ICNAAM 2020 CONFERENCE

VIRTUAL PARTICIPATION PROGRAM

17 September 2020

Virtual Room 1

Session Name:	THE TENTH SYMPOSIUM ON ADVANCED COMPUTATION AND INFORMATION IN NATURAL AND APPLIED SCIENCES	
Chair Name:	Dr. Claus-Peter Rückemann	
Program:		
Hours	Paper Title	Author
09.00-09.05	Welcome Notes	Claus-Peter Rückemann
09.05-09.50	Keynote Lecture / Information Science and Structure: Beware – Ex Falso Quod Libet	Claus-Peter Rückemann
09.50-10.25	Information Science Approaches to Sustainable Structures: Rhodos Case Results From Knowledge and Mining	Claus-Peter Rückemann
10.25-11.00	Mathematics in the Heart of Brunelleschi's Dome	Raffaella Pavani

Session Name:	Statistical Inference in Copula Models and Markov Processes V	
Chair Name:	Veronica Andrea Gonzalez-Lopez	
Program:		
Hours	Paper Title	Author
16.00-16.20	A Stochastic Inspection about Genetic Variants of Covid-19 Circulating in Brazil during 2020	Jesús E. García, **V.A. González-López**, G.H. Tasca
16.20-16.40	Conditional Independence between Markov Random Fields	M. L. Lanfredi Viola, **Jesús E. García**, V.A. González-López
16:40-17.00	Semi-Parametric Copula-Based Estimation of Risk of Tailings Dams	**V.A. González-López**, J.L. Picanço, R. Rodrigues de Moraes

Session Name:	Dynamical Systems and Their Applications to Advanced Materials, Structures and Technologies	
Chair Name:	Prof. Jiří Vala	
Program:		
Hours	Paper Title	Author
18.30-19.00	A Variant of an Oscillation Criterion for Delayed Second Order Half-Linear Differential Equations	Z. Pátíková
19.00-19.30	Design Optimization of Filled Ceramic Blocks	S. Šťastník, D. Průša

Virtual Room 2

Session Name:	Numerical Analysis and Optimal design of materials and structures (nr 62)	
Chair Name:	Prof. Jüri Majak & Prof. David Bassir	
Program:		
Hours	Paper Title	Author
10.00-10.20	Integration of New Conceptual Design for Vtol Uav with Multilevel Optimization	David Bassir, Nadir Lebaal, Hao Yue, Hicham Medromi, Samuel Gomes
10.20-10.40	Higher Order Haar Wavelet Method for Vibration Analysis of Functionally Graded Beams	Madis Mikola, Jüri Majak, Meelis Pohlak, Boris Shvartsman
10.40-11.00	Finite Element Analysis and Shape Optimization of Coronary Stents Structure	Nadir Lebaal, David Bassir, S.Roth, Samuel Gemes
11.00-11.20	Comparison of Feature Extraction Methods for Support Parameter Identification in Vibrating Beams	Helle Hein, Ljubov Jaanuska
11.20-11.40	Application of the Adaptive Higher Order Haar Wavelet based methods for solving the sine–Gordon equation	Mart Ratas
11.40-12.00	Empennage Sizing using Tail Volume	Ramachandran Karunanihi, Dieter Scholz, Jüri Majak, Martin Eerme

Virtual Room 3

Session Name:	Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures	
Chair Name:	Juraj Králik	
Program:		
Hours	Paper Title	Authors
09.00-09.30	Experimental and Numerical Analysis of the Fragility of the Buble Towe Structures under Extreme pressure and temperature	Juraj Králik, Juraj Králik,jr.
09.30-10.00	The Fluid and Structural Probabilistic Analysis of NPP Critical Frame Fragility under Extreme Wind Impact.	Juraj Králik, Juraj Králik,jr.
10.00-10.30	Adhesive Connection of Timber-Concrete Composite Panels in Extreme Environmental Conditions	Viktória Bajzecerová, Eva Kormaníková, Ján Kanócz
10.30-11.00	Experimental Determination of Wind Pressure distribution for vertical cylinders in a row and the influence of surrounding structures	Ivana Véghová, Oľga Hubová

Session Name:	Particle-Based Multi-Scale Analysis.	
Chair Name:	Rimantas Kačianauskas	
Program:		
Hours	Paper Title	Author
11.30-12.00	Numerical Simulation of the Movement of Microparticles	T.Tofan , R.Jasevičius , H. Kruggel-Emden
12.00-12.30	Prediction of crack spacing of bending reinforced concrete by strain compliance approach and neural network	R. Ramanauskas, G. Kaklauskas, A. Sokolov and D. Bacinskas
12.30-13.00	Packing of Particles for DEM Models of Dry Snow	R. Kačianauskas, A. Kačeniauskas, R. Pacevič and E. Stupak
13.00-13.30	Yielding of Micro-Particles Impacting Substrate with High Velocity – FEM Simulation	G. Jočbalis, R. Kačianauskas,, G. Mordas and S.Borodinas

Virtual Room 3

Session Name:	Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures	
Chair Name:	Jozef Melcer	
15.00-15.30	Numerical Simulation of Two-Span Bridge Response on Bridge Spans Ratio	Jozef Melcer
15.30-16.00	Numerical Modeling of Moving One Axle Load on Concrete Slab	Daniela Kuchárová
16.00-16.30	Numerical Analysis of Flexural Behavior of Concrete Element with 3-D Printed Formwork	Petr Král, Petr Konečný, Petr Lehner and Jacek Katzer
16.30-17.00	Numerical modeling of a beam with a hole for verification of the tensile strength	Zuzana Marcalikova and Radim Cajka

Virtual Room 4

Session Name:	5th Symposium on Mathematical Modelling and Numerical Simulation of Physical and Chemical Phenomena in Porous Materials.	
Chair Name:	Jaroslav Kruis	
Program:		
Hours	Paper Title	Author
9:00-9:20	Characterization of Brick Clays Suitable for Advanced Ceramic Building Elements	Václav Kočí, Martin Keppert, Anton Trník, and Robert Černý
9:20-9:40	Models of Sound Attenuation in Homogeneous Materials	Jiří Maděra, Václav Kočí
9:40-10:00	Determination of metals leakage from rubber granulate	Martin Böhm, Klára Kobetičová, Jan Fořt, Robert Černý
10:00-10:20	On the Composition of Sodium Silicate-Sodium Hydroside Activator from Waste Ceramics Recycling	Vojtěch Pommer, K. Šádková, Lenka Scheinherrová, Dana Koňáková, Martin Keppert, Eva Vejmelková
10:20-10:40	Uncertainties in material models described by fuzzy set theory	Jaroslav Kruis, Tomáš Koudelka

