

UNIVERSITE Abdelhamid Ibn Badis MOSTAGANEM Abdelhamid ibn Badis University - Mostaganem Faculty of Exact Sciences and Computer Science Under the patronage of the Rector of the University of Mostaganem Professor BOUDERAH Brahim

National Symposium on Innovative Mathematics: Retrospective and Perspectives

Discover New Perspectives and Pioneering Approaches in the Field of Innovative Mathematics and Their Applications.

Conference

Program

Honorary Presidents

Prof. BOUDERAH Brahim Rector of the University of Mostaganem Prof. AMIR Abdessamed Dean of the Faculty of Exact Sciences and Computer Science

Conference Office

THE CAMPUS OF THE FACULTY OF EXACT SCIENCES AND COMPUTER SCIENCE .

11-12 th DECEMBER, 2024

CONFERENCE cordinators

Dr. BOUADJEMI Abdelkader

Dr. MOHAMMEDI Mustapha Dr. BOUANANI Oussama



Registration Link **Snmi.sciencesconf.org**

Snmi@sciencesconf.org



Symposium National sur les Mathématiques Innovantes: Rétrospective et Perspectives " Conférence Hybride "

11-12 déc. 2024 Mostaganem (Algérie)

First Day: Wednesday, 11th December 2024

HALL: Auditorium

08:30-09:30	Registration
09:30–09:35	Recitation from the Holy Quran
09:35–09:40	National Anthem
09:40-09:45	Opening Address by the Rector of University Abdelhamid Ibn Badis of Mostaganem
	Prof. BOUDERAH Brahim
09:45–09:50	Opening Address by the Dean of the Faculty of Exact Sciences and Computer Science
	Prof. AMIR Abdessamad
09:50-09:55	Opening Address by the President of the SNMI 2024 Conference
	Dr. BOUADJEMI Abdelkader

First Day: Wednesday, 11th December 2024

HALL: Auditorium

	Plenary Session
	Speaker: Prof. Hafid Aourag Mohamed Boudiaf University
10:00 -10:35	of Oran
10.00 -10.35	"Devons-nous rechercher le progrès ou l'innovation en
	mathématiques? "
	Chair: Prof. AMIR Abdessamad
	Speaker: Prof. Mouffak Benchohra
10:35 –11:10	Djillali Liabes University of Sidi Bel Abbes
	Chair: Prof. Berrabah Bendoukha
11:10–11:25	Coffee Break
	Speaker: Prof. Seddik Ouakkas
11:25–12:00	University Of Saida
	Chair: Prof. Lakehal Belarbi
	Speaker: Prof. Belaidi Benharrat
12:00-12:35	University Of Mostaganem
	Chair: Prof. Mouffak Benchohra
12:35–14:00	Lunch
	Speaker: Prof. Salim Bouzebda
14:00-14:40	University of Technology of Compiègne
	(UTC- France)
	Chair: Prof. Djillali BOUAGADA
	Google Meet Link: https://meet.google.com/

Chair: Prof. Bouagada Djillali

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
14:45-15:00	Bilal Abbad	Exponential Decay and Well-Posedness for a One-Dimensional Porous-Elastic System with Distributed Delay
15:00–15:15	Abdelnebi Amira	Numerical Advances: A Hybrid Approach for Solving Fractional Linear Boundary ValueProblems (FLBVPS)
15:15–15:30	Fatma Berrighi	Controllability of Mild Solutions in Second-Order Impulsive Evolution Equations
15:30-15:45	Benamar Mohammed Nadjib	Admissibility Analysis and Synthesis of 2D Singular Systems Using a Strict LMI Approach
15:45-16:00	Bouchelaghem Fairouz	On the solvability of fourth-order boundary value problem with accretive operators

