TUESDAY – July 3

9.00-9.30	OPENING CEREMONY				
9.30-10.30	PLENARY TALK: Prof. V. SALAPAKA				
10.30-11.00	coffee break				
	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	S5	M3	M2	S1	
11.00-11.25	Mathematical Problems in Chemical Physics	Mathematical Modeling, Numerical Algorithms, Optimization Methods	Nonlinear Analysis of Motion and Functioning of Electric Propulsion Spacecraft	Fractional differential equations and fractional derivatives of special functions	Discussion
11.25-11.50					
11.50-12.15					
12.15-14.00	lunch break				
	Plenary talk				
Room:	Room 1				
14.00-14.50	PLENARY TALK: Prof. S.N. VASSILYEV				
	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	S5	M1	M2	S1	
15.00-15.25	Mathematical Problems in Chemical Physics	Nonlinear Problems in Guidance, Navigation and Control	Nonlinear Analysis of Motion and Functioning of Electric Propulsion Spacecraft	Fractional differential equations and fractional derivatives of special functions	Discussion
15.25-15.50					
15.50-16.15					
16.15-16.45	coffee break				
	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	S5	M1	M2		
16.45-17.10	Mathematical Problems in Chemical Physics	Nonlinear Problems in Guidance, Navigation and Control	Nonlinear Analysis of Motion and Functioning of Electric Propulsion Spacecraft	Discussion	Discussion
17.10-17.35					
17.35-18.00					

20.00-	WALK AROUND CITY AND VISITING SINGING FOUNTAINS

WEDNESDAY - JULY 4

	Keynote talks	
Room:	Room 1	Room 2
8.30-9.20	KEYNOTE: Prof. Milan STEHLIK	KEYNOTE: Prof. Tal SHIMA
9.20-10.10	KEYNOTE: Prof. R. HILFER	KEYNOTE: Prof. A VATSALA
10.10-10.40	coffee break	

	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	M3	M1	M2	M4	S8
10.40-11.05	Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control	Nonlinear Problems in Guidance, Navigation and Control	Nonlinear Analysis of Motion and Functioning of Electric Propulsion Spacecraft	New Trends in Representation Theoretical Methodologies	Statistical and Stochastic Modelling
11.05-11.30					
11.30-11.55					
11.55-12.20					
12.20-14.00	lunch break				

	Plenary talks
Room:	Room 1
14.00-14.50	PLENARY TALK: Prof. Petros VOULGARIS
14.50-15.40	PLENARY TALK: Prof. Metin DEMIRALP
15.40-16.00	coffee break

	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	M3	M1	M2	S2	S3
16.00-16.25	Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control	Nonlinear Problems in Guidance, Navigation and Control	Nonlinear Analysis of Motion and Functioning of Electric Propulsion Spacecraft	Integral Equations and Their Applications in Science and Technology	Clifford algebras, Clifford analysis and their applications
16.25-16.50					
16.50-17.15					
17.15-17.40					
17.40-18.05					
18.05-18.30					
21.30-	MEZZO MUSIC EVENING				

THURSDAY – July 5

	Keynote talks	
Room:	Room 1	Room 2
8.40-9.30	KEYNOTE: Dr. Toshiya NAKAMURA	KEYNOTE: Prof. Xiaofeng WANG
9.30-10.20	KEYNOTE: Dr. Masato TAMAYAMA	KEYNOTE: Prof. G.S. LADDE

	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	M3	M1	S6	M4	S9
10.30-10.55 10.55-11.20 11.20-11.45 11.45-12.10	Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control	Nonlinear Problems in Guidance, Navigation and Control	Mechanics: CFD, Deformable solids and applications	New Trends in Representation Theoretical Methodologies	Nonlinear Engineering Problems
12.10-14.00	lunch break				
	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	M3	S7	S6	M4	S9
14.00-14.25 14.25-14.50 14.50-15.15 15.15-15.40	Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control	Methods of Nonlinear Analysis and Their Applications	Mechanics: CFD, Deformable solids and applications	New Trends in Representation Theoretical Methodologies	Nonlinear Engineering Problems
15.40-16.00	coffee break				
	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	M3	S7	S6	S4	S9
16.00-16.25 16.25-16.50 16.50-17.15	Mathematical Modeling, Numerical Algorithms, Optimization Methods	Methods of Nonlinear Analysis and Their Applications	Mechanics: CFD, Deformable solids	Aviation Management and Operation Research	Nonlinear Engineering Problems
19.00-	BANQUET				

