



**1st International Conference on Mathematics and Applications
(ICMA-2025)**

November 28-29, 2025

Organized by
Laboratory of Mathematical Analysis, Algebra and Applications (LAM2A)

Conference Program

Welcome Message — ICMA-2025

On behalf of the Organizing Committee, it is our great pleasure to extend a warm welcome to all participants of the International Conference on Mathematics and its Applications (ICMA-2025), held on November 28-29, 2025 in Casablanca, Morocco.

This scientific event, organized by the Laboratory of Mathematical Analysis, Algebra and Applications (LAM2A), Hassan II University of Casablanca, offers a valuable platform for both national and international researchers to explore recent advances, exchange ideas, and discuss emerging challenges across various areas of mathematics and their applications.

We would like to express our sincere gratitude to all committee members for their dedication and hard work throughout the preparation of this event. Our thanks also go to all speakers and participants for their valuable contributions that make ICMA-2025 possible.

We are equally grateful to our partners and sponsors, including Hassan II University of Casablanca, the Faculty of Sciences Ain Chock, the CNRST, among others.

We hope you enjoy your time with us and have a fruitful and inspiring experience. We look forward to seeing you again at future editions of the ICMA conference.

ICMA-2025 Organizing Committee

Keynote Speakers	
Mashhour Bani-Ata The Public Authority For Applied Education and Training, Kuwait City, Kuwait	On certain non-associative algebras in characteristic two
Omar El-Fallah Mohammed V University at Rabat, Rabat, Morocco	Weighted Dirichlet spaces
Mustapha Kabil Hassan II University of Casablanca, Casablanca, Morocco	Geometric aspects of generalized metric spaces. Relation with graphs, ordered sets and automata
Karim Kellay University of Bordeaux, Bordeaux, France	Ensemble de zéros de l'espace de Dirichlet
Najib Mahdou Sidi Mohamed Ben Abdellah University, Fez, Morocco	On (Graded) amalgamated algebras along an ideal
Abderrahmane Nitaj University of Caen Normandy, Caen, France	On the Post-Quantum Cryptography
Youssef Ouknine Cadi Ayyad University, Marrakech, Morocco	On Minimax Duality in Optimal Stopping in General Framework
Alexander Pushnitski King's College London, London, England	Inverse spectral problems for the Schrodinger operator with complex potential

Conference Program

Friday, November 28, 2025						
OPENING CEREMONY						
08h30-09h00 (UTC+1)	Welcome and Registration of Participants					
09h00-09h30 (UTC+1)	Opening ceremony of the conference					
PLENARY SESSION						
09h30-10h15 (UTC+1)	Inverse spectral problems for the Schrodinger operator with complex potential Alexander Pushnitski King's College London, London, England Moderator: El Hassan Zerouali					
Coffee Break						
PLENARY SESSION						
10h45-11h30 (UTC+1)	On the Post-Quantum Cryptography Abderrahmane Nitaj University of Caen Normandy, Caen, France Moderator: Abdellatif Rochdi					
PLENARY SESSION						
11h30-12h15 (UTC+1)	Weighted Dirichlet spaces Omar El-Fallah Mohammed V University at Rabat, Rabat, Morocco Moderator: Azz Eddine Daoui					
Lunch						
PLENARY SESSION						
14h45-15h30 (UTC+1)	On (Graded) amalgamated algebras along an ideal Najib Mahdou Sidi Mohamed Ben Abdellah University, Fez, Morocco Moderator: Abderrahim Boussairi					
Parallel Sessions						
15h40-17h00 (UTC+1)	Parallel Sessions					
	Oral Session 1	Oral Session 2	Oral Session 3	Oral Session 4	Oral Session 5	Oral Session 6
Coffee Break						
17h20-18h40 (UTC+1)	Parallel Sessions					
	Oral Session 1	Oral Session 2	Oral Session 3	Oral Session 4	Oral Session 5	Oral Session 6

