

5th Croatian Conference on Geometry and Graphics DUBROVNIK September 4–8, 2022

ORGANIZER: Croatian Society for Geometry and Graphics

PROGRAM

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

Donor: SAND d.o.o.

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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 (Chair: M. Šimić Horvath)

- 9.00- 9.10 Opening
- 9.10–9.50 Plenary lecture Goran Muić: Construction of Plane Models of Modular Curves
- 9.55 10.20 Coffee break
- 10.20-10.35 Anton Gfrerrer: Fitting a Triangle on Three Lines
- 10.40–10.55 Manfred L. Husty: Mulitple Solutions of DirectKinematics of 3-RPR Parallel Manipulators
- 11.00–11.15 Paul Zsombor-Murray: Rigid Body Displacement via Half-Turns
- 11.20-11.30 Pause
- 11.30–11.45 Tomislav Došlić: Block Allocation of a Sequential Resource and Related Topics
- 11.50–12.05 Hans Dirnböck, Gunter Weiss: Janos Bolyai's Angle Trisection Revisited
- 12.10–12.25 N J Wildberger: Paul Miller Duality Arising in a Symmetrical View of Pappus' Theorem

12.30-14.00 Lunch



Afternoon session (Chair: I. Kodrnja)

- 15.00–15.40 Plenary lecture Boris Odehnal: *Poncelet Porisms*
- 15.45 16.10 Coffee break
- 16.10–16.25 Hellmuth Stachel: Poncelet Grids Associated With a Projective Billiard
- 16.30–16.45 Zoltán Kovács, Thierry Dana-Picard, Tomás Recio: Inner Isoptics of a Parabola
- 16.50–17.05 László Németh: Exeter Transformation
- 17.10-17.20 Pause
- 17.20–17.35 Ružica Kolar-Šuper, Vladimir Volenec, Zdenka Kolar-Begović: On Properties of some Brocard Figures of a Triangle in the Isotropic Plane
- 17.40–17.55 Ema Jurkin: Loci of Centers in Pencil of Triangles in Isotropic plane
- 18.00–18.25 Georg Glaeser: The Beauty and Bio-Diversity of the Adriatic Sea An Appeal to Do Everything to Keep it That Way
- 19.00-21.00 Dinner

TUESDAY, SEPTEMBER 6

- 7.00-9.00 Breakfast
- 9.00–18.00 EXCURSION Elafiti islands cruise
- 19.00-21.00 Dinner



WEDNESDAY, SEPTEMBER 7

7.00-9.00 Breakfast

Morning session (Chair: Ž. Milin Šipuš)

- 9.00–9.40 Plenary lecture Rafael López: The Mathematical Model of a Dome and Some Related Problems
- 9.45 10.10 Coffee break
- 10.10–10.25 Zbyněk Šír: Rational Curves with Pythagorean Hodograph
- 10.30–10.45 Daniela Velichová: Pselical Surfaces and Armiloid
- 10.50-11.05 Leonard Weydemann: Games in Non-Euclidean Geometries
- 11.10-11.20 Pause
- 11.20–11.35 Georg Glaeser: Cross Science: Experience Geometry, Biology, and Physics. A Free Interactive Simulation Software
- 11.40–11.55 Albert Wiltsche, Kilian Hoffmann, Milena Stavrić: It Moves ... or Does It?
- 12.00–12.15 Cornelia Binder, Karl-Heinz Grass, Michaela Kraker, Christina Krause, Anton Gfrerrer, Milena Stavrić: Mathe Schatzkiste: Interactive Multimodal Learning Environments in Primary Mathematics Education

12.30-14.00 Lunch



Afternoon session (Chair: Z. Erjavec)

- 15.00–15.15 Domen Kušar, Mateja Volgemut: Remote Learning (at Descriptive geometry) and its Consequences
- 15.20–15.35 Petra Surynková: 3D Printed Models Manufacturing and the Application of Concrete Manipulatives into the Educational Process to Support Learning and Teaching Geometry
- 15.40–15.55 Rita Nagy-Kondor: Spatial Intelligence and Plane Sections
- 16.00 16.25 Coffee break
- 16.25–16.40 Maja Andrić, Neda Lovričević: *Teaching Descriptive Geometry in math-*STEM Context
- 16.45–17.00 Blaženka Divjak, Petra Žugec: Benefits and Downsides of e-assessment in Mathematics in Higher Education
- 17.05–17.20 Petra Žugec, Blaženka Divjak: A Model of a Student Perspective on e-assessment in Mathematics in Higher Education
- 17.30 17.50 Poster session

Gorana Aras-Gazić, Ana Laštre, Neda Lovričević: Implementation of Basic Geometric Transformations in the Construction Process

Cornelia Binder, Karl-Heinz Grass, Michaela Kraker, Christina Krause, Anton Gfrerrer, Milena Stavrić: *The Benefits of Educative Curriculum Materials for Discovery-Based Learning in Primary Mathematics Education*

Mirijam Demirović: On a Coloring Problem in the Plane

Ema Jurkin, Marija Šimić Horvath: On Complete Quadrilateral in Rectangular Coordinates

Helena Koncul, Nino Koncul, Dora Pokaz: *Generative Design of Surfaces* Helena Koncul, Nino Koncul, Dora Pokaz: *Helicoid and Twisted Towers*

20.00-24.00 Conference dinner



THURSDAY, SEPTEMBER 8

7.00-9.00 Breakfast

Morning session (Chair: E. Jurkin)

- 9.00–9.40 Plenary lecture Željka Milin Šipuš: On Lightlike Curves and Surfaces in Lorentz-Minkowski Space
- $9.45 {-} 10.10$ Coffee break
- 10.10–10.25 Ivana Filipan, Željka Milin Šipuš, Ljiljana Primorac Gajčić: Translation Surfaces with Constant Curvatures in 3-dimensional Lorentz-Minkowski Space
- 10.30–10.45 Zlatko Erjavec, Jun-ichi Inoguchi: Minimal Invariant and Minimal Totally Real Submanifolds in Sol₀⁴
- 10.50–11.05 Luiz C. B. da Silva, José D. da Silva: On Extrinsically Flat Surfaces That are Ruled and a Characterization of Riemannian Manifolds of Constant Curvature by Ruled Surfaces
- 11.10-11.20 Pause
- 11.20–11.35 István Talata: On the Separable Hadwiger Numbers of Platonic Solids
- 11.40–11.55 Ana Mimica: Realizations of Stasheff Politope by Means of Alternating Sign Matrices
- 12.00–12.15 Iva Kodrnja: Transcendental Reality
- 12.20 12.30 Closing
- 12.30-14.00 Lunch

Departure