FRIDAY – July 6

	Keynote talks				
Room:	Room 1		Room 2		
8.30-9.20	KEYNOTE: Prof. Oleksandr POKUTNYI		KEYNOTE: Prof. F.B.M. BELGACEM		
Room:	Room 1				
9.20-10.10	KEYNOTE: Prof. Vladimir V. GOLUBEV				
10.10-10.40	coffee break				
	Parallel sessions				
Room:	Room 1	Room 2	Room 3	Room 4	Room 5
Session:	M3	S10	Gen 1	Gen 2	Gen 3
10.40-11.05 11.05-11.30 11.30-11.55	Mathematical Modeling, Numerical Algorithms, Optimization Methods	Unsteady Aerodynamics, Aeroacoustics and Flow Control	General Session 1	General Session 2	General Session 3
12.00-	TRIP TO SEVAN LAKE WITH LUNCH				
END OF CONFERENCE					

TUESDAY – July 3

9.00-9.30	**OPENING CEREMONY - Room**
9.30-10.30	**PLENARY TALK: Prof. V. SALAPAKA - "Combinatorial Optimization Problems on Networks: A Maximum-Entropy-Principle Based Framework"**

10.30-11.00	**coffee break**

11.00-12.15	**Parallel sessions**

Room 1	**S5: Mathematical Problems in Chemical Physics**	
	Chair: V. Kulish	
11.00-11.25	Vladimir Horak	Chaotic behaviour of the exact solution to the Navier-Stokes equation: transition to turbulence
11.25-11.50	Vladimir Posvyanskii	Numerical solution of surface combustion on a flat porous matrix
11.50-12.15	Mark Kozhushner	Interaction of charge with metal

Room 2	**M3. Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques**	
	Chair: Alexandru Dumitrache	
11.00-11.25	Evgenii Semenishchev	Images stitching algorithm of the underlying surface Earth, obtained from the Unmanned Aerial Vehicles (UAV)
11.25-11.50	Elizaveta Nikolaeva	Simulation of a system for protecting Earth from asteroid hazard by gravitational spacetug or solar sail
11.50-12.15	Kseniya Petrukhina	Simulation of the flight spacecraft with low thrust from highly elliptical to geosynchronous orbit

Room 3	**M2. Nonlinear Analysis of Motion and Functioning of the Electric Propulsion Spacecraft**	
	Chair: O. Starinova	
11.00-11.25	Andrew Khramov	Formation of algorithms of sequential control for spacecraft rendezvous with low-thrust
11.25-11.50	Min Thein	Comparative Analysis of the Effectiveness of Methods for Solving Boundary Value Problems of the Maximum Principle for Low Thrust Trajectory Optimization
11.50-12.15	Ilya Nikolichev	Application of Dual Numbers in the Low Thrust Interorbital Multi-Revolutions Trajectory Optimization with the Effect of Perturbations

Room 4	**S1. Fractional differential equations and fractional derivative of special functions**	
	Chair: E. Guariglia	
11.00-11.25	Narinder Singh	ICMGWO: A Novel Flexible Inertia Constant Mean Grey Wolf Optimizer Algorithm for Engineering Real Life Applications
11.25-11.50	Bhuvaneswari Sambandham	Numerical results for nonlinear Caputo fractional boundary value problems
11.50-12.15	Giuseppe Pucciarelli	Fractional-Wavelet modeling: an application in Volcanology

12.15-14.00	**lunch break**

14.00-14.50	**PLENARY TALK: Prof. S.N. VASSILYEV - "Method of logical equations in mathematical systems theory"**

15.00-16.15	**Parallel sessions**

Room 1	**S5: Mathematical Problems in Chemical Physics**	
	Chair: V. Kulish	
15.00-15.25	Leonid Trakh	Sensor properties of In2O3 based semiconducting binary metal-oxide nanocomposites
15.25-15.50	Valeriya Bodneva	Sensor properties of In2O3 based semiconducting binary metal-oxide nanocomposites
15.50-16.15	Boris Novozhilov	Solution of Inverse Problem of the Theory of Nonsteady Solid Propellant Combustion under the Pressure Drop in Rocket Engine