Saturday, November 29, 2025						
PLENARY SESSION						
09h00-09h45 (UTC+1)	On certain non-associative algebras in characteristic two Mashhour Bani-Ata The Public Authority For Applied Education and Training, Kuwait City, Kuwait Moderator: Seddik Abdelalim					
PLENARY SESSION						
09h45-10h30 (UTC+1)	Ensemble de zéros de l'espace de Dirichlet Karim Kellay University of Bordeaux, Bordeaux, France Moderator: Houssame Mahzouli					
Coffee Break						
PLENARY SESSION						
11h00-11h45 (UTC+1)	Geometric aspects of generalized metric spaces. Relation with graphs, ordered sets and automata Mustapha Kabil Hassan II University of Casablanca, Casablanca, Morocco Moderator: Najib Mahdou					
PLENARY SESSION						
11h45-12h30 (UTC+1)	On Minimax Dualiy in Optimal Stopping in General Framework Youssef Ouknine Cadi Ayyad University, Marrakech, Morocco Moderator: Omar El-Fallah					
Lunch						
Parallel Sessions						
14h20-16h00 (UTC+1)	Parallel Sessions					
	Oral Session 1	Oral Session 2	Oral Session 3	Oral Session 4	Oral Session 5	Oral Session 6
Coffee Break						
16h30-18h30 (UTC+1)	Parallel Sessions					
	Oral Session 1	Oral Session 2	Oral Session 3	Oral Session 4	Oral Session 5	Oral Session 6
18h30-19h (UTC+1)	CLOSING CEREMONY					

Parallel Sessions

Friday, November 28, 2025

Session 1	Chair : N. Mahdou, Y. Zahir	
15:40 - 16:00	Adam Anebri	Graphs defined by ideal-theoretic properties of commutative rings
16:00 - 16:20	Anass Assarrar	On graded-(m,n)-prime ideals of commutative graded rings
16:20 - 16:40	Fatima-Zahra Guissi	Graded Pseudo-Valuation Rings
16:40 - 17:00	Imane El khair	A note on S-2-absorbing rings

Coffee Break

Session 1	Chair: N. Mahdou, Y. Zahir	
17:20 - 17:40	Nassima Guennach	On Graded n-Valuation Domains
17:40 - 18:00	Mohammad Ahmadi	On S-(m,n)-prime ideals and their extensions
18:00 - 18:20	Mohammed Assalami	Commutative Rings in which every ideal is weakly S-primary
18:20- 18: 40	Adam Ait El Mekki	Commutative rings in which every (principal) flat ideal is pure

Session 2	Chair : A. Boussairi, S. Lakhlifi	
15:40 - 16:00	Otman Ait Chiekh	Enhancing Visual Question Answering through Multi-Modal Factorized Bilinear Pooling and Co-Attention Mechanisms
16:00 - 16:20	Raja L'hamri	Rings whose associated extended zero-divisor graphs are complemented.
16:20 - 16:40	Hajar Lechhab	A Spectral Analysis Of Some Graph Classes
16:40 - 17:00	El Houssaine Oubouhou	On phi-weak dimension of phi-Prufer rings

Coffee Break

Session 2	Chair : A. Boussairi, S. Lakhlifi	
17:20 - 17:40	Brahim El Alaoui	Graph-Theoretic Properties of Amalgamated Duplications Along Ideals
17:40 - 18:00	Hiba Fihi	On derivation and generalized derivations in prime rings with involution involving symmetric elements
18:00 - 18:20	Zineb Sarir	Quasi-Orthogonal Extension of Symmetric Matrices
18:20- 18: 40	Ilham Moudou	A Unified View of Singular Value Decomposition and Principal Component Analysis

Session 3	Chair: M. Bani-Ata, H. Hamraoui	
15:40 - 16:00	Abdessamad AHOUITA	Affine surfaces with fixed point free GA-actions
16:00 - 16:20	Boutghouchout Samir	A Literature Review on Gorenstein Homological Algebra
16:20 - 16:40	Imad El Ghazi	On the Syracuse process and its loops
16:40 - 17:00	Mane Abdoulaye	Construction of the ring A_P , the field F_P of P-adic integers of a duo-ring, and P-adic valuation

Coffee Break

Session 3	Chair: M. Bani-Ata, H. Hamraoui	
17:20 - 17:40	Younes El Haddaoui	On weak n-von Neumann regular rings
17:40 - 18:00	Ayoub Bouziri	When Does Localization Preserve the Injectivity of Modules?
18:00 - 18:20	Mostafa Chaker	A Thorough Analysis of the RSA Cryptosystem: From Theory to Modern Applications.

