



**3rd Croatian Conference on Geometry and  
Graphics  
SUPETAR  
September 7–11, 2014**

**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 Szirovicza, Nikoleta Sudeta, Marija Šimić Horvath (president)

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of Croatia and the Foundation of Croatian Academy of Sciences and Arts.



## SUNDAY, SEPTEMBER 7

17.00–19.00 Registration

19.00–21.00 DINNER

## MONDAY, SEPTEMBER 8

7.00– 9.00 BREAKFAST

### **Morning session** (Chairperson: Marija Šimić Horvath)

9.00– 9.10 OPENING

9.10– 9.55 Plenary lecture

Otto Röschel: *Planar kinematics and overconstrained spatial mechanisms*

9.55–10.15 COFFEE BREAK

10.15–10.35 Hellmuth Stachel: *On the rigidity of simplices with prescribed areas of 2-facets*

10.35–10.55 Anton Gfrerrer: *Geometry and kinematics of a convertible's rear side window*

10.55–11.05 PAUSE

11.05–11.25 László Németh: *A new type of lemniscate*

11.25–11.45 Tomislav Došlić: *Combinatorial denaturalization of the Kepler-Bouwkamp constant*

11.45–12.05 Boris Odehnal: *Distances and central projections*

12.30–14.30 LUNCH



**Afternoon session** (Chairperson: Ema Jurkin)

- 15.00–15.45 Plenary lecture  
Vladimir Volenec: *Three-bar curves, asymmetric propellers and idempotent medial quasigroups*
- 15.45–16.05 COFFEE BREAK
- 16.05–16.25 Helena Halas: *Curves of the 3rd class obtained by line-inversion in the quasi-hyperbolic plane*
- 16.25–16.45 Nikolina Kovačević, Vlasta Szivoczka: *On the Maclaurin mapping in the quasi-hyperbolic plane*
- 16.45–17.05 Georg Glaeser: *Nature and numbers – But where are the numbers?*
- 17.05–17.15 PAUSE
- 17.15–17.35 László Vörös: *Newer animations of symmetric patterns based on space-filling zonotopes*
- 17.35–17.55 János Katona, Emil Molnár, István Prok, Jenő Szirmai: *On visualization of regular polytopes, algorithmic problems*
- 19.00–21.00 DINNER

**TUESDAY, SEPTEMBER 9**

- 7.00– 8.00 BREAKFAST
- 8.00–20.00 EXCURSION - Island of Brač
- 20.00–21.00 DINNER



## WEDNESDAY, SEPTEMBER 10

7.00– 9.00 BREAKFAST

### Morning session (Chairperson: Tomislav Došlić)

9.00– 9.45 Plenary lecture

Cornelie Leopold: *Structural and geometric concepts for architectural design processes*

9.45–10.05 COFFEE BREAK

10.05–10.25 Lidia Korotaeva: *Architecture and face*

10.25–10.45 Merve Taşlıoğlu: *The density analysis diagrams of the public areas which are affected from user actions with an interactive map*

10.45–11.05 Roberto Vdović, Morana Pap, Davor Andrić: *Parametric microstructure geometry for construction elements*

11.05–11.15 PAUSE

11.15–11.35 Neda Milić, Miklós Hoffmann, Tibor Tómacs: *Adaptation of image content for users with colour vision deficiencies*

11.35–11.55 Vojtech Bálint, Michal Kaukič, Štefan Peško: *Solving one maximization problem using a computer*

11.55–12.15 Henrietta Tomán, András Hajdu: *Fractals in genomic data visualization*

12.30–14.30 LUNCH



**Afternoon session** (Chairperson: Željka Milin Šipuš)

- 15.00–15.20 Sonja Gorjanc, Iva Kodrnja: *Perspective – optional course for master students at the Faculty of Civil Engineering in Zagreb*
- 15.20–15.40 István Talata: *Computer-aided geometry education at Ybl Faculty of Szent István University*
- 15.40–16.00 COFFEE BREAK
- 16.00–16.20 Viera Čmelková: *Introduction to orthogonal axonometry via GeoGebra*
- 16.20–16.40 Domen Kušar, Mateja Volgemut: *Is there a decline in spatial abilities of students?*
- 16.40–17.00 Luigi Cocchiarella: *Surfing projective space homology in graphic education*
- 17.00–17.10 PAUSE
- 17.10–17.30 Ivanka Stipančić-Klaić: *The impact of technology on learning*
- 17.30–17.50 Ildikó Papp, Roland Kunkli, Robert Tornai: *Geometry in science promotion events*
- 17.50–18.20 POSTER SESSION  
Sonja Gorjanc, Ema Jurkin: *Monoid surfaces through the absolute conic in the Euclidean space*  
Sonja Gorjanc, Iva Kodrnja: *Students' assignments – optional course Perspective*  
Anja Kostanjšak: *Perceiving architectural space through different folding techniques*  
Rita Nagyné Kondor, Adrien Árvainé Molnár: *Geometric problems occurring in engineering sciences*  
Robert Tornai, Roland Kunkli, Ildikó Papp: *GLSL processing in image manipulations*
- 20.30–.... CONFERENCE DINNER



## THURSDAY, SEPTEMBER 11

7.00– 9.00 BREAKFAST

### Morning session (Chairperson: Sonja Gorjanc)

9.00– 9.45 Plenary lecture

Zlatko Erjavec: *3D homogeneous geometries and some special surfaces*

9.45–10.05 COFFEE BREAK

10.05–10.25 Friedrich Manhart: *On DINI-surfaces in Euclidean and Minkowski geometry*

10.25–10.45 Daniela Velichová: *Minkowski set algebra*

10.45–10.55 PAUSE

10.55–11.15 Gunter Weiss, Sybille Mick: *Non-standard visualizations of Fibonacci numbers and the golden mean*

11.15–11.35 Norman J Wildberger: *Rational trigonometry and relativistic geometries*

11.35–11.55 Ema Jurkin: *Circular cubics in pseudo-Euclidean plane*

11.55–12.05 CLOSING

12.30–14.30 LUNCH

Departure