Session Name:	Modelling and analysis of problems in mathematical physics and engineering	
Chair Name:	Gabriella Bognar	
Program:		
Hours	Paper Title	Author
13.00-13.20	Analytical Investigation of the Rotating and Stratified Hydrodynamical Problem	Imre Ferenc Barna, Gabriella Bognar, Laszlo Matyas and Krisztian Hriczo
13.20-13.40	Analytical Examination of the Time-dependent Incompressible Boundary Layer with Heat Conduction	Imre Ferenc Barna, Gabriella Bognar, Laszlo Matyas and Krisztian Hriczo
13.40-14.00	The Heat and Mass Transfer in Blasius and Sakiadis nanofluid flows	Gabriella Bognár, Mohamad Klazly and Krisztián Hriczó
14.00-14.20	Heat and Mass Transfer for Al2O3 Nanofluid in a Duct	Mohamad Klazly and Gabriella Bognár

Virtual Room 5

Session Name:	The 15th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer Numerical Fluids 2020	
Chair Name:	Mostafa Shadloo	
Program:		
Hours	Paper Title	Author
9:00 – 9:15	Mhamad Mahdi Alloush, Marwan Darwish, Fadl Moukalled and Luca Mangani	An Improved Full Approximation Storage for Finite Volume Pressure-Based Flow Solvers
9:15 – 9:30	Shengxiang Lin, Huanxiong Xia, Jianhua Liu, Honglei Wang	The Effect of Particles on The Dynamics of Fluid Flows Around an Obstacle
9:30 – 9:45	Petr Svacek, J. Valasek	On finite element solution of aeroacoustic and vibro acoustic problems related to human phonation
9:45 – 10:00	Anna Szardenings, Niels Petersen and Heike Fassbender	Concept for Thermal Analysis of Batteries using Reduced Order Modeling
10:00 – 10:15	Arturo Hidalgo, Lourdes Tello	ADER-LSTDG numerical approach for a reaction-diffusion model of atherosclerosis disease
10:15 – 10:30	Zhang Rui, Li Hongying, Afshin Goharzadeh and Yap Yit Fatt	A One-Dimensional Model for Nanofluid Flow with Nanoparticle Aggregation in Long Pipes
10:30 – 10:45	Georis Billo, Michel Belliard and Pierre Sagaut	A Finite Element Penalized Direct Forcing Method To Take Into Account Infinitely Thin Immersed Boundaries In A Dilatable Flow
10:45 – 11:00	A.R. Appadu and Y.O. Tijani	On the numerical solution of 2D Generalised Burgers-Huxley equation using NSFD method

Session Name:	The 15th International Symposium on Numerical Analysis of Fluid Flow, Heat and Mass Transfer Numerical Fluids 2020	
Chair Name:	Petr Svacek	
Program:		
Hours	Paper Title	Author
12:00 – 12:15	Tomas Neustupa, O. Winter	On Study of the Influence of the Strength of Nonlinear Partof Boundary Condition on the Outlet
12:15 – 12:30	F. Almasi, M. Hopp-Hirschler, Mostafa Shadloo, A. Hadjadj, U. Niecken	Thermo-Capillary Induced Motion in Multiphase System Using Smoothed Particles Hydrodynamics
12:30 – 12:45	A.R. Appadu, A.S. Kelil and Y. Ndala	Some semi-analytic methods to solve linearised KdV equation
12:45 – 1:00	Zhang Haokun and Yap Yit Fatt	Modeling of Hybrid Nanofluid Flow and Heat Transfer in a Porous Curved Channel
1:00 – 1:15	Alin-Florin Totorean, Iuliana-Claudia Totorean, Sandor Bernad	Numerical study of blood flow characteristics in patient-specific renal arteries configuration
1:15 – 1:30	Ali Zaidi	Domain size effect on particle velocity fluctuations settling in Stokes and non-Stokes regime
1:30 – 1:45	Mhamad Mahdi Alloush, Marwan Darwish, Fadl Moukalled and Luca Mangani	A Coupled VOF Solver for the Solution of Incompressible Free Surface Flows
1:45 – 2:00	Ali Ghaemi, Natalie Germann	Thermodynamics of partially miscible flows: A CFD appraoch

Virtual Poster Session

Session Name:	The Fourth Symposium on Mathematical Methods in Economics and Nature Use (SMMENU 2020). Poster Session.
Chair Name:	Alexander Medvedev, Marina Medvedeva
Hours: 15.00 – 17.00	

Paper Title	Author
Optimally Controlling a Non-Smooth Environmental System with Random Observation and Execution Delay	Hidekazu Yoshioka and Yuta Yaegashi
Ambiguity-averse Environmental Assessment with Discontinuous Value Functions	Hidekazu Yoshioka and Motoh Tsujimura
Wavelet Method for Sensitivity Analysis of European Options under Merton Jump-Diffusion Model	Dana Cerna
European Option Pricing under the CGMY Model using the Discontinuous Galerkin Method	J. Hozman and T. Tichy
Wavelet-Galerkin Method for Integro-Differential Equations	Vaclav Finek
Comparing the Types of Artificial Neural Networks to Predict the Carbon Dioxide Concentration Changes	Alexander Sergeev, Alexander Buevich, Andrey Shichkin, Elena Baglaeva, Irina Subbotina, Marina Sergeeva
The Pattern of Some Greenhouse Gases Content in the Air of Belyy Island in the Russian Arctic Region	Alexander Sergeev, Elena Baglaeva, Alexander Buevich, Andrey Shichkin, Maria Remezova
Improved Algorithm for Splitting Raw Data into Training and Test Subsamples for MLP-Based Models	Alexander Sergeev, Anna Rakhmatova, Alexander Buevich, Andrey Shichkin, Elena Baglaeva, Irina Subbotina
Short-Term Forecast the Dynamics of Changes in the Surface Concentration of Methane Using a Non-Linear Autoregressive Neural Network with External Input and Vector Autoregression Model	Alexander Sergeev, Andrey Shichkin, Alexander Buevich, Anna Rakhmatova, Maria Remezova
Phase Portraits of Hamiltonian Systems in Growth Models	A.M. Tarasyev, A.A. Tarasyev, A.A. Usova
Labor Market Tightness for University Graduates	G.A. Agarkov, V.A. Koksharov, A.A. Tarasyev
Web Application for Personalized Language Learning: Use Case for IT Students	Olga Zvereva, Sofya Kopalova, and Nikita Averyanov
Integrated Approach to Cybersecurity of a Small-Sized Business System	Olga Zvereva and Vitaliy Loshchenko
Video Wall Control System Development	A.S. Lysenko and N.R. Spiricheva
Dashboard for Business Plan Viewing, Factor Analysis and Forecasting	A.A. Levadniy, I.A. Tsyganov, and N.R. Spiricheva
Changing approaches and educational practices in engineering education in the context of the Covid-19 pandemic	S.A. Berestova, Z.A. Belyaeva, T.A. Roscheva, E.M. Romanovskaia, E.A. Savina
Visualization for the shear modulus anisotropy of 3D and 4D-reinforced composites	E.M. Romanovskaia, S.A.Berestova, N.D. Romanovskaia, M.A. Vorontsov, D.A. Mamylin
About Statistical Analysis of Environmental Pollution Monitoring Data Obtained in the Vicinity of a Copper Quarry	Alexander N. Medvedev and Maxim A. Medvedev

