installations*
- 19.00–.... COLLOQUIUM DINNER



THURSDAY, SEPTEMBER 8

7.00– 9.00 BREAKFAST

Morning session (Chairperson: Ž. Milin Šipuš)

9.00– 9.45 Plenary lecture

Z. Kolar-Begović, R. Kolar-Šuper: *Geometric Concepts in Some Special Classes of IM-Quasigroups*

9.45–10.10 COFFEE BREAK

10.10–10.30 S. Vidak: *Parallelograms and Equations in Some Special Subclasses of IM-Quasigroups*

10.30–10.50 M. Šimić Horvath, E. Jurkin, V. Volenec, J. Beban-Brkić: *On Brocard Points of Harmonic Quadrangle in $I_2(\mathbb{R})$*

10.50–11.10 G. Weiss: *Special Conics in a Hyperbolic Plane*

11.10–11.30 I. Božić Dragun, H. Halas, A. Sliepčević: *Introduction to the Planimetry of the Quasi-Elliptic Plane*

11.30–11.40 PAUSE

11.40–12.00 H. Stachel: *Auto-Isogonal Cubics*

12.00–12.20 G. Nagy KEM, J. Katona: *Characterization of the Motions of Fibrils*

12.20–12.40 H.-P. Schröcker: *Rational Ruled Surfaces as Trajectories of Minimal Degree Rational Motions*

12.40–12.50 CLOSING

13.00–14.30 LUNCH

Departure