Chair: Dr. TABAHRIT Louiza

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
14:45–15:00	Bennour Abdelaziz	Solutions for a Fractional Equation with Critical Sobolev Exponent and Singular Term
15:00-15:15	Bouziane Aboubaker El- Saddik	On a Certain Class of Singular Fractional Caputo-Differential Problems Via Fixed PointTechnique
15:15–15:30	Anouar Laidani	Modelling of a PMSG wind turbine system using park's transformation
15:30-15:45	Hafssa Yfrah	Solving Random Fractional Differential Equations and Their Stochastic Solutions in Statistical Physics
15:45-16:00	Kerim Hanaa	SOME FIXED POINT RESULTS VIA A NEW SPACE: MODULAR FUZZY METRIC SPACE

Chair: Dr. DJOURDEM Habib

	Oral Presentation: In-Person Mode	
	Speakers	Presentation Titles
14:45-15:00	Nasli Bakir Aissa	Operators that attain their norms on Hilbert spaces
15:00-15:15	Sidhoumi Noura	Resolutions on four-dimensional Lorentzian manifolds admitting a parallel null vector field
15:15–15:30	Kainane Mezadek Mourad	Semilinear σ -evolution models with friction and visco-elastic type damping
15:30-15:45	Saidani Mansouria	New Results on the $[p, q]$ -Order of Meromorphic Solutions of Linear Differential Equations
15:45-16:00	Tahar Mezeddek Mohamed	Square roots of unitriangular matrices.

Chair: Prof. Ouakkas Seddik

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
14:45-15:00	Derkaoui Khadidja	Geometry of the magnetic structure
15:00-15:15	Rezazgui Amina Zahra	COMMON FIXED POINT RESULTS IN THE FRAME OF AN EXTENDED QUASI B- METRIC SPACE
15:15–15:30	Zagane Abderrahim	Champs de Vecteurs Harmonniques sur le Fibre Tangent Equipé de la métrique de Sasakid Eformée
15:30–15:45	Belarbi Mansour	LINEAR BIHARMONIC MAPS IN 3-DIMENSIONAL GENERALIZED SYMMETRIC SPACES
15:45-16:00	Hamza Benachour	On the minimal translation surfaces in Minkowski 3-space with density

Chair: Prof. Dahmani Zoubir

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
14:45-15:00	Mekki Sanaa Dounya	QUANTILE REGRESSION OF A SINGLE FUNCTIONAL INDEX FOR FUNCTIONAL DATA WITH RANDOM MISSING DATA
15:00–15:15	Belhadji Lamia	The Contact Process with an Asymptomatic State
15:15–15:30	Arioui Fatima Zahra	Riemann-Liouville Fractional Stochastic Integro-Differential Equations with Delay
15:30–15:45	Becheroul Amina	ASYMPTOTIC ANALYSIS OF TREND FOR STOCHASTIC DIFFERENTIAL EQUATIONS DRIVEN BY SUB- FRACTIONAL BROWNIAN MOTION
15:45-16:00	Debbah Isma	Nonparametric Regression Estimation with Missing Data

Chair: Dr. DJILALI Laïd

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
14:45-15:00	Garici Tarek	SUR UNE EQUATION DIOPHANTIENNE DE TYPE RESULTANT
15:00–15:15	Boubekeur Maroua Amel	Impact of Obesity on COVID-19 Transmission: A Mathematical Modeling Approach
15:15–15:30	Kamel Benyettou	A New Positivity Condition of Fractional Fornasini-Marchesini Models Using theNon-Conformable Derivative
15:30–15:45	Nadira Abbassa	Innovative Jacobi Multi-Wavelets Method to solve A linear variational Calculus Problem
15:45-16:00	Houari Nourredine	ON NONTRIVIAL SOLVABILITY OF A SIXTH ORDER INTEGRO-MULTI- POINT BVP

