

## PROGRAM

### INTERNATIONAL CONFERENCE ON MATHEMATICS APPLIED IN LIFE SCIENCES 2022, IAȘI, ROMÂNIA

The time in the program is Romanian time (Eastern European Time (EET), UTC +2)

#### Thursday 23 June 2022

10.00 – 10.30	<b>Opening ceremony</b>
10.30 – 10.45	About the Fuzzy Grade of a Hypergroup Violeta FOTEA, University Alexandru Ioan Cuza, Iasi, Romania
10.45 – 11.00	Lie Algebras on Raised Very Thin $H_v$ -fields Thomas VOUGIOUKLIS, Emeritus Professor, Democritus University of Thrace, Xanthi, Greece

Coffee break

#### Section presentations

##### ROOM 1 – Chairman CHIRUȚĂ Ciprian

First session

11.30 – 11.45	Optimal Location of Aquaculture Farming: An Elimination Decision Approach Lazim ABDULLAH, University Malaysia Terengganu, Malaysia,
11.45 – 12.00	Data Management and Interpretation Using Cloud Facilities in Horticultural Sciences Ciprian CHIRUȚĂ, Mirela COJOCARIU, Marius CĂLIN, Emilian BULGARIU, University of Life Sciences “Ion Ionescu de la Brad”, Iasi, Romania,
12.00 – 12.15	Doubly Truncated Power- Hazard Rate Distribution via Generalized Order Statistics Md. Izhar KHAN, Department of Mathematics, Faculty Science, Islamic University of Madinah, Madinah, Kingdom of Saudi Arabia
12.15 – 12.30	Calibration based Chain Ratio-Type Estimator of Population Total under Successive Sampling Alka NA, Banasthali Vidyapith, Tonk, India,
12.30 – 12.45	Helix-hopes on minimal $H_v$ -fields Souzana VOUGIOUKLIS, Aristotle University of Thessaloniki, Greece
12.45 – 13.00	Closed-Form solutions of 2-dimensional systems of difference equations Allam ASMA, Abdelhafid Boussouf University center of Mila, Algeria,
13.00 – 13.15	Existence of Solutions for a Kirchhoff Type Problem with Critical Exponent in $\mathbb{R}^4$ Hayat BENCHIR, University of Tlemcen, Algeria,
13.15 – 13.30	Analysis and applications of the proportional Caputo derivative and integral in Banach space Abdellatif BOUTIARA, University of Ghardaia, Medea, Algeria,

Coffee Break

## ROOM 1 – Chairman CHIRUȚĂ Ciprian

### Second Session

14.30 – 14.45	Mathematical modeling, analysis and optimal control of a type 1 diabetes Hanane FERJOUCHIA, Laboratory Analysis, Modeling and Simulation LAMS. Hassan II University of Casablanca, Morocco,
14.45 – 15.00	Fractional Partial Hyperbolic Differential Inclusions with finite State- Dependent Delay Mohamed HELAL, Mustapha Stambouli University of Mascara, Sfisef. Sidi Bel-Abbès, Algeria,
15.00 – 15.15	Existence, interval of existence of solutions for nonlinear Caputo-Hadamard fractional differential equations using the generalization of Gronwall's inequality Chahra KECHAR, University of Souk Ahras, Algeria,
15.15 – 15.30	A Generalization for p-Harmonic Maps Bouchra MERDJI, Mustapha Stambouli University, Algeria,
15.30 – 15.45	Approximate Solution of Inverse Problem for Differential Equation Nabil SAOULI, University of Badji Mokhtar Annaba, Algeria,
15.45 – 16.00	The kNN smoothing of the relative-error regression with functional regressor Guenani SOMIA, Lab. of Statistics and Process Stochastic, Univ. Djillali Liabes, Sidi Bel Abbes BP 89, Sidi Bel Abbes 22000 Algeria,
16.00 – 16.15	Nonparametric estimation of the conditional distribution with functional independent data Bouanani OUSSAMA, University of Abdlhamid Ibn Badis, Algeria,
16.15 – 16.30	Some results about the Mixed Convection Boundary Layer flow over a vertical permeable surface embedded in a Porous Medium Boudjema Djefal KHALED, Hassiba Ben Bouali University, Chlef, Algeria