Room 2	**M1.Nonlinear Problems of Guidance, Navigation and Control**	
	Chair: Yevgeny Somov	
15.00-15.25	Yevgeny Somov	Land-survey satellite guidance and attitude control during a scanning stereoscopic imagery
15.25-15.50	Vladimir Kurenkov	Estimation of Land Remote Sensing Satellite Power Balance Based on Simulation of its Orbital Movement
15.50-16.15	Alexander Kucherov	Methodology of optimizing the angles of solar cells batteries installation at land-remote sensing satellites, considering their dynamics

Room 3	M2. Nonlinear Analysis of Motion and Functioning of the Electric Propulsion Spacecraft	
	Chair: A. Shornikov	
15.00-15.25	Olga Starinova	The mission's design of solar sail spacecraft based on locally-optimal control laws
15.25-15.50	Vyacheslav Petukhov	Optimization of Space Missions to Near-Earth Asteroids Using Solar Electric Propulsion Systems
15.50-16.15	Elizaveta Nikolaeva	Simulation of a system for protecting Earth from asteroid hazard by gravitational spacetug or solar sail

Room 4	S1. Fractional differential equations and fractional derivative of special functions	
	Chair: E. Guariglia	
15.00-15.25	Emanuel Guariglia	Fractional derivative of the complex gamma function
15.25-15.50	Emanuel Guariglia	Fractional calculus of meromorphic functions
15.50-16.15	Mehar Chand	Certain Fractional Kinetic Equations Involving generalized multiindex Mittag-Leffler function

16.15-16.45	coffee break

16.45-18.00	Parallel sessions

Room 1	S5: Mathematical Problems in Chemical Physics	
	Chair: B. Novozhilov	
16.45-17.10	Vladimir Kulish	A generalised relation between the local values of temperature and the corresponding heat flux in a one- dimensional semi-infinite domain with the moving boundary: investigation of behaviour
17.10-17.35	Andrey Nasedkin	About determination of smoothed and discontinuous derivatives in the finite element package ACELAN-COMPOS for composite materials
17.35-18.00	Andrey Nasedkin	Finite element homogenization of elastic materials with open porosity at different scale levels

Room 2	M1.Nonlinear Problems of Guidance, Navigation and Control	
	Chair: Yevgeny Somov	
16.45-17.10	Sergey Somov	Satellite guidance and attitude control at an areal scanning land-survey
17.10-17.35	Yevgeny Somov	Guidance, navigation and control of a free-flying robot at its rendezvous with a passive space vehicle
17.35-18.00	Aram Baghiyan	Parametrization of the Uncertainties in the Dynamics of the Target Tracking Systems of Aircraft

Room 3	M2. Nonlinear Analysis of Motion and Functioning of the Electric Propulsion Spacecraft	
	Chair: O. Starinova	
16.45-17.10	Andrey Shornikov	Stabilized trajectories of a spacecraft in inhomogeneous gravitational fields
17.10-17.35	Andrey Plokhikh	Analysis and application of non-linear methods for increasing interference immunity of radio communication systems operating on board a spacecraft with electric propulsion thrusters
17.35-18.00	Mikhail Konstantinov	Analysis of the change in the optimum thrust profile as a function of the parameters of the transport system with electric propulsion

20.00-	WALK AROUND CITY AND VISITING SINGING FOUNTAINS

WEDNESDAY – July 4

8.30-10.10	**Keynote talks**

Room 1	*Chair: Prof. Gangaram S. Ladde*	
8.30-9.20	**Prof. Milan STEHLIK**	**On algebraic confidence sets**
9.20-10.10	**Prof. Rudolf HILFER**	**TBA**

Room 2	*Chair: Prof. Luis Castro*	
8.30-9.20	**Prof. Tal SHIMA**	**Cooperative Guidance in Pursuit-Evasion Engagements**
9.20-10.10	**Prof. Aghalaya S. VATSALA**	**Nonlinear Caputo Impulsive Fractional Differential Equations and Generalized Monotone Method**