Chair: Dr. ANDASMAS Maamar

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
14:45-15:00	Rouan Serik Mehdi	Artificial Intelligence Technics for the Unicost Set Covering Problem
15:00-15:15	Della Krachai Mohamed	Développement Mathématique de la Commande Prédictive (MPC) Appliquée à un Convertisseur Vateur DC-DC
15:15–15:30	Asma Gafour	ON BARRIER METHODS FOR STOCHASTIC PROGRAMMING
15:30-15:45	Kadda Chergui	Modélisation Simulation et Contrôle d'un Microréseau Électrique Autonome
15:45–16:00	Zelmat Souheyla	Optimal Control and the Power of Nonsmooth Newton Optimization



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Conference Program (online)

Google Meet Link: https://meet.google.com/ Chair: Dr.Lamia Belhadji

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	Boudjelda Souhaib	ASSET ALLOCATION IN THE MEAN-VARIANCE MODEL WITH RISKY ASSETS AND A RISK-FREE ASSET
09:15–09:30	Madiha Tour	A modified champernowne transformation to improve boundary effect in kernel distribution estimation
09:30–09:45	Mohamed Amine Mezerdi	APPROXIMATION OF RELAXED CONTROL PROBLEMS OF MCKEAN-VLASOV SDE
09:45–10:00	Oum elkheir Benaouda	Asymptotic Normality of a Nonparametric Estimator of the Conditional Density Function for Functional Data
10:00-10:15	FERIAL SAIHI	ASYMPTOTIC NORMALITY OF KERNEL ESTIMATORS BASED UPON INCOMPLETE DATA
10:15–10:30	Khemissi Zahia	ESTIMATION OF FRECHET PARAMETERS USING A WEIGHT FUNCTION

SESSION: 1 HALL: 1

Google Meet Link: https://meet.google.com/

SESSION: 1 HALL: 2

Chair: Dr.Lamia Belhadji

	Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles	
10:45-11:00	Fatih Chellai	Hierarchical Bayesian Logistic Models for Assessing Under-Five Mortality Risk Factors in Algeria: Evidence from the MICS6 Survey	
11:15–11:30	Ranya Boustila	Kernel estimator of the functional conditional density under censored data	
11:30–11:45	Rahmouna Mecene	Linear combinations in Volatility modeling	
11:45-12:00	Amel Azzi	MODAL REGRESSION ESTIMATION FOR SCALAR RESPONSE WITH FUNCTIONAL TIME SERIES DATA	
12:00-12:15	Omar El Farouk Cherifi	Some inequalities for a class of dependent random variables and application to a non-parametric regression model	
12:15-12:30	Aghiles MALOUM	Semiparametric estimation of conditional Frank's Copula when margins are subject of right censoring.	
12:15-12:30	Manel ElBatoul Merai	The asymptotic properties for a conditional mode of the kernel estimators	

SESSION: 2 HALL: 1

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Google Meet Link: https://meet.google.com/ Chair: Dr. Keddi Abdelmalek

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	Nacira Allaoua	A LANGUAGE SHIFT SIMULATION BASED ON ASYNCHRONOUS CELLULAR AUTOMATA
09:15–09:30	Riad Boudellioua	A numerical study of the annular geometry impact of on forced convection in a Taylor-Couette system
09:30–09:45	hichem elmossaoui	CONSTRUCTION OF COMPUTER EXPERIMENT DESIGNS USING NEAREST-NEIGHBOUR MARKOV POINT PROCESS
09:45–10:00	benatmane saadiya	DFT-based computational investigations of the structural, electronic, elastic, and magnetic properties of ternary full-Heusler X2YZ compounds
10:00-10:15	OUAFA AMIRA	Improved FCM Clustering with Possibilistic and Probabilistic Approaches
10:15–10:30	Mama Talhi	La tension de claquage des huiles végétales utilisées dans les transformateurs de puissance

