5TH EDITION OF INTERNATIONAL CONFERENCE ON APPLIED MATHEMATICS (ICAM'2024)

December 19-20, 2024
Polydisciplinary Faculty of Taza (FPT)
Taza-Morocco
Planning

Thursday 19 December 2024	
Time	**Conference room/Salle de conférence**
09:00-10:00	Registration and welcome
10:00-10:45	Opening Ceremony
10:45-11:45	**Speaker 2: Pr. Abdessamad Tridane** Chair: A. El azzouzi
	Title: «New Optimal Control Approach to Contain Epidemic in the Case of Limited Resources»
	Coffee Break

Session 1: Nonlinear Analysis and Applications 1

Chair: A. Dakkak and M. D. Belghiti	Room : Salle de conférence
Speaker	**Title**
12:15-12:30 Mohamed ELMASSAOUDI	On the Characterization of the Spectrum of a Fourth-Order Eigenvalue Problem
12:30-12:45 Mohammed BARGHOUTHE	Existence of solutions for a discrete problem with mixed boundary conditions
12:45-13:00 Mohamed TIAL	Indépendance et stabilité de quelques équations fonctionnelles
13:00-13:15 Fatna JAAFRI	Existence and non existence of solutions for a bi-nonlocal p(x)-Kirchhoff equation
13:15-13:30 Abdellah EL ALLAOUI	Common properties of the bounded right linear operators AB and BA in the quaternionic setting
13:30-13:45 Ayoub OUHABI	System of functional equations on semigroups

Session 2: Partial Differential Equations 1

Chair: S. Lalaoui Rhali and M. Mekkour	Room: B1
Speaker	**Title**
12:15-12:30 Ahmed ABERQI	Double Phases Problems: Insight and new trends
12:30-12:45 Mohammed El ANSARI	Non-coercive differential inclusions problems in anisotropic Sobolev spaces with variable exponent and L^1-data
12:45-13:00 Rachid El Ayadi	Internal and gradient stabilization of an unbounded bilinear systems: parabolic and hyperbolic cases
13:00-13:15 Rachid ELHARCH	Existence of a solution for nonlinear degenerate elliptic unilateral problems
13:15-13:30 Ouidad AZRAIBI	On some nonlinear elliptic equations with measurable boundary conditions in anisotropic weighted Sobolev spaces
13:30-13:45 Mouad ALLALOU	On a class of $p(z)$-biharmonic Kirchhoff type problems with indefinite weight and no-flow boundary condition

Session 3: Stochastic Analysis and Probability Theory

Chair: M. Nemiche and M.M. CHEMS-EDDIN		Room: B4
Speaker		Title
12:15-12:30	Jaouad BOURABIAA	Stochastic Aggregation-Diffusion Equation: Analysis via Dirichlet Forms
12:30-12:45	Soukaina BIGANZINE	Global Existence of Solutions of Stochastic Aggregation Equations with Random Diffusion
12:45-13:00	Mohamed BOURHAIL	Accurate Closed-Form Approximations for the Sum of a Ratio of Uncorrelated Rayleigh Random Variables
13:00-13:15	Fatima Zahra ASSILA	Exploring Complex Monge-Ampère Measures : Insights from Projective Logarithmic Potentials
13:15-13:30	Mohamed EL MOUSTAFID	Convergence of martingale: Application to uniform amart
13:30-13:45	Abdenbi EL AZRI	Simulated annealing estimation for three parameters in a generalized stochastic Raleigh diffusion process
13:45-14:00	Anouar BOUTAHYRY	Convergence and decomposition theorems of set-valued mils

Session 4: Control Theory 1

Chair: Z. Rahou and M. Elmassoudi		Room: C4
Speaker		Title
12:15-12:30	Mohamed ERRACHIDI	Contraction-Based Hidden State Regularization in Convolutional Neural Networks
12:30-12:45	Wadii GHANDOR	The controllability of fractional differential system with state and control delays
12:45-13:00	Hamza EL BOUTAHIRI	Strong Stabilization of an Unbounded Bilinear System with Time Delay
13:00-13:15	Oussama EJJARJARI	feedback strong stabilization for a semilinear control system of time-dependent delay
13:15-13:30	Mohammed ZARHOUNI	Pseudo almost periodic solution of a delayed quaternion-Valued Fuzzy recurrent neural networks model on time scales
13:30-13:45	Mohssine ES-SAIYDY	Almost periodic solution of Lotka-Volterra neural networks.
13:45-14:00	Aissam ICHATOUHANE	Applying convexificators in nonsmooth multi-objective semi-infinite fractional interval-valued optimization

