

Friday, June 24, 2016

**Conference MITRE-2016**  
**Programme<sup>1</sup> (June 24–26, 2016)**

**Friday, June 24, 2016**

**09.00–09.55 Registration<sup>2</sup>** (BC, 1<sup>st</sup> floor, room 141).

**10.00–10.30 Opening ceremony** (BC, 1st floor, room 141)

**Chairperson: G. Rusu**

**10.30–11.40 Special session of homage to**

**Professor Mihai Barcari (1930–1991),**

**Profesor Boris Cinic (1935–2016),**

**Professor Alexandr Cuznetov (1926–1984),**

**Profesor Ana Danilcenco (1931–1995)**

**Profesor Ivan Parovicenco (1930–1999),**

**Profesor Constantin Sacaliuc (1925–2002),**

**Profesor Vladimir Zolotarevschi (1946–2004)**

Presentations: **I. Goian, V. Baltag, O. Izbaş, L. Malahov, I. Gutsul, V. Neagu, V. Seiciuc**

**11.40–12.00 Coffee break** (BC, 1<sup>st</sup> floor, room 141)

**Plenary session** (BC, 1<sup>st</sup> floor, room 141)

**Chairperson: M. Ciobanu**

**12.00–12.40 D. Cheban.** Levitan/Bohr almost periodic and almost automorphic solutions of the scalar differential equations

**12.40–13.20 A. Kashu.** On closure operators in categories of modules (an overview)

**13.20–14.00 D. Lozovanu.** Determining stationary Nash equilibria for average stochastic games

**14.00–15.00 Lunch break**

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<sup>1</sup> In case of joint authorship, the presenting author is indicated with \*.

<sup>2</sup> The Registration, Opening Ceremony and Plenary session will be held in the Central Building (BC), the Section sessions will be held in the Building 4 (B4).

**Section I “Algebra, Geometry and Topology”** (B4, 2<sup>nd</sup> floor, room 113)

**Chairperson: A. Lungu**

- 15.00-15.20** **M. Choban\***, **I. Budanaev**. On the theory of free topological monoids and its applications
- 15.20-15.40** **V. Arnautov\***, **G. Ermakova**. Lattice of all topologies of countable module over countable rings
- 15.40-16.00** **I. Gutsul**. On octahedral manifolds and their complitions
- 16.00-16.20** **V. Ursu**. About free oronable nilpotent  $A$ -loops
- 16.20-16.40** *Coffee break*

**Chairperson: M. Ciobanu**

- 16.40-17.00** **V. Shcherbacov\***, **A. Tcacenco**. On prolongation of a quasigroup
- 17.00-17.20** **V. Izbash\***, **M. Luchian**. Generalizing Sierpinski's Theorem to multisorted operations
- 17.20-17.40** **L. Chiriac\***, **M. Terenti**, **V. Barbulat**. On a method of constructing idempotent medial quasigroups
- 17.40-18.00** **P. Syrbu**, **I. Grecu\***. On multiplication groups of izostrophic loops
- 18.00-18.20** **A. Şcerbacova**, **V. Shcherbacov\***. About spectrum of  $T_2$ -quasigroups
- 18.20-18.40** **D. Ceban\***, **P. Syrbu**. On paratopies of orthogonal systems
- 18.40-19.00** **I. Jordan**. On a new operation in the class of preradicals of modules

**Section II “Analysis, Differential Equations and Dynamical Systems”**

(B4, 2<sup>nd</sup> floor, room 214)

**Chairperson: M. Popa**

- 15.00-15.20** **D. Cozma**. Sadovskii's centers and Darboux integrability for a nine-parameter cubic differential system
- 15.20-15.40** **D. Cozma**, **A. Dascalescu\***. Center conditions for cubic systems with a bundle of two invariant straight lines and one invariant cubic curve
- 15.40-16.00** **Iu. Calin\***, **S. Ciubotaru**.  $GL(2, \mathbf{R})$ -comitants and Lyapunov quantities for bidimensional polynomial systems of differential equations with nonlinearities of the fourth degree
- 16.00-16.20** **S. Ciubotaru\***, **Iu. Calin**. The center conditions for a class of bidimensional polynomial systems of differential equations with nonlinearities of the fourth degree
- 16.20-16.40** *Coffee break*

