6th Chaotic Modeling and Simulation International Conference (CHAOS2013)

June 11-14, 2013 Istanbul Turkey

Program

Session / Room	Date / Time	Authors / Talk Title / Event		Authors / Talk Title / Event
Room1	8.30-10.00	Tuesday June 11		Registration
Room 1	10.00-10.20	Opening Ceremony		
Room 1	10.20-11.00	Keynote Session (Chair: A. Hacinliyan)	Professor Ferdinand Verhulst	Timescales and error estimates in dynamical systems
Room 1	11.00-11.40	Keynote Session (Chair: A. Hacinliyan)	Professor Valery Romanovski	Integrability and bifurcations of polynomial systems of ODEs
	11.40-12.00			Coffee Break
Room 1	12.00-12.45	Keynote Session (Chair: F. Verhulst)	Dr. Paul Manneville	On the subcritical transition to turbulence in wall-bounded flows
	11.06.13:12.45-14.00			Lunch
Room 1	11.06.13:14.15-15.00	Keynote Session (Chair: Paul Manneville)	Professor Fatihcan Atay	Synchronization and Chaos
Room 1	11.06.13:15.00-15.45	Keynote Session (Chair: Paul Manneville)	Professor P.H. Diamond	Multi-Scale 'Ecological' Dynamics of Turbulence, Flows and Profiles in Confined Plasmas
	11.06.13:15.45-16.15			Coffee Break

SCS1		SPECIAL AND CONTRIBUTED SESSIONS SCS1	
Room 1	11.06.13:16.15-18:00	**Chair: Ö. D. Gürcan**	**Turbulence in Plasmas**
		P. Hennequin, L. Vermare, Ö. D. Gürcan, A. Storelli, P. Morel, N. Fedorczak, C. Fenzi, X. Garbet, P. Ghendrih, P. Tamain, and the Tore Team	Flows and turbulence in magnetic fusion plasmas
		Yue Dong, Roland Grappin, Andrea Verdini	Solar wind turbulence: the fight between the direct turbulent cascade and the (anisotropic) expansion
		Oscillatory Turing Patterns and Chaos in Tokamak Edge Plasma	C. Yarim, U. Daybelge
		R. Grappin	Isotropic and anisotropic MHD turbulence
		P. Morel, Ö. D. Gürcan, V. Berionni	Predator prey dynamics in numerical simulation of gyrokinetic turbulence
Room 2	11.06.13:16.15-18:00	**Chair: Victor J Law**	**Plasma**
		Chaotic Paradigm of Stimulated Raman Backscattering in Nonlinear Laser-Plasmas	Miloš M. Škorić, Ljubomir Nikolić, Seiji Ishiguro
		Difficulties on the Study of the Exponentially changed Plasma Quantities. Models for confronting the Mathematical Inabilities	C. L. Xaplanteris, E. D. Filippaki, L. C. Xaplanteris, D.P. Leousis
		Resonances and patterns within the kINPen-MED atmospheric pressure plasma jet	Victor J Law, A Chebbi, F T O'Neill, D P Dowling
		The Profile of Temperature In the Dissipative Over-Dense Plasma	Leila Rajaei
Room 3	11.06.13:16.15-18:00	**Chair: Valeriy Abramov**	**Fractals**
		Correlation relations and statistical properties of the deformation field of fractal dislocation in a model nanosystem	Valeriy S. Abramov
		Governance of Alteration of the Deformation Field of Fractal Quasi-Two-Dimensional Structures in Nanosystems	Olga P. Abramova, Sergey V. Abramov
		About Shape of Julia Sets Pre-Fractals on Double Numbers Plane	Dmitry G. Pavlov, Maria S. Panchelyuga, Victor A. Panchelyuga
		Multivalued fractals and hyperfractals	Miroslav Rypka
		LORENZ ATTRACTOR IN FRACTAL PROCESS	Kais Bouallegue, Ahmed Rhif, Said Grouni
Room 4	11.06.13:16.15-18:00	**Chair: Dumitru D. Deleanu**	**Order and Chaos**
		On the Quantitative Aspects of the Asymmetry Coefficients as Indicators of Order and Chaos	Dumitru D. Deleanu
		New Scenarios Of Transition To Deterministic Chaos In Dynamic Systems With A Limited Power-Supply	A. Yu. Shvets
		Maxwell-Bloch equations the Lorenz type chaotic system in Lagrangian form	H.A. Yildirim, E.E.Akkaya, A. Hacinliyan, G. Sahin
		Chaos in high-energy physics	Valeriy A. Kolombet
		Representations for the fractional Laplacian as limiting case of self-similar lattice models	Thomas Michelitsch, Gérard Maugin, Shahram Derogar, Franck Nicolleau, Andrzej Nowakowski

Room 1	11.06.13:18.00-18.40	**Keynote Session (Chair: Avadis S. Hacinliyan) Professor Haluk O. Bingol**	**As We Interact**

	11.06.13: 18.40-19.30		**Welcome Reception**

Wednesday June 12

SCS2		**SPECIAL AND CONTRIBUTED SESSIONS SCS2**	
Room 1	12.06.13: 8.30-10.00	**Chair: I. Kusbeyzi Aybar**	**Equations**
		Model Order Reduction for Nonlinear Schrödinger Equation	Canan Akkoyunlu, Murat Uzunca, Bülent Karasözen
		Geometry of chaos – the Bernoulli equation for ternary and quaternary alloys	E.M. Sheregii
		Acceleration Data Extraction Associating to the Peak-Valley Segmentation Approach Using the Morlet Wavelet Transform	S. Abdullah, T. E. Putra, D. Schramm, M. Z. Nuawi
		On a new integrable hierarchy of Riemann type hydrodynamic flows	Anatolij K. Prykarpatski
		Exact number of positive solutions for a class of quasilinear boundary value problems with a singular nonlinearity	M. Derhab, H. Sabbagh
		Best trapezoidal solution of fuzzy nonlinear equations by metric space	Yousef Jafarzadeh