10.10-10.40	**coffee break**

10.40-12.20	**Parallel sessions**

Room 1	**M3. Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques**	
	Chair: S. Bogos	
10.40-11.05	Vassili Toropov	Large-scale stochastic optimisation for aeronautical applications
11.05-11.30	Narinder Singh	ICMGWO: A Novel Flexible Inertia Constant Mean Grey Wolf Optimizer Algorithm for Engineering Real Life Applications
11.30-11.55	Haik Biglari	Embedded Systems Development Platform For Model-Based Systems
11.55-12.20	Constantin Rotaru	Time dependent and multidimensional effects of the detonation combustion waves

Room 2	**M1.Nonlinear Problems of Guidance, Navigation and Control**	
	Chair: N. Kuznetsov	
10.40-11.05	Andrey Shevchenko	Development of Method for Predicting the Aircraft Brake-Way and Investigation of Its Reliability
11.05-11.30	Sergey Somov	Nonlinear dynamics of the satellite emergency orientation at digital control of magnetic actuator
11.30-11.55	Nikolay Kuznetsov	Hidden nonlinear oscillations in an aircraft stabilization system with restrictions at the actuator control
11.55-12.20	Costin Ene	H-infinity control design for the nonlinear longitudinal dynamics of the B-1 Lancer

Room 3	**M2. Nonlinear Analysis of Motion and Functioning of the Electric Propulsion Spacecraft**	
	Chair: M. Konstantinov	
10.40-11.05	Olga Starinova	Halo-orbit formation in the Earth-Moon system by the electric propulsion spacecraft
11.05-11.30	Vladislav Lyubimov	Study of the rotation of the Martian asymmetric probe before and after the heat shield undocking
11.30-11.55	Gregory Filippov	Nominal control program in problem of far rendezvous at geostationary orbit with low transversal thrust
11.55-12.20	Gregory Filippov	Ballistic analyze of spacecraft-inspector motion, equipped with electric thruster, above International Space Station

Room 4	**M4. New Trends in Representation Theoretical Methodologies**	
	Chair: M. Demiralp	
10.40-11.05	Zeynep Gündoğar	Determination of Decomposition Type for Tridiagonal Folmat Enhanced Multivariance Products Representation Method via Correlation Analysis
11.05-11.30	Ayla Okan	Bivariate Generating Functions in Overlapped Square Blocks Tridiagonal Kernel Enhanced Multivariance Products Representation (OSBTKEMPR) Perspective
11.30-11.55	Metin Demiralp	Tridiagonal Folded Kernel Enhanced Multivariance Products Representation (TFKEMPR)
11.55-12.20	Ercan Gurvit	Taylor Series Remainder's Kernel Evaluation in Tridiagonal Enhanced Multivariance Products Representation (TKEMPR) Perspective

Room 5	**S8. Statistical and stochastic Modelling**	
	Chair: M. Stehlik	
10.40-11.05	Maksim Ivanushkin	Processing of telemetry data arrays for "AIST" small satellites using the methods of imputing missing data
11.05-11.30	Jerzy Filus	Enforced Regression Paradigm
11.30-11.55	Jerzy Filus	Two universal representations of bivariate survival functions
11.55-12.20	Erik Trell	Stochastic Wavepacket Tessellation of Atomic Constitution and Periodic Table in Structural R3×SO(3) Solid State Configuration Space

12.20-14.00	**lunch break**

14.00-15.40	**Plenary talks**

Room 2	*Chair: M. Stehlik*	
14.00-14.50	**Prof. P. VOULGARIS**	**Distributed and Structured Control: The Impact of Youla-Kucera Parametrization**
14.50-15.40	**Prof. M. DEMIRALP**	**Space Extension Conceptuality and the Recent Status of Probabilistic Evolution Theory (PREVTH)**

15.40-16.00	**coffee break**

16.00-18.05	**Parallel sessions**

Room 1	**M3. Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques**	
	Chair: A. Dumitrache	
16.00-16.25	S. Bogos, A. Dumitrache	The aircraft dynamics and control at landing phase
16.25-16.50	Constantin Rotaru	Reacting flow particularities for turbojet combustion chambers
16.50-17.15	Adina Toma	Centrifugal Gas Compressors Noise Reduction Case Study
17.15-17.40	Valeriu Dragan	Turbulence model sensitivity on steady state mapping of a very high pressure ratio compressor stage
17.40-18.05	Mihai Pricop	Airfoil optimization based on low fidelity flow models
18.05-18.30	Mihai Niculescu	Corrections for Wind Tunnel Results for 2D High Lift Configurations Using RANS Simulations

