

**Sapientia Hungarian University of Transylvania**

# **5th International Conference on Mathematics and Informatics**

September 2-4, 2015  
Târgu Mureş/Marosvásárhely, Romania

## **Program**

7.30–12.00 Registration  
8.00–8.45 Breakfast  
8.45 Opening ceremony

**Plenary session (room 231)**

*Chairman: Zoltán Kása*

9.00–9.50 **Zoltán Ésik:** Equational properties of fixed point operations  
10–10.50 **Hanspeter Mössenböck:** Truffle – A Self-optimizing Language Implementation Framework  
11–11.50 **Zoltán Horváth:** Research Projects in EIT Digital Innovation Areas at ELTE Faculty of Informatics

12 Lunch

**Section A (room 231)** -----

*Chairman: Grigore Ştefan Sălăgean*

14.00–14.25 **Zsolt Darvay, Petra-Renáta Takács:** New interior-point algorithm for convex quadratic symmetric cone optimization  
14.25–14.50 **István Fazekas:** A scale-free random graph model  
14.50–15.15 **Ágnes Orsolya Páll-Szabó, Olga Engel:** Integral properties of certain class of analytic functions defined by Ruscheweyh derivative with varying arguments  
15.15–15.30 Coffee break

*Chairman: Zsolt Darvay*

15.30–15.55 **Grigore Ștefan Sălăgean:** Some characteristic properties of analytic functions

15.55–16.20 **Zoltán Makó:** The properties of alternative algorithms for estimating unobserved product characteristics in the Pure Characteristics Demand Model

16.20–17.00 Coffee break

*Chairman: Zoltán Makó*

17.00–17.25 **László Aszalós:** Practical distance-constrained labelling of graphs

17.25–17.50 **Attila Perecsényi:** Weights of Cliques in a Random Graph Model Based on Three-Interactions

17.50–18.15 **Gábor Fábián:** On topological properties of polygonal meshes

18.15–18.40 **Szilárd Nagy:** Mathematical approach to Stackelberg equilibria

**Section B (room 230)** -----

*Chairman: László Aszalós*

14.00–14.25 **Margit Antal:** The influence of password difficulty on keystroke dynamics using touchscreen-based devices

14.25–14.50 **Tibor Ásványi:** Detecting negative cycles with Bellman-Ford FIFO

14.50–15.15 **Ádám Tóth:** Performance Analysis of Computational Cluster Networks

15.15–15.30 Coffee break

*Chairman: Szabolcs Iván*

15.30–15.55 **Gábor Fazekas:** Quality Assurance Of Learning Systems Using SQC

15.55–16.20 **Péter Fehér:** Simple, scalable FPGA based DNA sequencer for exhaustive search of substitution errors

16.20–16.45 **Ágnes Fülöp:** Chaotic behaviour of the lattice Yang-Mills equations by parallel algorithm

16.45–17.00 Coffee break

- 17.00–17.25 **Szabolcs Iván:** Algebraic characterization of temporal logics on forests  
17.25–17.50 **Katalin Tünde Jánosi-Rancz:** Sapiness – Sentiment Analyser  
17.50–18.15 **Zoltán Kátai:** Characterizing the distance between formal and informal organizational structures

18.15–18.30 Coffee break

*Chairman: Zoltán Kátai*

- 18.30–18.55 **Imre Kilián:** Application examples of Contralog: a Prolog conform forward chaining engine  
18.55–19.20 **Tamás Bérczes:** Performance Analysis of Sensor Networks by using finite-source queueing systems

19.30 Dinner

### September 3

8.00–9.00 Breakfast

#### Plenary session (room 231)

*Chairman: Csaba Farkas*

- 9.00–9.50 **Tibor Pogány:** Mathieu series approach to the Hilbert inequality  
10.00–10.50 **Alexandru Kristály:** Interpolation inequalities on manifolds: from best constants to rigidities  
11.00–11.50 **Saminathan Ponnusamy:** On Univalent Harmonic Mappings

12.00 Lunch

#### Section A (room 231) -----

*Chairman: Alexandru Kristály*

- 13.30–13.55 **Dragana Jankov Maširević:** Summations of Neumann series containing modified Bessel function of the first kind terms  
13.55–14.20 **Sanjeev Singh:** Monotonicity and functional inequalities for certain classes of special functions

**Section B (room 230)** -----

*Chairman: Zoltán Kása*

13.30–13.55 **János Pánovics:** Assessments in SmartCampus

13.55–14.20 **Zsuzsanna Szalayné Tahy:** How to Teach Programming Indirectly – Using Spreadsheet Application

15.00–18.00 City tour

19.40–20.00 Flute & Harp chamber music (Zsuzsa Domahidi, Orsolya Nagy) in the foyer

20.00 Banquet (2<sup>nd</sup> floor)

**September 4**

8.00–9.00 Breakfast

**Plenary session (room 231)**

*Chairman: Róbert Szász*

9.00–9.50 **Francesca Faraci:** Two solutions for a singular elliptic problem indefinite in sign

10.00–10.50 **Árpád Baricz:** Laguerre-Pólya class of real entire functions, Fourier critical points and applications to special functions

11.00–11.15 **Zoltán Kása:** Miklós Szilágyi 75

12.00 Lunch

**Section A (room 231)** -----*Chairman: Pál Kupán*

- 14.00–14.25 **Nihat Yagmur:** Certain Geometric Properties of Generalized Struve Functions  
 14.25–14.50 **Halit Orhan:** Bounds for the second Hankel determinant of certain bi-univalent function  
 14.50–15.15 **Róbert Szász:** Geometric properties of the Gamma,  $1/\Gamma$ ,  $\Gamma_q$ , and  $1/\Gamma_q$  functions  
 15.15–15.30 Coffee break

*Chairman: Halit Orhan*

- 15.30–15.55 **Csaba Farkas:** Singular Poisson equations on Finsler–Hadamard manifolds  
 15.55–16.20 **Erhan Deniz:** Radii of alpha-convexity of some normalized Bessel functions of the first kind  
 16.20–16.45 **Murat Çağlar:** Partial sums of the normalized Lommel functions

*Chairman: Erhan Deniz*

- 16.50–17.15 **Ildikó Mezei:** Schwarz symmetric solutions for E-differentiable functionals  
 17.15–17.40 **Anca Grad:** A Generalized Interior Approach to Constrained Set-Valued Duality  
 17.40–18.05 **Pál Kupán:** About strong starlikeness conditions

**Section B (room 230)** -----*Chairman: Imre Kilián*

- 14.00–14.25 **Gábor Márton:** Unit Testing and Friends in C++  
 14.25–14.50 **László Szatmári:** Learning of proofs with computer assistance  
 14.50–15.15 **Gyöngyvér Márton:** Some security problems in Android Applications  
 15.15–15.30 Coffee break

*Chairman: Gyöngyvér Márton*

- 15.30–15.55 **Marian Muresan:** The power of Mathematica  
 15.55–16.40 **Szilárd Révész:** Turan type reverse Markov inequalities for compact sets of the complex plane  
 16.40–17.10 **Lehel István Kovács:** Towers of Hanoi - where paradigms are changed

19 Dinner

21.45 Football: Hungary–Romania (TV broadcast)