Session 4	Chair : H. El Azhar, Y. Omari	
15:40 - 16:00	Houssame Mahzouli	On behavior of singular values of Hankel operators with general symbols on weighted holomorphic spaces
16:00 - 16:20	Imane El Yazidi	The characterization of the image for the Weinstein heat transform
16:20 - 16:40	Youssef Zarifi	Multipliers and the Corona Theorem in Certain Analytic Function Spaces
16:40 - 17:00	Imane Atir	Integration operators on Dirichlet-type spaces

Coffee Break

Session 4	Chair: H. El Azhar, Y. Omari	
17:20 - 17:40	Driss Aadi	Sampling and Interpolation in the Bergman Space of the Unit Disk
17:40 - 18:00	Abdelilah El mouni	Spectral decomposition of Dunkl Laplacian and application to a radial integral representation for the Dunkl kernel
18:00 - 18:20	Abdelkarim El hadouni	The Von Neumann spectral study for the canonical Dunkl Laplacian and its applications to evolution equations
18:20 - 18:40	EL-Houcine Ouali	Some embedding theorems on the $s(\dots)$ -fractional Musielak–Sobolev spaces

Session 5	Chair : F. El Wassouli, M. Elhamma	
15:40 - 16:00	Abdellatif Akhlidj	On the Abilov's theorems and Titchmarsh's theorems for the linear canonical Jacobi transform
16:00 - 16:20	Iz-iddine EL-Fassi	Lipschitz stability estimates for a variant of the quadratic functional equation on monoids
16:20 - 16:40	Fatima-Ezzahra Bourhim	Fractional Impulsive Hybrid Systems with Linear and Nonlinear Perturbations via the ψ -Caputo Derivative
16:40 - 17:00	Mohammed EL Bouazizi	An analog of Titchmarsh's theorem for the generalized dunkl transform

Coffee Break

Session 5	Chair : F. El Wassouli, M. Elhamma	
17:20 - 17:40	Abdessalam Chablaoui	The characterization of the image for the canonical Bessel heat transform
17:40 - 18:00	Fatima Elgadiri	Quantitative uncertainty principles associated with the fractional quaternion fourier transform.
18:00 - 18:20	Youssef El bekri	Interpolative Cirić-Reich-Rus-Meir-Keeler Type Contraction in G-Metric Space
18:20 - 18:40	Abdessalam Skidi	Modified Whittaker transform of two-variable functions

Session 6	Chair : M. Izid, A. Salhi	
15:40 - 16:00	Abdelmajid Oudades	The Semigroup and Ideals in Weighted Convolution Algebra of the Semi-Line
16:00 - 16:20	Abdeslam TALHA	Existence results of renormalized solutions to nonlinear parabolic equations in Musielak-Orlicz spaces
16:20 - 16:40	Chaima El maghraoui	Existence and stability of mild solutions for hybrid fractional semi-linear evolution equations
16:40 - 17:00	Soufiane KASSIMI	An improved Perona–Malik model for image denoising using non-local anisotropic diffusion with Caputo derivatives and Gaussian convolution

Coffee Break

Session 6	Chair : M. Izid, A. Salhi	
17:20 - 17:40	Chaimaa Benzarouala	Fixed point results in generalized rectangular metric spaces and their applications
17:40 - 18:00	Asmaa Baihi	An existence and unicity study of the (Φ, φ) -order Caputo fractional integro-differential system involving a Kernel operator
18:00 - 18:20	El habib Banouisse	Existence And Stability Analysis Using Fixed Point Theorems For A Class Of Nonlinear ψ -Caputo Fractional Differential Equations
18:20 - 18:40	Zakaria Asermoh	Fixed point and delay differential equations

