



ICDEA
2017

23RD INTERNATIONAL CONFERENCE ON DIFFERENCE EQUATIONS AND APPLICATIONS

JULY 24 – JULY 28, TIMIȘOARA, ROMANIA



PROGRAM

**23rd International Conference
on Difference Equations
and Applications
ICDEA 2017**

PROGRAM

Timișoara, July 24-28, 2017

Monday, July 24

Time	Aula Magna "Ioan Curea"		Amphitheatre A01	
8:00-9:30	Registration			
9:30-9:50	Opening Ceremony			
	Chair	Speaker	Chair	Speaker
10:00-11:00	H. Smith	S. Elaydi		
11:00-11:30	Coffee Break			
11:30-12:30	S. Elaydi	L. Gardini		
15:00-15:30			T. Hüls	M. Gyllenberg
15:30-16:00				B. Polyak
16:00-16:30				I. Sushko
16:30-17:00	Coffee Break			
17:00-17:30			M. Bohner	A. Reinfelds
17:30-18:00				S. Georgiev
18:00-18:30				M. Unal
19:30-22:30	Welcome Dinner			

- Aula Magna "Ioan Curea" - first floor
- Amphitheatre A01 (Senate Hall) - ground floor

Monday, July 24

Time	Amphitheatre A11		Amphitheatre A02	
8:00-9:30	Registration			
9:30-9:50				
	Chair	Speaker	Chair	Speaker
10:00-11:00				
11:00-11:30	Coffee Break			
11:30-12:30				
15:00-15:30	B. Mestel	I. Bula	K. Patidar	M. Saburov
15:30-16:00		M. Radin		F. Georgescu
16:00-16:30		A. Soos		L. Biriş
16:30-17:00	Coffee Break			
17:00-17:30	Y. Hamaya	M. Guzowska	P. Hasil	V. Pravec
17:30-18:00		K. Saito		J. Tesarčík
18:00-18:30		L. Cerboni Baiardi		O. Brandibur
19:30-22:30	Welcome Dinner			

- Amphitheatre A02 - ground floor
- Amphitheatre A11 - first floor

Tuesday, July 25

Time	Aula Magna "Ioan Curea"		Amphitheatre A01	
8:30-9:00	Registration			
	Chair	Speaker	Chair	Speaker
9:00-10:00	P. Kloeden	H. Smith		
10:10-11:10	L. Gardini	A. Gasull		
11:10-11:40	Coffee Break			
11:40-12:10			A. Reinfelds	M. Bohner
12:10-12:40				S. Georgiev
12:40-13:10				H. Kemaloğlu
15:30-16:00			A. L. Sasu	E. Braverman
16:00-16:30				A. Rodkina
16:30-17:00				S. Siegmund
17:00-17:20	Coffee Break			
17:20-18:20			ISDE Meeting	

- Aula Magna "Ioan Curea" - first floor
- Amphitheatre A01 (Senate Hall)- ground floor

Tuesday, July 25

Time	Amphitheatre A11		Amphitheatre A02	
8:30-9:00	Registration			
	Chair	Speaker	Chair	Speaker
9:00-10:00				
10:10-11:10				
11:10-11:40	Coffee Break			
11:40-12:10	Y. Raffoul	Z. Pospíšil	D. Zaharie	M. Bialecki
12:10-12:40		A. Buică		O. Agratini
12:40-13:10		B. Mestel		V. Preda
15:30-16:00	S. Olaru	M. Neamțu	H. Kemaloğlu	C. Lynd
16:00-16:30		K. Patidar		L. Barbanti
16:30-17:00		J. Almeida		B. Damasceno
17:00-17:20	Coffee Break			
17:20-18:20				

- Amphitheatre A02 - ground floor
- Amphitheatre A11 - first floor

Wednesday, July 26

Time	Aula Magna "Ioan Curea"		Amphitheatre A01	
	Chair	Speaker	Chair	Speaker
9:00-10:00	A. Gasull	P. Kloeden		
10:10-11:10	S. Siegmund	T. Hüls		
11:10-11:40	Coffee Break			
11:40-12:10			S. Baigent	Y. Raffoul
12:10-12:40				D. Reynolds
12:40-13:10			I. Sushko	V. Kocic
13:10-13:40				Y. Hamaya
17:00-20:00	Excursion			