**Chairperson: D. Cozma**

- 16.40-17.00 C. Bujac\*, N. Vulpe.** First integrals of cubic systems with the maximum number of invariant lines
- 17.00-17.20 V. Orlov\*, M. Popa.** Canonical forms of the four-dimensional Lyapunov-Darboux differential system with quadratic nonlinearities
- 17.20-17.40 N. Neagu\*, M. Popa.** Lie algebras of ternary differential systems with quadratic nonlinearities of the Darboux form and applications
- 17.40-18.00 V. Pricop.** The differential system  $s(1,3,5)$  and corresponding common Hilbert series
- 18.00-18.20 A. Şubă, S. Turuta\*.** Integrability of Lotka-Volterra cubic systems with  $(1:-2)$ -singularity having six invariant straight lines of two directions
- 18.20-18.40 O. Vacaraş.** Maximal multiplicity of the line at infinity for cubic differential systems with two real parallel invariant straight lines
- 18.40-19.00 S. Port\*, V. Pricop, V. Trifan.** The mathematical model of emotion impact

### **Section III “Applied Mathematics” (B4, 1<sup>st</sup> floor, room 213a)**

**Chairperson: D. Lozovanu**

- 15.00-15.20 B. Hâncu.** Parallel SMM-DMM algorithm to solve the bimatrix informational extended game
- 15.20-15.40 L. Novac.** Applications of the informational extended games
- 15.40-16.00 V. Ungureanu.** Matrix games on disgraphs
- 16.00-16.20 A. Vrabie.** Estimating the transition probability matrix in the HMMs
- 16.20-16.40 *Coffee break***

**Chairperson: B. Hâncu**

- 16.40-17.00 Gh. Mişcoi, R. I. Ţicu\*, A. Costea, C. Pomazan.** Evaluation algorithms of the waiting time of ships in a seaport
- 17.00-17.20 A. Poştaru, N. Prodan\*, O. Benderschi.** On the probability  $\pi$  problem in randomized method of responses
- 17.20-17.40 V. Paţiuć\*, G. Rîbacova.** Application of FDTD method and characteristic difference scheme for solving telegraph equations
- 17.40-18.00 G. Sprincean.** Chebyshev method for calculating parameters of semiconductor devices
- 18.00-18.20 M. Migdalovici\*, L. Vlădăreanu, D. Baran, G. Vlădeanu.** On the stability control of walking robots and applications
- 18.20-18.40 R. Dumbrăveanu\*, M. Petic.** Softcrates application and its mathematical aspects
- 18.40-19.00 R. Buzatu.** Nontrivial convex partition of a tree

**Section IV “Computer Science and IT”** (B4, 1<sup>st</sup> floor, room 222)

**Chairperson: I. Andrieș**

- 15.00-15.20 V. Arnaut\*, I. Andrieș.** Software tools for measurement data processing in optical interferometry
- 15.20-15.40 Gh. Căpățână\*, P. Soltan.** Turing test: past, present and future
- 15.40-16.00 T. Bragaru, V. Malcoci\*.** Cyber security on cloud computing
- 16.00-16.20 Gh. Căpățână, Gh. Latul\*.** Frames using in the language for computer assisted courses programming
- 16.20-16.40 Coffee break**

**Chairperson: V. Arnaut**

- 16.40-17.00 R. Bergman.** Information projects quality model
- 17.00-17.20 Gh. Carmocanu.** Technologies and architectures utilized in Web applications
- 17.20-17.40 C. Ciubotaru, S. Cojocaru, V. Demidova, A. Colesnicov, L. Malahov, Ș. Ungur\*.** Converter for Romanian printed texts of the 18th-20th centuries
- 17.40-18.00 V. Cozlov.** Lexicon of frequency creation
- 18.00-18.20 V. Demidova, L. Burtseva\*.** On digitalization of cultural heritage of historical Romanian Cyrillic texts
- 18.20-18.40 A. Gladei.** Adapting the local HPC systems of MSU to grid computing
- 18.40-19.00 M. Croitor.** A database errors detection technology

**Section V “Didactics”** (B4, 2<sup>nd</sup> floor, room 122)

**Chairperson: I. Goian**

- 15.00-15.20 I. Achiri.** Curriculumul revizitat la matematică
- 15.20-15.40 D. Afanas.** Determinarea extremelor funcției utilizând vectorii
- 15.40-16.00 Ș. Alexei.** Asupra unor identități
- 16.00-16.20 M. Cernalevschi\*, V. Guțu.** Ecuații recurente liniare și șiruri tip Fibonacci
- 16.20-16.40 Coffee break**