END OF DAY 1

18 September 2020

Virtual Room 1

Session Name:	The Fourth Symposium on Methods of Nonlinear Mathematical Physics	
Chair Name:	PhD, Sc. Dr., Professor Nikolay A. Kudryashov	
Program:		
Hours	Paper Title	Author
09.00-09.20	Accuracy Enhancement for Past Surface Temperature Reconstructions Based on the Additional Climatic Data	**O.V. Nagornov**, S.A. Tyuflin, T.I. Bukharova
09.20-09.40	Data-Driven Model for Identifying Related Pharmaceutically-Significant Entities in Clinical Texts	**Alexander Sboev**, Gleb Rylkov, Roman Rybka, Artem Gryaznov, Sanna Sboeva
09.40-10.00	Neural Network Data Driven Model of The Process of Analyzing Control Commands for a Mobile Robot in Natural Russian Language	**A.G. Sboev**, R.B. Rybka, Y.A. Davydov, I.A. Moloshnikov
10.00-10.20	Graph Convolution Network with Attention to Include Syntax Trees into Text Author's Gender Identification Task	Roman Rybka, **Alexander Sboev**, Dmitriy Bogachev, Anton Selivanov, Ivan Moloshnikov
10.20-10.40	Interpolation of multivariable functions by means of the nonlinear schema of metric analysis	**A.V. Kryanev**, V.V. Ivanov, I.A. Malinkin, L.A. Sevastyanov, D.K. Udumyan
10.40-11.00	Another Model for Risk Assessment of Venous Thrombosis	A. Golub, L. Popova, **T. Khlevchuk**, M. Aksenova, M. Kanevskaia, T. Kondrateva, A. Gerasimov, S. Shatalina, L. Patrushev, T. Kovalenko, I. Bokarev, Y. Belenkov
11.00-11.30	**Coffee Break**	
11.30-11.50	Explicit Formulas for General Solutions of Two nonlinear Ordinary Differential Equations via Jacobi Elliptic Sine	**N. A. Kudryashov**
11.50-12.10	Traveling wave solutions of the coupled nonlinear Schrodinger equation with cubic-quintic-septic and weak non-local nonlinearity	**A.A. Kutukov**, N.A. Kudryashov
12.10-12.30	Nonlinear dynamical regimes of the generalized Kuramoto-Sivashinsky equation with various degrees of nonlinearity	**S. F. Lavrova**, N. A. Kudryashov
12.30-12.50	Painleve Analysis and Exact Solution to The Traveling Wave Reduction of Nonlinear Differential Equations for Describing Pulse in Ptical Fiber	N. A. Kudryashov, **D. V. Safonova**

Virtual Room 1 (CONTINUE)

(Continued):		
Hours	Paper Title	Author
12.50-13.10	Solitary Waves for the Sixth Order Nonlinear Differential Equation in Optical Fiber Bragg Grating	**K. V. Kan**, N. A. Kudryashov
13.10-13.30	2D Numerical Simulation of Adiabatic Shear Bands Formation	**R. V. Muratov**, P. N. Ryabov, M. B. Soukharev
13.30-13.50	Experimental Comparison of COVID-19 data with the Analytical Solution of the SIR Model	Nikolay A. Kudryashov, **Mikhail A. Chmykhov**, Michael Vigdorowitsch

Session Name:	Nonlinaer Energy Harvesting from Mechanical and Aeroelastic Vibrations	
Chair Name:	Grzegorz Litak, Piotr Wolszczak Abdessattar Abdelkefi	
Program:		
Hours	Paper Title	Author
15.00-15.20	to be given later	Abdessattar Abdelkefi
15.20-15.40	Nonlinear modelling of multi-stable piezoelectric energy harvesting for performance enhancement	Junyi Cao
15.40-16.00	Nonlinear Energy Harvesting from Mechanical and Aeroelastic Vibrations	Jose M. Balthazar
16.00-16.20	Experimental and numerical analysis of an inverted flag in a wake of bluff body	Emad Uddin
16.20-16.40	Piezoelectric energy harvesting from hybrid aerodynamic instabilites	Junlei Wang
16.40-17.00	Energy Harvesting Capabilities of Pendulum NES	Pradeep Mlaji

Virtual Room 2

Session Name:	13th Symposium on Recent Trends in the Numerical Solution of Differential Equations	
Chair Name:	Luigi Brugnano	
Program:		
Hours	Paper Title	Author
09.30-10.00	Adapted peer methods for oscillatory problems	D.Conte
10.00-10.30	Semi-implicit multivalue almost collocation methods	M.P.D'Arienzo
10.30-11.00	Modeling the COVID-19 spread in Italy	F.Iavernaro
11.00-11.30	Stiffness ratio and the diffusion of fake news	R.D'Ambrosio
11.30-12.00	Numerical conservation issues for stochastic Hamiltonian problems	G.Giordano

Session Name:	13th Symposium on Recent Trends in the Numerical Solution of Differential Equations	
Chair Name:	Ewa Weinmueller	
Hours	Paper Title	Author
13.30-14.00	Real-values stability analysis of Runge-Kutta-Chebyshev methods for delay differential equations	A.Eremin
14.00-14.30	Spectral solution of Delay Differential Equations with application to the COVID-19 spread in Italy	L.Brugnano
14.30-15.00	Numerical solution of fractional differential equations by spline collocation methods	A.Cardone
15.00-15.30	High order methods for multi-term fractional integro-differential equations with weakly singular kernels	M.Vikerpuur
15.30-16.00	Adjoint-based computation of the exact Hessian-vector multiplication	Y.Miyatake
16.00-16.10	**GROUP PHOTO**	all speakers

Vitrual Room 3

Session Name:	5th Symposium on Difference & Differential Equations and Applications	
Chair Name:	Sandra Pinelas	
Program:		
Hours	Paper Title	Author
09.00-09.30	Nonlinearly determined wavefronts of the Nicholson's diffusive equation	Valery Covachev
09.30-10.00	Existence of Periodic Solutions for the Discrete-Time Counterpart of a Neutral-Type Cohen-Grossberg Neural Network with Time-Varying Delays and Impulses	Karel Hasik
10.00-10.30	TBA	Lyudmila Uvarova
10.30-11.00	TBA	Lyudmila Uvarova
11.00-11.30	Nonoscillatory Solutions to Third Order Neutral Difference Equations of Mixed Type	Sandra Pinelas

Session Name:	Sixth Symposium on Mathematical Modelling of Hydrological Sciences	
Chair Name:	Francesco Napolitano & Fabio Russo	
Program:		
Hours	Paper Title	Author
11.30-11.40	General greetings and introduction to the Symposium	Francesco Napolitano, Fabio Russo
11.40-12.00	Accounting for spatial variability in rainfall thresholds: a case study in central Italy	Claudia Bertini, Francesco Napolitano
12.00-12.20	Evaluation of CMORPH skills in capturing rainfall extreme events: a case study in Mignone river catchment	Claudia Bertini, Fabio Russo
12.20-12.40	Predictability of lake water stage by inflow river observation: a case study in Tonle Sap Lake, Cambodia	Tomohiro Tanaka, Hidekazu Yoshioka
12.40-13.00	Drought risk analysis and spring discharge forecasting: a coupled method for an optimal fresh water management	Claudio Mineo, Stefania Passaretti, Anna Varriale
13.00-13.20	Improving water leakage estimation using consumption smart metering: distric metered areas in the city of Rome	F. Patrizi, M. Giglioni, A. Trotta, A. Varriale
13.20-13.30	Discussion	

