

7ème Colloque International sur les Mathématiques Appliquées et Modélisation (CIMAM'25)

10-11 octobre 2025 Oujda, Maroc.



Université Mohamed Premier
Faculté des Sciences
Département de Mathématiques
Laboratoire des Mathématiques Appliquées de l'Oriental
(LaMAO)



PROGRAMME DE LA CONFERENCE

7ème Colloque International sur les Mathématiques Appliquées et Modélisation (CIMAM'25)

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Site Web: <https://cimam25.sciencesconf.org>

LIEU DU CONGRÈS

La manifestation aura lieu à la Faculté de Médecine et de Pharmacie de l'Université Mohammed Premier à Oujda.

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Heure	Vendredi 10 octobre 2025		Faculté de Médecine et de Pharmacie	
8h00-9h00	Accueil des participants			
9h00-9h15	Cérémonie d'ouverture			
9h15-9h45	Chair: B. Marzouki		Conférence plénière: Étienne Pardoux	
	Epidemic models with varying infectivity and waning immunity as LLN limits of non Markovian stochastic models			
	Session I : Amphi de conférence Chair : B. Karim		Session II : Salle A Chair : A. Jaddar	
9h45-10h	CI-1 : I. Salhi ; Combining Deep Learning and Stochastic Modeling for Time Series Forecasting		CII-1 : S. Berrajaa ; Spectral Analysis of a Non-Self-Adjoint Discrete Operator	
10h-10h15	CI-2 : A. Gouthon ; A Spatiotemporal Clustering Algorithm Combining Multiple Data Sources		CII-2 : H. El Ballout ; The weak unique continuation for the p-Laplacian equation with weight	
10h15-10h30	CI-3 : O. Baghdadi ; Cooperative Two-Type SIR Dynamics on Galton-Watson		CII-3 : A. El Katit ; On a $q(\cdot)$ -triharmonic problem of Kirchhoff type involving critical growth	
10h30-11h	Pause café			
11h-11h30	Chair: O. Chakrone		Conférence plénière : Delfim F. M. Torres	
	Exact Solutions to Dynamic SIR models			
	Session I : Amphi de conférence Chair : M. Moussi		Session II : Salle A Chair : M. Allaoui	
11h30-11h45	CI-1 : M. Bouabdallah ; The Nehari manifold approach for a discrete fractional p-Laplacian equation		CII-1 : I. Benamara ; Dynamical Systems Approach to Measles Transmission	
11h45-12h	CI-2 : M. Abderrahim ; Properties Around The First Eigenvalue Of A Partial Discrete Dirichlet Boundary		CII-2 : M. Haddadi ; Non-explosion and pathwise uniqueness of strong solutions stochastic	
12h-12h15	CI-3 : W. Hidda ; Existence of mild solutions for second-order boundary Cauchy problems		CII-3 : T. Jaber ; Stability Analysis of a Bilinear Mathematical Model of Drug Resistance in Cancer	
14h15	Déjeuner			
15h30-16h00	Chair: Z. Allali		Conférence plénière : Ahmed Youssfi	
	Sobolev imbeddings in Musielak spaces			
	Session I : Amphi de conférence Chair : M. Rahmani		Session II : Salle A Chair : F. Kissi	
15h30-15h45	CI-1 : M. Abdellaoui ; Existence results for some noncoercive parabolic problems with lower order terms and measure data		CII-1 : H. Ahalli ; The law of the iterated logarithm for local time of generalized fractional Brownian motion	
15h45-16h	CI-2 : A. Aglzim ; Existence of Weak Solutions for a Double Phase Fractional $(p_1(x, y), p_2(x, y))$ -Laplacian Problem with Indefinite Weights		CII-2 : M. Afdel ; Parameter Estimation in the Brennan-Schwartz Model Using Weighted Regression with a Milstein Discretization	
16h-16h15	CI-3 : M. Alaoui Mhammedi ; Inverse design d'encapsulants alimentaires par IA generative contrainte par la physique: de la courbe de liberation cible a la formulation realisable		CII-3 : Z. El Idrissi ; Modélisation d'une stratégies de trading directionnel par séries temporelles en vue de surmonter l'inflation sur le marché boursier	
16h15-16h30	CI-4 : A. Azghay ; Existence of solutions for a double-phase Kirchhoff-type equation with nonlinear matrices diffusion		CII-4 : M. El Ouafi ; A Post-Quantum Message Transmission Scheme for IoT Inspired by the Shamir Scheme and Based on the Hidden Number Problem (HNP)	
16h30-16h45	CI-5 : H. Baladi ; Fractional Kirchhoff eigenvalue problems		CII-5 : O. Harrach ; Mathematical Modeling of Scientific Competencies for Predicting Student Academic Success	
16h45-17h	CI-6 : W. Banfour ; Existence of Two Solutions for Kirchhoff-Double Phase Problems with Small Perturbation without (AR)-Condition		CII-6 : A. Jebrane ; A Data-Driven Hybrid Multi-Scale Model for Viral Spread Simulation Integrating Mobility and Social Contact Dynamics in Casablanca	
17h-17h15	CI-7 : H. Ben. Hssain ; The generalized Common fixed point theorem for weakly compatible mappings in fuzzy metric spaces		CII-7 : O. OUAALI ; Stochastic Volterra Integral Equations with Logarithmic-Power-Law Kernels: A Theoretical and Numerical Study Using Operational Matrix Methods	
17h15-17h30	CI-8 : A. El Hachimi ; Three solutions for a Navier-type differential inclusion problem involving the		CII-8 : E.O. Rahamani ; Estimation et validation de la structure Tobit en présence de censure	
17h30-17h45	CI-9: M. El Massaoudi ; Global existence of weak solutions for a fractional Laplacien parabolic equation at high energy level		CII-9: S. Regui ; Detecting random effects in a periodic multiple regression model	

