



**17th Scientific-Professional Colloquium on
Geometry and Graphics
RASTOKE
September 4–8, 2013**

ORGANIZER:

Croatian Society for Geometry and Graphics

PROGRAM

COMMITTEE:

Maja Andrić, Jelena Beban Brkić, Sonja Gorjanc,
Ema Jurkin (vice-president), Mirela Katić Žlepalo, Nikolina Kovačević,
Vlasta Szivoczka, Nikoleta Sudeta, Marija Šimić Horvath (president)

CO-ORGANIZERS:

Ministry of Science, Education and Sports of the Republic of Croatia
The Foundation of the Croatian Academy of Sciences and Arts
The Foundation of the University of Rijeka

SPONSOR:

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WEDNESDAY, SEPTEMBER 4

17.00–19.00 Registration

19.00–21.00 DINNER

THURSDAY, SEPTEMBER 5

7.00– 9.00 BREAKFAST

Morning session (Chairperson: Marija Šimić Horvath)

9.30– 9.40 OPENING

9.40–10.25 Plenary lecture
Paul Zsombor-Murray: *Finding principal axes and moments of inertia*

10.25–10.45 COFFEE BREAK

10.45–11.05 Josef Schadlbauer, Paul Zsombor-Murray, Manfred L. Husty: *2-wire planar positioning of the 4-bar coupler curve via the kinematic mapping*

11.05–11.25 László Vörös: *New animations of symmetric patterns based on space-filling zonotopes*

11.25–11.35 PAUSE

11.35–11.55 Viera Čmelková: *Partridge number of a triangle is at least 4*

11.55–12.15 Roland Kunkli, József Szabó: *The generalization of Szabó's Theorem for rectangular cuboids with an example application*

12.30–14.00 LUNCH



Afternoon session (Chairperson: Ema Jurkin)

- 15.00–15.45 Plenary lecture
Imre Juhász: *An interpolating trigonometric spline curve*
- 15.45–16.05 COFFEE BREAK
- 16.05–16.25 Márta Szilvási-Nagy, Szilvia Béla: *Approximation of B-spline curves or surfaces with third order continuity*
- 16.25–16.45 Ferenc Nagy, Roland Kunkli, Miklós Hoffmann: *A fast algorithm for finding special isoptic curve of Bézier surfaces*
- 16.45–16.55 PAUSE
- 16.55–17.15 Boris Odehnal: *Spherical conchoids*
- 17.15–17.35 Georg Glaeser: *The sophisticated geometry of compound eyes and some applications in bionics*
- 17.35–18.10 SMALL EXCURSION - Rastoke
- 19.00–21.00 DINNER

FRIDAY, SEPTEMBER 6

- 7.00– 9.00 BREAKFAST
- 9.00–18.00 EXCURSION - Plitvice Lakes National Park
- 19.00–21.00 DINNER



SATURDAY, SEPTEMBER 7

7.00– 9.00 BREAKFAST

Morning session (Chairperson: Jelena Beban Brkić)

9.30– 10.15 Plenary lecture

Anton Gfrerrer: *Mechanisms and their visualization*

10.15–10.35 COFFEE BREAK

10.35–10.55 Emil Molnár, Jenő Szirmai: *Densest geodesic ball packings by some $\sim \mathbf{SL}_2\mathbf{R}$ space groups*

10.55–11.15 Jenő Szirmai: *On hypersphere packings in the 5-dimensional hyperbolic space*

11.15–11.25 PAUSE

11.25–11.45 Željka Milin Šipuš: *Bonnet surfaces and harmonic evolutes of surfaces in the Minkowski 3-space*

11.45–12.05 Daniela Velichová: *Minkowski triples of point sets*

12.30–14.00 LUNCH

Afternoon session (Chairperson: Mirela Katić Žlepalo)

15.00–15.20 István Talata: *Teaching experience on the course Space Geometry with Computers at Szent Istvan University*

15.20–15.40 Sonja Gorjanc, Ema Jurkin: *Results of Project Introducing 3D Modeling into Geometry Education at Technical Colleges*

15.40–16.00 Daniel Guralumi: *Computer graphics and descriptive geometry*

16.00–16.20 COFFEE BREAK

16.20–16.40 Luigi Cocchiarella: *Education vs profession in architectural domain locating geometry in the digital delay*

16.40–17.00 Bernadett Babály, Attila Bölcskei, László Budai, Andrea Kárpáti, János Katona: *Virtual learning environments and online assessment of spatial abilities*

17.00–17.10 PAUSE

17.10–17.30 Marija Šimić Horvath, Nikoleta Sudeta: *The experience of teaching in English at the Faculty of Architecture, University of Zagreb*

17.30–17.50 Bojana Rudić, Jelena Beban Brkić: *On transition curves used in road design*

20.30–.... COLLOQUIUM DINNER



SUNDAY, SEPTEMBER 8

7.00– 9.00 BREAKFAST

Morning session (Chairperson: Sonja Gorjanc)

- 9.30– 10.15 Plenary lecture
Hellmuth Stachel: *Conics and quadrics for ever*
- 10.15–10.35 COFFEE BREAK
- 10.35–10.55 Ivana Božić, Helena Halas: *From the geometry of quasi-hyperbolic plane I*
- 10.55–11.15 Ivana Božić, Helena Halas: *From the geometry of quasi-hyperbolic plane II*
- 11.15–11.25 PAUSE
- 11.25–11.45 Iva Kodrnja: *Modeling some ruled surfaces using Rhino and Grasshopper*
- 11.45–12.05 Lidija Pletenac: *Modeling of higher order surfaces and project of e-course development*
- 12.05–12.25 Kinga Kruppa, Kornél Bana, Roland Kunkli, Miklós Hoffmann: *An improved method to construct intersection curves of skinning surfaces*
- 12.25–12.35 CLOSING
- 13.00–14.00 LUNCH
- Departure