Virtual Room 3 (Continue)

Session Name:	3rd Symposium on Advanced Methods and Information Technologies Applications (AMITA)	
Chair Name:	Prof. Dr. Petr S. Martyshko and Prof. Dr. Elena N. Akimova	
Program:		
Hours	Paper Title	Author
17.00-17.30	Development of Method and Information Technology for Decision-Making, Modeling, and Processes Scheduling.	Anna S. Antonova, Konstantin A. Aksyonov, Polina E. Ziomkovskaia.
17.30-18.00	UAV Control for Collision Avoidance.	Sergei I. Kumkov, Sergei G. Pyatko.
18.00-18.30	Green's Functions of Layered Structures in the Sensor Selection Problem for Microwave Radiometry of the Brain.	Evgeny P. Shabashov, Sergey N. Shabunin.
18.30-19.00	Workflow for Transformation of Deep Seismic Sounding Cuts into 3D Density Model.	Alexander G. Tsidaev.
19.00-19.30	Development of an Electronic Robot with Remote Control for Research on the Operation of Distance Sensors.	Nataliya V. Papulovskaya, Julia I. Filimonova.

Virtual Room 4

Session Name:	Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures	
Chair Name:	Eva Kormaníková	
Program:		
Hours	Paper Title	Author
09.00-09.30	Frequency Analysis of Composite Sandwich Panel with CFRP Faces	Eva Kormaníková, Kamila Kotrasová, Slávka Harabinová, Eva Panulinová
09.30-10.00	Cut slope protection using reinforcing elements	Slávka Harabinová, Eva Panulinová, Eva Kormaníková, Kamila Kotrasová
10.00-10.30	A Comparison of Various FE Modelling Methods of Concrete Slab Exposed to Impact Loads	Daniel JINDRA, Petr HRADIL and Jiří KALA
10.30-11.00	Approaches of Biaxial Testing of Membrane Materials	Nela Freiherrova and Martin Krejsa

Session Name:	Recent Advances in Numerical Methods and Simulations in Statics and Dynamics of Structures	
Chair Name:	Martin Krejsa	
Program:		
Hours	Paper Title	Author
11.30-12.00	Spline Functions in Problems of Structural Mechanics	Martin Krejsa
12.00-12.30	Statistical Analysis of Experimental Chloride Profiles Resulted from LIBS	Tuan Duc Le, Petr Konečný, Matthias Bernhard Lierenfel, Marie Horňáková and Petr Lehner
12.30-13.00	On the possibility of the utilizing Polynomial Chaos Expansion for Reliability-oriented Sensitivity Analysis	Lukaš Novák, Zdenek Kala and Drahomír Novak
13.00-13.30	Numerical Methods For Elastic Materials With Generalized Stress Constraints Stress Constraints	Massimiliano Lucchesi, Barbara Pintucchi and Nicola Zani

Virtual Room 5

Session Name:	Modelling and analysis of problems in mathematical physics and engineering	
Chair Name:	Gabriella Bognar	
Program:		
Hours	Paper Title	Author
09.00-09.20	Singular Perturbation Initial Value Problems with Interpolated Variational Iteration Method	Batuhan Toker, Mehmet Tarık Atay, Onur Metin Mertaslan, Musa Kasım Agca and Abdulkadir Yılmaz
09.20-09.40	Haar Wavelet Collocation Method for Linear First Order Stiff Differential Equations	Mehmet Tarık Atay, Onur Metin Mertaslan, Musa Kasım Agca, Abdulkadir Yılmaz and Batuhan Toker
09.40-10.00	Numerical characterisation of the car tire-road interaction due to overload	Algirdas Maknickas, Marijonas Bogdevičius, Rimantas Kačianauskas and Oleg Ardatov
10.00-10.20	Kardar-Parisi-Zhang Interface Growing Equation with Different Noise Terms	Sayfidinov Okhunjon and Gabriella Bognár

Session Name:	Geomatics Approaches for environmental surveying and modelling	
Chair Name:	MICHELE MANGIAMELI - GIUSEPPE MUSSUMECI	
Program:		
Hours	Paper Title	Author
10.30-10.50	Remote sensing to Analyse Urban Heating Island. A case study from Catania (Sicily)	Fabio Favazza, Antonio Gagliano, Michele Mangiameli, Giuseppe Mussumeci
10.50-11.10	A new tool to enhance field operations during combined gravity and GNSS surveys to monitor Etna volcano (Sicily, Italy)	FILIPPO GRECO, MICHELE MANGIAMELI, ELENA MOTTA, GIUSEPPE MUSSUMECI
11.10-11.30	REMOTE SENSING APPROACH FOR MONITORING OF MACROFACTORS CLIME, SOIL AND VEGETATION (ME.D.A.L.US. PROTOCOL) IN THE DESERTIFICATION PROCESS IN SICILY	G. Mussumeci, R.M.S. Costa, M. Mangiameli, V. Piccione, M. Schilirò, D. Tomarchio
11.30-11.50	Improved regularity criterion for the 3D Navier-Stokes equations via the gradient of one velocity component	Ahmad Alghamdi, Sadek Gala and Maria Alessandra Ragusa

Virtual Room 6

Session Name:	6th Symposium on Modelling and Simulation in Computer Sciences and Engineering 2020 (MSCSE 2020)	
Chair Name:	D. Miranda / F. Miranda / F. Veloso	
Program:		
Hours	Paper Title	Author
09.00-09.20	Novel Modeling Method using Set Theory for Interference Study between Multiple FMCW Radars	Daniel Albuquerque, Daniel Fernandes, Ana Tomé, Eurico Pedrosa, Francisco Curado and José Vieira
09.20-09.40	Thermal discomfort Assessment in Schools Buildings: Study Based on Short-Term Measurements	Kevin Aleixo and António Curado
09.40-10.00	Structural Mechanical Simulation to Optimize the Sensor Arm Geometry to be Implemented on Cranial Remodeling Orthosis	F. Veloso, D. Miranda, Pedro Morais, Helena R. Torres, Mario Ruediger , F. Miranda, António C.M. Pinho, and J. L. Vilaça
10.00-10.20	A capacitive pressure sensor for monitoring of the pectus carinatum treatment	A. Real, D. Miranda, Jorge Correia-Pinto, F. Veloso, P. Morais and J. L. Vilaça
10.20-10.40	Lattice microstructure design for cathode electrodes for high-performance lithium-ion batteries	D. Miranda, R. Gonçalves, F. Veloso, F. Miranda, J. Vilaça, C. M. Costa and S. Lanceros-Méndez
10.40-11.00	Towards Patient-Specific Carbohydrate Counting Accuracy: An In Silico Study	Carlos Abreu, Francisco Miranda and Paula Felgueiras

