

Program and Abstracts
of the
International Conference on
Differential and Difference Equations

organized by

Department of Mathematics and Computing
Faculty of Information Technology
University of Pannonia

and

Regional Centre of the Hungarian Academy of Sciences
Veszprém

July 14-17, 2008
Veszprém, Hungary

**The conference is dedicated to
Professor István Győri
on the occasion of his 65th birthday**

Organizing Committee:

F. Hartung (Co-Chairman), M. Pituk (Co-Chairman), O. Fenyvesi, L. Horváth, Cs. Mihálykó, Gy. Mike, B. Slezák.

Plenary Speakers: S. Elaydi (USA), I. Győri (Hungary), T. Krisztin (Hungary), G. Ladas (USA), E. Liz (Spain), R. Obaya (Spain)

Invited Speakers: M. Akhmet (Turkey), G. Bognár (Hungary), A. Cabada (Spain), J. Čermák (Czech Republic), T. Csendes (Hungary), W. Desch (Austria), A. Domoshnitsky (Israel), O. Došlý (Czech Republic), B. Garay (Hungary), K. Hangos (Hungary), T. Hara (Japan), Z. Horváth (Hungary), H. Matsunaga (Japan), R. Medina (Chile), E. Orbán-Mihálykó (Hungary), P. Řehák (Czech Republic), A. Reinfelds (Latvia), D. W. Reynolds (Ireland), M. Rontó (Hungary), G. Röst (Hungary), C. J. Schinas (Greece), Š. Schwabik (Czech Republic), P.L. Simon (Hungary), J. Sugie (Japan), J. Tabor (Poland).

The **Conference Proceedings** will be published as a Special Issue of International Journal of Qualitative Theory of Differential Equations and Applications edited in honor of István Győri's 65th birthday. All participants of the conference are invited to submit a paper to this Special Issue. The papers have to be submitted in electronic form (Latex, pdf or ps) to DDE2008 Organizing Committee. The deadline of submission is November 30, 2008. Please keep the length of the manuscript below 12 pages for plenary speakers, 8 pages for invited speakers, and 6 pages for contributed speakers. The papers will go through the usual referee process.

Please submit your paper to:
DDE2008 Organizing Committee
email: dddea@szt.uni-pannon.hu

Conference location: Regional Centre of the Hungarian Academy of Sciences
Veszprém, Vár Str. 37

Acknowledgement: The conference is partially supported by the Faculty of Information Technology, University of Pannonia.

Time tables

Monday, July 14

9:00-9:25	<i>Opening Session</i>	
9:30-10:20	Elaydi	
	<i>Coffee Break</i>	
10:50-11:20	Cabada	
11:20-11:50	Došlý	
11:50-12:20	Sugie	
	<i>Lunch Break</i>	
14:15-14:45	Desch	
14:45-15:15	Akhmet	
15:15-15:45	Röst	
15:45-16:15	Schinas	
	<i>Coffee Break</i>	
16:45-17:05	Pituk	Slezák
17:05-17:25	Rhouma	Szörényi
17:25-17:45	Lóczi	Vieru-Lazu
19:00-	<i>Welcome Party</i>	

Tuesday, July 15

8:00-8:50	Krisztin	
8:55-9:45	Obaya	
	<i>Coffee Break</i>	
10:15-10:45	Csendes	
10:45-11:15	Čermák	
11:15-11:45	Bognár	
11:45-12:15	Hara	
	<i>Lunch Break</i>	
14:15-14:45	Hangos	
14:45-15:15	Řehák	
15:15-15:45	Medina	
15:45-16:15	Matsunaga	
	<i>Coffee Break</i>	
16:45-17:05	Bánhelyi	Dzhalladova
17:05-17:25	Hartung	L. Horváth
17:25-17:45	Oliveira	Lakshmi Narayan
17:45-18:05	Yilmaz	
20:00-	<i>Organ Concert</i>	

Time tables

Wednesday, July 16

8:00-8:50	Ladas	
8:55-9:25	Reynolds	
9:25-9:55	Schwabik	
9:55-10:25	Z. Horváth	
	<i>Coffee Break</i>	
11:00-11:20	Paez Chavez	Kropielnicka
11:20-11:40	Czernous	Elabbasy
11:40-12:00	Herrmann	Nagy
	<i>Lunch Break</i>	
14:30-	<i>Excursion</i>	

Thursday, July 17

8:00-8:50	Liz	
8:55-9:45	Győri	
	<i>Coffee Break</i>	
10:15-10:45	Tabor	
10:45-11:15	Rontó	
11:15-11:45	Domoshnitsky	
11:45-12:15	Orbán-Mihálykó	
	<i>Lunch Break</i>	
14:00-14:30	Simon	
14:30-15:00	Reinfelds	
15:00-15:30	Garay	
15:30-15:40	<i>Closing Session</i>	

Program

Monday, July 14

9:00-9:25 **Opening Session**

Plenary Lecture

Chair: G. Ladas

9:30-10:20 **Saber Elaydi:** Attenuance vs resonance in populations with fluctuating habitats

Invited Lectures

Chair: E. Liz

10:50-11:20 **Alberto Cabada:** Existence of solutions for discontinuous functional impulsive equations

11:20-11:50 **Ondřej Došlý:** Friedrichs extension of operators defined by symmetric banded matrices

11:50-12:20 **Jitsuro Sugie:** Asymptotic stability for three-dimensional linear time-varying systems

Invited Lectures

Chair: R. Medina

14:15-14:45 **Wolfgang Desch:** Integral equations with stochastic forcing

14:45-15:15 **Marat Akhmet:** Differential equations with discontinuities

15:15-15:45 **Gergely Röst:** Strong resonances for periodic delay differential equations