SESSION: 2 HALL: 2

Google Meet Link: https://meet.google.com/ Chair: Dr. Raouf ZAIDI

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
10:30-10:45	Sabira Ben alia	Nonlocal variational setting for non-linear image fusion
10:45-11:00	Ines Garti	On the Cauchy Problem for the Generalized Boussinesq Equation with Logarithmic Nonlinearity: Existence and Blow-up Analysis
11:00–11:15	Zineb Bellabes	Weak Topology and Fractional Derivatives
11:15–11:30	DJEBBARA Mohamed Redha	Innovative Strategies for Cloud Data Replication: A Multi-Criteria Decision Analysis Approach
11:30–11:45	Hadjadj Houari	NUMERICAL ANALYSIS OF MARKOIAN UNIRELIABLE RETRIAL QUEUE WITH MULTIPLE VACATION
11:45 – 12:00	Houari Fettouche	THE POSSIBLE ORDERS OF GROWTH OF SOLUTIONS TO CERTAIN LINEAR DIFFERENTIAL EQUATIONS

SESSION: 3 HALL: 1

Google Meet Link: https://meet.google.com/ Chair: Dr. Abdelkader El moumene

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	Ikram Redjaimia	Numerical simulation of the speed ratio effect on the forced convection of a Taylor-Couette system
09:15–09:30	Nina Hanane	EXISTENCE AND UNIQUENESS RESULTS FOR FBVP BY BANACH'S FIXED POINT THEOREM
09:30–09:45	Nasreddine Bouchikhi	An Improved Optimization Algorithm for Effective Distributed Generation Integration in Large- Scale Electrical Networks
09:45–10:00	RIYADH BOUDDOU	Mathematical Modeling of Uncertainties in Distributed Generation Systems for Robust Control in microgrid
10:00-10:15	Bahlali Dounia	SDEs with past dependence
10:15–10:30	Youcef elhamam Hemici	Study of a two-parameter conjugate gradient method with different formulas to calculate the stepsize

SESSION: 3 HALL: 2

Google Meet Link: https://meet.google.com/ Chair: Dr. Saidani Mansouria

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
10:45-11:00	Amira Batahri	A class of fractional elliptic problem with increasing power term
11:00-11:15	Siham Boukarabila	About an elliptic problem with singular nonlinear term and gradient dependence
11:15–11:30	Ahlem Abdelouahab	AN ELLIPTIC FREE BOUNDARY PROBLEM MODELING TUMOR GROWTH : ASYMPTOTIC BEHAVIOR
11:30–11:45	Samira Lecheheb	DISTRIBUTIONAL SOLUTION FOR A NONLINEAR ELLIPTIC SYSTEM WITH VARIABLE EXPONENT
11:45-12:00	Helal Mohamed	Neutral Hyperbolic Fractional Differential Inclusions with Finite Delay in Fréchet Spaces
12:00–12:15	AIMEN DAOUDI	New Contributions to Caputo Viscoelastic Equations with a Nonlinear Logarithmic Source Term

SESSION: 4 HALL: 1

Google Meet Link: https://meet.google.com/ Chair: Dr. ZAGANE abderahim

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	Adem Aikous	THE HYPERSTRUCTURES
09:15–09:30	Massinissa KELLALA	On some geometric properties of quasi super modular production functions
09:30–09:45	Chahrazed Boudefla	Controllable Mild Solutions for Nonlocal Second-Order Neutral Evolution Equations with Finite State-Dependent Delay
09:45–10:00	Mohamed Karek	ON A NONLINEAR INTEGRO-DIFFERENTIAL EQUATION WITH A NON-LINEAR UNKNOWN SOURCE TERM OF VOLTERRA TYPE
10:00–10:15	Fatiha Azzemou	Fractional Differential Approach to Modeling Solar Cell Parameters
10:15–10:30	Habib Ameur	Fractional differential equations
10:15–10:30	Nawel Bettayeb	ON A COUPLED SYSTEM OF NONLOCAL TEMPERED ψ-CAPUTO FRACTIONAL DIFFERENTIAL EQUATIONS IN GENERALIZED BANACH SPACES