Room 2	12.06.13: 8.30-10.00	**Chair: Vladimir L. Kalashnikov**	**Lasers - Chaotic charges**
		Sensing through dynamic Brillouin gratings sustained by chaotic lasers	M. Santagiustina, L. Ursini
		Instabilities in Lasers with Fast Oscillating Delayed Feedback	Elena V. Grigorieva, Sergey A. Kaschenko
		Noise-Induced Dynamics in Vector-Field Lasers	Larissa Svirina
		Analysis of regular and chaotic charges trajectories in charged cylindrical beam	Alexander S. Rozov, Vil B. Baiburin
		Energy Scalability of Dissipative Solitons in Presence of Quantum Noise	Vladimir L. Kalashnikov

Room 3	12.06.13: 8.30-10.00	**Chair: Aydin A. Cecen, Co-Chair: N. Jevtic**	**Time Series**
		RECONSTRUCTION OF EVAPORATION DYNAMICS FROM TIME SERIES	Özlem BAYDAROĞLU, Kasım KOÇAK
		An empirical Fokker-Planck-based non-stationarity test for time series	Cahit Erkal, Aydin A. Cecen
		The Power of Nonlinear Time Series Analysis: Distinguishing Truly Random from Under-Sampled Signals	N. Jevtic, S. Grib, J.S. Schweitzer, P. Stine
		The Presence of Chaos in the GDP Growth Rate Time Series	Radko Kříž, Radka Kněžáčková
		Synchronized Attractors and Phase Entrained Chaos	Muhammad Abdul, Farhan Saif

Room 4	12.06.13: 8.30-10.00	**Chair: Avadis S. Hacinliyan**	**Chaos**
		Replication of Discrete Chaos	M. U. Akhmet, M. O. Fen
		Nonlinear reply of radon and Deterministic chaos	Miraç Kamışlıoğlu, Fatih Külahcı, Fatih Özkaynak
		Some features in measurements of chaos	Valeriy A. Kolombet
		Chaos in parametrically excited continuous systems	T. Krasnopolskaya, A.A.Gourjii, V.M. Spektor, D.F. Prihodko

	12.06.13: 10.00-10.45		**Coffee Break**
Room 1	12.06.13: 10.45-11.30	**Keynote Session (Chair: Paul Manneville) Dr. M.Yu. Uleysky, M.V. Budyansky, S.V. Prants**	**Lagrangian simulation of mixing and transport in the ocean based on altimetric velocity fields**
SCS3		**SPECIAL AND CONTRIBUTED SESSIONS SCS3**	
Room 1	12.06.13: 11.30-13.00	**Chair: Guanrong Chen**	**Attractors / Fractals**
		Coexistence of Three Basic Attractors: Point, Periodic and Chaotic Attractors	Julien Clint Sprott, Xiong Wang, Guanrong Chen
		Restoration of symmetry on attractor merging crises	T. Mizuguchi, M. Yomosa, M. U. Kobayashi, N. Fujiwara
		On a Topological Problem of Strange Attractors	Ayhan Yurdaer, Ibrahim Kirat
		Chaos theory and fractal in urban pattern	Azadeh Rezafar
		Nambu Mechanics in Non-Hamiltonian Chaos	Minos Axenides
Room 2	12.06.13: 11.30-13.00	**Chair: Mikhail Zakrzhevsky, Co-Chair: O. Ozgur Aybar**	**Bifurcation**
		Dynamics and bifurcation in a transport model of L-H transition in magnetized fusion devices	Ö. D. Gürcan, V. Berionni
		Stability and Bifurcation in the Henon Map and its Generalizations	O. Ozgur Aybar, I. Kusbeyzi Aybar, A. S. Hacinliyan
		Complete bifurcation analysis of the Duffing-Ueda forced damped oscillator: plenty of unknown bifurcation groups with chaotic attractors	Mikhail Zakrzhevsky, Igor Schukin, Eduard Shilvan
		Analysis of 1-D Linear Piecewise-smooth Discontinuous Map	Bhooshan Rajpathak, Harish Pillai and Santanu Bandyopadhyay
Room 3	12.06.13: 11.30-13.00	**Chair: Carlos A. Vargas, Co-Chair: A. Meletiou**	**Meteorology / Earthquakes**
		Depth profile of the fractal dimension associated to earthquakes distribution in the NW South America	Carlos A. Vargas, Juan M. Salazar
		Dynamics and Chaos in a low-order ocean-atmosphere coupled model	Stéphane Vannitsem
Room 4	12.06.13: 11.30-13.00	**Chair: Jan Awrejcewicz**	**Models and Modeling**
		Bifurcation Phenomena Observed in an Interrupted Electric Circuit with Two Switches	Hiroyuki Asahara, Yutaka Izumi, Takuji Kousaka
		Mechanical Systems with Impacts	Lina Otradnova
		Fuzzy modeling for chaotic systems via interval type 2 T-S fuzzy model with parameter uncertainties	Goran Hassanifard, Ali Akbar Gharaveisi
		Burgers turbulence in random matrix models	Jean-Paul Blaizot, Maciej A. Nowak, Piotr Warchoł