15:45-16:15 **Christos J. Schinas:** Boundedness, attractivity and stability of a rational difference equation with two periodic coefficients

Contributed Talks, Section A

Chair: H. Matsunaga

16:45-17:05 **Mihály Pituk:** A Poincaré type theorem for second order difference equations

17:05-17:25 **M. Ben Haj Rhouma:** The effect of harvesting and stocking in a Leslie/Gower model

17:25-17:45 **Lajos Lóczy:** The discretized fold, transcritical and pitchfork bifurcations: conjugacy results

Contributed Talks, Section B

Chair: P. Simon

16:45-17:05 **Bernát Slezák:** On the first integrals

17:05-17:25 **Miklós Szörényi:** Polynomial approximation of the solutions of delay differential equations

17:25-17:45 **Alina Vieru-Lazu:** Ljapunov pairs in the nonlinear case

19:00- **Welcome Party**

Tuesday, July 15

Plenary Lectures

Chair: W. Desch

- 8:00-8:50 **Tibor Krisztin:** Global structures for equations with delayed feedback
8:55-9:45 **Rafael Obaya:** Stability and extensibility results for abstracts skew-product semiflows

Invited Lectures

Chair: D. W. Reynolds

- 10:15-10:45 **Tibor Csendes:** Verified solution of differential equations
10:45-11:15 **Jan Čermák:** Qualitative properties of the exact and discretized pantograph equation
11:15-11:45 **Gabriella Bognár:** The series expansions of the solution of some nonlinear problems involving the p -Laplacean
11:45-12:15 **Tadayuki Hara:** Limit sets in two-dimensional linear differential systems with quasiperiodic coefficients

Invited Lectures

Chair: J. Tabor

- 14:15-14:45 **Katalin Hangos:** Estimating domains of attraction using maximal Lyapunov functions
14:45-15:15 **Pavel Řehák:** Power type comparison theorems for half-linear equations
15:15-15:45 **Rigoberto Medina:** Stabilizability for nonlinear systems of difference equations
15:45-16:15 **Hideaki Matsunaga:** Delay- dependent and delay-independent stability criteria for delay differential equations

Contributed Talks, Section A

Chair: A. Rontó

- 16:45-17:05 **Balázs Bánhelyi:** A computer-assisted proof for chaotic behaviour and control of the forced pendulum
17:05-17:25 **Ferenc Hartung:** On linearized stability in state-dependent delay equations
17:25-17:45 **José J. Oliveira:** Boundedness and global exponential stability for delayed differential equations with applications
17:45-18:05 **Enes Yilmaz:** Impulsive Hopfield-type neural networks system with piecewise constant argument

Contributed Talks, Section B

Chair: É. Orbán-Mihálykó

- 16:45-17:05 **Irada A. Dzhalladova:** Optimization of the system of linear differential equations with random coefficients
17:05-17:25 **László Horváth:** Generalization of special Bihari type integral inequalities in measure spaces
17:25-17:45 **Kunderu Lakshmi Narayan:** A prey-predator model with a cover linearly varying with the prey population and an alternative food for the predator
20:00- **Organ Concert**

Wednesday, July 16

Plenary Lecture

Chair: O. Došlý

8:00-8:50 **Gerasimos Ladas:** Open problems and conjectures in difference equations

Invited Lectures

Chair: A. Cabada

8:55-9:25 **David W. Reynolds:** Exact convergence rates to equilibrium for a logistic equation with infinite delays

9:25-9:55 **Štefan Schwabik:** Stability results for impulsive FDE's using generalized ODE's

9:55-10:25 **Zoltán Horváth:** Stability and positivity of dynamical systems

Contributed Talks, Section A

Chair: A. Domoshnitsky

11:00-11:20 **Joseph Paez Chavez:** Discretizing dynamical systems with a codimension two singularity

11:20-11:40 **Wojciech Kiejstut Czernous:** Infinite systems of first order PFDE's with mixed conditions

11:40-12:00 **Leopold Herrmann:** Oscillatory properties of almost periodic solutions to the second order abstract evolution equations

Contributed Talks, Section B

Chair: A. Reinfelds

11:00-11:20 **Karolina Kropielnicka:** Implicit difference functional inequalities and applications

11:20-11:40 **Elmetwally M. Elabbasy:** Interval oscillation for second order nonlinear differential equations with a damping term

11:40-12:00 **Bálint Nagy:** Bifurcations of a one-loop circadian rhythm model

14:30- **Excursion**

Thursday, July 17

Plenary Lectures

Chair: Š. Schwabik

- 8:00-8:50 **Eduardo Liz:** Global stability and bifurcations in a delayed discrete population model
8:55-9:45 **István Győri:** Limit formulas for the solutions of linear Volterra difference equations

Invited Lectures

Chair: G. Röst

- 10:15-10:45 **Jacek Tabor:** On hyperbolic IFS
10:45-11:15 **Miklós Rontó:** Constructive investigation of some linear boundary value problems for differential equations with a special type of argument deviation
11:15-11:45 **Alexander Domoshnitsky:** Maximum principles for first order functional differential equations
11:45-12:15 **Éva Orbán-Mihálykó:** Application of advanced and delay integro-differential and difference equations in insurance mathematics and process engineering

Invited Lectures

Chair: Z. Horváth

- 14:00-14:30 **Peter L. Simon:** Epidemic dynamics on contact networks
14:30-15:00 **Andrejs Reinfelds:** Decoupling and simplifying of discrete dynamical systems
15:00-15:30 **Barnabas M. Garay:** Some chaotic properties of the β -hysteresis transformation
15:30-15:40 **Closing Session**