**Chairperson: P. Efros**

- 16.40-17.00 A. Corlat.** Pregătirea viitorilor matematicieni
- 17.00-17.20 P. Efros\*, L. Solovei.** Unele particularități metodice ale predării - învățării - evaluării matematicii la Facultatea de Chimie
- 17.20-17.40 V. Jardan.** Inegalități clasice în liceu
- 17.40-18.00 P. Macari\*, L. Macari.** Aplicații ale invarianților la rezolvarea ecuațiilor
- 18.00-18.20 A. Poștaru\*, O. Benderschi.** Modele de urne și rezolvarea problemelor de teoria probabilităților

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- 18.20-18.40 P. Silivestru.** GeoGebra - un suport didactic la lecțiile de matematică în clasele liceal (profil real)
- 18.40-19.00 V. Țicău\*, S. Țicău.** Aplicarea metodelor numerice de calcul al integralei definite în Microsoft Excel și MathCad
- 19.00-19.20 C. Negara\*, E. Rotari.** Instruirea adaptivă - un factor nou în dezvoltarea competențelor profesionale
- 19.20-19.40 E. Rotari, C. Negara\*.** Formarea competențelor profesionale la studenți prin intermediul instruirii adaptive
- 19.40-20.00 L. Zastînceanu.** Utilizarea resurselor digitale în instruirea adaptivă la cursul de Didactica matematicii

Saturday, June 25, 2016

## Saturday, June 25, 2016

### Section I “Algebra, Geometry and Topology” (B4, 2<sup>nd</sup> floor, room 113)

Chairperson: **A. Kashu**

- 09.00-09.20** **A. Lungu.** The groups of  $W_p$ -symmetry: elements of theory and structure
- 09.20-09.40** **E. Zamorzaeva.** On tilings of hyperbolic plane by 14-gons and 16-gons for translation group of genus 2
- 09.40-10.00** **F. Damian.** Involutions without fixed points on manifolds
- 10.00-10.20** **V. Balcan.** A question about the behavior of geodesic curves on hyperbolic manifolds
- 10.20-10.40** **P. Efros.** The distribution  $\Delta_{p-r}$  on the surface of codimension three in Euclidean space
- 10.40-11.00** **A. Popa.** Generalized orthogonal matrices as Lie group of homogeneous spaces
- 11.00-11.20** *Coffee break*

Chairperson: **V. Izbash**

- 11.20-11.40** **I. Cucu.** Some generalizations of expressibility in superintuitionistic logics
- 11.40-12.00** **D. Botnaru, O. Cerbu\*.** About semireflexive subcategories
- 12.00-12.20** **D. Pavel.** Almost periodicity of functions on topological spaces
- 12.20-12.40** **D. Botnaru, A. Ţurcanu\*.** About the right product of two subcategories
- 12.40-13.00** **A. Ţarălungă.** About some properties of the topological group  $G$   $\square$

### Section II “Analysis, Differential Equations and Dynamical Systems”

(B4, 2<sup>nd</sup> floor, room 214)

Chairperson: **V. Neagu**

- 10.00-10.20** **A. Perjan, G. Rusu\*.** A note on fractional powers of positive definite operators
- 10.20-10.40** **Ya. Bihun\*, R. Petryshyn.** Averaging method in multifrequency systems with delay and with initial and boundary-value conditions
- 10.40-11.00** **L. Sergeeva.** On a global solution for one class of nonhomogeneous partial differential equations with deviating argument in the time variable
- 11.00-11.20** *Coffee break*

Chairperson: **A. Perjan**

- 11.20-11.40** **V. Glavan.** Mixing and specification in weakly contracting relations
- 11.40-12.00** **V. Guţu.** Compact viable sets in affine IFS with a generalized cone condition
- 12.00-12.20** **V. Neagu.** On the compactness of certain integral operators
- 12.20-12.40** **V. Dryuma.** On solving equations of flows of incompressible liquids

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**12.40-13.00 C. Mortici.** Methods and algorithms for estimating the gamma function

**Section III “Applied Mathematics”** (B4, 1<sup>st</sup> floor, room 213a)

**Chairperson: I. Secieru**

- 10.00-10.20 S. Cataranciuc.**  $\alpha$ -stable complexes of multi-ary relations
- 10.20-10.40 A. Tkacenko.** The multi-criteria fractional transportation problem with fuzzy “bottleneck” criterion
- 10.40-11.00 M. Capcelea, T. Capcelea\*.** Algorithms for efficient and accurate approximation of piecewise continuous functions
- 11.00-11.20** *Coffee break*

