



**20th Scientific-Professional Colloquium on
Geometry and Graphics
FUŽINE
September 3–7, 2017**

ORGANIZER:
Croatian Society for Geometry and Graphics

PROGRAM

PROGRAM COMMITTEE:
Ema Jurkin, Domen Kušar, Boris Odehnal, Jenő Szirmai

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SUNDAY, SEPTEMBER 3

17.00–19.00 Registration

19.00–21.00 DINNER

MONDAY, SEPTEMBER 4

7.00– 9.00 BREAKFAST

Morning session (Chairperson: M. Katić Žlepalo)

9.00– 9.10 OPENING

9.10– 9.55 Plenary lecture
M. Pfurner: *On Movable Single-Loop Mechanisms*

9.55–10.20 COFFEE BREAK

10.20–10.40 A. Gfrerrer, J. Lang: *A Geometrical Approach to Fully Variable Valve Control*

10.40–11.00 N.J. Wildberger: *Extending Rational Trigonometry into Higher Dimensions*

11.00–11.20 G. Notowidigdo: *Tetrahedron Centres in a General Metrical Framework*

11.20–11.30 PAUSE

11.30–11.50 L. Németh: *Hyperbolic Pascal Triangles and Fibonacci Word Fractals*

11.50–12.10 I. Talata: *On Volume Formulas for the Intersection of a Simplex and a Half-Space*

12.30–14.30 LUNCH



Afternoon session (Chairperson: Ž. Milin Šipuš)

- 15.00–15.20 I. Kodrnja, H. Koncul: *Nedian Triangle of Ratio η*
- 15.20–15.40 B. Odehnal: *Generalized Conchoids*
- 15.40–16.10 COFFEE BREAK
- 16.10–16.30 H. Stachel: *Reflection in Quadrics and Ivory's Theorem*
- 16.30–16.50 G. Glaeser: *Ellipsoids, Hyperboloids and other Quadrics in Geometry, Arts and Nature*
- 16.50–17.10 D. Tutić, M. Štanfel, A. Kuveždić Divjak, M. Triplat Horvat: *Poles of Inaccessibility in Croatia*
- 19.00–21.00 DINNER

TUESDAY, SEPTEMBER 5

- 7.00– 9.00 BREAKFAST
- 9.00–19.00 EXCURSION - Gorski kotar
- 19.00–21.00 DINNER



WEDNESDAY, SEPTEMBER 6

7.00– 9.00 BREAKFAST

Morning session (Chairperson: E. Jurkin)

9.00– 9.45 Plenary lecture

Z. Kovács: *Automated Reasoning Tools for Euclidean Planar Geometry in GeoGebra*

9.45–10.10 COFFEE BREAK

10.10–10.30 M. Stavrić, A. Wiltsche, M. Katić Žlepalo: *Workshop “Parametric Modelling and Digital Fabrication”*

10.30–10.50 L. Cocchiarella: *Geometry and Graphics in the Postgraduate Programmes for Architects and Engineers: an Experience in Progress*

10.50–11.10 S. Gorjanc: *Web Textbook for Descriptive Geometry*

11.10–11.20 PAUSE

11.20–11.40 M. Ribeiro Grimaldi, G. Augusto Fonseca: *Volumetry in Gaudi’s Works at Park Güell*

11.40–12.00 D. Kušar, L. Pletenac, M. Volgemut: *Digitalization of the Mental Rotation Test*

12.00–12.20 M. Bašić, B. Divjak, Ž. Milin Šipuš, E. Špalj: *Mathematics Education, Relevant, Interesting and Applicable – Are we Ready?*

12.30–14.30 LUNCH



Afternoon session (Chairperson: S. Gorjanc)

- 15.00–15.20 Á.G. Horváth: *On The Conjugate Diameters of an Ellipsoid. The Construction of Chasles in Practice*
- 15.20–15.40 G. Weiss: *Non-standard Aspects of Fibonacci-Series*
- 15.40–16.10 COFFEE BREAK
- 16.10–16.30 E. Molnár, J. Szirmai: *On Hyperbolic Crystallography, Cobweb Manifolds*
- 16.30–16.50 J. Szirmai: *Translation Triangles, Tetrahedra and Bisector Surfaces in Sol Geometry*
- 16.50–17.10 Z. Erjavec: *Generalization of Cayley Transform in 3D Homogeneous Geometries*
- 17.10–17.20 PAUSE
- 17.20–17.50 POSTER SESSION
M. Balaško, D. Tutić, A. Kuveždić Divjak: *Augmented Reality Sandbox in the Classroom*
J. Beban-Brkić, N. Sudeta: *Leopold Sorta. Students' Works at the Beginning of the 20th Century*
- 20.00–.... COLLOQUIUM DINNER



THURSDAY, SEPTEMBER 7

7.00– 9.00 BREAKFAST

Morning session (Chairperson: J. Beban Brkić)

9.00– 9.45 Plenary lecture
G. Csima, J. Szirmai: *Isoptic curves and surfaces*

9.45–10.10 COFFEE BREAK

10.10–10.30 M. Szilvási-Nagy: *Local Shaping of B-spline Surfaces by Building in a Given Pattern*

10.30–10.50 D. Velichová: *Minkowski Product of Free-Form Curves*

10.50–11.00 PAUSE

11.00–11.20 I. Martinjak: *Symmetric Associated Schemes and Finite Geometries*

11.20–11.40 I. Protrka, Lj. Primorac Gajčić, Ž. Milin Šipuš: *New Examples of Maximal Surfaces in Minkowski Space*

11.40–11.50 CLOSING

12.00–14.00 LUNCH

Departure