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Heure	Samedi 11 Octobre 2025		Faculté de Médecine et de Pharmacie	
08h30-09h	Chair: A. Chetouani		Conférence plénière: Taoufik Bouerzmarni Copula-based estimation of health inequality measures	
	Session I : Amphi de conférence Chair : C. Allouch		Session II : Salle A Chair : A. Ourraoui	
09h-09h15	CI-1 : M. Barghouthe ; Existence of solutions for an anisotropic discrete problem		CII-1 : H. Boucraa ; Numerical Analysis of some Method for Solving Hemivariational Inequalities Arising in Contact Problems	
09h15-09h30	CI-2 : M. Belahcen ; Existence results for anisotropic discrete boundary value problems		CII-2 : A. Bousgheiri ; Existence de solutions multiples pour un syst`eme (p 1 , . . . , p N)-polyharmonique	
09h30-09h45	CI-3 : M. Belarbi ; Periodic solutions of quaternionic equation with perturbed monomial nonlinearity		CII-3 : K. CHABLA ; On a p(x)-Biharmonic Problem with Nonlocal Boundary Conditions	
09h45-10h	CI-4 : S. Benhammou ; Existence of solution for φ Laplacian impulsive differential equation		CII-4 : I. Chamlal ; Existence de solutions pour un probl`eme singulier d`ordre quatre par la vari`et de Nehari	
10h-10h30	Pause café			
10h45-11h15	Chair: A. Aslimani		Conférence plénière: Jean-François Dupuy Confidence intervals for the proportional hazard premium with heavy-tailed claim amounts	
	Session I : Amphi de conférence Chair : S. El Habib		Session II : Salle A Chair : L. Moutaouekkil	
11h15-11h30	CI-1 : S. Taarabti ; On Singular p(x)-Laplacian Equations		CII-1 : A. Khlif ; Blow-up Phenomena in Nonlinear Parabolic Equations on Discrete p-Laplacian Structures	
11h30-11h45	CI-2 : H. El Aoud ; Global existence and blow-up of solutions for parabolic equations involving the Laplacian under nonlinear boundary conditions		CII-2 : A. Lamreoua ; Modeling and Control Improvement of Multi-Level PV Inverter	
11h45-12h00	CI-3 : A. El Minsari ; Blow-up of solutions for a parabolic equation with variable exponent		CII-3 : R. Challi ; Multi-Hyperplanes Support Vector Machines for Binary Classification	
12h00-12h15	CI-4 : M. Hailouma ; Existence of solutions for Fractional KIRCHHOFF type problems		CII-4 : I. Rahmani ; Automating Offensive Security Operations with Large Language Models: A Framework for CTF and Penetration Testing Platforms	
12h15-12h30	CI-5 : A. Hamidi ; Multiplicity of positive solutions for mixed local and nonlocal Anisotropic Kirchhoff problems with singular variable exponents and critical nonlinearities		CII-5 : O. Rhouni ; Few algorithms for computing multivariate Lagrange interpolation polynomials	
12h30-12h45	CI-6 : M. Hosni ; Papyrus as a Medium of Communication and Heritage Preservation: A Case Study on the History of Mathematics in Ancient Egypt		CII-6 : M. Z. Tsouli ; Key Applications of AI in Virtualization Environments	
12h45-13h	CI-7 : K. Kassale ; Global well-posedness of solutions to a class of double phase parabolic equation with variable exponents		CII-7 : A. Yassine ; Common Fixed Point Theorems for Three Self-Mappings in Modular b-Metric Space	
13h-13h15	CI-8 : O. El Alami ; Existence results of infinitely many solutions for Fractional $p(\cdot, \cdot)$ -Kirchhoff Operators		CII-8 : Y. Zine.eddine ; On p(x)-Kirchhoff bi-nonlocal elliptic type problems	
13h15-13h30	CI-9 : S. Kassimi ; A Neural Network and Mathematical Modeling Framework for Predicting the Cognitive Impact of Nutritional Status in Children			
13h30	Cérémonie de clôture plus déjeuner			