

SECOND ANNOUNCEMENT

The Fifth International Workshop-2012

**CONSTRUCTIVE METHODS FOR NON-LINEAR BOUNDARY
VALUE PROBLEMS**

28 June – 1 July, 2012, Tokaj, Hungary

organized by
**Institute of Mathematics,
University of Miskolc, Hungary**

and

Institute of Mathematics of the Academy of Sciences of Czech Republic

in cooperation with the

**Miskolc Regional Committee of the Hungarian Academy of Sciences,
Junior Mathematical Society Miskolc**

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Constructive Methods for Non-Linear Boundary Value Problems, Fifth International Workshop-2012,
28 June - 1 July, 2012, Tokaj, Hungary ([http://www.uni-
miskolc.hu/uni/dept/gepesz/matematika/workshop](http://www.uni-miskolc.hu/uni/dept/gepesz/matematika/workshop))

PROGRAM

June 28, Thursday

13:00 – 19:00	Registration
19:00 - 20:00	<i>A short opening address and introduction to the history of Tokaj</i>
20:30	<i>Welcome dinner</i>

June 29, Friday

For the accompanying persons:

8:20 – 10:20	<i>Guided walk through the historical part of Tokaj</i>
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The main program:

07:00	<i>Breakfast</i>
8:10 – 8:40	Alberto Cabada (Santiago de Compostela, University of Santiago de Compostela, Spain) and J.Angel Cid (University of Vigo, Ourense, Spain) <i>Existence of singular periodic oscillations of a satellite via singular Sturm-Liouville problems on the half line</i>
8:45 – 9:15	Michal Feckan and Michal Pospíšil (Comenius University and Mathematical Institute, Slovak Academy of Sciences, Bratislava) <i>Forced travelling waves in discretized FPU lattices</i>
9:20 – 9:50	Vasile Berinde and Madalina Pacurar (Tech.University Cluj, CUN Baia Mare and Cluj-Napoca, Babes-Bolyai University, Romania) <i>Stability of k-step fixed point iterative methods</i>
9:55 – 10:15	Iván Szántó (University of Santa Maria, Valparaiso, Chile) <i>Coexistence of limit cycles and invariant algebraic curves</i>

- 10:20 – 10:40 **Break. Conference group photo in front of the building of the High School**
- 10:40 – 11:10 **Irena Rachůnková** (Palacký University, Olomouc, Czech Republic)
BVPs with state-dependent impulses
- 11:15 – 11:35 **Felix Sadyrbayev** (Inst. of Math. and Comput. Sci., Uni. of Latvia, Latvia)
On oscillatory solutions of boundary value problems
- 11:40 – 12:10 **Alexander Domoshnitsky** (Ariel University , Ariel, Israel)
Positivity of Green's operator for functional differential boundary value problems
- 12:15 **Lunch**
- 13:15 – 13:35 **Milan Tvrđy** (IM AS CR, Praha, Czech Republic)
Existence of periodic solutions of one singular problem modeling the valvelles pumping
- 13:40 – 14:00 **Marta Gadotti** (Universidade Estadual Paulista, Rio Claro, Brazil)
Stability results for impulsive functional differential equations
- 14:05 – 14:35 **László Simon** (L. Eötvös University of Budapest, Hungary)
Semilinear hyperbolic functional differential equations
- 14:40 – 15:00 **Jose-Angel Cid** (University of Vigo, Ourense, Spain) **and Alberto Cabada** (Santiago de Compostela, University of Santiago de Compostela, Spain)
Comparison principles for the Hill's equation
- 15:05 – 15:15 **Break**
- 15:15 – 15:35 **Mykola Perestyuk and Petro Feketa** (Taras Shevchenko National University of Kyiv, Kyiv, Ukraine)
On invariant manifolds of extensions of dynamical systems on torus
- 15:40 – 16:00 **Maria Dobkevich** (Daugavpils University, Daugavpils, Latvia)
Non-monotone approximations of solutions of quasi.linear BVP
- 16.05 – 16:35 **Adrian Petrusel** (Babes- Bolyai University, Cluj-Napoca, Romania)

