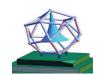


# Sixth Central- and Eastern European Conference on Computer Algebra- and Dynamic Geometry Systems in Mathematics Education



### 7-10 September, 2016 Targu Mures, Romania

# **Schedule**

# Wednesday, 7 September 2016

8:30-9:00 Registration

9:00-9:30 Welcome

9:30-10:30 **Plenary I**:

**Christian Bokhove:** *Using technology for maths teaching and learning: instructional design, digital books and automated feedback* 

10:30-11:00 *Coffee Break* 

11:00-12:30 Parallel Session I

#### Room 230 Room 231

The impact of digital tools on students' learning of geometry, working group Chair: Zsolt Lavicza	eduTPS working group Chair: Zlatan Magajna
39. Ruti Segal, Avi Sigler and Moshe Stupel: Problem Posing and Problem Solving of Geomatrical Configurations by Integrating Dynamic Geometry Software	1.Vanda Santos and Pedro Quaresma:  Adaptive Strategies in the Web Geometry  Laboratory
40. Victor Oxman, Avi Sigler and Moshe Stupel: "What if not" investigation method with the aid of Geogebra of a geometric configuration of quadrilaterals that through a dynamic process aspire to be square	2. Zoltán Kovács and Csilla Sólyom-Gecse: GeoGebra Tools with Proof Capabilities
41. Avi Sigler, Victor Oxman and Ruti Segal: The development of interesting connections between the radiuses of circles that are inscribed in or by triangles, and the discovery of unique features, with algebraic manipulations and dynamic exploration.	28. Jiri Blazek and Pavel Pech: Computeraided investigation of sets of points in geometry

The impact of digital tools on students' learning of geometry, working group Chair: Anatoli Kouropatov	eduTPS working group Chair: Pedro Quaresma
30. Valentyna Pikalova: Teaching and Learning Math Behind Computer Science with the Help of GeoGebra and Python	7. Walther Neuper: Reasoning by CAS is a dead end!
52. Kristóf Fenyvesi, Zsolt Lavicza, Diego Lieban, Imre Nyögéri, Ho-gul Park & Taeyoung Choi:  STEAM Workshops for Collaborative Problem Solving Based on Connecting Hands-on 4dframe Activities with the Implementation of Geogebra	15. Miguel A. Abanades, Francisco Botana, Zoltan Kovacs, Tomas Recio and Csilla Solyom-Gecse: Automatic Discovery in GeoGebra: First Steps
46. Partová Edita: Diagnostics and the development of geometric knowledge through a variety of constructing tools	20. Walther Neuper: Engineering mathematics intuitive and formal

15:30-16:00 *Coffee Break* 

**Poster**: 11. Mohamed El-Demerdash, Nataly Essonnier, Jana Trgalova and Christian Mercat: *Digital Resources to Enhance Creative Mathematical Thinking in a Biomathematics Context* 

#### 16:00-17:30 Parallel Session III

The impact of digital tools on students' learning of geometry, working group	eduTPS working group
Chair: Valentyna Pikalova	Chair: Walther Neuper
43. Lilla Korenova: <i>GeoGebra in elementary education</i>	32. Zlatan Magajna: Technology as a support for generating and presenting proofs in geometry
12. Peter Körtesi: Using GeoGebra to study the Famous Curves of the MacTutor History of Mathematics archive	44. Pedro Quaresma: Intelligent Geometry
8. Anatoli Kouropatov, Regina Ovodenko and Sara Hershkovitz: <i>The impact of digital tools on students' learning of geometry</i>	Summary of the group's work

# **Thursday, 8 September 2016**

9:00-10:30 Parallel Session IV

Using Sets of Mathematical Tools with Copy and Paste, working group	Modeling and Experimental Approach in Math Classrooms, working group
24. Matija Lokar and Paul Libbrecht: Obstacles in combining the use of various tools in solving mathematical problems — why is Copy/Paste often useless	Chair: János Karsai  10. Mohamed El-Demerdash, Pedro Lealdino and Christian Mercat: The Effectiveness of Kinesthetic Approach in Developing Mathematical Function Graphs Recognition and Understanding at University Level
25. Paul Libbrecht and Matija Lokar:  Expectations of the Copy and Paste Action for Formulæ	22. János Karsai, Zsolt Vizi, Eszter Szénási and Lőrinc Pósfai: <i>Modeling approach in</i> teaching math students
26. Masataka Kaneko and Setsuo Takato: Collaborative use of KeTCindy with CAS	27. Přemysl Rosa and Vladimíra Petrášková: Potential of Maple as tool for improving financial education of future teachers

