



ICAOTA '2026

The First International Conference on Advances in Operator Theory and Applications

Hammamet – Tunisia, March 24–25–26, 2026

TUI MAGIC LIFE Africana

Welcome Day & Registration: Monday, March 23, 2026 at 3:00 PM

SCIENTIFIC PROGRAM

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+216 22 500 216

Pre-Conference Day: Registration & Welcome: March 23, 2026

Time	Activity	Location
15:00 – 23:30	Registration and welcome desk open	Registration Desk
	Assistance and information available at the welcome desk	
	Distribution of conference materials (badge collection, program and information package)	
	Informal welcome remarks and guidance for the opening day	
18:30 - 21:00	Dinner	

Day 1 : Tuesday, March 24, 2026

I. Official Opening Ceremony

Time	Session	Location
08:30 – 08:45	Official inauguration of the conference by the chair and members of the organizing committee	Zaghouan Room

II. Plenary Lectures

Time	Session	Chair	Location
08:45 – 09:30	- Pr. Giovanni Paolo Galdi - Affiliation: University of Pittsburgh, United States - Title : Very weak solutions and asymptotic behavior of Leray solutions to the steady-state Navier-Stokes equations in exterior domains	- Pr. Saloua Mani Aouadi - Affiliation : University of Tunis El Manar, Tunisia	Zaghouan Room
09:30 – 10:15	- Pr. El Hassan Zerouali - Affiliation: Mohammed V University, Morocco - Title : Quaternionic toeplitz moment problem: structure and measure representation		
10:15 - 10:45	Coffee Break		
10:45 – 11:30	- Pr. Fuad Kittaneh - Affiliation : University of Jordan, Amman, Jordan - Title : On inequalities involving the spherical operator transforms	- Pr. Chérif Amrouche - Affiliation : University of Pau and the Adour Region, France	Zaghouan Room
11:30 – 12:15	- Pr. Šárka Nečasová - Affiliation : Institute of Mathematics CAS, Czech Republic - Title : The primitive equations and anisotropic Navier-Stokes equations [online]		
12:15 - 14:00	Lunch Break		

III. Workshop – AI

Time	Session	Location
14:00 – 16:00	- Pr. Bassem Ben Hamed - Affiliation : University of Sfax, Tunisia - Title : Foundations and first implementation	Zaghouan Room
16:00 – 16:30	Coffee Break	

IV. Parallel Sessions

Parallel Sessions : Part I			
Zaghouan Room	Room 1	Room 2	Room 3
• Chair : Pr. Nour Seloula • Affiliation : University of Caen Normandy, France	• Chair : Pr. Abdelhalim Azzouz • Affiliation : University of Saïda, Algeria	• Chair : Pr. Dahmane Achour • Affiliation : University of M'sila, Algeria	• Chair : Pr. Wathek Chammam • Affiliation : University of Carthage, Tunisia
16:30 – 16:50			
• Speaker : Hassen Aydi • Affiliation : University of Sousse, Tunisia • Title : On multiplicative metric spaces and related fixed point results	• Speaker : Abdelbasset Felhi • Affiliation : University of Carthage, Tunisia • Title : Optimization results for cyclic proximal non-self mappings and application to a system of differential equations	• Speaker : Khaled Bouadjila • Affiliation : University of Medea, Algeria • Title : Multilinear relations between normed spaces	• Speaker : Mongia Khelifi • Affiliation : University of Carthage, Tunisia • Title : On some generalizations and extensions of formulas and identities for special numbers
16:50 – 17:10			
• Speaker : Asma Azaiez • Affiliation : University of Sfax, Tunisia • Title : Scalar behavior for a complex multi-soliton arising in blow-up for a semilinear wave equation	• Speaker : Sadok Chakroun • Affiliation : University of Sfax, Tunisia • Title : Some results concerning stability problem in Fredholm theory via measure of weak noncompactness and application	• Speaker : Moufida Lahrach • Affiliation : University of Gabes, Tunisia • Title : Characterization and construction of a solution for a perturbed elliptic problem	• Speaker : Aida Gammoudi • Affiliation : University of Gabes, Tunisia • Title : Bloch periodic functions and their relation to S-asymptotically W-periodic functions
17:10 – 17:30			
• Speaker : Imen Ferjani • Affiliation : University of Sfax, Tunisia • Title : Relative generalized weakly demicompact operators	• Speaker : Chiraz Kroumi • Affiliation : University of Sfax, Tunisia • Title : On the order structure of the linear relations set	• Speaker : Fairouz Bouchelaghem • Affiliation : University of Mostaganem, Algeria • Title : On the factorization of monic quadratic operator pencils with accretive coefficients	• Speaker : Khaled Ben Amara • Affiliation : University of Sfax, Tunisia • Title : Existence and uniqueness of continuous solutions for iterative functional differential equations in Banach algebras
Parallel Sessions : Part II			
• Chair : Pr. Nouredine Ghiloufi • Affiliation : University of Gabes, Tunisia	• Chair : Pr. Ahmed Boudaoui • Affiliation : University of Adrar, Algeria	• Chair : Pr. Chirine Chettaoui • Affiliation : University of Tunis El Manar, Tunisia	• Chair : Pr. Faiçal Abdelmouleh • Affiliation : University of Sfax, Tunisia
17:30 – 17:50			
• Speaker : Yesmine Bahloul • Affiliation : University of Sfax, Tunisia • Title : Generalized Fredholm theory	• Speaker : Nihel Feki • Affiliation : University of Sfax, Tunisia • Title : Generalized Kato and Browder linear relations via commuting projections	• Speaker : Hassen Magtouf • Affiliation : University of Monastir, Tunisia • Title : Almost order Fredholm theory via some quantities	• Speaker : Hedda Bouras • Affiliation : University of M'sila, Algeria • Title : Structure of lipschitz compact operators via c_0-factorization
17:50 – 18:10			
• Speaker : Khadidja Mebarki • Affiliation : University of Adrar, Algeria • Title : Study on existence and stability of solutions for coupled fractional differential equations involving the Atangana–Baleanu derivative in the Caputo sense	• Speaker : Nahed Krir • Affiliation : University of Gabes, Tunisia • Title : Bessel Gabor operator	• Speaker : Loubna Herhira • Affiliation : University of Oran 1 - Ahmed Ben Bella, Algeria • Title : Analyzing the solutions of second order nonlinear boundary value problem of p-Laplacian operator under integral condition	• Speaker : Aida Jrajria • Affiliation : University of Sfax, Tunisia • Title : Rescaling method for blow-up solutions of nonlinear wave equations
18:10 – 18:30			
• Speaker : Omaïma Kchaou • Affiliation : University of Sfax, Tunisia • Title : Weak demicompactness of restricted operators	• Speaker : Hana Chtourou • Affiliation : University of Sfax, Tunisia • Title : Local spectral theory for invertible linear relations	• Speaker : Vuk Stojiljković • Affiliation : Mathematical Institute of the Serbian Academy of Sciences and Arts, Belgrade, Serbia • Title : Structural approach to numerical radius inequalities: integrating geometric angles and range closures	• Speaker : Fatma Jerbi • Affiliation : University of Sfax, Tunisia • Title : Convergence study of a psi-shifted fractional differential scheme
18:30 - 21:00		Dinner	