- Aula Magna "Ioan Curea" - first floor
- Amphitheatre A01 (Senate Hall) - ground floor

Wednesday, July 26

Time	Amphitheatre A11		Amphitheatre A02	
	Chair	Speaker	Chair	Speaker
9:00-10:00				
10:10-11:10				
11:10-11:40	Coffee Break			
11:40-12:10	M. Gyllenberg	E. Părau	J. Baštinec	S. Kalabušić
12:10-12:40		M. Marvá		P. Hasil
12:40-13:10	G. Robledo	L. Peng	Z. Pospíšil	M. Veselý
13:10-13:40		B. Bogoşel		Y. Kostrov
17:00-20:00	Excursion			

- Amphitheatre A02 - ground floor
- Amphitheatre A11 - first floor

Thursday, July 27

Time	Aula Magna "Ioan Curea"		Amphitheatre A01	
	Chair	Speaker	Chair	Speaker
9:00-10:00			A. Pinto	S. Baigent
10:10-11:10			B. Polyak	G. Röst
11:10-11:40	Coffee Break			
11:40-12:10			E. Braverman	A. J. Homburg
12:10-12:40				G. Robledo
12:40-13:10				A. Castañeda
15:30-16:00			A. Rodkina	S. Olaru
16:00-16:30				E. C. Balreira
16:30-17:00				Á. Garab
17:00-17:30	Coffee Break			
17:30-18:00			M. Guzowska	R. Abu-Saris
18:00-18:30				W. Tikjha
18:30-19:00				C. Lăzureanu
20:00-22:30	Conference Dinner			

- Aula Magna "Ioan Curea" - first floor
- Amphitheatre A01 (Senate Hall) - ground floor

Thursday, July 27

Time	Amphitheatre A11		Amphitheatre A02	
	Chair	Speaker	Chair	Speaker
9:00-10:00				
10:10-11:10				
11:10-11:40	Coffee Break			
11:40-12:10	J. Diblík	E. Akin	M. Veselý	N. Pop
12:10-12:40		N. Apreutesei		V. Martsenyuk
12:40-13:10		J. Baštinec		M. Gümüş
15:30-16:00	V. Kocic	R. Miculescu	A. Buică	C. Mihiţ
16:00-16:30		A. Rădulescu		N. Psarros
16:30-17:00		O. Bagdasar		R. Boruga
17:00-17:30	Coffee Break			
17:30-18:00	R. Miculescu	S. Urziceanu	M. Megan	N. Lupa
18:00-18:30		A. Băbăiţă		V. Crai Terlea
18:30-19:00		R. Matei		D. Pătraşcu-Borlea
20:00-22:30	Conference Dinner			

■ Amphitheatre A02 - ground floor

■ Amphitheatre A11 - first floor

Friday, July 28

Time	Aula Magna "Ioan Curea"		Amphitheatre A01	
	Chair	Speaker	Chair	Speaker
9:00-10:00	A. J. Homburg	A. Pinto		
10:10-11:10	G. Röst	J. Diblík		
11:10-11:40	Coffee Break			
11:40-12:10			D. Reynolds	I. Rovența
12:10-12:40				T. Cuchta
12:40-13:10				M. Malin
15:30-16:00			E. C. Balreira	J. Dudás
16:00-16:30				C. Șerban
16:40-17:00			Closing	

- Aula Magna "Ioan Curea" - first floor
- Amphitheatre A01 (Senate Hall) - ground floor

Friday, July 28

Time	Amphitheatre A11		Amphitheatre A02	
	Chair	Speaker	Chair	Speaker
9:00-10:00				
10:10-11:10				
11:10-11:40	Coffee Break			
11:40-12:10	M. Radin	A. Lyapin	E. Kaslik	I. Dzhalladova
12:10-12:40		L. Moleriu		A. Svinin
12:40-13:10		D. Gurban		V. Gaiko
15:30-16:00	B. Sasu	C. Zaharia		
16:00-16:30		R. Mureşan		
16:40-17:00				

- Amphitheatre A02 - ground floor
- Amphitheatre A11 - first floor

List of Presentations

Monday, July 24

Aula Magna "Ioan Curea"

Time	Chair	Speaker
10:00-11:00	H. Smith	S. Elaydi - Towards a theory of global dynamics in difference equations: Application to population dynamics
11:00-11:30	Coffee Break	
11:30-12:30	S. Elaydi	L. Gardini - Bifurcations in smooth and piecewise smooth noninvertible maps

