



Zarqa University – Science Faculty
The 9th International Arab Conference on Mathematics and
Computations (IACMC 2025)
May 07 – 09, 2025

Conference 1st day

Wednesday 07/05/2025

Registration

09:00 – 10:00

Conference Opening Ceremony 10:00 – 10:30 Conference Hall

Royal Anthem

Holy Quran

Welcoming Speech / Conference Chair's

University President Speech

Honoring and Thanks to Conference Sponsors

Coffee Break

10:30 – 11:00

Keynote Speakers

11:00 – 12:30

Conference Hall

11:00 – 11:45

Prof. Sergey Utyuzhnikov

Title: Data-driven Models for Dynamical Systems

11:45 – 12:30

Prof. Peter Šemrl

Title: From Loewner's Characterization of Operator Monotone Functions to the
Fundamental Theorem of Chronogeometry



Conference 1st Day

Wednesday 07/05/2025

Conference Speakers 12:30 – 14:30 Conference Hall

Chairman: Prof. Amjad Al-Nasser

Speaker	Title	Country
Snezhana Hristova	Ulam Type Stability for Boundary Value Problems for Differential Equations	Bulgaria
Koichi Unami	Innovation in Groundwater Hydraulics using Singular-Degenerate Differential Equations	Japan
Ayman Alzaatreh	Rethinking Feature Importance: A Bayesian Feature Selection for Mixed-Type Variables	UAE
Mohammed EL-arbi Khalfallah	Modeling Dependency Between Common Effects Claims in Credibility Models	Algeria
Chafika Amel Aitemrar	A New Characterization of Revealed Möbius Transformation	Algeria
Mariam Al-Nasser	Developing the Second Victim Satisfaction Index Model	Jordan
Fatima Al-Kanan	Simultaneous Confidence Intervals in Repeated Measurements Models	Iraq
Hamza Ruzayqat	Local Sequential MCMC for Data Assimilation	KSA
Abdelrahim Mousa	Nash Equilibria Characterization in a Discrete Mathematical Model with Quazi-linear Utilities	Palestine



Conference 1st Day

Wednesday 07/05/2025

Special Session

12:30 – 14:30

Al-Khwarizmi Hall 319 D

Title: Discrete Mathematical Modelling and Industrial Engineering Applications

Chairman: Prof. Amir Baklouti

Speaker	Title	Country
Marwa Layouni	Weyl Subgroup of Graded Kac-Moody Lie Algebras	Tunisia
Aissa Guesmia	Polynomial and non-Exponential Stability of A Weak Dissipative Bresse System	France
Abdelhakim Khatab	Order Assignment and Picking Routing Optimization Problem in Picker-to-Part Systems	France
Sofiene Dellagi	Integrated Maintenance Quality Strategy Based on Mathematical Development	France
Yazid Aafif	Optimizing Maintenance Strategies for Offshore Wind Turbine Blades: A Study of Threshold-Based Interventions	France
Abdullah Assiry	Lie Groups and its Applications in Commodity Prices and Market Dynamics	KSA
Nawaf Alsowait	Application of Lie Algebra Techniques to Derivative Pricing in Financial Markets	KSA

Prayer and Lunch Break 14:30 – 15:30



Conference 1st Day

Wednesday 07/05/2025

Keynote Speakers

15:30 – 16:25

Conference Hall

15:30 – 15:55

Prof. Mohammad Sababheh

Title: A Journey Through Matrix Inequalities

16:00 – 16:25

Prof. Dumitru Baleanu

Title: New Topics in Fractional Calculus

Conference Speakers

16:30 – 17:30

Conference Hall

Chairman: Prof. Emad Al-Kuffi

Speaker	Title	Country
Emad Kuffi	Solution the Fuzzy Volterra Integro-Differential Equations Via Using Fuzzy SEA Integral Equations	Iraq
Maha Alsoudi	Cryptography By GMS Integral Transform for Hyperbolic Functions	Jordan
Ameerah Aljarrah	Exact Solution for Certain Non-Linear Partial Differential Equation using Tensor Product Technique	Jordan
Hamzeh Zureigat	Numerical Solution of Fuzzy Variable-Order Time Fractional Diffusion Equation Using Modified Explicit Method	Jordan
Emad Az-Zo'bi	Progressing Numerical Simulation for Fractional Integro- Differential Problems: An Application of Physics-Informed Neural Networks	Jordan