## ROOM 2 – Chairman SONEA Andromeda

### First session

11.30 – 11.45	A blow up of solutions for the hyperbolic type equation variable coefficients Ayşe FIDAN, Dicle University, Turkey,
11.45 – 12.00	Linear Diophantine Fuzzy Subsets of Semigroups Madeleine AL-TAHAN, Abu Dhabi University, Abu Dhabi, UAE, Saba AL-KASEASBEH, Tafila Technical University, Tafila, Jordan, Muhammad RIAZ, University of the Punjab Lahore, Pakistan, Akin OSMAN, Ahi Evran Üniversitesi Fen-Edebiyat, Fen-Edebiyat Fakültesi Matematik Bölümü, Turkey
12.00 – 12.15	Multicriteria Group Decision Making Based on Intuitionistic Cubic Fuzzy Aggregation Information MUNEEZA, Abdul Wali Khan University Mardan, Pakistan,
12.15 – 12.30	q-Rung Orthopair Multi-Fuzzy Soft Set Mahalakshmi P, Alagappa University, Karaikudi, India,

12.30 – 12.45	New algorithm for monitoring network equipment using ICMP Ghouti ABDELLAOUI, Higher School in Applied Sciences, Tlemcen, Algeria, Hafidha SEBBAGH, Higher School in Applied Sciences, Tlemcen, Algeria
12.45 – 13.00	Innovating the learning experience through educational technology a digital insight Vishakha JOSEPH, ARKA JAIN University, India, Rajeev Kumar SINHA, ARKA JAIN University, India, Angad TIWARY, ARKA JAIN University, India
13.00 – 13.15	Null controllability of $\psi$ – Hilfer implicit fractional integro-differential equations with nonlocal conditions Ichrak Mourad BOUACID KERBOUA, LMAM, University 8 Mai 1945. Guelma, Ttamelous, Skikda, Algeria,
13.15 – 13.30	On the Solution of an Evolution Equation with mixed Finite Element Manal DJAGHOUT, Laboratory of Applied Mathematics and Modelling, Faculty of Sciences. University 8 May 1945, Guelma. Algeria,

Coffee Break

## ROOM 2 – Chairman SONEA Andromeda

### Second Session

14.30 – 14.45	Optimal control strategy of Covid-19 spread in Morocco using Seird Model Hanane FERJOUCHIA, Laboratory Analysis, Modeling and Simulation LAMS. Hassan II University of Casablanca, Morocco,
14.45 – 15.00	Finite-time stabilization for fractional-order inertial neural networks with time varying delays Hedienne JALLOULI, University of Carthage, Tunisia,
15.00 – 15.15	On invariant of coadjoint orbits on Lie groups Rafik KHALFI, Faculty of Sciences of Bizerte, University of Chartage, Tunisia,
15.15 – 15.30	Elliptic problems with Robin boundary coefficient -operator conditions in Hölder spaces: non commutative cases Mohammed RABAH, Université Abdelhamid Ibn Badis, Algeria,
15.30 – 15.45	The Adomian Decomposition Method for Solving a Class of Fractional Nonhomogeneous Multi-Pantograph Equations with Initial Conditions Hafidha SEBBAGH, Higher School in Applied Sciences, Algeria, Ghouti ABDELLAOUI, Higher School in Applied Sciences, Algeria
15.45 – 16.00	Study of the behavior of the solutions of some systems of difference equations Nouressadat TOUAFEK, Mohamed Seddik Ben Yahia University, Algeria
16.00 – 16.15	Bandwidth consistency for various kernel estimators for functional operators in infinite dimensional. Nadjet BELLATRACH, University Kasdi Merbah, Ouargla, Algeria
16.15 – 16.30	Global Existence and Blow up of negative-initial-energy solutions of a nonlinear hyperbolic equation Bounaama ABIR, University of 20 August 1955, Laboratory Lamahis, Skikda, Algeria