Room 5	12.06.13: 11.30-13.00	**Handbook of Applications of Chaos Theory**	**Private Session**
		Skiadas, Manneville, Sokolov, Sirko, Verhulst, Kalashnikov, Prants(M.Yu. Uleysky), Pestana, Hacinliyan, Jevtic, Lubashevsky, Sotiropoulos, Shvets, Dimitriu, Oommen.	
	12.06.13:13.00-14.00		**Lunch**
Excursion	12.06.13: 14.30-20.00		**Half Day Excursion**

	Thursday June 13	
SCS4	**SPECIAL AND CONTRIBUTED SESSIONS SCS4**	

Room 1	13.06.13: 9.00-10.40	**Chair: André E. Botha**	**Industry Applications**
		Dynamical Properties of the Electromechanical System Damped by Impact Element with Soft Stops	Marek Lampart, Jaroslav Zapoměl
		Quasi-periodic and frequency-locking routes to chaos in intrinsic Josephson junctions	André E. Botha, Yury M. Shukrinov, Mohammad R. Kolahchi
		Influence of densimetric Froude number on sharpedged orifice jets	Luigi A. Besalduch, Maria G. Badas, Simone Ferrari, Giorgio Querzoli
		1D modeling of Dielectric Barrier Discharge at low pressure Ar/Cl2 mixture	A. Barjasteh, E. Eslami, N. Morshedian, D. Mihailova, M. Noori
		Improvement practical diagnostics of industrial power transformers	S. Grouni, A. Aibeche, H. Akroum, M. Kidouche

Room 2	13.06.13: 9.00-10.40	**Chair: Wolfgang Kinzel, Co-Chair: Jian Xu**	**Delay Systems**
		Fast-slow and Chaotic Behaviors in a Delay-coupled Flexible Joint System	Shanying Jiang, Jian Xu, Yu Huang
		Chaos in nonlinear networks with time-delayed couplings	Wolfgang Kinzel
		Recovery of Coupling Architecture in Ensembles of Coupled Time-Delay Systems	Vladimir I. Ponomarenko, Mikhail D. Prokhorov, Ilya V. Sysoev
		Delay-dependent output feedback guaranteed cost control for Hopfield neural networks	G. Rajchakit
		Delay-dependent optimal guaranteed cost control of stochastic neural networks with interval nondifferentiable time-varying delays	M. Rajchakit

Room 3	13.06.13: 9.00-10.40	**Chair: Paul Manneville**	**Flows**
		Breakdown of turbulence in a plane Couette flow. Can extreme fluctuations be used to understand critical transitions?	Faranda, D., Lucarini, V., Manneville, P., Wouters, J.
		Synchronization of air bubbles by circulation of a viscous fluid	José C. Sartorelli, Felipe A. C. Pereira, Eduardo Colli
		DNS for Physics of Turbulence Generation and Sustenance	Chaoqun Liu, Ping Lu, Yonghua Yan
		Dynamical chaos in the three-dimensional flow with point symmetry group D2	Yuri Gurov, George Chechin, Denis Ryabov
		Nonlinear dynamics of a spatial extensible curved pipe conveying pulsating fluid by DQM	Qiao Ni, Min Tang, Yikuen Wang

Room 4	13.06.13: 9.00-10.40	**Chair: Dinis Pestana, Co-Chair: Bernard Cazelles**	**Demographics and Population**
		Dynamic Instabilities in Population Growth Models I: Bernoulli Randomized Modified Fibonacci Model	Maria de Fatima Brilhante, Maria Ivette Gomes, Dinis Pestana
		Dynamic Instabilities in Population Growth Models II: Panjer Randomized Modified Fibonacci Model	Maria de Fatima Brilhante, Maria Ivette Gomes, Dinis Pestana, Maria Luísa Rocha
		Uniform Phase and Chaotic Amplitude (UPCA) dynamics may explain the unpredictability of influenza A epidemics in temperate areas	Bernard Cazelles
		Extensions of the Verhulst Model, Order Statistics and Products of Independent Uniform Random Variables	Maria de Fatima Brilhante, Maria Ivette Gomes, Dinis Pestana
		The development of 2-phase model of population growth	Balyakin A.A., Zhulego V.G.

	13.06.13: 10.40-11.00		**Coffee Break**

Room 1	13.06.13: 11.00-11.40	**Keynote Session (Chair: Valentin V. Sokolov) Michał Ławniczak, Agata Nicolau-Kuklińska, Szymon Bauch, Oleh Hul, Professor Leszek Sirko**	**The Elastic Enhancement Factor as an Experimental Measure of Quantum Chaos**

SCS5		**SPECIAL AND CONTRIBUTED SESSIONS SCS5**	

Room 1	13.06.13: 11.40-13.00	**Chair: Sandra M. Aleixo**	**Communications, Sychronization**
		Synchronization in von Bertalanffy's models	J. Leonel Rocha, Sandra M. Aleixo, Acilina Caneco
		CHAOS BASED COMMUNICATION 2013 (minBW&maxMBps)	ABULMEINI FIKRY
		Blind Channel Equalization of Single Input Single Output Chaotic Communication System Using Stochastic Gradient Algorithms	Bassam A. Harb, Al-Obiedollah M. Haitham
		Features modeling of chaotic communication systems in environments Matlab and LabVIEW	Mykola Kushnir, Sergii Galiuk, Petro Ivaniuk, Volodymyr Rusyn, Oleg Eliyashiv, Grygorii Kosovan
		Implementation of Chaos Based Secured Communication System on TMS320C64x+ DSP	Mahalinga V. Mandi, Ramesh S, Murali R, Dileep D