Conference 1st Day

Wednesday 07/05/2025

Conference Speakers 16:30 – 17:30 Library Room 104

Chairman: Prof. Jehad Jaraden

Speaker	Title	Country
Jehad Jaraden	On Products of p -local Formations of Finite Groups	Jordan
Fadi Alrimawi	Some Numerical Radius Inequalities Via an Extension of Buzanois Inequality	Jordan
Khalid Shebrawi	On the Generalized Numerical Radii of Operators	Jordan
Jamila Jawdat	Fixed Point Theorems for Some Contraction Mappings in Metric Spaces	Jordan
Salam Amer	On Directional Contractions and Fixed-Point Theorems in Banach Spaces	Jordan

Conference Speakers 16:30 – 17:30 Library Room 106

Chairman: Prof. Khalid Hyasat

Speaker	Title	Country
Talat Alkhoul	A Modified Conjugate Gradient Method with Accurate Line Search for Solving High-Dimensional Unconstrained Nonlinear Optimization Problems	Jordan
Ahmad Alhawarat	Some Descent Conjugate Gradient Methods with Applications to Micro Electronics for Lithography, Electrical Engineering and Image Restoration	Jordan
Jadallah Jawdat	The Influence of Quasi-Periodic Gravity Modulation on Chaos with Internal Heat Generation	Jordan
Mahmoud DarAssi	Mathematical Modeling of Cyberattack Propagation in IoT Networks: Analysis and Risk Assessment	Jordan
Morad Ahmad	A New q -integral Operator for Subclass of Meromorphic Functions	Jordan



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Conference 2nd Day

Thursday 08/05/2025

Keynote Speakers

09:30–11:15

Conference Hall

09:30–10:15

Prof. Martin Bohner

Title: The Beverton–Holt Equation

10:15–10:45

Prof. Ali Akgül

Title: Analysis of Fractal, Fractional and Conformable Derivatives and Integral Transforms

10:45–11:15

Prof. Mahmoud Abdel-Aty

Title: Insights into Scientific Publishing and Indexing of International Journals

Coffee Break

11:15 –12:00



Conference 2nd Day

Thursday 08/05/2025

Conference Speakers

12:00 – 14:30

Conference Hall

Chairman: Prof. Khaled Jaber

Speaker	Title	Country
Abdullah Ajlouni	New Approach for Radioactive Materials Dispersion in the Atmosphere	Jordan
Rahaf Rawashde	A Novel Weighted Grouping Approach for Fitting Simple Linear Regression Mode	Jordan
Neena Uthaman	An Improvised Hungarian Method for Unbalanced Fuzzy Assignment Problems with Multiple Jobs under a Pythagorean environment	Oman
Yazan Haj Hussein	Methods of Estimating Parameters in Simple Linear Regression Model	Jordan
Loai Alzoubi	Length-Biased of the Length-Biased Loai Distribution	Jordan
Omar Ramadan	Stable Energy-Conserved Multi-Stage Matrix-Exponential Product-Formula for Incorporating Graphene Nano material into the Finite-Difference-Time-Domain Algorithm	Turkey
Kamal Bouh	Positive solutions for a subcritical approximate of the scalar curvature problem on the half sphere	Mauritania
Khaled Hyasat	Combat Models for the Drones Era	Jordan
Qasem Al-Mdallal	Improved Iterative Schemes for Solving Fractional Initial Value Problems on Subdomains	UAE
Mohammad Tashtoush	AI-Maximum Likelihood Approach for Parameter Estimation of Non-Homogeneous Poisson Process with Integrated Brownian Motion	Jordan