V. Poster Session

Time	21:00 - 21:30			
Location	Zaghouan Room			
Chair : Pr. Abdelhalim Azzouz [University of Saïda, Algeria]				
Poster Session	Poster 1	Poster 2	Poster 3	Poster 4
	• Speaker : Mustapha Merzoug • Affiliation : University of Science and Technology Houari Boumedien, Algeria • Title : Wavelet-based denoising of gearbox signals using a Genetic Algorithm	• Speaker : Hafida Abbas • Affiliation : University of Saïda, Algeria • Title : New extensions of some special functions	• Speaker : Nacéra Maachou • Affiliation : University of Science and Technology Houari Boumedien, Algeria • Title : A branch-and-cut method for integer indefinite quadratic bilevel problems with multiple upper-level objectives	• Speaker : Suleyman Demir • Affiliation : Eskisehir Technical University, Turkiye • Title : Macfarlane quaternion formulation of the two-fluid plasma model

I. Plenary Lectures

Time	Session	Chair	Location
08:45 – 09:30	• Pr. Chérif Amrouche • Affiliation : University of Pau and the Adour Region, France • Title : The Dirichlet problem for the Laplacian in Lipschitz Domains	• Pr. Ulrich Razafison • Affiliation : University of Picardie Jules Verne in Amiens, France	Zaghouan Room
09:30 – 10:15	• Pr. Saloua Mani Aouadi • Affiliation : University of Tunis El Manar, Tunisia • Title : Sensitivity and parameter calibration for a PDE-based tumour growth model		
10:15 - 10:45 Coffee Break			
10:45 – 11:30	• Pr. Ulrich Razafison • Affiliation : University of Picardie Jules Verne in Amiens, France • Title : Mathematical analysis of the three-dimenional stationary exterior Stokes problem with Navier boundary conditions	• Pr. Nazife Erkursun Özcan • Affiliation : University of Hacettepe, Turkey	Zaghouan Room
11:30 – 12:00	• Mrs. Tatiana Golea • Affiliation : Journal Publisher of Springer Nature • Title : Springer Nature: enhancing your publishing opportunities		
12:00 - 14:00 Lunch Break			

II. Workshop – AI

Time	Session	Location
14:00 – 16:00	• Pr. Bassem Ben Hamed • Affiliation : University of Sfax, Tunisia • Title : PDEs and real-world applications	Zaghouan Room
16:00 – 16:30	Coffee Break	