Room 2	**M1.Nonlinear Problems of Guidance, Navigation and Control**	
	Chair: Ye. Somov	
16.00-16.25	Sergey Ul'yanov	Robust formation control of autonomous underwater vehicles under discrete-time periodic communications
16.25-16.50	Gennady Oparin	Methods and tools of synthesis for linear regulator in binary dynamics systems: a logical approach
16.50-17.15	Razvan Mihai	Cooperative Distributed Trajectory Optimization for a Heterogeneous UAV Formation
17.15-17.40	Ana-Maria Bordei	Stability Limit Cycles in a Longitudinal Flight of an UAV
17.40-18.05	Marian Gaiceanu	Designing an altitude controller for a miniUAV using an automated speed device
18.05-18.30	Valentin Pana	Robust stability analysis of systems with parametric uncertainties and time delay

Room 3	**M2. Nonlinear Analysis of Motion and Functioning of the Electric Propulsion Spacecraft**	
	Chair: O. Starinova	
16.00-16.25	Pavel Fadeenkov	Optimum program of control of continuous low-thrust at flight between noncoplanar elliptical and geostationary orbits
16.25-16.50	Maksim Fain	Angular motion control of electric propulsion spacecraft transfers between L1 and L2 libration points of the Earth-Moon system
16.50-17.15	Roman Khabibullin	Nonlinear analysis of three-dimension guided motion of solar sail spacecraft
17.15-17.40	Alexander Shulepov	The launch and separation of an inspecting microsatellite from a space vehicle
17.40-18.05	Andrew Khramov	Evaluation of the aerospace vehicle maneuverability during combined orbital plane changes
18.05-18.30	Alexey Chetverikov	Multistep algorithms for the orbit control of geostationary spacecraft using low thrust engine

Room 4	**S2. Integral Equations and Their Applications in Science and Technology**	
	Chair: Luis Castro	
16.00-16.25	Luis Castro	New convolutions and integral equations associated with generalizations of the Fourier transform
16.25-16.50	Rita Guerra	Solutions of Finite Interval Convolution type Equations with Wiener-Hopf plus Hankel kernels
16.50-17.15	Anabela Silva	Fredholmness of Singular Integral Operators with a Carleman Shift on Variable Exponent Lebesgue Spaces
17.15-17.40	M. Manuela Rodrigues	Norm estimates and uncertainty principles associated with the Laguerre integral transform
17.40-18.05	Alberto Simões	Stabilities for a Class of Higher Order Integro-Differential Equations

Room 5	**S3. Clifford algebras, Clifford analysis and their applications**	
	Chair: S. Georgiev	
16.00-16.25	Miroslav Kures	Curves in the dual and Minkowski dual spaces, their geometric characteristics and examples

16.25-16.50	Peter Rowlands	Idempotent or Nilpotent?
16.50-17.15	Anastasiia Legatiuk	On convergence of discrete potentials on a rectangular lattice
17.15-17.40	Dmitrii Legatiuk	Approximation-based Coupling of Function Theoretic Methods with the Finite Element Method
17.40-18.05	Helmuth Malonek	On positivity, subordination, Joukowski transformations and hypercomplex polynomials
18.05-18.30	Svetlin Georgiev	Brownian Motion in the Framework of Quaternion Analysis

21.30-	**MEZZO MUSIC EVENING**

THURSDAY – July 5

9.30-10.20	**Keynote talks**

Room 1	*Chair: N. Hovakimyan*	
8.40-9.30	**Dr. Toshiya NAKAMURA**	**Reconstruction of Stress Field based on Stress Functions**
9.30-10.20	**Dr. Masato TAMAYAMA**	**Lift Distribution Control for Realization of High Aspect Ratio Wings**

Room 2	*Chair: S. Sivasundaram*	
8.40-9.30	**Prof. Xiaofeng WANG**	**Lebesgue-Approximation Model Predictive Control of Nonlinear Sampled-Data Systems**
9.30-10.20	**Prof. Gangaram S. LADDE**	**An overall view on stochastic modeling, analysis and simulations of the solar cycle dynamics properties**