Session 5: Algebra 1

Chair: A. Boua and A. Soullami		Room: C5
Speaker		Title
12:15-12:30	Iz-iddine EL-FASSI	Approximate solution for a certain type of functional equations
12:30-12:45	Abdelilah ZERBANE	On the structure of quotient quasi-rings
12:45-13:00	Sara AHALLAL	Confluent hypergeometric functions in continued fractions
13:00-13:15	Safia BATLA	The First Cohomology Group of the Units of a Real Biquadratic Field and Its P´olya Group
13:15-13:30	Jawad BOUTARFASS	Stability of functional inequalities in quasi-Banach spaces
13:30-13:45	Imane EL KHIR	Commutative rings in which every ideal is S-2-absorbing

Session 6: Cryptography and Coding Theory 1

Chair: A. Ahaitouf and A. Chillali		Room: Salle de décanat
Speaker		Title
12:15-12:30	Mohammed SAHMOUDI	On monogeneity of nonic relative number field
12:30-12:45	Mohamed EL BACHRAOUI	N-tuple sum analogues for Ramanujan-type congruences
12:45-13:00	Noureddine ESSAIDI	Advancing the Construction of Quantum Codes over Non-Chain Rings: A Generalized Approach
13:00-13:15	Hafsa EL KHATTABI	Characterizing Subgroups of Class Groups in Biquadratic Fields
13:15-13:30	Bilal MEJMAA	A new SRTOMS algorithm for 5G New-Radio Standards
13:30-13:45	Youness TALEB	Error Correction in IoT LoRa Systems: Polar Codes for Enhanced Communication Reliability
13:45-14:00	Youness ERRADI	p^n -Power relatives extensions with power integral basis

Lunch	
Time	Conference room/Salle de conférence

15:30-16:30	**Speaker 3 : Pr. Abdellah TOUHAFI**		**Chair: K. El moutaouakil**
	Title: «Mathematical Tools and Techniques for Cough Analysis Using Acoustic Camera Technology»		

Session 7: Nonlinear Analysis and Applications 2

Chair: K. Belhadj and M. Tial		Room : Salle de conférence	
Speaker		**Title**	
16:30-16:45	Hajar EL BALLOUT	On the problem of unique continuation for a nonlinear elliptic equation	
16:45-17:00	Anass LAMAIZI	Existence of solutions for p-Laplacian parabolic equation	
17:00-17:15	Abdelmajid BOUKHSAS	Existence of solutions for a Steklov eigenvalue problem	
17:30-17:45	Mahmoud EL AHMADI	Multiplicity results for Kirchhoff-double phase problem with nonlinear boundary condition	
17:45-18:00	Ibrahim Chamlal	Etude de la multiplicit2 des solutions faibles d'un problème singulier ($p(x)$, $q(x)$)-biharmonique avec conditions de non-flux	
18:00-18:15	Mohamed BOUABDALLAH	Multiple homoclinic solutions for a class of discrete fractional p-Laplacian equations	

Session 8: Control Theory 2

Chair: A. Essahlaoui and A. Aberqi		Room: B2	
Speaker		**Title**	
16:30-16:45	Marwan FAKHRI	Strong stabilization and decay estimate for a class of semilinear time-delay systems of neutral type	
16:45-17:00	Lamiae SEDDATI	Neural Network Controllability of financial Dynamic Systems	
17:00-17:15	Jawad SALHI	Indirect controllability of coupled degenerate Euler-Bernoulli beam equations	
17:30-17:45	Hamid BOUTANFIT	Viscosity solutions of HJB equation for a model of wastewater treatment	
17:45-18:00	Mohammed ERRAKI	Optimal feedback control stabilisation for a class of bilinear delayed systems of neutral type	
18:00-18:15	Chaimae OUCHICHA	A novel fuzzy clustering approach for robust MRI brain segmentation	
18:15-18:30	Mohamed OHDA	On the partial calmness condition for an interval-valued bilevel optimization problem	