### ROOM 3 – Chairman BULGARIU Emilian

#### First session

11.30 – 11.45	Study of instability for two interfacial waves in the presence of a basic current shear Dipankar CHOWDHURY, Serampore College, India,
11.45 – 12.00	Linear Diophantine Multi-Fuzzy Set and its Properties Jeevitha K, Alagappa University, Karaikudi, India
12.00 – 12.15	Absolute Triple Convolved Norlund Summable Factor Alka MUNJAL, Akal University Talwandi Sabo, India,
12.15 – 12.30	A study on oscillatory behavior of solutions for a class of fractional differential equations with impulses Abdur RAHEEM, Aligarh Muslim University, India,
12.30 – 12.45	Codimension two and three bifurcations for a class of neutral differential systems and applications to some modelled systems Houssem ACHOURI, Faculty of Sciences of Bizerta, Carthage University, Tunisia
12.45 – 13.00	Global Convergence Property with Inexact Line Search for a New Hybrid Conjugate Gradient Method Sabrina BEN HANACHI, Mohamed-Cherif Messaadia University - Souk Ahras, Tebessa, Algeria
13.00 – 13.15	On Some Averaging Result for Differential Equation Amel BOURAADA, University Mustapha Stambouli, Mascara, Algeria,
13.15 – 13.30	A set-valued approach applied to a control problem of tuberculosis with treatment Mohamed ELHIA, Hassan II University of Casablanca, Morocco

#### Coffee Break

### ROOM 3 – Chairman BULGARIU Emilian

#### Second Session

14.30 – 14.45	Solution for Elliptic Problem with Multiple Critical Exponents Yamina HAMZAoui, Higher School of Management, Tlemcen, Algeria,
14.45 – 15.00	About the numerical treatment of the quadratic eigenvalues for the Schrödinger operator Soumia KAMOUCHE, University of 08 mai 1945 Guelma, Boumahra Ahmed – Guelma, Algeria
15.00 – 15.15	Some results for stability of Van Karman beam Ibrahim LAKEHAL, University of Mohamed Elbachir Elibrahimi-BB, Algeria,
15.15 – 15.30	Some results for weakly strongly star Menger Lakehal RACHID, University of Boumerdes, Algeria
15.30 – 15.45	Stochastic groundwater flow analysis in heterogeneous aquifer with radial basis function partition of unity method Fouzia SHILE, Faculty of Sciences, University Ibn Zohr, Agadir, Morocco
15.45 – 16.00	Solvability and dynamics of a super-linear reaction diffusion problem with integral condition Chebana ZAINOUBA, Université Larbi Ben M'hidi O.E.B, Algeria

16.00 – 16.15	Investigation of Self-Similarity and Memory of Daily Data of New Confirmed Cases of COVID-19 in Some Major Impacted Countries Koushik GHOSH, University Institute of Technology, The University of Burdwan, Burdwan, India
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## Friday 24 June 2022

### ROOM 1– Chairman CHIRUȚĂ Ciprian

#### First session

10.00 – 10.15	Qualitative theory of solution for a higher order Klein-Gordon equation with logarithmic nonlinearity Ruken AKSOY, Dicle University, Turkey, Erhan PIŞKIN, Dicle University, Turkey
10.15 – 10.30	Arising of Endemic Bubble in an SIR epidemic model with saturated type of treatment rate Arun KUMAR, Banaras Hindu University, Varanasi, India
10.30 – 10.45	Fuzzy modeling for single server queue with double orbit and balking Sudeep Singh SANGA, SV National Institute of Technology Surat, India
10.45 – 11.00	An Existence Study for a Tripled System with $P$ -Laplacian Involving $\varphi$ -Caputo Derivatives Hamid BEDDANI, Higher School of Electrical and Energy Engineering of Oran, Algeria,
11.00 – 11.15	Optimal control of a phytoplankton-zooplankton spatiotemporal discrete bioeconomic model Soukaina BEN RHILA, Hassan II University of Casablanca, Morocco
11.15 – 11.30	Hardy-Littlewood Sobolev type theorem on the Hardy spaces for the generalized Dunkl-Riesz potential Mohamed Amine BOUBATRA, Teacher Education College of Setif, Algeria
11.30 – 11.45	Primal-Dual Interior Algorithm for Second Order Cone Optimization Based on Kernel Function Roumaissa CHARIF, University of Batna 2, Algeria
11.45 – 12.00	The impact of quarantine on the spread of addiction to electronic games among children and youth in Morocco. Fractional mathematical modeling and the optimal control approach Kada DRISS, Faculty of Sciences Ben M'Sik, Hassan II University, Casablanca, Morocco