Saturday, November 29, 2025

Session 1	Chair : A. Anebri, N. Mahdou	
14:20 - 14:40	Youssef Zahir	On S-sdf-absorbing ideals in commutative rings
14:40 - 15:00	Chadi Benchakroun	Almost Commutative Q-Algebras
15:00 - 15:20	Brahim Boulayat	The IDF property in semigroup rings
15:20 - 15:40	Hicham Laarabi	On graded n-Pseudo valuation domain
15:40- 16:00	Ayoub Kharbouch	On S-primary rings
Coffee Break		
Session 1	Chair : A. Anebri, N. Mahdou	
16:30 - 16:50	Salah Eddine Mahdou	On regular S-Noetherian rings
16:50 - 17:10	Yassir MATA	On the Graded Goldman Domain
17:10 - 17:30	Miloud Ez-zinbi	Stably tame exponential automorphisms of the polynomial ring $R^{\wedge}\{[2]\}$
17:30 - 17:50	Hatim Labtani	The Freeness Property for Locally Nilpotent Derivations
17:50 - 18:10	Abdelhakim Chiboub	Spectral characterizations of doubly regular tournaments
18:10 - 18:30	Rachid Hachache	On S-(δ , 2)-primary ideals of a commutative ring

Session 2	Chair : A. Boussairi, M. Zouagui	
14:20 - 14:40	Soufiane Lakhli	Some spectral properties of tournaments
14:40 - 15:00	Asmaa Moussaddar	β -Random Walk: A Balanced Sampling Approach for Node Embeddings in Link Prediction
15:00 - 15:20	Asmae Ben Yassine	Dualizations of Approximations and Large Cardinal Principles
15:20 - 15:40	Mohammed El Bilali	A new generalized inverse for square matrices
15:40- 16:00	Imane Souktani	About the spectral study of regular two-graphs and their sub-two-graphs
Coffee Break		
Session 2	Chair : A. Boussairi, M. Zouagui	
16:30 - 16:50	Rachid El Maaouy	Approximations by objects of finite homological dimensions
16:50 - 17:10	Oumaima El Aouny	Models of $(\infty, 1)$ -Categories and Cosmological Unstraightening
17:10 - 17:30	Mohamed Raziki	A-infinity twisted complexe
17:30 - 17:50	Fatima Maayane	Simplicial Resolutions in Model Categories and a Path Toward Multisimplicial Resolutions
17:50 - 18:10	Abdelhadi Moutassim	Four dimensional real pre-Hilbert third power associative division algebras satisfying $\ x^2\ = \ x\ ^2$

Session 3	Chair: A. Chaichaa, A. Rochdi	
14:20 - 14:40	Chokri Nouar	Towards a Post-Quantum Cryptography for the Internet of Things
14:40 - 15:00	Meryem Hafid	Assembly-Derived Control Flow Graphs: A Foundation for Program Analysis
15:00 - 15:20	Asmaa Cherkaoui	Extending Ramp Secret Sharing from Finite Fields to Galois Rings
15:20 - 15:40	Abdelkarim Lkoaiza	For Gröbner Bases Fast Computation via Macaulay Matrices and Sparse Linear Algebra
15:40- 16:00	Mbark Abouessaouab	Adaptive Blockchain Based Access Control ABAC for Secure Cloud Data Access: A Comprehensive Approach
Coffee Break		
Session 3	Chair: A. Chaichaa, A. Rochdi	

16:30 - 16:50	Chafi Soumia	Algebraic Representations in Large Language Models for Intelligent Text Classification
16:50 - 17:10	Adnane Roudi	Global Gorenstein projective dimension in representation theory of quivers
17:10 - 17:30	Khadija Zeroual	Nonlinear Regression in HIV-Syphilis Coinfection Model
17:30 - 17:50	Nouhaila Houssa	Prostate Cancer Detection Using Logistic Regression
17:50 - 18:10	Asmaa Ait Brik	Preventing Cycling in Linear Programming based on IPS.
18:10 - 18:30	Tariq Yassir	Optimization-based multi-class classification

Session 4	Chair : Y. Elmadani, S. Moussaten	
14:20 - 14:40	Khalid Bouras	Some property of positive Null almost L-weakly compact operators on Banach lattices.
14:40 - 15:00	Mahjoub Ikhoub	A new fractional derivative operator and applications
15:00 - 15:20	Ayoub Louakar	Existence and optimal control of Hilfer fractional stochastic pantograph differential equations
15:20 - 15:40	Samah Aslaoui	A phase space localization in negative binomial states
15:40- 16:00	Mouna Haddadi	Linear mean reflection backward stochastic differential equations driven by optional semimartingales