Session Name:	Recent advances in nonlinear partial differential equations and systems and their applications	
Chair Name:	G. R. Cirmi, S. D'Asero, S. Leonardi	
Program: Sept. 17		
Hours	Paper Title	Author
11.00-11.30	On a class of nonlinear partial differential equations of parabolic type	M. M. Porzio
11.35-12.05	Scalar and vectorial degenerate elliptic problems	F. Leonetti
12.10-12.40	On some singular elliptic systems in R^N	S. A. Marano
12.45-13.15	THE BOTTARO-MARINA SLICE METHOD FOR DISTRIBUTIONAL SOLUTIONS TO ELLIPTIC EQUATIONS WITH DRIFT TERM	S. Buccheri

END OF DAY 2

19 September 2020

Virtual Room 1

Session Name:	Numerical mathematics and High Performance Computing in Engineering and Environmental Sciences	
Chair Name:	Martin Cermak	
Program:		
Hours	Paper Title	Author
09.00-09.20	SIFT feature extraction applied in SVM classification	M. Čermák
09.20-09.40	On the Influence of the Measurement Inaccuracy on the E_FAO Evaporation Estimates (in the Area of the Lake Most)	D. Dlouhá
09.40-10.00	The comparison of linear regression methods	K Kozlová
10.00-10.20	The Dual Formulation of Discretized Beam Bending Problem with Sliding and Swivel Friction	L. Pospíšil
10.20-10.40	Parallel Solution of Partial Differential Equations Using the Taylor Series Method	P. Veigend
10.40.11.00	System Control Using High Order Numerical Method	P. Veigend

Session Name:	Nonlinaer Energy Harvesting from Mechanical and Aeroelastic Vibrations	
Chair Name:	Grzegorz Litak, Piotr Wolszczak Abdessattar Abdelkefi	
Program:		
Hours	Paper Title	Author
15.00-15.20	Bifurcation analysis and control of chaos on bistable piezoelectric energy harvesting systems	Americo Cuhna
15.20-15.40	Hydrodynamic energy harvesting analysis of two piezoelectric tandem flags under the influence of wakes of upstream body	Emad Udin
15.40-16.00	Analysis of frequencies synchronization and nonlinear phenomena in rotary cantilever oscillation in vertical position between movement limiters	Piotr Wolszczak
16.00-16.20	Broadband energy harvesting in a bistable system with hysteresis	Grzegorz Litak

Session Name:	Elastic Curves and Surfaces with Applications and Numerical Representations	
Chair Name:	Anthony Gruber	
Program:		
Hours	Paper Title	Author
17.00-17.30	Minimal Surfaces Bounded by Elastic Curves	**A. Pampano**
17.30-18.00	Willmore-Stable Minimal Surfaces	**A. Gruber**/M. Toda/H. Tran
18.00-18.30	On the stability index of optimization problems with constraints	**H. Tran**
18.30-19.00	Minimizers of the multiphase Canham-Helfrich functional	**L. Lussardi**
19.00-19.30	Quaternionic Remeshing During Surface Evolution	**A. Gruber**/E. Aulisa

Virtual Room 2

Session Name:	MS 51: "Advanced methods of computational mechanics and simulation oriented to civil and industrial engineering" organized by G. Milani, R. Fedele, N. Cefis	
Chair Name:	Milani and/or Fedele	
Program:		
Hours (Greek time)	Paper Title	Author
10.00-13.00	**TBA**	TBA
	TBA	TBA
	TBA	TBA
	TBA	TBA
	TBA	TBA
	TBA	TBA
	TBA	TBA

Virtual Room 3

Session Name:	Recent advances in nonlinear partial differential equations and systems and their applications	
Chair Name:	G. R. Cirmi, S. D'Asero, S. Leonardi	
Program:		
Hours	Paper Title	Author
9.00-9.30	Singular Quasilinear Elliptic Problems With Convection Terms	U. Guarnotta
9.35-10.05	Fels criterion for a fourth-order differential equation with variable coefficients	M. Ruggieri
10.10-10.40	Oscillation results for second-order neutral delay differential equations	A. Scapellato

Virtual Room 4

Session Name:	Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques	
Chair Name:	Alexandru Dumitrache, Florin Frunzulica	
Program:		
Hours	Paper Title	Author
11.00-11.20	Optimization Methods for Collision Aircraft Avoidance	Mihaela-Luminita Costea, Gabriela-Liliana Stroe, Florin Costache, Augustin Semenescu and Irina-Carmen Andrei
11.20-11.40	Modelling and Analysis of the Air Traffic Control Systems	Gabriela-Liliana Stroe, Mihaela-Luminita Costea, Florin Costache, Augustin Semenescu and Irina-Carmen Andrei
11.40-12.00	Unsteady Lift of Thin EllipticalWings in Subsonic Flow	Marco Berci
12.00-12.20	Analysis and Numerical Simulation of Air Traffic Collision Avoidance System	Mihaela-Luminita Costea, Gabriela-Liliana Stroe, Florin Costache, Raluca Balasa, Alexandru-Gabriel Andrei, Augustin Semenescu, and Irina-Carmen Andrei

END OF DAY 3

20 September 2020

Virtual Room 1

Session Name:	Optimal Homotopy Asymptotic Approach to Nonlinear Dynamical Systems in Engineering	
Chair Name:	Nicolae Herisanu	
Program:		
Hours	Paper Title	Author
09.00-09.20	Dynamics of a piezoelectric cantilever for energy harvesting	Nicolae Herisanu, Vasile Marinca
09.20-09.40	Numerical solution for system of nonlinear Volterra integral equation of the first kind via MOHAM	Roya Montazeri, Jafar Biazar
09.40-10.00	Oscillations of a nonlinear energy harvester	Vasile Marinca, Nicolae Herisanu
10.00-10.20	An optimal analytical solution to a simple pendulum with air resistance	Bleoju Ciprian, Cristina Chilibaru-Opritescu
10.20-10.40	Analytical investigation to biomechanical properties of a vocal fold model	Laura Jurca, Cosmina Vigaru, Cristina Chilibaru-Opritescu
10.40-11.00	A biodynamic multibody system. OHAM solution	Andreea Stoia, Dan Ioan Stoia, Nicolae Herisanu

Virtual Room 1 (Continue)

Session Name:	Mathematical Modeling, Numerical Algorithms, Optimization Methods and Flow Control for Aerospace Techniques	
Chair Name:	Alexandru Dumitrache, Daniel Crunteanu	
Program:		
Hours	Paper Title	Author
11.00-11.20	New Air Traffic Surveillance Systems	Gabriela-Liliana Stroe, Mihaela-Luminita Costea, Florin Costache, Augustin Semenescu and Irina-Carmen Andrei
11.20-11.40	CFD Analysis of Low-Power Vertical Axis Wind Turbines	Florin Frunzulica, Alexandru Dumitrache and Daniel Crunteanu
11.40-12.00	Improving the efficiency of a wind turbine using blades with winglets	Florin Frunzulica, Daniel Crunteanu and Alexandru Dumitrache
12.00-12.20	Structural Analysis of a Two-Stage Rotor VAWT	Bogdan Adrian Nicolin, Alexandru Dumitrache and Florin Frunzulica
12.20-12.40	The Sensitivity of Some Riemann Solvers with Respect Small Variations in the Initial Data	Marius Stoia-Deska
12.40-13.00	A Reduced Order Model for the Aeroelastic Analysis of Slender Launchers and Missiles	Marius Stoia-Deska