#### Coffee Break

### ROOM 1– Chairman CHIRUȚĂ Ciprian

#### Second Session

13.00 – 13.15	On the positivity of a class of 2D fractional linear system described by the conformable derivative Mohammed Amine GHEZZAR, Mostaganem University, Algeria
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13.15 – 13.30	Existence and uniqueness of radial positive solutions to some classes of nonlinear equations involving $k$ -Hessian operator Kods HASSINE, Laboratoire de Mathématiques, modélisation déterministe et aléatoire, université de Sousse, Monastir, Tunisia
13.30 – 13.45	Nonlinear Differential Equations with different Fractional orders involving $p$ -Laplacian Operator Mohammed KAID, University Mostaganem, 27000, Algeria, Hamid BEDDANI, School of Electrical and Energy Engineering of Oran, 31000, Algeria Houari FETTOUCH, Hassiba Benbouali University of Chlef, 02000, Algeria
13.45 – 14.00	The $h$ -stability behavior of solutions for certain nonlinear differential equations Abir KICHA, University of Jijel, Algeria
14.00 – 14.15	Virtual control of problems with missing data Sihem MAHOUI, University of Sciences and Technology Houari Boumediene, Algeria
14.15 – 14.30	Study the stability in linear neutral differential equations with variable delays by using fixed point theory Hassan MESSAOUDI, Mohamed-Cherif Messaadia University - Souk Ahras, 41000, Algeria
14.30 – 14.45	Hermite-Hadamard Type Inequalities for Convex Stochastic Processes via Fractional Integrals Oualid RHOLAM, School of Applied Sciences (ENSA), University Ibn Tofail, Kenitra, Morocco
14.45 – 15.00	Uniqueness solution for fractional boundary value problems Lilia ZENKOUFI, University 8 may 1945 Guelma, Algeria

## ROOM 2 – Chairman SONEA Andromeda

### First session

10.00 – 10.15	Firefly Algorithm Based-Neural Network Control of Nonlinear Dynamical Systems with Uncertainties Arun BALI, School of Mathematics, Shri Mata Vaishno Devi University Kakryal, Katra-182320 (JK), India, Rahul KUMAR, School of Mathematics, Shri Mata Vaishno Devi University Kakryal, Katra-182320 (JK), India, Uday Pratap SINGH, School of Mathematics, Shri Mata Vaishno Devi University Kakryal, Katra-182320 (JK), India, Varun BALI, School of Physics, Shri Mata Vaishno Devi University Kakryal, Katra-182320 (JK) India,
10.15 – 10.30	Krasner Hyperfields and the Model Theory of Valued Fields Alessandro LINZI, University of Szczecin, Szczecin, Poland
10.30 – 10.45	New aspects of commutativity degree in complete hypergroup theory Andromeda SONEA, University of Life Sciences “Ion Ionescu de la Brad”, Iasi, Romania
10.45 – 11.00	Nonlinear differential equation via $\varphi$ -Hilfer fractional derivative Moustafa BEDDANI, E. N. S. of Mostaganem, Mostaganem, Algeria



11.00 – 11.15	On Some Nonlocal Problems with Critical Nonlinearities Safia BENMANSOUR, ESM TLEMCEN, Tlemcen, Algeria
11.15 – 11.30	Global Existence of solution for a nonlinear Timoshenko Equation with source terms Wissem BOUGHAMSA, LAMAHIS Laboratory, University of 20 August 1955, Skikda, Algeria
11.30 – 11.45	Discrete Fractional Order Two-Point Boundary Value Problem with Some Relevant Physical Applications Omar CHOUCHA, Kasdi Merbah University of Ouargla, Ouargla, Algeria
11.45 – 12.00	Diabetology, Machine Learning, and Causal Inference Sahar ECHAJEI, Ben M'sik Faculty of Science, Casablanca, Morocco