Coffee Break

Session 4	Chair : Y. Elmadani, S. Moussaten	
16:30 - 16:50	Imane Labghail	Reproducing kernels in weighted Dirichlet spaces
16:50 - 17:10	Yassine Chakroune	Bivariate stochastic Rayleigh process: Computational aspects, statistical inference and prediction analysis
17:10 - 17:30	Ayoub Ghanmi	Binet's Formula for Operator-valued Recursive Sequences and the Operator Moment Problem
17:30 - 17:50	Mohammed Boutrigue	Numerical Range and numerical radius inequalities
17:50 - 18:10	Badr Elmansouri	Reflected BSDEs with default time: Beyond right-continuity

Session 5	Chair : H. Bahajji Elidrissi, Z. Mouhcine	
14:20 - 14:40	Abdelaziz Moujahid	Colombeau theory and application
14:40 - 15:00	Maryam Charafi	Very Weak Solutions for the Generalized Burgers Equation
15:00 - 15:20	Hassan Benlaajine	Generalization of Titchmarsh's theorem for the linear Canonical Fourier-Bessel transform
15:20 - 15:40	Abdelmajid Khadari	Boas-type theorem concerning an integral transform.
15:40- 16:00	Youssef Makroune	Quasi Einstein locally conformally Kahler (LCK) manifolds

Coffee Break

Session 5	Chair: H. Bahajji Elidrissi, Z. Mouhcine	
16:30 - 16:50	Mohammed Dahman	Fixed point property of Hilbert modules over infinite dimensional C^* -algebras
16:50 - 17:10	Ayoub Ouhabi	Quaternion-valued Cauchy multiplicative function
17:10 - 17:30	Yassine Labbane	Slodkowski's spectra of some new generalized spherical Aluthge transform
17:30 - 17:50	Achraf EL Wazna	Some approximation properties in orlicz sobolev spaces with fractional order
17:50 - 18:10	Noureddine Nafie	Calderon's formula and uncertainty principle associated with the multidimensional Hankel-Gabor transform
18:10 - 18:30	Youssef Nafnaf	Some new results on the class of bounded- E^a operators and applications

Session 6	Chair : M. Berghout, A. Hanine	
14:20 - 14:40	Hicham Maadan	on the asymptotic behavior for $p(x)$ -laplacian problem with steklov nonlinear condition
14:40 - 15:00	Jawad Boutarfass	Stability of a functional equation in single variable in b-metric spaces and its applications
15:00 - 15:20	Khadija Elkhalloufy	On Chaotic and Stable Behaviour of the Conformable Von Foerster–Lasota Equation
15:20 - 15:40	Khadija Oufkir	Solving Fractional Differential Equations via Green's Function Approach with ψ -Caputo Derivative
15:40- 16:00	Zoubair Boulahia	Finite Volume Analysis of Free Convection Heat Transfer in a Square Enclosure Filled by a Cu-Water Nanofluid Containing Different Shapes of Heating Cylinder
Coffee Break		
Session 6	Chair: M. Berghout, A. Hanine	
16:30 - 16:50	Abdessamad Ait Brahim	Pricing options in new generalized fractional Black-Scholes model.
16:50 - 17:10	Abderrahim Kraitia	On the existence of solution of hybrid fractional differential equations with nonlocal conditions
17:10 - 17:30	Hasnaa Lahmadi	Algebraic Properties of the Mehler–Fock–Clifford Convolution and Its Applications
17:30 - 17:50	Samira Zerbib	On the nonlinear quadratically perturbed fractional differential systems via complex order derivative
17:50 - 18:10	Hayat MALGHI	Mild-Weak Asymptotically Almost Automorphic Solutions for Fractional Integro-Differential Equations in Banach Spaces with Weak Topology
18:10 - 18:30	Belaid L'Kaihal	Mathematical Study of a Thermo-Viscoelastic Contact Problem Involving a Hemivariational Inequality