Google Meet Link: https://meet.google.com/

SESSION: 4 HALL: 2

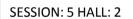
Chair: Dr. KRIM HANAA

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
10:45-11:00	Sara Smail	A CHARACTERIZATION OF THE SCHECHTER ESSENTIAL PSEUDOSPECTRUM FOR BLOCK OPERATOR MATRICES
11:00–11:15	MAADANI MUSTAPHA	A-Hyponormal operator
11:15–11:30	Amar Ghris	Generalize and improve on some numerical radius inequalities for commutators of bounded linear operators
11:30–11:45	Ayyoub Fellag ariouat	n power quasi-norml operator
11:45-12:00	Meriem Araour	On the existence and uniqueness of the solution of fuzzy Caputo integral equations
12:00-12:15	Sofiane Mahmoudi	ORDER OF GROWTH OF SOLUTIONS OF LINEAR FRACTIONAL DIFFERENTIAL EQUATIONS IN THE COMPLEX DOMAIN
12:15-12:30	Ahmed Bouchenak	STUDY AND ANALYSIS OF TAYLOR'S SERIES USING THE MODIFIED CONFORMABLE OPERATOR

SESSION: 5 HALL: 1

Google Meet Link: https://meet.google.com/ Chair: Dr. Menad Abdallah

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	Nacira Allaoua	A LANGUAGE SHIFT SIMULATION BASED ON ASYNCHRONOUS CELLULAR AUTOMATA
09:15–09:30	Ahlem Abdelouahab	AN ELLIPTIC FREE BOUNDARY PROBLEM MODELING TUMOR GROWTH : ASYMPTOTIC BEHAVIOR.
09:30–09:45	Nora Dekkiche	EVALUATION OF AN ELLIPTIC DIFFERENTIAL EQUATION IN THREE HABITATS WITH ASYMMETRIC BOUNDARY CONDITIONS AT INTERFACES IN LQ SITUATIONS
09:45-10:00	Abdelkrim Kina	ON LIMIT CYCLE FOR THE CLASS OF NONLINEAR DIFFERENTIAL SYSTEM
10:00-10:15	Lakehal Rachid	STABILITY RESULT FOR A TIMOSHENKO SYSTEM WITH THERMODIFFSION EFFCTS
10:15–10:30	IBRAHIM DAAMECHE	Well-posedness and energy decay for full von Karman system of dynamic theromelasticity damped with distributed delay and past history terms



Google Meet Link: https://meet.google.com/ Chair: Dr. Djemia Bensikaddour

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
11:00–11:15	Rima FAIZI	FAEDO-GALERKIN METHOD FOR TIME-FRACTIONAL PARABOLIC EQUATION
11:15–11:30	Mohammed Kaid	Existence of Solutions FDE
11:30–11:45	Mahdi RAKAH	Fractional calculus in beam deflection: Uniqueness of solutions, Ulam–Hyers stability and travelling waves
11:45–11:00	Chaima Boutiba	New Operational Matrix for Solving Prabhakar Fractional Differential Equations
12:00-12:15	Wissame Selmani	Some inequalities for fractional integrals
12:15-12:30	Leyla Soudani	ON THE STUDY OF A FRACTIONAL DIFFERENTIAL INCLUSION
12:30-12:45	FADIA HAOUAM	BEHAVIOR OF GENERALIZED SYSTEM

SESSION: 6 HALL: 1

Google Meet Link: https://meet.google.com/ Chair: Dr. BOUABÇA Wahiba

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	Souad SALMI	Stability Margin and Region for Fractional Linear Systems: A Robust Approach Using Linear Matrix Inequalities
09:15–09:30	HAMIDAT NADJAT	Potential effect of diabetes on the dynamic model of hepatitis C disease
09:30–09:45	Fadila Leslous	Modélisation d'un problème semi-infini en relation avec la gestion des déchets industriels
09:45-10:00	Sakina Benkaddour	Existence of solution for SDE driven by the Rosenblatt process
10:00-10:15	Nesrine KARA TERKI	Normalité Asymptotique Locale pour un processus autorégressif fonctionnel
10:15–10:30	Abderrahmen MANAA	On Periodic ZIP-INGARCH model Appling on COVID-19 Data