Amphitheatre A01

Time	Chair	Speaker
15:00-15:30	T. Hüls	M. Gyllenberg - Dynamics of the three-dimensional Ricker model
15:30-16:00		B. Polyak - Peak Effects in Stable Linear Difference Equations
16:00-16:30		I. Sushko - Snap-back repellers and critical homoclinic orbits
16:30-17:00	Coffee Break	
17:00-17:30	M. Bohner	A. Reinfelds - Decoupling and simplifying dynamical systems on time scales
17:30-18:00		S. Georgiev - Series solutions of dynamic equations on time scales
18:00-18:30		M. Unal - Lyapunov type inequalities for forced sub and super-half-linear dynamic equations on time scales

Monday, July 24

Amphitheatre A11

Time	Chair	Speaker
15:00-15:30	B. Mestel	I. Bula - Some Properties of Difference Equations with Infinitely Many Cycles with Period Two
15:30-16:00		M. Radin - Discrete Neuron Model using piece-wise difference equations with a periodic internal decay rate with various periods
16:00-16:30		A. Soos - Approximation of the Solution of Stochastic Differential Equations Driven by Step Fractional Brownian Motion
16:30-17:00	Coffee Break	
17:00-17:30	Y. Hamaya	M. Guzowska - Global and Local Stability Analysis in a Discrete-time Ramsey Model
17:30-18:00		K. Saito - On the asymptotic stability of discrete crocodilians model
18:00-18:30		L. Cerboni Baiardi - On a discrete-time model with replicator dynamics in renewable resource exploitation

Monday, July 24

Amphitheatre A02

Time	Chair	Speaker
15:00-15:30	K. Patidar	M. Saburov - Iterated Means Dichotomy for Discrete Dynamical Systems
15:30-16:00		F. Georgescu - Iterated function systems consisting of ϕ -max-contractions have attractor
16:00-16:30		L. Biriş - On uniform exponential splitting of variational nonautonomous difference equations in Banach spaces
16:30-17:00	Coffee Break	
17:00-17:30	P. Hasil	V. Pravec - On dynamics of triangular maps of the square with zero topological entropy
17:30-18:00		J. Tesařík - On the Spectrum of dynamical systems on trees
18:00-18:30		O. Brandibur - Stability of two dimensional incommensurate fractional-order systems

Tuesday, July 25

Aula Magna "Ioan Curea"

Time	Chair	Speaker
9:00-10:00	P. Kloeden	H. Smith - Persistence versus extinction for a class of discrete-time structured population models
10:10-11:10	L. Gardini	A. Gasull - Non-autonomous dynamical systems: some surprising local and global results
11:10-11:40	Coffee Break	

Amphitheatre A01

Time	Chair	Speaker
11:40-12:10	A. Reinfelds	M. Bohner - Higher-Order Beverton-Holt Equations
12:10-12:40		S. Georgiev - Multidimensional Brownian motion on time scales
12:40-13:10		H. Kemaloğlu - The Statement of Polynomial Pencil of Sturm-Liouville Operators on Continuous and Discrete case
15:30-16:00	A. L. Sasu	E. Braverman - Structured stability radii and exponential stability tests for Volterra difference systems
16:00-16:30		A. Rodkina - Stochastic difference equations with the Allee effect
16:30-17:00		S. Siegmund - A remark on difference equations
17:00-17:20	Coffee Break	
17:20-18:20	ISDE Meeting	

Tuesday, July 25

Amphitheatre A11

Time	Chair	Speaker
11:40-12:10	Y. Raffoul	Z. Pospíšil - Instability of a discrete reaction-diffusion equation
12:10-12:40		A. Buică - On the equivalence of the Melnikov functions method and the averaging method
12:40-13:10		B. Mestel - Functional difference equations arising from renormalization in quasiperiodic systems
15:30-16:00	S. Olaru	M. Neamțu - Dynamics of a tourism sustainability model with time delay
16:00-16:30		K. Patidar - Difference Approximations for Pricing Barrier Options
16:30-17:00		J. Almeida - Prices under differentiation
17:00-17:20	Coffee Break	
17:20-18:20	ISDE members are invited in A01	