- Coupled fixed points for multivalued operators and applications*
- 16:40 – 17:00 **Gabriela Petrusel** (Babes- Bolyai University, Cluj-Napoca, Romania)
Ulam-Hyers stability in gaunge spaces and applications
- 17:05 – 17:15 **Break**
- 17:15 – 17:35 **Kateryna Marynets** (Uzhgorod National University, Uzhgorod, Ukraine)
On parametrization for boundary- value problems with m-point nonlinear restrictions
- 17:40 – 18:00 **Natliya Shchobak** (Uzhgorod National University, Uzhgorod, Ukraine)
Investigation of solutions of some non-linear BVPs with argument deviation
- 18:05 – 18:25 **András Rontó** (Institute of Mathematics, Academy of Sciences of Czech Republic) **and Miklós Rontó** (University of Miskolc, Hungary)
Periodic successive approximations and interval halving
- 19:00 **Workshop dinner**

June 30, Saturday

- 07:20 **Breakfast**
- 8:20 – 8:40 **Nicolae Pop** (Technical University Cluj, CUN Baia Mare, Romania)
On the variational inequalities in elasticity with frictional contact
- 8:45 – 9:05 **Marcel-Adrian Serban** (Babes-Bolyai University, Cluj-Napoca, Romania)
Step method for a system of integral equations from biomathematics
- 9:10 – 9:30 **Zdenek Svoboda** (Brno University of Technology, Brno, Czech Republic)

Delayed Matrix Functions and Lambert Functions

- 9:35 - 10:05 **Josef Diblík** (Brno University of Technology, Brno, Czech Republic)
Positive and oscillating solutions of delayed equations
- 10:10-10:30 **Vasyl Marynets** (Uzhgorod National University, Uzhgorod, Ukraine)
On one approach for approximate construction of solutions of boundary value problems for hyperbolic equations
- 10:35- 10:45 **Break**
- 10:45 – 11:05 **Ihor Korol** (Uzhgorod National University, Uzhgorod, Ukraine)
Existence and approximate construction of periodic solutions of differential-algebraic systems
- 11:10 – 11:30 **Fernández Tojo Fernando Adrián** (School of mathematics, Santiago de Compostela, University of Santiago de Compostela, Spain)
Existence results for equations with reflections
- 11:35 – 11:55 **Octavia-Maria Nica** (Babes-Bolyai University, Cluj-Napoca, Romania)
Existence results for nonlocal initial value problems
- 12:00– 12:20 **Cristina-Lavinia Urs** (Babes-Bolyai University, Cluj-Napoca, Romania)
Coupled fixed points for nonlinear operators and applications
- 12:25 – 12:45 **Oana Maria Mlesnite** (Babes-Bolyai University, Cluj-Napoca, Romania)
Existence and Ulam-Hyers stability results for coincidence problems
- 13:00 **Lunch**
- 14:00 – 14:20 **Ruben Figueroa** (University of Santiago de Compostela, Santiago de Compostela, Spain)

Discontinuous differential equations with delayed or advanced arguments

- 14:25 – 14:45 **Calin-Constantin Serban** (West University of Timisoara, Timisoara , Romania)
Ground state and mountain pass solutions for discrete $p(\cdot)$ -Laplacian
- 14:50 – 15:10 **Kateryna Mamsa** (National Technical University of Ukraine, Kyiv)
and Yuriy Perestyuk (Taras Shevchenko National University of Kyiv, Ukraine)
About one class of discontinuous dynamical systems on the plane
- 15:15 – 15:35 **Vita Pylypenko** (National Technical University of Ukraine, Kyiv, Ukraine)
Slowly growing solutions of singular linear functional differential systems
- 15:40 – 15:50 **Break**
- 15:50 – 16:10 **Krisztián Hriczó** (Universty of Miskolc, Hungary)
Solution of boundary value problem on infinite interval
- 16:15 – 16:35 **Suzete Afonso** (Universidade Estadual Paulista, Rio Claro, Brazil)
Stability of functional differential equations with impulsive perturbations via generalized ordinary differential equations
- 19:15 **Discussion and wine tasting**

July 1, Sunday

07:30

Breakfast. Departure.