SESSION: 6 HALL: 2

Google Meet Link: https://meet.google.com/ Chair: Dr. TABHARIT Louiza

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
10:45-11:00	Salima Mansouri	NUMERICAL SOLUTION OF A FRACTIONAL COUPLED SYSTEM WITH THE CAPUTO-FABRIZIO FRACTIONAL DERIVATIVE
11:00-11:15	Souad BOUGUESSA	Analyse de la Stabilité des Systèmes Fractionnaires
11:15–11:30	Samar Chebbah	Additive Schwarz Method For Coercive Variational Inequalities
11:30–11:45	Besma Fadlia	EXISTENCE AND UNIQUENESS OF WEAK SOLUTIONS FOR ANTIPLANE CONTACT PROBLEMS WITH FRICTION AND ADHESION
11:45–12:00	Meneceur Maroua	FIXED POINT RESULTS IN QUASI-PARTIAL METRIC SPACES VIA C-CLASS FUNCTIONS WITH AN APPLICATION
12:00-12:15	Sarra Gaouir	New class of sweping process

SESSION: 7 HALL: 1

Google Meet Link: https://meet.google.com/

Chair: Dr. KAID Mohammed

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	BELGACEM TIKIALINE	Boundary control and asymptotic stability of an axially moving with a logarithmic nonlinearity
09:15–09:30	Mouna Abdelli	DISCRETIZATION OF NO-REGRET AND LOW-REGRET CONTROLS
09:30–09:45	Abed Yfrah	Full-descretization and semi-descretization for a viscoelastic wave equation
09:45-10:00	Abdelkader Benali	GENERALIZATION OF KAPLASNSKY THEOREM FOR SOME (p, k)-QUASIHYPONORMAL
10:00–10:15	DJEBBARA Mohamed Redha	Applications of Deep Learning in Medical Imaging: Tuberculosis Diagnosis Through CT Analysis
10:15–10:30	Azzouz Belqassim	Study for a coupled problem of \$k\$-Hilfer
10:30-10:45	ABDELMALIK KEDDI	ASYMPTOTIC PROPERTIES OF A KERNEL ESTIMATOR OF TREND FUNCTION FOR STOCHASTIC DIFFERENTIAL EQUATION DRIVEN BY A SMALL FRACTIONALBROWNIAN SHEET

SESSION: 8 HALL: 1

Google Meet Link: https://meet.google.com/ Chair: Dr. BELARBI Mansour

Oral Presentation: In-Person Mode		
	Speakers	Presentation Titles
09:00–09:15	abdel hakim azzedine	A Novel Mathematical Approach To Quality Control In Complex Dynamic Systems
09:15–09:30	Manel Sbia	ANALYSIS OF THE DYNAMICS AND CONTROL OF EPIDEMIOLOGICAL MODELS
09:30–09:45	mohamed dellal	Competition Dynamics and Stability Analysis in a Chemostat Model with Allelopathic Inhibition and Non-Monotonic Growth Rates
09:45–10:00	Benmessaoud Hibaterrahmane	EXISTANCE DE SOLUTION DU PROBL'EME DYNAMIQUE THERMO-VISCO'ELASTIQUE DES DONN'EES L1
10:00-10:15	Hamidat Ahmed	DAMAGE EVOLUTION AND CONTACT ANALYSIS IN THERMO-ELECTRO-ELASTIC-VISCOPLASTIC MATERIALS
10:15–10:30	Ghermoul Khedoudja Sirine	Asymptotic behaviour of a class of reaction diffusion difference systems with distributed delay and non monotone bistable nonlinearity
10:30–10:45	Abdelhak Guendouzi	Cost optimization of a queueing system with differentiated working vacation, Bernoulli schedule vacation interruption, waiting server, and customers'impatience