Session 9: Partial Differential Equations 2

Chair: C. Yazough and A. Salmani		Room: C8	
Speaker		**Title**	
16:30-16:45	Safae El Alaoui	Bilinear stabilization of second order evolution equations by a class of bilinear unbounded feedbacks	
16:45-17:00	Mohamed KNIFDA	On a class of double phase problem involving potentials terms	
17:00-17:15	Khalid SOUALHINE	On a generalized $p(x)$-biharmonic problem with two nonlocal terms	
17:30-17:45	Zoubida Echchaffani	Existence of mild solution and approximate controllability for nonlinear fractional neutral evolution systems	
17:45-18:00	Abdellah HAMIDI	The Nehari manifold for anisotropic Kirchhoff problems involving variable singular exponent and critical terms	
18:00-18:15	Mohammed EL FATRY	A nonlinear elliptic problems with natural growth and integrable data	

Session 10: Cryptography and Coding Theory 2

Chair : A. Mouhib and M. Abarkan		Room: C12	
Speaker		**Title**	
16:30-16:45	Aziz BOULBOT	Elliptic curves over the ring F$q[e]$, $e^3 = e$	
16:45-17:00	Jalal DIDI	On monogenity of certain septic number fields defined by $x^7 + ax^6 + b$	
17:00-17:15	Hussain BEN-AZZA	Codes on Dessins d'Enfants	
17:30-17:45	Abdelali GRINI	Twisted Hessian Curve ElGamal Cryptosystem	
17:45-18:00	Ali ECH-CHAKOURI	Some Characterizations of Codisk-Cyclicity for Linear Relations	
18:00-18:15	Fatima HMIDANI	Techniques in image encryption and decryption	
18:30-18:45	Abdelghani ASSARRAR	On greenberg's conjectures	

Session 11: Algebra 2

Chair: M. Taous and M. Ouriagli		Room: C13	
Speaker		**Title**	

16:30-16:45	Ayoub OUAZZA	Some identities arising homoderivations in prime rings and Banach algebras
16:45-17:00	Abderazak SOULLAMI	Algebraic number fields generated by an infinite family of monogenic trinomials
17:00-17:15	Fedoua SGHIOUER	Rational approximation of quasi-arithmetic power and heron operator means
17:30-17:45	Mouhssine EL-ARABI	On proper strong property (A) for rings and modules
17:45-18:00	Imad BOUROUAHA	An Algebraic Perspective on Generalized Fredholm Operators via Projection Techniques

Session 12:   Artificial intelligence 1

Chair: K. El Moutaouakil and A. Hallaoui		Room: Salle de décanat
Speaker		**Title**
16:30-16:45	Omar BAHOU	Fuzzy-PID controller
16:45-17:00	Khadija MOUATASSIM	An Innovative Intrusion Detection Model for VANETs Using Convolutional Neural Networks
17:00-17:15	Chaimae OUCHICHA	A novel fuzzy clustering approach for robust MRI brain segmentation
17:30-17:45	Azedine OUHMID	Investigating the Memory Effect in Supply Chain Management Using Fractional Calculus Models
17:45-18:00	Ayoub BENACHOUR	Bridging AI and Culture: Developing an Autonomous Robot with Darija Conversational Capabilities and Object Recognition
18:00-18:15	Ali BOUFSSASSE	An Innovative Dropout Strategy for Enhancing Robustness in GNNs
18:15-18:30	Safaa SAFOUAN	Improved Clustering with Fractional Fuzzy C-Means: via Long-Memory Effects and Geometric Indices
18:30-18:45	Nassira MADANI	An Innovative Approach Utilizing Artificial Neural Networks and the Hybrid GA-IPA Technique to Solve Fractional Non-linear Dynamical System
18:45-19 :00	Mohammed ZIANE	Resilient Strategies for Complex Markets: The Role of AI, Robust Optimization, and Dynamic Approaches in Portfolio Management

Friday 20 December 2024		
Time	**Conference room/Salle de conférence**	
09:00-10:00	**Speaker 5: Pr. Abderrahmane NITAJ**	**Chair: S. Lalaoui Rhali**
	Title: « Lattice Based Post Quantum Cryptography »	
10:00-11:00	**Speaker 6: Pr. Ali KACHA**	**Chair: A. Boua**
	Title: « Transcendence of some continued fractions »	
	Coffee Break	