Tuesday, July 25

Amphitheatre A02

Time	Chair	Speaker
11:40-12:10	D. Zaharie	M. Bialecki - On extensions of 1D Drossel-Schwabl forest-fire model
12:10-12:40		O. Agratini - Statistical approximation and q-generalizations of some linear processes
12:40-13:10		V. Preda - Nonlinear Fokker-Planck equations associated with weighted Tsallis and Kaniadakis entropies
15:30-16:00	H. Kemaloğlu	C. Lynd - A Class of Anti-Competitive Systems of Difference Equations
16:00-16:30		L. Barbanti - Derivatives on time scales relative to the class of the controlled (or conformable) derivatives
16:30-17:00		B. Damasceno - Time scales derivatives and the Radon transform in the plane
17:00-17:20	Coffee Break	
17:20-18:20	ISDE members are invited in A01	

Wednesday, July 26

Aula Magna "Ioan Curea"

Time	Chair	Speaker
9:00-10:00	A. Gasull	P. Kloeden - Forward attractors and limit sets of nonautonomous difference equations
10:10-11:10	S. Siegmund	T. Hüls - Computing areas of attraction and repulsion for nonautonomous, noninvertible dynamical systems
11:10-11:40	Coffee Break	

Amphitheatre A01

Time	Chair	Speaker
11:40-12:10	S. Baigent	Y. Raffoul - Exponential Stability in Volterra Difference Equations
12:10-12:40		D. Reynolds - Discrete Approximations to Volterra Equations
12:40-13:10	I. Sushko	V. Kocic - Global Behavior of Some Nonlinear Nonautonomous Difference Equations
13:10-13:40		Y. Hamaya - Existence and stability of almost periodic solutions in discrete almost periodic systems

Wednesday, July 26

Amphitheatre A11

Time	Chair	Speaker
11:40-12:10	M. Gyllenberg	E. Părau - Stability of capillary waves on fluid sheets
12:10-12:40		M. Marvá - An eco-epidemic competition model
12:40-13:10	G. Robledo	L. Peng - Group analysis of differential-difference equations and conservation laws
13:10-13:40		B. Bogoşel - Discrete version of an optimal partitioning problem

Amphitheatre A02

Time	Chair	Speaker
11:40-12:10	J. Baštinec	S. Kalabušić - Global Dynamics of Monotone Second Order Difference Equation
12:10-12:40		P. Hasil - Conditional oscillation of second order linear and half-linear difference and differential equations
12:40-13:10	Z. Pospíšil	M. Veselý - Solution spaces of homogeneous linear difference systems with coefficient matrices from commutative groups
13:10-13:40		Y. Kostrov - On the Rational Difference Equation with Quadratic Term

Thursday, July 27

Amphitheatre A01

Time	Chair	Speaker
9:00-10:00	A. Pinto	S. Baigent - Global stability and the carrying simplex for discrete-time competitive population models
10:10-11:10	B. Polyak	G. Röst - Dynamics of the period maps of time periodic delay differential equations
11:10-11:40	Coffee Break	
11:40-12:10	E. Braverman	A. J. Homburg - From random dynamics to partially hyperbolic dynamics
12:10-12:40		G. Robledo - Dichotomy spectrum and topological conjugacy on nonautonomous unbounded difference system
12:40-13:10		A. Castaneda - Almost reducibility of linear difference systems from a spectral point of view
15:30-16:00	A. Rodkina	S. Olaru - Analysis of Piecewise Affine Control for Linear Delay Difference Equations
16:00-16:30		E. C. Balreira - Global Stability of Periodic Monotone Maps
16:30-17:00		Á. Garab - Morse Decomposition for Scalar Delay Difference Equations
17:00-17:30	Coffee Break	
17:30-18:00	M. Guzowska	R. Abu-Saris - On modular happy numbers
18:00-18:30		W. Tikjha - On a Family of First-Order Piecewise Linear Systems
18:30-19:00		C. Lăzureanu - On the integrable deformations of a Hamilton-Poisson system