10:30-11:00 *Coffee Break* 

11:00-12:00 **Plenary II:** 

**Noah Dana-Picard:** The usage of technology to revive classical topics in mathematics

12:00-13:30 Lunch

### 13:30-15:00 Parallel Session V

Chair: Matija Lokar	Modeling and Experimental Approach in Math Classrooms working group Chair: János Karsai
18. Eleonóra Stettner: <i>Geomatech Competitions</i>	29. Štefan Berežný, Kristína Budajová, Eva Komová and Henrich Glaser-Opitz: The MATH and the Vernier System at Faculty of Aeronautics
38. Norbert Bogya, Lajos Szilassi and	34. Ildikó Perjesi-Hámori and Csaba
Zoltán Kovács: Euclid, Bolyai and the	Sárvári: More or less? Using CAS in
exemplification in teaching of geometry	Mathematics teaching based on 15 years of experience
36. Štefan Berežný: Implementation of Research Findings in the Laboratories of DMTI	Summary of the group's work

**Poster:** 37. János Karsai, Lőrinc Pósfai, Eszter Szénási and Zsolt Vizi: *Teaching Mathematical Modeling to first-year math students: experiences of a modeling course in 2016* 

15:30-16:30 CADGME 2018 in Coimbra: presentation by Pedro Quaresma

### **Plenary III:**

**Zsolt Lavicza:** *GEOMATECH: Integrating Technology into Primary and Secondary School Teaching to Enhance Mathematics Education in Hungary* 

16:30-18:30 City of Bolyai's -walk through the city

19:00-22:00 Conference dinner

# Friday, 9 September 2016

9:00-10:30 Parallel Session VI

Chair: Paul Libbrecht	Chair: Csaba Sárvári
48. Natalija Budinski and Dragica Milinkovic: Learning mathematics trough real life situation with use of educational software	31. Denys Stolbov: Visual models of cipher algorithms for students' learning information security
35. Rein Prank, Evari Koppel, Joosep Kibal, Katrin Valdson and Joosep Norma: <i>Word</i> <i>Problem Solution Environment TEKSTER</i>	21. Martin Günzel, Tereza Suchopárová and Helena Binterová: <i>Tessellations in lower</i> <i>secondary school classes</i>
13. Gregor Jerše and Matija Lokar:  Learning and teaching programming and numerical methods with a system for automatic assessment	16. Norbert Bogya: Playing card game with finite projective geometry

10:30-11:00 *Coffee Break* 

11:00-12:30 Workshops

19. Eleonóra Stettner: What We Learned	6. Liudmyla Gryzun: Digital and didactic
From the Children?	tools for the development of
	interdisciplinary curriculum for pre-service
	Mathematics teachers' training
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12:30-14:00 Lunch

14:00 - 16:00 **Workshops** 

4. János Karsai: With or without Delay:	9. Masataka Kaneko, Setsuo Takato, Satoshi
Simple Dynamic Systems with Mathematica	Yamashita, Koji Nishiura, Hideyo
	Makishita: Introduction to KeTCindy
	Unification of Dynamic Geometry and
	High-Quality Printing

16:00-16:30 *Coffee Break* 

16:30-17:30 **Plenary IV:** 

**Morten Misfeldt:** *Teaching mathematics with reasoning tools: learning, teaching and curriculum planning* 

17:30 – 18:30 Question time - scriber and moderator: **Paul Libbrecht** 

19:00- Dinner

# Saturday, 10 September 2016

### 8:30-10:00 Parallel Session VII

Chair: Christian Mercat	Chair: Masataka Kaneko
45. Joris van der Hoeven: <i>GNU TeXmacs as a CAS front-end</i>	49. Natalija Budinski: Geogebra as a tool for connecting Materials Science and high school Mathematics
47. Zsolt Lavicza, Mamdouh Soliman and Maryam Al-Kandary: <i>Improving students' learning through technology integration in Kuwait</i>	42. Satoshi Yamashita: Producing Class Materials with KeTCindy — Programming Styles, Creating Portal Site and the Evaluation
50. Natalija Budinski: Geogebra and origami-connection between technology and hands-on activities	53. Hunor Nagy and Pál Kupán: Improving the students performance using digital tools in geometry instruction

10:00-10:30 Coffee Break

10:30-11:30 **Plenary V:** 

**Zoltán Kátai:** Learning algorithms in technologically and artistically enhanced interactive environments

11:30-12:00 Closing

12:00-13:00 Lunch

15:00-22:00: **Optional excursion to Sighișoara**/ **Segesvár**/**Schäßburg** will be offered for a separate fee.