Room 2	13.06.13: 11.40-13.00	Chair: Rabih F. Sultan	Physico-Chemical Chaos
		Self-organization in the thin gas-sensitive Ag-containing polyacrylonitrile films	V. Petrov, N. Plugotarenko, T. Semenistaya
		Modeling of the structure and electronic properties of ZnO nanoclusters	D.I.Popovych, R.V.Bovhyra, A.S.Serednytski
		Pattern Formation Dynamics in Diverse Physico-Chemical Systems	Rabih F. Sultan
		SIGNALS OF CHAOS IN THE TRANSIENT CURRENT THROUGH As2S3(Ag) THIN FILMS	A.S. Hacinliyan, Y. Skarlatos, O. Ozgur Aybar, I. Kusbeyzi Aybar, E. Kandiran, A. C. Keles, E. C. G. Artun

Room 3	13.06.13: 11.40-13.00	Chair: Acilina Caneco	Networks, Hamiltonians, Chaotic Models and Applications of Chaos
		Mutual information rate and topological order in networks	J. Leonel Rocha, Acilina Caneco
		Study and development of Nystrom – type methos for integration of Hamiltonian problems	Ch. Tsitouras, I. Th. Famelis
		Numerical Study Of Closure Models Applied To Turbine Blade Film Cooling	Amar Berkache, Rabah Dizene
		APPLICATIONS OF CHAOS THEORY IN PROJECT TIME MANAGEMENT IN CONSTRUCTION INDUSTRY	Atie Ahmadi, Mahmoud Golabchi, Saied Yousefi
		Efficient Transport Management System (ETMS) Using ARM Processor	Shivaputra, Chetan S
		Conformal transformation of metrics on the n-sphere	Dina A. Abuzaid, Randa Ben Mahmoud, Hichem Chtioui
		Luminescent Spatial Temporal Structures: Induction Period	S. G. Karitskaya

Room 4	13.06.13: 11.40-13.00	Chair: John Oommen	Neural Networks
		Nonlinear Interdependence (S) Measures used for Exploring Chaotic Behavior in Large-Scale Neuro-Models	Dragos Calitoiu, John Oommen
		Chaotic Pattern Recognition Using the Adachi Neural Network Modified in a Random Manner	Ke Qin, B. J. Oommen
		Hysteresis modelling of cold-formed steel shear walls with neural networks	Gholamreza Abdollahzadeh, Farid Ghobadi
		Layer-Recurrent Neural Network Modelling of Reactive Distillation Process	Abdulwahab GIWA, Saidat Olanipekun GIWA
		Stochastic synchronization of chaotic recurrent neural networks with time varying delays using adaptive feedback control	R. Suresh
		The Fokker-Planck Equation in Chaotic Dirac-Fermion Systems and Statistical Mechanics	Muhammad Yusuf

	13.06.13: 13.00-14.00		Lunch

Room 1	13.06.13: 14.15-15.00	**Keynote Session (Chair: Jan Awrejcewicz) Oleh I. Shpotyuk, Avadis S. Hacınlıyan, Roman Golovchak, Yani Skarlatos, Valentina Balitska, Ilnkur Kusbeyzi Aybar, Andrzej Kozdras, Orhan Ozgur Aybar**	**Observation of Chaotic Behaviour in Physical Ageing of Chalcogenide Glasses**
Room 1	13.06.13: 15.00-15.40	**Keynote Session (Chair: Leszek Sirko) Dr. Valentin V. Sokolov**	**Elastic Enhancement Factor as a Probe of Chaotic Quantum Dynamics (old and new aspects of a striking phenomenon)**
Room 1	13.06.13: 15.40-16.20	**Keynote Session (Chair: Leszek Sirko), Prof. Varga Kalantarov**	**Attractors of Semigroups Generated by Dissipative Parabolic PDE's**
	13.06.13: 16.20-16.40		**Coffee Break**
SCS6		**SPECIAL AND CONTRIBUTED SESSIONS SCS6**	
Room 1	13.06.13: 16.40-18.00	**Chair: C. H. Skiadas**	**Mixing**
		Revealing chaotic features of mixing at river groyne fields using Lagrangian tools	Márton Zsugyel
		Mixing and Coherent Structures in Two and Three Dimensional Containers	Tatyana S. Krasnopolskaya, Volodymyr S. Malyuga, Oleksandr L. Golichenko
		The power of simple chaotic forms: Examples and simulations	Christos H. Skiadas, Charilaos Skiadas
		On the mixing dues to wind generated nonlinear resonances in shallow lakes	Balázs Sándor
Room 2	13.06.13: 16.40-18.00	**Chair: Bernd Binder**	**Signals**
		Chaotic Signal Jumps: Within, Beneath, and Beyond Quantum Physics?	Bernd Binder
		An Algorithmic Approach for Radiation Signal Encryption using Artificial Neural Networks and Chaos Dynamics	S. Chatzidakis, P. T. Forsberg, J. Young, A. L. Grelle, L. H. Tsoukalas
		Methods for studying of different physical nature distributed signals	Ivan M. Pershin
		Analysis of Chaotic Signals as an alternative to Pseudo Random sequences in DS-CDMA	Sneha Venkateswar, Gargi Rajadhyaksha, Jinal Shah
		Application of signal processing techniques to ultrasonic guided waves	A. Benammar, R. Drai