**Chairperson: S. Cataranciuc**

- 11.20-11.40 E. Guțuleac\*, G. Secieru.** Numerical vulnerability assessment of hazardous materials storage under dynamic load
- 11.40-12.00 I. Secieru.** Stability of weighted approximate schemes for fractional order evolution equation with two spatial variables
- 12.00-12.20 A. Lazari.** The win probabilities in the cyclic games with homogeneous linear recurring game duration distribution
- 12.20-12.40 G. Braguța.** Extremal elements in the complex of multi-ary relations

**Section IV “Computer Science and IT”** (B4, 1<sup>st</sup> floor, room 222)

**Chairperson: Gh. Căpățână**

- 09.40-10.00 N. Pleșca.** Frameworks used to provide responsive Web interfaces
- 10.00-10.20 G. Magariu\*, T. Verlan.** Stroke predictive models overview: input and output parameters, underlying dataset and predictive value
- 10.20-10.40 D. Macari.** Informational tool for portal hypertension assessment
- 10.40-11.00 A. Popov\*, M. Butnaru, Gh. Căpățână.** The intelligent software concept of delimitation of the autochthonous mental neurotic disorders from that epileptic maintained
- 11.00-11.20** *Coffee break*

**Chairperson: E. Seiciuc**

- 11.20-11.40 V. Ungureanu.** Principles, concepts and programming paradigms of the Wolfram Language
- 11.40-12.00 V. Seiciuc\*, E. Seiciuc.** On design and development of some university courses on the Moodle platform for distance e-learning
- 12.00-12.20 V. Seiciuc.** On creation techniques of test-games for distance learning on mobile devices and PC
- 12.20-12.40 E. Socolov.** Justification of the need in building an intelligent assistant that can manage and optimize small-scale and individual production



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**Section V “Didactics” (B4, 2<sup>nd</sup> floor, room 122)**

**Chairperson: A. Corlat**

- 09.00-09.20 A. Braicov\*, T. Velicova.** Avantajele utilizarii aplicatiei “LearningApps.org” la elaborarea conținuturilor educaționale interactive
- 09.20-09.40 R. Evdochimov.** Unele metode și instrumente online pentru evaluarea cunoștințelor studenților
- 09.40-10.00 A. Gasnaș.** Rolul LMS MOODLE în predarea-evaluarea cursului “Programarea orientată pe obiecte”
- 10.00-10.20 A. Globa.** Necesitatea reexaminării tehnologiilor didactice în predarea conceptelor și tehnicilor de programare
- 10.20-10.40 A. Gorea\*, T. Cioruță.** Platforma e-learning și medii de socializare - metode moderne interactive de predare și învățare
- 10.40-11.00 M. Pavel, D. Pavel\*.** Securitatea online - o componentă educațională a parenting-ului modern
- 11.00-11.20 Coffee break**

**Chairperson: A. Braicov**

- 11.20-11.40 Gh. Căpățână.** Programarea orientată pe familii de probleme - o metodologie originală de programare imperativă
- 11.40-12.00 A. Pisau.** Dezvoltarea competențelor digitale ale elevilor în procesul educațional la matematică
- 12.00-12.20 L. Popov.** Dezvoltarea competențelor digitale prin utilizarea instruirii adaptive la unitatea de curs Tehnologii Informaționale
- 12.20-12.40 L. Sali\*, M. Teleucă.** Aspecte didactice ale organizării activității investigaționale asistate de calculator la matematică
- 12.40-13.00 I. Valuță.** Rolul matematicii în procesul de formare a civilizației contemporane informaționale
- 13.00-13.20 T. Vascan.** Formarea culturii matematice - un factor calitativ de pregătire a specialiștilor IT
- 13.20-13.40 T. Veveriță.** Aspecte psihopedagogice de formare inițială a profesorilor de filologie pentru utilizarea a TIC