Virtual Room 2

Session Name:	Numerical Methods and Fundamental Research on Renwable Energy Conversion	
Chair Name:	Abel Rouboa	
Program:		
Hours	Paper Title	Author
09.00-09.20	Forced Convection Heat Transfer around a Rotating Cylinder: Viscous Dissipation	Armando Soares
09.20-09.40	Flowchart optimization study of the process of purification of crude glycerol from biodiesel production residues	Matheus Oliveira
09.40-10.00	Fluid Flow and Heat Transfer Around a Cylindrical Surface with Single and Dual Protrusions	Armando Soares
10.20-10.40	Effects of the Arterial Reconstruction on the Hemodynamics	Armando Soares
10.40-11.00	Analysis of Vineyard Pruning Residues Potential as a Function of Syngas Quality Indices	Ana Abbas
11.20-11.40	Experimental study and modeling of the thermal dissipation of a multi-junction photovoltaic cell	Anas Abbaz
11.40-11.20	Discussion on renewabke energy recents research	

END OF DAY 4

21 September 2020

Virtual Room 1

Session Name:	59) Reliability modelling and optimization systems of structures with composite materials	
Chair Name:	Simone Spagnuolo	
Program:		
Hours	Paper Title	Author
10.00-10.20	Effect of Different Surface Modification on the Pull-out Behavior of Carbon Embedded in Cementitius Matrix	Francesca Bompadre
10.20-10.40	Experimental and Numerical Study on the Flexural Behavior of Ultra High Performance Fiber Reinforced Concrete (UHPFRC)	Jacopo Donnini
10.40-11.00	Hybrid Precast Tunnel Lining: Optimization of Fiber Reinforced Concrete (FRC) Segments with Glass Fiber Reinforced Polymer (GFRP) Bars	Simone Spagnuolo

Session Name:	The Fourth Symposium on Mathematical Methods in Economics and Nature Use (SMMENU 2020). Zoom Session.	
Chair Name:	Alexander Medvedev, Marina Medvedeva	
Program:		
Hours	Paper Title	Author
13.00-13.20	Imitation Modeling of Economic Systems Development Scenarios	S.N. Lapshina
13.20-13.40	Problems of Education Digitalization when Conversion to On-Line Technologies	S.N. Lapshina, E.M. Romanovskaya
13.40-14.00	Separation Algorithm for Modernization of Hybrid Power Supply System in Northern City in Northern city	Sergey Kruglikov
14.00-14.20	Operation Research Presentation of the State Support for the Regional Industry	Sergey Kruglikov
14.20-14.40	Modeling the structure of composites reinforced with a system of curved fibers	E.M. Romanovskaia, S.A. Berestova, N.D. Romanovskaia
14.40-15.00	Cyber Securing the Future	Christopher Kolb, James Strouse, Justynn Palmer, Vitaly Ford, Victoria Turygina
15.00-15.20	Utilizing Virtual Reality Game Design to Improve Problem Solving and Logical Thinking Skills	Andrew Pressman, Tyler Ramdass, Patrick Walls, Vitaly Ford, Victoria Turygina
15.20-15.40	Model of Flexible Management of Documents Circulation Processes Informatization in a Non-Profit Organization	Anna Kolomytseva, Helen Iskra, Marina Medvedeva, Vladimir Belousov
15.40-16.00	Model for Forecasting the Indicators of the Interorganizational Interaction Forms Efficiency in a Virtual Environment	Anna Kolomytseva, Helen Iskra, Marina Medvedeva, Yelyzaveta Denysenko

Virtual Room 1 (CONTINUE)

Program: (CONTINUED)		
Hours	Paper Title	Author
16.00-16.20	A Model for Regulating Cross-Functional Interaction in the Management of Logistics Processes	Helen Iskra, Marina Medvedeva, Inna Svyrydova
16.20-16.40	Information Architecture Model of Interaction in Educational Networks	Anna Kolomytseva, Marina Medvedeva, Vladimir Timokhin, Aleksandr Gaydatov
16.40-17.00	Modeling the Processes of Managing the Advertising Budget of an Electronic Trading Platform	Anna Kolomytseva, Vladimir Timokhin, Alexander Medvedev, Mark Pavlov
17.00-17.20	Target Architecture Model for Data and Application Management in Organization of Deliveries	Y.E. Kharitonov, V.B. Timokhin, A.N. Medvedev, J.A. Nelubina
17.20-17.40	Big Data Analysis with Python and Oracle Apex Integration	V.N. Timokhin, N.V. Timokhin, A.N. Medvedev

Virtual Room 2

Session Name:	The First Symposium on Information, Educational Technology, Applied Mathematics and Engineering (IETAME 2020)	
Chair Name:	Associate Prof. Chialiang Lin and Prof. T. E. Simos	
Program:		
Hours	Paper Title	Author
09.00-09.20	Large-scale eggshell crack detection simulation based on impulse response signal	Xing Yuan Li
09.20-09.40	Will be announced very soon.	
09.40-10.00	Will be announced very soon.	

Virtual Room 2

General Session

Chair Name:	Jurgen Geiser	
Program:		
Hours	Paper Title	Author
13.00-13.20	Effect of inflow temperature on root canal irrigation: a computational fluid dynamics study	Mingzhou Yu, Zhengqiu Huang, Na Zhou, Zihan Xu, Shuli Deng, Hanhui Jin
13.20-13.40	Solver Methods for Nonlinear Diffusion Equation: Demixing of Two Species	Jurgen Geiser and Lutz Schimansky-Geier
13.40-14.00	Adaptive-Iterative Implicit Methods for Solving Hodgkin-Huxley Type Systems	Jurgen Geiser and Dennis Ogiermann
14.00-14.20	Non-Homogeneous Five State Semi-Markov Reliability Model of Operation Process	Franciszek Grabski
14.20-14.40	ON FUZZY C-PARACOMPACT TOPOLOGICAL SPACES	FRANCISCO GALLEGO LUPIÁÑEZ
14.40-15.00	A Hoeffding-Azuma type inequalty for Adapted Random Processes	Mahir Hasansoy