Room 3	13.06.13: 16.40-18.00	Chair: Gabriel V. Orman	Stochastics
		Some aspects of stochastic calculus and approximation in chaotic systems analysis	Gabriel V. Orman, Irinel Radomir
		Local Analysis of Noise-Like Time Series: Dimension of Minimal Cover and Histogram Shape	Victor A. Panchelyuga, Maria S. Panchelyuga
		Stochastic Model Reduction for Polynomial Chaos Expansion Using Proper Orthogonal Decomposition	Mehrdad Raisee, Dinesh Kumar, Chris Lacor
		The Health State Function of Human Population and the Prediction of Life Expectancy by Applying Stochastic Modeling Techniques	George Matalliotakis, Christos H. Skiadas
Room 4	13.06.13: 16.40-18.00	Chair: Adnane Latif	Communications
		Chaotic Modulation and Demodulation Approach for Secure Communication	Abdelkrim Boukabou
		Digital Secure Communication Using Chaotic Time-Delay Systems	Mikhail D. Prokhorov, Vladimir I. Ponomarenko, Danil D. Kulminskiy, Anatoly S. Karavaev
		Simulation of a Network Circular Patch Antennas for the Wireless Communications	Adnane Latif, Abdellah Ait Ouahman
Room 1	13.06.13: 18.00-18.40	Keynote Session (Chair: Christos H Skiadas), Professor Mikhail Zakrzhevsky, Dmitry Pikulin, Alex Klokov	The Exact Nonlinear Dynamics and Chaos Prediction for Pendulum-like and Many-well Driven Damped Systems
PS	13.06.13: 18.40-19.00	POSTER SESSION	POSTER SESSION
		The list is at the end of the program	
	13.06.13: 21.00-00.30		Farewell Dinner
		Friday June 14	
SCS7		SPECIAL AND CONTRIBUTED SESSIONS SCS7	
Room 1	14.06.13: 9.00-10.40	Chair: Y. Dimotikalis	Oscillators
		Dynamics of multiple pendula without gravity	Wojciech Szumiński
		Enhancing synchrony in chaotic oscillators by dynamic relaying	R. Banerjee, E.Padmanaban, D.Ghosh, R.Ramaswamy, L.M.Pecora, S.K.Dana
		A Beam Periodically with Nonlinear Local Resonate Elements for Broadband Vibration Absorption	Hongping Hu, Ziyang Lian, Yuantai Hu, Ji Wang
		Coupled Nonlinear Oscillators: Linking Dynamical Systems and Chaos Theory with Engineering Applications	Antonio Palacios, James Turtle, Visarath In, Patrick Longhini

Room 2	14.06.13: 9.00-10.40	Chair: Gabriel Orman	Stochastics
		New Trends in the Theory of Abstract Stochastic Problems	Irina V. Melnikova
		EKF for Estimation of The Lorenz System In Existence of Colored Noise	Mozhgan Mombeini, Hamid Khaloozadeh
		Stochastic Model for Calculation reserves with dependent accident years	I. Chorfi, K. T. Eiesele and R. Remita
		Stochastic Properties of Dynamical Systems Arising from (quantum) Spaces and Actions of (quantum) Groups	Nikolaj M. Glazunov
		On Solving the Stochastic Search on the Line Problem with a team of Learning Automata Operating on a Hierarchical Search Space	A. Yazidi, B. J. Oommen
Room 3	14.06.13: 9.00-10.40	Chair: Avadis S. Hacinliyan	Biology
		Multistationarity, Hybrid Dynamical Systems with Memory and Tumor-Immune Interaction	N.Gökgöz, H. Öktem
		Wavelet Analysis of the Human Brain Lability to Reproduce the External Rhythm	Olga E. Dick
		Self-organization and chaos in the metabolism of a cell	V.I. Grytsay, I.V. Musatenko
		The Method of "Channels and Jokers' in the Research of Bioelectrical Activity of the Brain	O.Yu. Mayorov, V.N. Fenchenko
		Cyclic diagrams in synergetics of brain and heart diseases	Anatoly M. Taranenko
		Influence of geomagnetic activity on recurrence quantification indicators of human EEG	Igor Kanunikov
Room 4	14.06.13: 9.00-10.40	Chair: Ivan Zelinka, Co-Chair: Jan Andres	Chaos, multivalued chaos, fractals and multivalued fractals - retrospectives and perspectives
		Multivalued chaos	Jan Andres
		Wick-Malliavin Approximations for Equations of Fluid Dynamics	B. L. Rozovsky
		Pattern formation and dynamics in a liquid layer submitted to an inclined gradient of temperature	D. Nezar, S. Rahal
		Laceability in the Brick Product of Cycles	R Murali, Shivaputra, Chetan S
		Dynamic -Spatial -Temporal Urban Growth Modelling uning Remore Sensing and Intelligent Algorithms	Ali Soltani, Davoud Karimzadeh
		On Relations Between CML Systems and Evolutionary Dynamics	Ivan Zelinka, Vaclav Snasel
SCS8		SPECIAL AND CONTRIBUTED SESSIONS SCS8	
Room 1	14.06.13: 10.40-12.20	Chair: Yiannis Dimotikalis, Co-Chair: B. Venturi	Economy
		Nonlinear Analysis of Crete Tourism Data An attractor and a superattractor in the contemporary pan-humanitarian space	Yiannis Dimotikalis Maximova Marina
		The Model of Behavior Economic System in the Conditions of Innovative and Market Changeability	Pavel V. Zakharchenko
		CHAOTIC SOLUTIONS IN A NEW KENESIAN MODEL	B. Venturi, G. Bella, P. Mattana

