



**4th Croatian Conference on  
Geometry and Graphics  
VODNJAN (PEROJ)  
September 2–6, 2018**

ORGANIZER:

Croatian Society for Geometry and Graphics

# PROGRAM

PROGRAM COMMITTEE:

Ema Jurkin, Domen Kušar, Boris Odehnal, Jenő Szirmai

DONORS:

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State Geodetic Directorate of the Republic of Croatia

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## SUNDAY, SEPTEMBER 2

17.00–19.00 Registration

19.00–21.00 DINNER

## MONDAY, SEPTEMBER 3

7.00– 9.00 BREAKFAST

### Morning session (Chair: M. Katić Žlepalo)

9.00– 9.10 OPENING

9.10– 9.50 Plenary lecture

R. López: *Experiments with Soap Films and Surfaces with Constant Mean Curvature*

9.55–10.20 COFFEE BREAK

10.20–10.35 M. Pember:  *$\Omega$ -surfaces and Weierstrass Type Representations*

10.40–10.55 I. Protrka, Ž. Milin Šipuš, Lj. Primorac Gajčić: *Harmonic Evolutes of B-scrolls with Constant Mean Curvature in Minkowski Space*

11.00–11.15 M. Marvan: *Equiareal Orthogonal Patterns on the Sphere*

11.20–11.30 PAUSE

11.30–11.45 G. Weiss: *The Three-Reflections-Theorem Revisited*

11.50–12.05 B. Odehnal: *A Convergent Triangle Tunnel*

12.10–12.25 T. Došlić: *Directed Packings of Circles in the Plane*

12.30–14.30 LUNCH



**Afternoon session** (Chair: E. Jurkin)

- 15.00–15.15 J. Beban-Brkić, A. Josić, T. Leventić: *Teaching Mathematics – a Task that Requires Continuous Adaptation*
- 15.20–15.35 M. Stavrić, A. Wiltsche, M. Katić Žlepalo: *Workshop “Parametric Modelling and Digital Fabrication”*
- 15.40–16.00 COFFEE BREAK
- 16.00–16.15 M. Rodić: *Geometry – Design – Textile – Fashion*
- 16.20–16.35 S. Tan, L. Cocchiarella: *Descriptive Geometry Education in Architecture with Mobile Augmented Reality Application*
- 16.40–16.55 L. Liu, L. Cocchiarella: *Meta-Geometry in Spatial Design. Perceptual Space Analysis in Chinese Landscape Architecture*
- 17.00–17.10 PAUSE
- 17.10–17.25 A. Gferrer: *Geometry, CAD-implementation and 3D-printing of Gears*
- 17.30–17.45 G. Glaeser: *Remarkable Kinematic Mechanisms in the Animal World*
- 17.50–18.05 D. Kušar, M. Volgemut: *Compositional Principles between Architectural Plans and Reality*
- 19.00–21.00 DINNER

**TUESDAY, SEPTEMBER 4**

- 7.00– 8.15 BREAKFAST
- 8.30–19.00 EXCURSION - Vodnjan, Pula, Brijuni
- 19.00–21.00 DINNER



## WEDNESDAY, SEPTEMBER 5

7.00– 9.00 BREAKFAST

### Morning session (Chair: J. Beban-Brkić)

9.00– 9.40 Plenary lecture

M. Kerber: *The Persistent Homology Pipeline Shapes, Computations, and Applications*

9.45–10.10 COFFEE BREAK

10.10–10.25 M. Bátorová, P. Chalmovianský: *Envelopes of Systems of Convex Curves and their Applications*

10.30–10.45 E. M. Troll: *Caustics of Free-formed Curves*

10.50–11.05 Z. Erjavec, J. Inoguchi: *Killing Magnetic Curves in Sol Space*

11.10–11.20 PAUSE

11.20–11.35 G. Csima: *Isoptic Curves of Cycloids*

11.40–11.55 F. Nagy, R. Kunkli, M. Hoffmann: *Isoptic Surfaces of Large Concave Polyhedral Meshes*

12.00–12.15 H. Stachel: *Logarithmic Spirals in Kinematics*

12.30–14.30 LUNCH



**Afternoon session** (Chair: S. Gorjanc)

- 15.00–15.40 Plenary lecture  
J. Rowlett: *Incomputable yet Physically Tangible Numbers*
- 15.45–16.10 COFFEE BREAK
- 16.10–16.25 Z. Kolar-Begović, R. Kolar-Šuper, V. Volenec: *Parallelograms in Vakarelov Quasigroups*
- 16.30–16.45 L. Németh: *Domino Tilings of Euclidean and Hyperbolic Boards*
- 16.50–17.05 E. Molnár: *Algorithmic Classification of Compact Fundamental Polygons for Plane Groups (Poincaré-Delaunay Problem)*
- 17.10–17.20 PAUSE
- 17.20–17.35 I. Božić Dragun, H. Koncul: *Playing with the Constructions of Limaçon*
- 17.40–17.55 M. Katić Žlepalo, E. Jurkin: *On some Curves Related to Pencil of Triangles in Isotropic Plane*
- 18.00–18.20 POSTER SESSION  
M. Šimić Horvath, G. Aras-Gazić, B. Pažek: *Shades and Shadows for Architecture and Design Students*  
D. Nikolić, M. Vučić, R. Štulić, M. Petrović: *Grapho-Analytical Framework for Geometric Supersymmetry*
- 20.00–.... COLLOQUIUM DINNER



## THURSDAY, SEPTEMBER 6

7.00– 9.00 BREAKFAST

### Morning session (Chair: Ž. Milin Šipuš)

9.00– 9.40 Plenary lecture

I. Talata: *Geometric Constructions of Polyhedra*

9.45–10.10 COFFEE BREAK

10.10–10.25 D. Velichová: *Measures*

10.30–10.45 L. Vörös: *A Set of Planar and Spatial Tessellations Based on a Compound 3D Model of the 8D Cube*

10.50–11.05 M. Baniček, I. Kodrnja: *3D Static Equivalency Using Grassmann Algebra*

11.10–11.20 PAUSE

11.20–11.35 M. Stavrić, A. Wiltsche: *Monostable and Bistable Auxetics Structures*

11.40–11.55 O. Röschel: *Regularizing Quadrangles in the Möbius Plane*

12.00–12.10 CLOSING

12.30–14.00 LUNCH

Departure