Virtual Room 2

General Session

Chair Name:	George Mihail Vlăsceanu	
Program:		
Hours	Paper Title	Author
15.00-15.20	Biomimetism in developing osteoinductive bone tissue engineering substitutes from polymer blend/graphene oxide composites	George Mihail Vlăsceanu, Horia Iovu, Eugeniu Vasile, Mariana Ioniţă
15.20-15.40	Fractional Modelling of Conventional Solar Desalination System	E. F. El-Gazar, W. K. Zahra, Hamdy Hassan, Sherif I. Rabia
15.40-16.00	Effect of an Initial Polydispersity of Bubble Size on Weakly Nonlinear Wave Equation for Short PressureWaves in Bubbly Liquids	Tetsuya Kanagawa and Takuma Kawame
16.00-16.20	Heterogeneous asynchronous time integrator for non-smooth dynamics	Anthony Gravouil
16.20-16.40	Weakly Nonlinear Formulation of Focused Ultrasound with Viscous and Thermal Attenuations in Bubbly Liquids	Tetsuya Kanagawa and Shunsuke Kagami
16.40-17.00	On a Generalized Form of Multiset Finite Automata with Suppressed Nonfinal States	Pavel Martinek

Virtual Room 2

Session Name:	Nonlinear control in engineering and economics	
Chair Name:	Gerasimios G. Rigatos	
Program:		
Hours	Paper Title	Author
17.00-17.20	Nonlinear optimal control of coupled time-delayed economic growth models	G. Rigatos
17.20-17.40	Nonlinear optimal control for the ball and plate dynamical system	G. Rigatos
17.40-18.00	Nonlinear optimal control of electro-hydraulic actuators	G. Rigatos
18.00-18.20	Nonlinear optimal control of the underactuatted slosh-container-system	G. Rigatos
18.20-18.40	Nonlinear optimal control for attitude stabilization of micro-satellites	G. Rigatos
18.40-19.00	Nonlinear optimal control of redundant robotic manipulators	G. Rigatos

Virtual Room 3

Session Name:	Qualitative properties of solutions of differential equations	
Chair Name:	Marianna Ruggieri and Andrea Scapellato	
Program:		
Hours	Paper Title	Author
09:00-09:30	Existence of a periodic solution for a coupled system of differential equations	Maria Alessandra Ragusa
09:30-10:00	Regularity results for a noncoercive Dirichlet problem with data in Morrey spaces	Giuseppa Rita Cirmi
10:00-10:30	Existence of solutions for a class of noncoercive elliptic systems	Salvatore D'Asero

Virtual Room 3

General Session

Chair Name:	Plamena I. Marcheva	
Program:		
Hours	Paper Title	Author
13.00-13.20	On the Semilocal Convergence of a Modified Weierstrass Method for the Simultaneous Computation of Polynomial Zeros	Plamena I. Marcheva and Stoil I. Ivanov
13.20-13.40	Direct Numerical Simulation of Leidenfrost Droplets	Guillaume Mialhe, Sebastien Tanguy and Dominique Legendre
13.40-14.00	Evaluation of R&D Projects Using Fuzzy MCDM Method	Mehtap Dursun, Melike Kılıc and Nazli Goker
14.00-14.20	Nonuniform Polynomial Behaviors in Banach Spaces	Rovana Boruga(Toma) and Marioara Lapadat
14.20-14.40	On the Convergence of Nourein Iterative Method for Simultaneous Approximation of Polynomial Zeros	Petko D. Proinov and Maria T. Vasileva
14.40-15.00	A note on absolute continuity of stationary distributions of some piecewise-deterministic Markov process	Dawid Czapla, Katarzyna Horbacz and Hanna Wojewódka Sciazko

Virtual Room 3

General Session

Chair Name:	Petko D. Proinov	
Program:		
Hours	Paper Title	Author
15.00-15.20	Semilocal Convergence of a Family of Multi-Point Ehrlich-Type Root-Finding Methods	Petko D. Proinov and Milena D. Petkova
15.20-15.40	Statistical Evaluation of Fatigue Curve of Vibration-Loaded Structures	Věra Marková and Karel Ráž
15.40-16.00	Head Shape Variations Based on a Three–Shell Forward Electroencephalographic Spherical Model	A. Papargiri, V. Kalantonis, P. Vafeas, M. Doschoris, F. Kariotou and G. Fragoyiannis
16.00-16.20	CFD Parametric Study of Thermal Performance of Different Fruit Packaging Box Designs	Adhiyaman Ilangovan, Pedro D. Gaspar, Pedro D. Silva, Ana R. Gonçalves, Álvaro M. Sampaio, António J. Pontes, Nanci Alves
16.20-16.40	Adjusting the Operating Conditions of a Refrigeration System in Order to Reduce the Frost growth on Heat Exchange Surfaces	Daniel Fernandes, Pedro D. Silva, Luís C. Pires, Pedro D. Gaspar
16.40-17.00	A Phase Fitted RKN Method for the Numerical Integration of Oscillatory Problems	D.F. Papadopoulos and T.E. Simos

Virtual Room 3

Session Name:	VII Symposium on Symmetry Methods and Applications for Differential Equations	
Chair Name:	Maria Gandarias Maria Bruzón	
Program:		
Hours	Paper Title	Author
17.00-17.20	On nonclassical symmetry analysis for a confined-unconfined flow model	Nitsime Batsesana
17.20-17.40	On the algebra of nonlocal symmetries for the 4D Martinez Alonso-Shabat equation	Petr Vojcak
17.40-18-00	Conservation laws of a nonlinear partial di erential equation describing the wave propagation in nonlinear low-pass electrical transmission	Maria Gandarias, Masood Khalique

Virtual Room 4

General Session

Chair Name:	O. Ilker Basaran	
Program:		
Hours	Paper Title	Author
14.00-14.20	Optimal Breathing Gas Mixture in Professional Diving with Multiple Supply	O. Ilker Basaran
14.20-14.40	Estimation of Periodic Long-memory GARCH-in-mean Model	Alex C. Gonzaga
14.40-15.00	Numerical Analysis of the Contamination Influence on the Parameters of Gas Flow Through Single-Hole Orifice Meter	J. Imamović, A. Hasečić, S. Bikić, E. Džaferović
15.00-15.20	Numerical Modeling of Forced Convection of Ionic Liquid [C4mpyrr][NTf2]	A. Hadžić, A. Hasečić, S. Bikić, E. Džaferović
15.20-15.40	An iterative approach for non-linear analysis of lightweight structures	Ileana Corbi, Ottavia Corbi, Francesca Tropeano
15.40-16.00	Analytical/Numerical Tools for the Evaluation of Performance Decay of Non-structural Elements	Ileana Corbi, Ottavia Corbi, Francesca Tropeano

Virtual Room 4

General Session

Chair Name:	Ottavia Corbi	
Program:		
Hours	Paper Title	Author
16.00-16.20	Mathematical Setup of Compensating Devices for Structural Vibrations	Ileana Corbi, Ottavia Corbi
16.20-16.40	Toward a unified theory of inverse-free two-step point-to-point iterative processes	M. A. Hernandez-Veron, Sonia Yadav, A´ . A. Magrenan, Eulalia Martınez and Sukhjit Singh
16.40-17.00	Method of Developing Bone Segmentation Code by Using the VTK Library in Order to Extract Patients' Hip Joint from CT Scans	Patricia Isabela BRĂILEANU, Ionel SIMION and Benyebka BOU-SAÏD
17.00-17.20	Computational prediction of pressure wave propagation in bubbly liquid via KdV–Burgers equation based on a two-fluid model	Takahiro Ayukai and Tetsuya Kanagawa
17.20-17.40	Efficiency in the Health care in Countries in the Region of Europe: An Application to an Average Length of Life	Jakub Hanousek
17.40-18.00	An Approach to Evolution Cocycles from a Stochastic Point of View	Codruta Stoica