Room 2	14.06.13: 10.40-12.20	Chair: Pol D. Spanos, Co-Chair: Suphaphorn Panikhom	Equations / Estimation / Control
		Stabilization of an Inductorless Chua's Chaotic Circuit via Sliding Mode Control	Suphaphorn Panikhom, Wirote Sangtungtong and Sarawut Sujitjorn
		An efficient computational approach for global regularization schemes	Anoop Sivasankaran, Muhammad Shoaib
		Positive Solutions for Second Order Multi-Point Boundary Value Problems	Fatma Tokmak, Ilkay Yaslan Karaca
		Mathematical Analysis of Schelling's Segregation Model	Emre Kaya
		Two-Side Confidence Intervals for the Poisson Means	Manlika Rajchakit
		Correlation and Randomness Properties of Binary Sequences Generated Using Matrix Recurrence Relation Defined over Z8	Ramesh S, Dileep D
		Parameter estimation for the model of the chaotic process: combined application of the Kalman filter and the minimax filter	Anton S. Sheludko, Vladimir I. Shiryaev
		Computation of invariant tori by orthogonal collocation	Weiwei Sun
		Physical and geometrical elements for the short period eclipsing binary XY Lmi using Fourier transform method	ABDALLA HUSAIN ALMOHAMMAD
		On singular elliptic equations involving a concave term and critical Caffarelli-kohn-Nirenberg exponent	M.Bouchekif, A.Matallah
		Multiple positive solutions for a nonlocal boundary value problem	Naima Merzagui, Yassamina Tabet
		Efficient Monte Carlo simulations for nonlinear Stochastic Dynamics	Pol D. Spanos
		Adaptive Backstepping Controller Design For an Electro Hydraulic Servo System	Kidouche Madjid; Touati Brahim A.
		Automatic control of turbo generators setting automatic freqency	H. Meglouli, A. Chebouba, I. Habi
		Control of convective flow dynamics in a cavity using a vortex generator	H. Chebah, A. Hamada, S. Rahal
		A Supervisory Fuzzy System for Improving Temperature Control in an Industrial Gas Processing Unit	H. Habbi, N. Bekhadda, M. Kidouche

Room 3	14.06.13: 10.40-12.20	Chair: Borys A. Biletskyy, Co-Chair: Mahalinga V. Mandi	Control / Sychronization / Cryptography
		MPC based switching control method for PWL systems	Veysel G. Anık, Leyla Gören Sümer
		Dynamical System Control Using Composite Random Fields	Borys A. Biletskyy
		Control of Unknown Chaotic Systems using Bilinear Neurofuzzy Approximation Models	Yiannis S. Boutalis, Manolis A.Christodoulou, Dimitris C. Theodoridis
		EOG Based Eye Movement Controlled Human Machine Interface	Chetan S, Shivaputra
		Chaos Cryptography: Relation of Entropy with Message Length and Period	George Makris, Ioannis Antoniou
		Chaos Based Water Marked Image Encryption	Mahalinga V. Mandi, Dileep D
		A novel Cryptanalysis of Ultralightweight RFID authentication Protocol	Umar Mujahid, M.Najam-ul-islam, Jameel Ahmed
		New Chaotic Crypto System based on the Specific Generator and the Pickover's Attractor	Adda ALI-PACHA, Naima HADJ-SAID and Mohamed Sadek ALI-PACHA
		Applying the 0-1 test for the detection of chaotic and reduced-order synchronization of chaotic systems with different dimension	Javad Khaligh, Aghileh Heydari, Siroos Nazari
		A New Chaotic Pseudorandom Number Generator with Application in An Encryption Scheme with Avalanche Effect	Lequan Min

Room 4	14.06.13: 10.40-12.20	Chair: I. Kusbeyzi Aybar, Co-Chair: R. Murali	Maps / Engineering
		Stability maps of a simple chaotic circuit	Furat A. Al-Saymari, Imad Al-Deen, C.A. Emshary
		Chaotic Trajectories in Magnetron Diiode	V.B. Bayburin, N.Y. Khorovodova
		Normal and anomalous transport in the standard map	Lydia Bouchara, Ouerdia Ourrad Meziani, Xavier Leoncini
		An Extension of Krasnoselskii's Fixed Point Theorem for Contractions and Compact Mappings	Derrardjia Ishak, Ahcene Djoudi, Abdelouaheb Ardjouni
		Kinetics Complexity in Physical Ageing of Chalcogenide Glassy Semiconductors	V. Balitska, O. Shpotyuk, R. Golovchak, A. Kozdras
		Dynamical and Statistical Properties of Traffic Models	Armando Bazzani, Riccardo Gallotti, Sandro Rambaldi
		Proven avalanche dynamics in software reliability	Narjes Shojaati
		Behavioral Modeling of Microtweezer Integrated with Capacitive Touch Sensor	Nayyer Abbas Zaidi, Shafaat A. Bazaz, Nisar Ahmed, Rahim Umar
		The comparative study of chaoticity and dynamical complexity of the low latitude ionosphere over Nigeria, during quiet and disturbed days	B. O. Ogunsua, J.A. Laoye, I.A. Fuwape, A.B. Rabiu