Thursday, July 27

Amphitheatre A11

Time	Chair	Speaker
11:40-12:10	J. Diblík	E. Akin - Mathematical Modelling of the Growth of Pseudomonas putita by Gompertz Dynamic Equations
12:10-12:40		N. Apreutesei - Infinite dimensional discrete operators
12:40-13:10		J. Bařtinec - Two asymptotically different positive solutions of a perturbed discrete equation
15:30-16:00	V. Kocic	R. Miculescu - Invariant measures of Markov operators associated to iterated function systems consisting of φ - max-contractions with probabilities
16:00-16:30		A. Rădulescu - Template iterations of quadratic maps and hybrid Mandelbrot sets
16:30-17:00		O. Bagdasar - On the dynamical properties of certain complex recurrent sequences
	Coffee Break	
17:30-18:00	R. Miculescu	S. Urziceanu - On AGIFSs having attractor
18:00-18:30		A. Băbăiță - A Perron type approach for individual exponential dichotomy for linear skew-product semiflows
18:30-19:00		R. Matei - Some remarks on pointwise exponential dichotomy of skew-product flows

Thursday, July 27

Amphitheatre A02

Time	Chair	Speaker
11:40-12:10	M. Veselý	N. Pop - Transverse vibrations analysis of a beam with degrading hysteretic behavior by using Euler-Bernoulli beam model
12:10-12:40		V. Martsenyuk - Estimation Problem for Difference Descriptor System With Application to Network of Biosensors
12:40-13:10		M. Gümüş - Asymptotic Behavior of a Competitive System of Third-Order Difference Equations
15:30-16:00	A. Buică	C. Mihiț - On Splitting with Different Growth Rates for Linear Discrete-Time Systems in Banach Spaces
16:00-16:30		N. Psarros - On a system of m difference equations having exponential terms
16:30-17:00		R. Boruga - On polynomial asymptotic behaviors for discrete time systems in Banach spaces
	Coffee Break	
17:30-18:00	M. Megan	N. Lupa - A complete characterization of exponential stability for discrete dynamics
18:00-18:30		V. Crai Terlea - On (h,k)-dichotomy of linear discrete-time systems in Banach spaces
18:30-19:00		D. Pătrașcu Borlea - Asymptotic Behaviours of Linear Discrete-Time Evolution Cocycles in Banach Spaces

Friday, July 28

Aula Magna "Ioan Curea"

Time	Chair	Speaker
9:00-10:00	A. J. Homburg	A. Pinto - Characterization of chaos for piecewise smooth maps
10:10-11:10	G. Röst	J. Diblík - Discrete Delayed Exponential and its Applications (Representation of Solutions, Control Theory)
11:10-11:40	Coffee Break	

Amphitheatre A01

Time	Chair	Speaker
11:40-12:10	D. Reynolds	I. Roventă - The approximation of boundary controls for the one-dimensional wave equation
12:10-12:40		T. Cuchta - The hypergeometric difference equation
12:40-13:10		M. Malin - New nonlinear estimates for surfaces in terms of their fundamental forms
15:30-16:00	E. C. Balreira	J. Dudás - Global stability in difference equations
16:00-16:30		C. Şerban - Fisher-Kolmogorov type perturbations of the relativistic operator: differential vs difference
16:40-17:00		Closing

Friday, July 28

Amphitheatre A11

Time	Chair	Speaker
11:40-12:10	M. Radin	A. Lyapin - Generating functions for the number of paths on multidimensional integer lattice
12:10-12:40		L. C. Moleriu - Stability Analysis and its Impact on the Parameters Estimation for a Logistic Growth Model
12:40-13:10		D. Gurban - Positive radial solutions for systems involving potential Lane-Emden nonlinearities
15:30-16:00	B. Sasu	C. Zaharia - On Bailey's fixed point theorem in fuzzy metric spaces
16:00-16:30		R. Mureşan - A Perron type approach for the nonuniform exponential dichotomy for evolution families

Amphitheatre A02

Time	Chair	Speaker
11:40-12:10	E. Kaslik	I. Dzhalladova - Stability of zero solutions of linear differential equations with random coefficients and random transformation solution
12:10-12:40		A. Svinin - Construction of the first integrals for two classes of ordinary difference equations
12:40-13:10		V. Gaiko - Towards bifurcation theory of continuous and discrete polynomial dynamical systems

Acknowledgements

We would like to express our special thanks and gratitude for the financial support offered by:



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Faculty of Mathematics and Computer Science



Consiliul Județean Timiș
(Acțiune cofinanțată de Consiliul Județean Timiș)



Netex Consulting



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Special thanks for the financial support offered by