10.30-12.10	**Parallel sessions**

Room 1	**M3. Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques**	
	Chair: Alexandru Dumitrache	
10.30-10.55	Andreea Afloare	Closed Loop Rotorcraft Pilot Couplings Analysis by Combining Different Pilot Models with the Helicopter Dynamics Models
10.55-11.20	Dumitru Pepelea	Dynamic Derivatives Assessment of Earth Re-entry Capsule in Low Supersonic Conditions
11.20-11.45	Alexandru Onel	Computation of the Hypersonic Heat Flux with Application to Small Launchers
11.45-12.10	Ana-Maria Neculaescu	Trajectory optimization for small launchers using a genetic algorithm approach

Room 2	**M1.Nonlinear Problems of Guidance, Navigation and Control**	
	Chair: Yevgeny Somov	
10.30-10.55	Artem Davydov	A first-order logic based approach to problems of decentralized supervisory control of DES
10.55-11.20	Smbat Shahinyan	About Stability of Dynamical Systems With Integrally small Perturbations
11.20-11.45	Sergey Kochetkov	Robust control for synchronous electric drive under uncertainty conditions
11.45-12.10	Sergey Kochetkov	Block Design of Electromechanical Systems under Parametric Uncertainties and Incomplete Measurements

Room 3	**S6. Mechanics: CFD, Deformable solids and applications**	
	Chair: B. Alipova	
10.30-10.55	Nicolas Elisov	The aerodynamic characteristics of the payload set-upped out of aircraft
10.55-11.20	Olga Starinova	Technique for modeling a rotating thin-film solar power plant
11.20-11.45	Irina Gorbunova	Modeling the behavior of the spherical type spacecraft with a solar sail
11.45-12.10	Hassan Khawaja	Semi-Implicit Method for Pressure-Linked Equations (SIMPLE) - solution in MATLAB®

Room 4	**M4. New Trends in Representation Theoretical Methodologies**	
	Chair: M. Demiralp	
10.30-10.55	Ercan Gurvit	Univariate Function Evaluation via Contour Integration in Tridiagonal Enhanced Multivariance Products Representation (TKEMPR) Perspective: Focusing on High Oscillations
10.55-11.20	Derya Bodur	Separate Node Ascending Derivatives Expansion (SNADE) on Complex Plane
11.20-11.45	Cosar Gozukirmizi	Probabilistic Evolution Theory for Explicit Autonomous ODEs: Simplifying the Factorials, Cauchy Product Folding and Kronecker Product Decomposition
11.45-12.10	Melike Ebru Kirkin	A Case Study for Single Monomial Probabilistic Evolution Theory (PREVTH)

Room 5	**S9. Nonlinear Engineering Problems**	
	Chair: M. Dosaev	
10.30-10.55	Sowmya Muniswamy	Mixed Generalized Iterative Method for Scalar First Order Nonlinear Initial Value Problem with Applications
10.55-11.20	Cornel Arama	A Short Study about a New Concept in order to Decrease the Emission Pollutants in Compression Ignition Engine
11.20-11.45	Yury Selyutskiy	Dynamics of an elastically mounted plate in flow
11.45-12.10	Chien-Hsien Yeh	Mechanical problem in 3D Printed Ankle-Foot Orthoses with Function of Energy Storage

12.10-14.00	**lunch break**

14.00-15.40	Parallel sessions	

Room 1	M3. Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques	
	Chair: S. Bogos	
14.00-14.25	Takao Okada	Fatigue crack growth simulation under residual stress field formed by the friction stir welding
14.25-14.50	Mihaita Stoican	Wind tunnel model support and wall interference corrections using the CFD techniques
14.50-15.15	Lucian Constantin	On Airfoil Optimization Using Genetic Algorithms
15.15-15.40	Ana-Maria Neculaescu	Trajectory optimization for small launchers using a genetic algorithm approach

Room 2	S7. Methods of Nonlinear Analysis and Their Applications	
	Chair: Agnieszka Chlebowicz	
14.00-14.25	Agnieszka Dubiel	Solutions of Volterra-Stieltjes integral equations in the class of functions converging at infinity
14.25-14.50	Szymon Dudek	The generalized Darbo fixed point theorem in Frechet spaces and its applications
14.50-15.15	Mariola Kot	The generalized Day norm
15.15-15.40	Rafal Nalepa	A measure of noncompactness in the space of functions with tempered increments on the half-axis