Room 5	14.06.13: 10.40-12.20	Chair: A. Kolesnikov, Co-Chair: Olga D. Kreerenko	Short Papers Session: Synergetics
		Synergetic Synthesis of the Vector Control Laws of Movement of the Aircraft to Limit Flight Modes	Evgeny S. Kreerenko, Olga D. Kreerenko
		Combined Synthesis of the Control Laws of the Aircraft Deceleration on the Runway	Olga D. Kreerenko, Evgeny S. Kreerenko
		Chaotic dynamics for data processing and securing: synergetic approach	Yulia Dzuba, Gennady E. Veselov, Anatoly A. Kolesnikov, Alexey S. Mushenko
		Synergetics and cybernetics: concept-based synthetics	Anatoly A. Kolesnikov
		Method of nonlinear adaptive control of active vibration protection systems	Alexander A. Kolesnikov
		Power System's Turbo-generators Hierarchical Control: Synergetic Approach	Andrew A. Kuzmenko, Alexander S. Sinicyn
		Fractal - Scaling Approach in the Fractal Natural Science	Alexander A. Potapov
		The synergetic method of energy efficient control syntheses by electric drive of rolling stock	Anatoly A. Kolesnikov, Gennady E. Veselov, Andrew N. Popov, Yury I. Klimenko, Ivan A. Radionov
		Synergetic Control of Injection Engine	Andrey Smykov
		Synergetic approach to unmanned air vehicle control with "attractor-repeller" strategy of nondeterministic obstacles avoidance	Gennady E. Veselov, Andrey A. Sclyarov
		Self-organizing strategies of group control robotic systems	Gennady E. Veselov, Sergey A. Sclyarov
		Control of the movement of mechanic system, ineracting with surroundings. Problems of evolution and self organization	Vilor L. Zakovorothnii

Room 1	14.06.13: 12.20-13.00	Keynote Session (Chair: Dinis Pestana) Professor Jan Awrejevicz (A.V. Krysko, J. Awrejcewicz, T.V. Yakovleva, V. Dobriyan)	Mathematical modeling of chaotic vibrations of strongly non-linear continuous structures
	14.06.13: 13.00-14.00		**Lunch**
Room 1	14.06.13: 14.15-15.00	Keynote Session (Chair: Avadis S. Hacinliyan) Professor Ayse Erzan	Information, Fitness and Measures of Complexity
Room 1	14.06.13: 15.00-15.40	Keynote Session (Chair: Avadis S. Hacinliyan) Professor M. U. Akhmet, M. O. Fen	New Criteria for Generalized Synchronization Preserving the Chaos Type
SCS9		**SPECIAL AND CONTRIBUTED SESSIONS SCS9**	
Room 1	14.06.13: 15.40-17.00	**Chair: Dan G. Dimitriu**	**Plasma**

	Chaotic Properties of Plasma Turbulent Transport	T. Cartier-Michaud, Ph. Ghendrih, J Abiteboul, J. Bigot, G Dif-Pradalier, D. Esteve, X Garbet, V Grandgirard, G Latu, C Norscini, C. Passeron, F. Rozar, Y Sarazin, P Tamain, O. Thomine
	Competition of Scenarios of Transition to Chaos in Plasma – Experiment and Theoretical Modeling	Dan G. Dimitriu, Maricel Agop
	Nonlinear dynamical modelling of plasma oscillations by nonlinear jerk equation	A.N.Sekar Iyengar, M.S. Janaki
	Cavitation by nonlinear interaction between inertial Alfvén waves and magnetosonic waves in low beta plasmas	SANJAY KUMAR, R P SHARMA
	Ion acoustic cnoidal waves and solitons in nonthermal electron-positron-ion plasmas	S. Mahmood, T. Kaladze

Room 2	14.06.13: 15.40-17.00	**Chair: Anatolij K. Prykarpatski**	**Equations**
		Invariant measures for discrete dynamical systems and ergodic properties of generalized Boole type transformations	Anatolij K. Prykarpatski
		On homoclinic solutions of semilinear p-Laplacian difference equations with periodic coeffcients	Stepan Tersian
		Statement and Resolution of Generalized Orr-Sommerfeld Equation	Blaise NSOM, Noureddine LATRACHE, Karim BOUCHLAGHEM
		Exponential dichotomy and bounded solutions of the Schrödinger equation	Oleksander A. Pokutnyi