**Sunday, June 26, 2016**

- 09.30-17.00 Excursion to the Curchi Monastery.**

**Conference time-table****Friday, June 24, 2016**

	BC, 1 <sup>st</sup> floor, room 141				
<b>09.00-09.55</b>	Registration				
<b>10.00-10.30</b>	Opening ceremony				
<b>10.30-11.40</b>	Special session of homage to <i>Professor Mihai Barcari, Profesor Boris Cinic, Professor Alexandr Cuznețov, Professor Ana Danilicenco, Profesor Ivan Parovicenco, Profesor Constantin Sacaliuc, Profesor Vladimir Zolotarevschi</i> Presentations: I. Goian, V. Baltag, O. Izbaș, L. Malahov, I. Gutsul, V. Neagu, V. Seiciuc				
<b>11.40-12.00</b>	<i>Coffee break</i>				
<b>12.00-12.40</b>	D. Cheban (plenary talk)				
<b>12.40-13.20</b>	A. Kashu (plenary talk)				
<b>13.20-14.00</b>	D. Lozovanu (plenary talk)				
<b>14.00-15.00</b>	<i>Lunch break</i>				
	<b>Section 1 AGT</b> B4, room 113	<b>Section 2 ADE</b> B4, room 214	<b>Section 3 AM</b> B4, room 213a	<b>Section 4 CSIT</b> B4, room 222	<b>Section 5 D</b> B4, room 122
<b>15.00-15.20</b>	M. Choban +	D. Cozma	B. Hâncu	V. Arnaut +	I. Achiri
<b>15.20-15.40</b>	V. Arnautov +	A. Dascalescu +	L. Novac	Gh. Căpățână +	D. Afanas
<b>15.40-16.00</b>	I. Gutsul	Iu. Calin +	V. Ungureanu	V. Malcoci +	Ș. Alexei
<b>16.00-16.20</b>	V. Ursu	S. Ciubotaru +	A. Vrabie	Gh. Latul +	M. Cernalevschi +
<b>16.20-16.40</b>	<i>Coffee break (B4, 2<sup>nd</sup> floor, room 218)</i>				
<b>16.40-17.00</b>	V. Shcherbacov +	C. Bujac +	R. I. Țicu +	R. Bergmann	A. Corlat
<b>17.00-17.20</b>	V. Izbash +	V. Orlov +	N. Prodan +	Gh. Carmocanu	P. Efros +
<b>17.20-17.40</b>	L. Chiriac +	N. Neagu +	V. Pațiuț +	Ș. Ungur +	V. Jardan
<b>17.40-18.00</b>	I. Grecu +	V. Pricop	G. Sprincean	V. Cozlov	P. Macari +
<b>18.00-18.20</b>	V. Shcherbacov +	S. Turuta +	M. Migdalovici +	L. Burtseva +	A. Poștaru +

Conference time-table

<b>18.20-18.40</b>	D. Ceban +	O. Vacaraș	R.Dumbrăveanu +	A. Gladei	P. Silivestru
<b>18.40-19.00</b>	I. Jardan	S. Port +	R. Buzatu	M. Croitor	V. Țicău +
<b>19.00-19.20</b>					C. Negara +
<b>19.20-19.40</b>					C. Negara +
<b>19.40-20.00</b>					L. Zastînceanu

**Saturday, June 25, 2016**

	<b>Section 1 AGT</b> B4, room 113	<b>Section 2 ADE</b> B4, room 214	<b>Section 3 AM</b> B4, room 213a	<b>Section 4 CSIT</b> B4, room 222	<b>Section 5 D</b> B4, room 122
<b>09.00-09.20</b>	A. Lungu				A. Braicov +
<b>09.20-09.40</b>	E. Zamorzaeva				R. Evdochimov
<b>09.40-10.00</b>	F. Damian			N. Pleșca	A. Gasnaș
<b>10.00-10.20</b>	V. Balcan	G. Rusu +	S. Cataranciuc	G. Magariu +	A. Globa
<b>10.20-10.40</b>	P. Efros	Ya. Bihun +	A. Tkacenko	D. Macari	A. Gorea +
<b>10.40-11.00</b>	A. Popa	L. Sergeeva	T. Capcelea +	A. Popov +	D. Pavel +
<b>11.00-11.20</b>	<i>Coffee break</i> (B4, 2 <sup>nd</sup> floor, room 218)				
<b>11.20-11.40</b>	I. Cucu	V. Glavan	E. Guțuleac +	V. Ungureanu	Gh. Căpățână
<b>11.40-12.00</b>	O. Cerbu +	V. Guțu	I. Secrieru	V. Seiciuc +	A. Pisau
<b>12.00-12.20</b>	D. Pavel	V. Neagu	A. Lazari	V. Seiciuc	L. Popov
<b>12.20-12.40</b>	A. Țurcanu +	V. Dryuma	G. Braguța	E. Socolov	L. Sali +
<b>12.40-13.00</b>	A. Țarălungă	C. Mortici			I. Valuță
<b>13.00-13.20</b>	<i>Coffee pause</i>				T. Vascan
<b>13.20-13.40</b>	(B4, 2 <sup>nd</sup> floor, room 213a)				T. Veveriță
<b>13.40-14.00</b>					

**Sunday, June 26, 2016**

**09.30-17.00** Excursion to the Curchi Monastery.