Room 3	S6. Mechanics: CFD, Deformable solids and applications	
	Chair: B. Alipova	
14.00-14.25	Sergey Chernyakin	Probabilistic approach at delamination propagation problem in composite materials
14.25-14.50	Sergey Chernyakin	Numerical modeling of composite support for high-precision equipment
14.50-15.15	Sergey Chernyakin	The size stability of small spacecraft primary structure
15.15-15.40	Alexander Animalu	Electromagnetism of atomic structural consitution in deformable real R3×SO(3) configuration space

Room 4	M4. New Trends in Representation Theoretical Methodologies	
	Chair: M. Demiralp	
14.00-14.25	Metin Demiralp	Coordinate Bending Studies for Univariate Schrodinger Equation: Cubic and Inverse Cubic Bending Functions
14.25-14.50	Berfin Kalay	Energy Dependent Coordinate Bending for Quantum Dynamics of Screened Coulomb Potential Systems
14.50-15.15	Semra Bayat Özdemir	Coordinate Axis Bending in Univariate Schrödinger Equations
15.15-15.40	Bahar Yolcu	A Perturbative Expansion for the Roots of Hermite Polynomials at Infinite Degree Limit

Room 5	S9. Nonlinear Engineering Problems	
	Chair: Yu. Selyutskiy	
14.00-14.25	Marat Dosaev	Motion of vane with cavity filled by viscous filling
14.25-14.50	Ching-Huei Lin	Influence of wind fluctuations on the efficiency of wind turbine blade pitch control
14.50-15.15	Oleg Cherkasov	Optimal thrust programming for intermediate vehicle model
15.15-15.40	Paul Murad	A Possible Solution to a Relativistic Orbit for the 2-Body Celestial Mechanics Problem

15.40-16.00	coffee break	

16.00-17.40	Parallel sessions	

Room 1	M3. Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques	
	Chair: Alexandru Dumitrache	
16.00-16.25	Cosmin Katona	Efficiency location of a vawt based on the wind conditions around the buildings in a sea coastal region
16.25-16.50	Florin Frunzulica	Coanda effect in aerospace applications
16.50-17.15	Vasile Prisacariu	Sstudy of the combustor of the aviation motors

Room 2	S7. Methods of Nonlinear Analysis and Their Applications	
	Chair: Agnieszka Chlebowicz	
16.00-16.25	Beata Rzepka	Solvability of an infinite system of Hammerstein integral equations
16.25-16.50	Radoslaw Zawiski	Measures of non compactness and Hilbert rigged spaces in analysis of dynamical systems
16.50-17.15	Agnieszka Chlebowicz	On existence of subpower solutions of a quadratic integral equation of Erdelyi-Kober type

Room 3	S6. Mechanics: CFD, Deformable solids and applications	
	Chair: B. Alipova	
16.00-16.25	Maria Demsa	Determination of collection efficiency coefficient for ice accretion analysis
16.25-16.50	Radu Pahonie	Numerical investigations of ducted propeller aerodynamics for a mini paramotor UAV
16.50-17.15	Bakhyt Alipova Alipova	Simulation of wave dynamics of thermoelastic medium with crack

Room 4	S4. Aviation Management and Operation Research	
	Chair: B. Adenso-Daz	
16.00-16.25	Sebastián Lozano	A Potential-based efficiency assessment of Spanish airports
16.25-16.50	Belarmino Adenso-Daz	Modelling air traffic approaches considering noise and fuel consumption
16.50-17.15	Belarmino Adenso-Daz	Modelling air traffic approaches taking noise and fuel consumption into account

Room 5	S9. Nonlinear Engineering Problems	
	Chair: M. Dosaev	
16.00-16.25	Paul Murad	Binary Pulsars- with a new Class of Stars In a Restricted 4-Body Problem
16.25-16.50	Botir Usmonov	Vibration analysis of airfoil model with nonlinear hereditary deformable suspensions
16.50-17.15	Andrei Kolyshkin	Convective instability of a steady flow in an annulus caused by internal heat generation