Room 3	14.06.13: 15.40-17.00	Chair: Y. Dimotikalis	Various Aspects of Chaos / Applications
		Traditions and Innovations in Modern Genre System of Literature: Chaos or Order?	Palina P. Tkachova
		Wastewater Characterization and Evaluation tests of the impact on soil and plant by spreading: case of El-Madher plain	A.Tamrabet, N.Sahraoui
		Semantic structuring of chaotic-standing sentences of natural language	Vavilenkova Nastya
		Chaotification of Logistic Model with Periodic Impulsive Feedback	N. Vasegh, M. Pourmand
		University Students in a Non-Linear Environment Need Non-Linear Higher Education System	Gonca Kizilkaya Cumaoglu, Ilknur Kusbeyzi Aybar, K. Burak Olgun
		Linear-inversive congruential pseudo-random numbers with prime power modulus	Vadim Rudetskiy, Tran The Vinh, Pavel Varbanets, Sergey Varbanets
		The feature selection in the steganalysis	Imen Bouguerne
		Analogue of Turan-Erd•os-Koksma inequality for a discrepancy of complex PRN's	Vadim Rudetskiy, Tran The Vinh, Pavel Varbanets, Sergey Varbanets
		Probabilistic approach of an heterogeneous aquifer transmissivity. Example of the plain of Annaba-Algeria	TOUBAL Ahmed Chérif
		Electroacustic composition by means of Chaotic Dynamical Systems inside a Probabilistic Cellular Automaton environment	Edmar Soria
Room 4	14.06.13: 15.40-17.00	Chair: Alexandre Titov	Physics, Astrophysics
		Experimental demonstration of time-irreversible, self-ordering process in macroscopic quantum systems	Alexandre Titov, Ygor Malinovsky
		Studying chaotic features for atomic systems in an crossed dc magnetic and ac electric fields by analysis of recurrence spectra: Li atom	T.A. Florko
		Chaotic Magnetic Fields as Vlasov Maxwell Equilibria	M.S. Janaki, Abhijit Ghosh, Brahmananda Dasgupta, Abhay K. Ram
		Investigation of influence of interplanetary media on the movement of planets using statistical theory of gravitating spheroidal bodies	Alexander M. Krot
Room 5	14.06.13: 15.40-17.00	Chair: I. Kusbeyzi Aybar	Physiology/ Biology
		Dynamical systems analysis of the gene regulatory network: on example of fruit fly early segmentation	Spirov, A.V., Holloway, D.M.
		Chaos in a Modified Cardiorespiratory Model	Tatyana S. Krasnopolskaya, Evgeniy D. Pechuk
		Modified modeling of the heart by applying nonlinear oscillators and design proper control signal	Sirros Nazari, Aghileh Heydari, Javad Khaligh
		Comprehensive Chaotic Description of Heartbeat Dynamics Using Scale Index and Lyapunov Exponent	Sohrab Behnia, Javid Ziaei, Marjan Ghiassi, Mohammad Yahyavi
		Bursting Dynamics of Pancreatic β-cells with Electrical and Chemical Couplings	Qishao Lu, Pan Meng
		EOG Based Eye Movement Controlled Human Machine Interface	Chetan S, Shivaputra

Optimization tests of antagonistic interaction between Lead / Iron and Lead / Zinc, IN-VITRO, Investigations on the plant: PHASEOLUS VULGARIS		N. Sahraoui, A.Tamrabet
Comparative study of different diets efficiency on some biological parameters of Chrysoperla carnea (Stephens) (Neuroptera: Chrysopidae) for its mass rearing in insectariums		Mahmoud Jokar, Mehdi Zarabi
Chaos for Improving Ant colony Algorithm of Optimization		Mozhgan Mombeini, Mohammad Ali Nekoui

14.06.13: 17.00-17.30	**Closing Ceremony**	

Excursion	15.06.13	**Saturday June 15**	**Full Day Excursion**

PS	13.06.13: 18.40-19.00	Poster Session	Posters
		Protein Unfolding Process in Multiscaling Modeling	Gwonchan Yoon, Jae-In Kim, Kyung-Woo Kim, Sungsoo Na
		Transient chaos measurements using finite-time Lyapunov exponents in multidimensional systems	Katarzyna Buszko, Krzysztof Stefański
		Estimation of quality factors from CMP records and VSP data	Djeddi Mk, Mender M
		Feedback 4-D Chaotic Systems Synchronization for Image Encryption and Decryption	Sonia Hammami, Mohamed Benrejeb
		CHOTIC BEHAVIOUR IN SOME DISCRETE-TIME ADAPTIVE CONTROL SYSTEMS	Khalid Khan
		Torsion-Adding in Periodic Window Sequences	E. S. Medeiros, R. O. Medrano-T, I. L. Caldas, S. L. T. de Souza
		Thermal homogenization of multi swirling jet	Mohamed ROUDANE, Larbi LOUKERFI
		Improved Frank-Wolfe method: Application to the traffic assignment problem	Rachid OUAFI
		Application of Chaos to Cryptography	I.TALBI and S. BOUGHABA
		Estimating the bounds for the generalized 4-dimensions chaotic system	Okba Zehrour
		Central Configurations in a symmetric five-body problem	Muhammad Shoaib, Anoop Sivasankaran
		Looking at Graviton properties, as either Classical or QM, in nature, via alicki-Van ryn experimental realization	Andrew Beckwith
		Phytoremediation Potential of Chromoleaeceae odorata (siam weed) and Imperata Cylindrical (sword grass) for cleaning up a Lead-zinc Derelict Mine	Oti Wilberforce, J. O., Nwabue, F. I
		The Reaction Diffusion Progress VI1 can have Chaos part1	Mamadou Lamine dit papa NDao
		Chaotic Modeling of Color Objectivism	J. Manteith, N. Serov
		Interactive Studies of some Radical Scavenging drugs with Acetaminophen based Oscillatory Chemical Reaction	G. M. Peerzada, Nadeem Bashir
		Function Projective Synchronization of the Rabinovich Systems	Olurotimi S. Ojoniyi
		Application of chaotic particle swarm optimization algorithm in synchronization of modified modeling of the heart in presence of unknown parameters	Siroos Nazari, Aghileh Heydari, Javad Khaligh
		Application of chaotic particle swarm optimization algorithm in reduced-order synchronization of chaotic systems with different dimension in presence of unknown	Javad Khaligh, Aghileh Heydari, Siroos Nazari
		Stability and bifurcation in a two species predator-prey model with quintic interactions	I. Kusbeyzi Aybar, I. Hacinliyan
		Path Dependence in the Neoclassical Economic Growth Theory	Aleksander Jakimowicz