Session 13: Partial Differential Equations 3

Chair: M. C. Hassib and D. Achemlal		Room : C4
Speaker		**Title**
11:30-11:45	Anouar MARSOU	Nonlinear Parabolic Problem with $L1$-data in Orlicz Spaces
11:45-12:00	Said AIT DADA ALLA	Study of Nonlinear Elliptic Equations with Measurable Boundary Conditions in Anisotropic Weighted Sobolev Spaces
12:00-12:15	Adnan LAMTARAH	Quasilinear degenerate elliptic unilateral problems with measure data in the Anisotropic Sobolev Space
12:15-12:30	Jalal EL HAJOUJI	Entropy solution for some parabolic problems nonlinear in Musielak spaces with $L1$ Data
12:30-12:45	Abdelhak EL AOULA	Stabilization for a class of unbounded bilinear control system in Banach space
12:30-12:45	Mohammed ABDELLAOUI	Renormalized solution for a fractional (s, p)-Laplacian parabolic problem with diffuse measure data

Session 14: Theory control 3

Chair: S. El Hazzat and I. El-fassi		Room: C12
Speaker		**Title**
11:30-11:45	Mohammed BENGRICH	Stabilization and decay estimate for a class of neutral functional differential equations
11:45-12:00	Atmane EL HOUCH	Strong stabilization for a class of bilinear systems of neutral type with discrete multi-delays
12:00-12:15	Hamza BEN BRAHIM	Observability for a Class of Ψ-time -fractional linear systems
12:15-12:30	Asmaa AADI	On The Controllability of a class of Time-Fractional

	Systems with order between 1 and 2.

Session 15: Numerical Analysis and Scientific Computing 1

Chair: A. Raji and Y. Benali		Room: C6
Speaker		**Title**
11:30-11:45	Oumayma JAHID	The Finite Element Method in Anisotropic Sobolev Spaces
11:45-12:00	Omar RHOUNI	Numerical Methods for Solving the One-Dimensional Birkhoff Polynomial Interpolation Problem
12:00-12:15	Mohammed ZARHOUNI	pseudo almost periodic solution of a Delayed Quaternion-Valued Fuzzy Recurrent Neural Networks model on Time Scales
12:15-12:30	A.hmed EL-ALAOUI	Bernstein polynomials and local polynomial for the smooth estimation of regression

Session 16: Cryptography and Coding Theory 3

Chair : A. Kacha and M. Sahmoudi		Room: Salle de conférence
Speaker		**Title**
11:30-11:45	Amine MARZOUKI	Dénombrement des points d'une courbe elliptique
11:30-11:45	Karim BOULAJHAF	Cyclicity of the 2-decomposed unramified Iwasawa module
11:45-12:00	Aziz JAARI	Investment of some results and properties of graphs in some algebraic structures
12:00-12:15	Azddine ADDADI	Information Geometry Approach for MIMO Communication and Capacity
12:15-12:30	Ahmed LAHLOU	Some Results on Elliptic Curves over Finite Fields
12:30-12:45	Zakariae CHEDDOUR	Double cyclic Codes over $\aleph$ = Z2 + ζZ2
12:45-13:00	Abdelghani LARHLID	On a problem of Pillai involving S-units and Perrin numbers

Session 17: Dynamical Systems and Biomathematics 1

Chair: A. El azzouzi and A. Labzour		Room: C3
Speaker		**Title**
11:30-11:45	Ayoub CHEDDOUR	Stabilization of bilinear systems with distributed delays using the Banach state space decomposition method
11:45-12:00	Ibtissam BENAMARA	Stability analysis of a predator-prey eco-epidemic model with hunting cooperation and fear effects
12:00-12:15	Mohamed IGUERNANE	CNN-Based Facial Emotion Recognition: A Comprehensive Survey of Recent Advances and Challenges
12:15-12:30	Chaimaa ASSILA	Hopf bifurcation in a delayed fractional-order prey-predator model with Holling type II functional response, incorporating a refuge area for prey in the presence of toxicity
12:30-12:45	Aiman MDAGHRI	Distributions Stationnaires dans les Modèles Epidémiques Stochastiques : Une Approche Ergodiq
12:45-13 :00	Hicham MAADAN	Some Mathematical models based on industry 4.0 for healthcare
13 :00-13 :15	Abdellah OUAKKA	Modeling and Control of Chickenpox Transmission Using Age-Specific Vaccination and Immunity: An Analytical and Numerical Study
		Lunch
Time		**Conference room/Salle de Conférence**
15:30-16:30		**Round table to discuss collaborations**
16:30		**Closing ceremony**