Conference 2nd Day

Thursday 08/05/2025

Conference Speakers

12:00 – 14:30

Library Room 106

Chairman: Prof. Rania Saadeh

Speaker	Title	Country
Inaam Hassan	Solving Linear Volterra Integral Equations of Second Kind Using the GALM Transform	Iraq
Rania Saadeh	Study of Asymptotic Stability in Discrete Fractional Linear Equation with Variable Order	Jordan
Worood AL-Hakim	Solving Abel's Integral Equations Using the GMS Integral Transform	Iraq
Sara M. Ahmad	Solving the Reducible Equation of The Korteweg-de Vries Type by Atomic Solution Method	Jordan
Salsabiela Rawashdeh	Characterization of N^{th} -G-Compact Spaces Using the Intersection of N^{th} -Countable Neighbourhoods	Jordan
Amneh Saleh	Fractional Derivative of the Spin-Orbit Term in The Optical Potential for Nucleon - ^{12}C Elastic Scattering	Jordan
Zineb Bghou	A Novel Computational Approach for the Vibration Analysis of Timoshenko Beams	Jordan
Mohammad Obada Al-Safra	Analyzing Linear Sums Using Trapezoidal Areas	Jordan
Nabeel Amireh	Solving Abel's Integral Equation Using the GALM Transform	Jordan
Alaa Al-Wadi	Fractional-Order Discrete Neural Networks: Solvability and Control	Jordan
Loiy Kharabsheh	New Integral Transform "GALM" Transform and its Applications in Ordinary Differential Equations	Jordan



Conference 2nd Day

Thursday 08/05/2025

Conference Speakers 12:00 – 14:30 Library Room 104

Chairman: Prof. Ahmad Qazza

Speaker	Title	Country
Omar Alnajjar	q -Wright Functions and Bi-Univalent Functions	Jordan
Oqlah Al-Refai	Univalent Functions Associated with Bounded Derivatives	Jordan
Ahmad Qazza	Numerical Approach for Computing Exact Solutions of Classes of Delay Differential Equations	Jordan
Radwan Abu-Gdairi	Fixed Point Results in Convex b -Metric Spaces and Applications	Jordan
Bashar Mayyas	New Upper Bounds for the Numerical Radius of the Off-Diagonal Parts of Block Matrices	Jordan
Abeer Abu_Snainah	Optimal Bounds for Logarithmic and Identric Operator Means in Terms of Heinz Mean	Jordan
Leen Barghooth	Solving Multi-Step Radioactive Decay Using the Homotropy Perturbation Method	Jordan
Raghad Al-Tahaineh	Generating a New Probability Distribution with Applications	Jordan
Ahmad Qararah	A New One-Parameter Lifetime Distribution	Jordan
Malek Abukaroob	Implementing the Limit Residual Function Technique for Solving Physical Models in the Applied Science	Jordan
Mohammad Anwur	Employing the Numerical Radius Bounds to Locate the Zeros of Polynomials	Jordan



Conference 2nd Day

Thursday 08/05/2025

Special Session 12:00 – 14:30 Al-Khwarizmi Hall 319 D

Title: Advanced Mathematics in Artificial Intelligence

Chairman: Prof. Samir Brahim Belhaouari

Speaker	Title	Country
A. Boudjella	Predicting ECG Disease Using Machine Learning: Key Concepts in Cardiac Physics and Signal Processing	Jordan
Samir Belhaouari	SplitFreqNet: A Novel Fourier-Based Architecture for Image Reconstruction Using Dual Frequency Processing and Latent Space Integration	USA
Maria Siddiqua	RADAR-Net: Raindrop Diffusion-Attention Restoration Network	Qatar
Azouz Maroua	Enhancing Drug-Target Interaction Prediction with CvT: A Focused Study on the TriCvT-DTI Framework	Pakistan
Samir Belhaouari	Binary Brilliance: A Bitwise Approach to Fast and Interpretable Dimensionality Reduction	China
Samir Belhaouari	Dynamic Post-Transformer Pruning of Vision Transformers	Qatar
Nisreen Amer	Graph-Based Signal Processing Approach for MRI-Based Alzheimer's Disease Classification	Qatar
Adnan Khan	Performance Analysis of Expectation-Maximization (EM) Algorithm For Different Clustering Approaches	Qatar
Dena Abu Laila	Enhance Detection of Phishing Email Using Natural Language Processing	Qatar
Mohammed Shuaib	The Group Dynamics in Evacuation Scenarios: Assessing Efficiency and Safety When Navigating Around a Spreading Hazardous Source	Jordan
Assia Boukhamka	Analyzing the Impact of Loss Functions on 3D Brain Tumor Segmentation	Jordan
Farouk Mesbah	Hash-Guided Expert Specialization for Robust NLP Classification under Adversarial Threats	Algeria
Insaf Kraidia	PEDM: Patch-Based Expert-Driven Defense Mechanisms for Robust Pre-trained Language Models Against. Adversarial Attacks	Jordan



Closing Ceremony 14:30