Coffee Break

## ROOM 2 – Chairman SONEA Andromeda

### Second Session

13.00 – 13.15	Study of Hopf bifurcation of delayed tritrophic system: Dinoagellates, Mussels and Crabs Mohamed HAFDANE, University Hassan 2, Casablanca, Morocco
13.15 – 13.30	Quantum codes from Hermitian dual-containing constacyclic codes over $F_q(F_q[u] / \langle u^3 = 0 \rangle)$ Zineb HEBBACHE, National School of Built and Ground Works Engineering "Francis Jeanson", Garidi Kouba, 16051, Algeria,
13.30 – 13.45	Semi-functional partial linear regression Nassima Houda KEDIR, University of Djillali Liabes, Algeria
13.45 – 14.00	Analyzing the performance of the Degree-Corrected Stochastic Block Model: from a realistic view Zeyneb LAALA, University Center of Ahmed Salhi, Naama, Algeria
14.00 – 14.15	Ordinal sum of triangular norms on algebraic structure Abdelkrim MEHENNI, University of Science and Technology Houari-Boumediene, Algeria
14.15 – 14.30	The existence and uniqueness for a delay population model with harvesting term Lynda MEZGHICHE, University of 20 August 1955 Skikda, Algeria
14.30 – 14.45	Existence results for fractional problem involving the distributional Riesz derivative Chaima SAADI, University of 20 August 1955 Skikda, Algeria
14.45 – 15.00	

## ROOM 3 – Chairman BULGARIU Emilian

### First session

10.00 – 10.15	On Bi-variate B-tribonacci Polynomials Dr. Suchita GOLATKAR, Dnyaprasarak Mandal's College and Research Centre, Assagao-Goa, Mapusa-Goa, India,
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10.15 – 10.30	Nonlinear Evolution Equation of Surface-Gravity Waves in Presence of a Pycnocline of Finite Thickness Anushri PURKAIT, University of Calcutta, Kolkata, India,
10.30 – 10.45	Numerical radius inequalities Soumia AICI, Mustapha Stambouli, Mascara, Algeria,
10.45 – 11.00	A Necessary Maximum Principle of Markov Regime-Switching Forward-Backward Jump Model Hani BEN ABDALLAH, Mohamed Khider University, Algeria,
11.00 – 11.15	New Lmi Stability Test for the General Continuous Roeser Models Kamel BENYETTOU, Abdelhamid Ibn Badis University- Mostaganem, Algeria, Djillali BOUAGADA, Abdelhamid Ibn Badis University- Mostaganem, Algeria, Mohammed Amine GHEZZAR, Abdelhamid Ibn Badis University- Mostaganem, Algeria,
11.15 – 11.30	Stability of PDEs systems: mathematical and numerical study Hamed Abderrahmane BOURAOUI, University of Badji Mokhtar Annaba, Algeria
11.30 – 11.45	Analysis of electro-elastic antiplane contact problem with friction Mohamed DALAH, University FMC-Constantine, Faculty of Exact Sciences, Department of Mathematics, Constantine, Algeria
11.45 – 12.00	Numerical Solving of Hyperbolic Partial Differential Equation Khadidja FEKIRINI, Djillali-Liabes University, Sidi Bel Abbes, Algeria

Coffee Break

### ROOM 3 – Chairman BULGARIU Emilian Second Session

13.00 – 13.15	Employing Newton's method to modify the CD-conjugate gradient method for unconstrained optimization Naima HAMEL, University 08 May 1945 Guelma, Algeria
13.15 – 13.30	Stability of discrete fractional-order h-Nabla neural network with noncommensurate orders Amel HIOUAL, Departement of Mathematics and Computer sciences, University of Larbi Ben M'hidi, Oum El Bouaghi, Algeria
13.30 – 13.45	Existence Result of Solution for a Nonlinear Kirchhoff Type Reaction-Diffusion Equation with Variable Exponents Aya KHALDI, Laboratory of Applied Mathematics and History and Didactics of Mathematics (LAMAHS), University of 20 august 1955, Skikda, Algeria
13.45 – 14.00	Nonparametric Estimation of Conditional Quantile Function for Functional Dependent Data Ouahiba LITIMEIN, Djillali liabes University, Faculty of Exact Sciences, Sidi Bel Abbes, Algeria, Boubaker MECHAB, Djillali liabes University, Faculty of Exact Sciences, Sidi Bel Abbes, Algeria