Virtual Room 5

General Session

Chair Name:		
Program:		
Hours	Paper Title	Author
13.30-13.50	Cross-cultural interactions model	Fedor Loginov and Nikolay Belotelov
13.50-14.10	Modeling the Processes of Combined Fuel Combustion and Temperature Analysis in the Zone of Active Combustion of Power Plants	Vladislav N. Kovalnogov, Usama J. Mizher, Sergey V. Busygin and Andrei V. Chukalin
14.10-14.30	Mathematical Modeling of Exchange Processes in a Turbulent Boundary Layer, Research and Verification of the Model	Vladislav N. Kovalnogov, RuslanV. Fedorov, Andrei V. Chukalin
14.30-14.50	Models of Applied Mathematics in the Problems of Energy Efficiency of Buildings and Structures	Vladislav N. Kovalnogov, Ruslan V. Fedorov, Yuri E. Chamchiyan
14.50-15.10	Lie Symmetries, conservation laws and exact solutions a new extended (2 + 1)-dimensional Boussinesq equation	M.S. Bruzon, T.M. Garrido and R. de la Rosa
15.10-15.30	(2+1) Kadomtsev - Petviashvili - Boussinesq equation: Lie symmetries and solutions	T.M. Garrido, R. de la Rosa, E. Recio and M.S. Bruzon
15.30-15.50	Trigonometric Polinomyals Methods to Simulate Oscillating Chaotic Systems	Jessica Zaqueros-Martinez, Gustavo Rodríguez-Gómez, Esteban Tlelo-Cuautle and Felipe Orihuela-Espina

END OF DAY 5

22 September 2020

Virtual Room 1

Session Name:	The methods of development intelligent and adaptive control for problems of physical, biological and socio-economic processes modeling	
Chair Name:	Alexander N. Kvitko	
Program:		
Hours	Paper Title	Author
10.00–10.25	A Criterion of Null Controllability of a Nonlinear Stationary System with a Disturbance	A. N. Kvitko
10.25–10.50	Qualitative Analysis of Self-Oscillations in One Population Model	A. V. Ekimov, Yu. E. Balykina, M. V. Svirkin
10.50–11.15	A Sixth Order Explicit Method for Structurally Partitioned Systems of Ordinary Differential Equations	I. V. Olemskoy, N. A. Kovrizhnykh, A. S. Eremin
11.15–11.40	Bifurcation of a Cylindrical Panel Made of Elastomers under Uniform Pressure	S. A. Kabrits, E. P. Kolpak, D. D. Nurtdinov
11.40–12.05	Optimal Control of Parametric Oscillations of a Flexible Pipeline	I. M. Alesova, L. K. Babadzanjanz, I. Yu. Pototskaya, Yu. Yu. Pupysheva
12.05–12.30	The Discrete Stochastic Model for the Dynamic Object State Estimation	V. Chashnikova
12.30–12.55	Social Trade Networks and Compromise Solution in Multi-agent Interaction	O. A. Malafeyev et al.

Virtual Room 2

Session Name:	Mathematics of Neuro-Science, Technology and Engineering	
Chair Name:	A/Prof Dan Nicolau, Dr Ruairidh Battleday	
Program:		
Hours	Paper Title	Author
11.00-11.30	On the Origins and Nature of Thought	Sophie Taylor
11.30-12.00	Artificial Intelligence is Limited By Simplification of Biological Processes	Alexander Hasson
12.00-12.30	Persistent Homology and Topology of Concepts	Sophie Taylor
12.30-13.00	Agent-Based Modelling of Protocognition in Tumours	Hasitha Weerasinghe
13.00-13.30	Design and Limits of Intelligence	Son Tran
13.30-14.00	Neuroscience Without Neurons (Invited)	Andrew Adamatzky
14.00-14.30	Fungal Intelligence (Invited)	Dan Nicolau, Sr.
14.30-15.00	An Adversarial Principle of General Learning Tasks	Dan Nicolau
15.00-15.30	Casting Relational Generalisation Problems as Matrix Imputation	Ruairidh Battleday
15.30-16.00	A Bayesian Account of Learning and Generalising Representations	James Whittington

END OF DAY 6

23 September 2020

Virtual Room 1

Session Name:	Recent Advances and current research on the difference equations and its applications	
Chair Name:	Professor Seifedine Kadry	
Program:		
Hours	Paper Title	Author
09.00-09.20	Path optimization for D-star algorithm modification	Seifedine Kadry, Gennady Alferov, Viktor Fedorov and Anastasiia Khokhriakova
09.20-09.40	Study of Control Systems with Transistor Keys	S. Kadry, G. Alferov, G. Ivanov, V. Korolev
10.00-10.20	Study of Control Systems with Transistor Keys	S. Kadry, G. Alferov, V. Korolev, D. Shymanchuk

Virtual Room 1

Session Name:	53) Computational and Statistical Methods	
Chair Name:	Frederico Caeiro	
Program:		
Hours	Paper Title	Author
15.00-15.20	Exponential versus Generalized Exponential distribution: a computational study	Frederico Caeiro
15.20-15.40	Confidence Intervals for the shape parameter of a Pareto distribution.	Ayana Mateus

Virtual Room 1

Session Name:	Lucas Sequences and Fibonacci Numbers related equations (#57)	
Chair Name:	Sandor Kristyan	
Program:		
Hours	Paper Title	Author
17.00-17.20	Part I.: Differential Equations and Sums	Sandor Kristyan
17.20-17.40	Part II.: Polynomials	Sandor Kristyan

VIRTUAL ROOM 2

Session Name:	6th Computational Tools for Direct Digital Manufacturing (CT4DDM)	
Chair Name:	Nuno Alves, Paula Pascoal-Faria and Sandra Amado	
Program:		
Hours	Paper Title	Author
09.00-09.20	Comparison of Electromagnetic Stimulation Fields Generated By Different Experimental Setups: Biophysics Analysis	João Meneses, Nuno Alves, Abhishek Datta and Paula Pascoal-Faria
09.20-09.40	Endodontics irrigation: a computational fluid dynamics approach	Mário Rito Pereira, Paula Pascoal-Faria, Isabel Vasconcelos, Nuno Alves, António Ginjeira
09:40-10.00	Inconel Selective Laser Melting: a numerical analysis	Maryam Khaksar Ghalati, Paula Pascoal-Faria and Nuno Alves
10.00-10.20	Using voxel-based CAD-Systems for additive manufacturing with 3D multi material printing	Stefan Junk and Henning Einloth
10.20-10.40	Bioreactor optimization for cell culture	João Meneses, Nuno Alves, Sofia Fernandes, Abhishek Datta and Paula Pascoal-Faria

END OF CONFERENCE