19.00-	**BANQUET**

FRIDAY – July 6

8.30-10.10	**Keynote talks**

Room 1	*Chair: Prof. Yevgeny Somov*	
8.30-9.20	**Prof. Oleksandr POKUTNYI**	**Control theory of irreversible processes**
9.20-10.10	**Prof. Vladimir V. GOLUBEV**	**New Results in Wake Vortex Evolution, Interaction and Control**

Room 2	*Chair: Prof. S. Sivasundaram*	
8.30-9.20	**Prof. F.B.M. BELGACEM**	**Sumudu Transform Applications to Euler, Beroulli, and Genoccci Numbers**

10.10-10.40	**coffee break**

10.40-12.20	**Parallel sessions**

Room 1	**M3. Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques**	
	Chair: Florin Frunzulica	
10.40-11.05	Marius Cojocaru	Overset Mesh Capability Insertion in to a Very High Order CFD Code
11.05-11.30	Ionica Circiu	Applications of Coanda Effect in Aerospace Technology
11.30-11.55	Ionica Circiu	Theoretical and practical aspects of the Coanda effect

Room 2	**S10. Unsteady Aerodynamics, Aeroacoustics and Flow Control**	
	Chair: V. Golubev	
10.40-11.05	Tatiana Kozubskaya	An Approach to Simulation of Moving Body Aerodynamics Using Immersed Boundary Method on Unstructured Meshes
11.05-11.30	Wolfgang Luber	Single Degree of Freedom Flutter at Transonic Speeds
11.30-11.55	Stanislav Tomashevich	Implicit reference model adaptive spatial motion control of quadrotors in formation

Room 3	**General Session 1**	
	Chair: O. Pokutnyi	
10.40-11.05	Oleg Gasparyan	An eigenvalue decomposition method for analysis and design of discrete-time multivariable feedback control systems
11.05-11.30	Mary Boghosian	Prospective for CubeSats Development in Armenia
11.30-11.55	Godfrey Akpojotor	Algebrodynamic modeling in Partial Differential Equations formulated from the Oyibo grand unification theorem

Room 4	**General Session 2**	
	Chair: F.B.M. Belgacem	
10.40-11.05	Vinodh Kumar Chellamuthu	Assessing the Role of Temperature in Dengue Fever Outbreak Dynamics with Wolbachia Transinfection Control Methods.
11.05-11.30	Khalil Al-Ghafri	Optical solitons for the cubic-quintic nonlinear Schrodinger's equation
11.30-11.55	Khalil Al-Ghafri	Optical solitons for nonlinear Schrodinger's equation with anti-cubic nonlinearity in optical fibers

Room 5	**General Session 3**	
	Chair: S. Sivasundaram	
10.40-11.05	Viacheslav Voronin	Video quality assessment using generative adversarial network
11.05-11.30	Viacheslav Voronin	Feedback Alfa-Rooting Algorithm for Medical Image Enhancement
11.30-11.55	Igor Bychkov	A finite step spacecraft reorientation algorithm uninterruptedly executed by control moment gyros

12.00-	**TRIP TO SEVAN LAKE WITH LUNCH**

POSTER SESSION

P1	Tatyana Somova	Spacecraft attitude guidance and economical digital control in initial modes
P2	Nikolay Rodnishchev	In-flight verification of attitude control system for a land-imagery satellite at a final of its manufacturing
P3	Alexander Knyazhsky	Accuracy Analysis of a Sea Disturbance Measurement System for the Low-Flying Vehicles
P4	Alexander Knyazhsky	Synthesis of a Navigation and Control System for Forming a Group of Small Satellites
P5	Nadezhda Nagul	On checking properties of decentralized controlled discrete-event systems
P6	Stanislav Tomashevich	Implicit reference model adaptive spatial motion control of quadrotors in formation
P7	Nikolay Kuznetsov	Suppression of nonlinear wing-rock oscillations by adaptive control with the implicit reference model
P8	Stanislav Tomashevich	An improved adaptive binary coding procedure for transferring the navigation data between UAVs in formation
P9	Andrey Shevchenko	Development and testing of energy algorithms to predics the trajectory of aircraft takeoff
P10	Victor Glumov	Control Algorithms for some Functioning Modes of Free-Flying Space Manipulation Robot
P11	Pavel Kuznetsov	Identification of the spatial motion kinematic parameters for a passive space vehicle by its image analysis
P12	Nikolay Rodnishchev	Methods for identification of stochastic systems with application to control of flying vehicles