14.00 – 14.15	Existence Results for The Second Order Functional Differential Inclusions Imene MEDJADJ, University of Science and Technology Mohamed Boudiaf Oran USTO-MB, Algeria
14.15 – 14.30	Different estimation methods for NADARAJAH distribution Rochdi NOUADRI, Badji Mokhtar Annaba University, Algeria
14.30 – 14.45	Some characteristics of the numerical range of a bounded operator Ouaffa SELLAT, Tebessa University, Algeria
14.45 – 15.00	

#### ROOM 4 – Chairman FOTEA Violeta

##### First session

10.00 – 10.15	Application of Shehu Decomposition method to solve Burger's Equation arising into the Irradiation of Tumour Tissue in Biological Diffusing Systems Abey KELIL, Nelson Mandela University, Gqeberha, South Africa
10.15 – 10.30	A Review of Recent Approaches to the Variation Iterative Method for a Nonlinear Partial Differential Equation Megha SAINI, Chandigarh University, Mohali, Punjab, India
10.30 – 10.45	Stochastic Processes Topics on Fractional Inequalities of the Hermite-Hadamard Mohammed BARMAKI, University Hassan II, Morocco
10.45 – 11.00	Stability of positive 2D continuous-time Lyapunov systems Mohammed Nadjib BENAMAR, University of Abdelhamid Ibn Badis, Mostaganem, Algeria, Mohammed Amine GHEZZAR, University of Abdelhamid Ibn Badis, Mostaganem, Algeria, DJillali BOUAGADA, University of Abdelhamid Ibn Badis, Mostaganem, Algeria
11.00 – 11.15	Finite-Difference Schemes for the Numerical solution of fractional Riccati differential equation with Atangana–Baleanu fractional derivative Ahmed BOKHARI, Hassiba Benbouali University, Chlef, Algeria
11.15 – 11.30	On the existence of exact periodic solution for fractional-order memristor-based circuit Safa BOURAFIA, University Center of MILA, Algeria
11.30 – 11.45	General decay for a viscoelastic translation Euler-Bernoulli beam Imane DJAIDJA, University of Science and Technology Houari Boumedienne, Algeria
11.45 – 12.00	Existence results of viable solutions for autonomous differential inclusions with pln functions Nora FETOUCI, University of Jijel, Algeria

Coffee Break

**ROOM 4** – Chairman FOTEA Violeta

Second Session

13.00 – 13.15	Existence results for quasilinear parabolic systems with nonlocal boundary Matallah HANNA, University of 20 August 1955, Algeria
13.15 – 13.30	To Linear Differential Equations in the unit disc Fettouch HOUARI, University Abdelhamid Ibn Badis Mostaganem, Algeria
13.30 – 13.45	Some existence results on positive periodic solution for a neutral delay hematopoiesis model Marwa KHEMIS, University of 20 August 1955, Skikda, Algeria
13.45 – 14.00	Well-posedness and asymptotic behavior of Piezoelectric Beams system with some delay terms Sami LOUCIF, University of Larbi Tebessi-Tebessa, Algeria
14.00 – 14.15	Estimating the Bound of a Hyperchaotic Fractional Order System and Application to Chaos Synchronization Souad MEROUDJ, Constantine 1 University, Algeria
14.15 – 14.30	A Dynamic Viscoelastic Frictional Contact Problem with Normal Compliance Imane OUAKIL, Laboratory of Pure and Applied Mathematics, University of Mohamed Boudiaf-M'sila, Algeria, Benyattou BENABDERRAHMANE, Laboratory of Pure and Applied Mathematics, University of Mohamed Boudiaf-M'sila, Algeria, Yamna BOUKHATEM, Laboratory of Pure and Applied Mathematics, University of Laghouat, Algeria
14.30 – 14.45	The Uniqueness Solution for p-Laplacian Kamel TAHRI, Abou Bekr Belkaid University, Algeria
14.45 – 15.00	

15.00 – 15.30	Closing ceremony
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**"Ion Ionescu de la Brad" Iasi University of Life Sciences (IULS)**

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