III. Parallel Sessions

Parallel Sessions : Part I			
Zaghouan Room	Room 1	Room 2	Room 3
• Chair : Pr. Fethi Mahmoudi • Affiliation : University of Tunis El Manar, Tunisia	• Chair : Pr. Ridha Sfaxi • Affiliation : University of Gabes, Tunisia	• Chair : Pr. Hassen Aydi • Affiliation : University of Sousse, Tunisia	• Chair : Pr. Salma Azaouzi • Affiliation : University of Sfax, Tunisia
16:30 – 16:50			
• Speaker : Slah Eddin Ben Abdejilil • Affiliation : University of Tunis El Manar, Tunisia • Title : The Malthus parameter in metastatic growth model	• Speaker : Fateh Mekdour • Affiliation : University of M'sila, Algeria • Title : Factorization of multilinear operators through L_p spaces	• Speaker : Faten Belgacem • Affiliation : University of Sfax, Tunisia • Title : Pseudo-Browder spectrum of right linear operator in quaternionic setting	• Speaker : Alaya Mohamed • Affiliation : University of Gabes, Tunisia • Title : Gegenbauer polynomials and Hahn'sTheorem with respect to a raising operator
16:50 – 17:10			
• Speaker : Hamdi Braiek • Affiliation : Esprit School of Engineering, Tunisia • Title : A variable-order fractional total variation operator for multiplicative noise removal	• Speaker : Kais Dhifaoui • Affiliation : University of Sfax, Tunisia • Title : B-essential and B-Weyl pseudo-spectra for the sum of two commuting bounded operators	• Speaker : Nesrine Sghaier • Affiliation : University of Sfax, Tunisia • Title : Essential spectra of bounded operators acting on right quaternionic Hilbert spaces	• Speaker : Fatima Zohra Boutaf • Affiliation : University of M'sila, Algeria • Title : Kato's strictly singular and compact operators in non-Archimedean Banach spaces
17:10 – 17:30			
• Speaker : Rabeb Aydi • Affiliation : University of Sfax, Tunisia • Title : Perturbation classes of generalized Fredholm operators and generalized essential spectrum	• Speaker : Amina Haimed • Affiliation : University of M'sila, Algeria • Title : Comparative analysis of Newton Kantorovich and Adomian decomposition methods for nonlinear Volterra integral equations	• Speaker : Noura Laksaci • Affiliation : University of Adrar, Algeria • Title : On Tychonoff's fixed point theorems using degrees of weak nondensifiability in Banach spaces and applications	• Speaker : Abdelwaheb Ifa • Affiliation : University of Kairouan, Tunisia • Title : Semiclassical Bohr–Sommerfeld conditions for the Schrödinger operator using microlocal Wronskians
Parallel Sessions : Part II			
Zaghouan Room	Room 1	Room 2	
• Chair : Pr. Nadia Amri • Affiliation : University of Sfax, Tunisia	• Chair : Pr. Imen Safi • Affiliation : University of Sfax, Tunisia	• Chair : Pr. Omar Jedidi • Affiliation : University of Sfax, Tunisia	
17:30 – 17:50			
• Speaker : Mahamed Beghdadi • Affiliation : University of Saïda, Algeria • Title : Characterizations of the γ-approximative pseudospectrum of bounded linear operators	• Speaker : Rim Farhat • Affiliation : University of Sfax, Tunisia • Title : Local and global well-posedness for hyperbolic Navier–Stokes equations	• Speaker : Wefa Cherif • Affiliation : University of Oran 1 Ahmed Ben Bella, Algeria • Title : Binormal linear operators: a study of the bounded and unbounded case in Hilbert spaces	
17:50 – 18:10			
• Speaker : Anis Bel Hadj Hassin • Affiliation : Esprit School of Engineering, Tunisia • Title : Reconstruction of missing boundary data in nonlinear parabolic systems	• Speaker : Souad Khlifa • Affiliation : University of Sfax, Tunisia • Title : Existence of solutions for an infinite system of quadratic integral equations in Banach algebra	• Speaker : Bisma Nedjai • Affiliation : University of M'sila, Algeria • Title : Herz-type modulation spaces	
18:10 – 18:30			
• Speaker : Amel Souhail • Affiliation : University of Sfax, Tunisia • Title : Self-adjoint block multivalued linear operator matrix and application	• Speaker : Aicha Abdelkader • Affiliation : University of Gabes, Tunisia • Title : On m-biisometric operators on a Hilbert space	• Speaker : Zahia Khemissi • Affiliation : University of Biskra, Algeria • Title : Reduced-bias estimation of the extreme value index via generalized least squares : a Monte Carlo simulation	
18:30 - 21:00			
Dinner			

Plenary Lectures

Time	Session	Chair	Location
08:45 – 09:30	• Pr. Carsten Trunk • Affiliation : Ilmenau University of Technology, Germany • Title : Hermitian pencils and their representation in Krein space	• Pr. Hamadi Baklouti • Affiliation: University of Sfax, Tunisia	Zaghouan Room
09:30 – 10:15	• Pr. Clemente Cesarano • Affiliation : University of Uninettuno, Italy • Title : Operator theory in the description of orthogonal polynomials [online]		
10:15 – 11:00	• Pr. Maher Mnif • Affiliation : University of Sfax, Tunisia • Title : Local spectral theory of linear relations : advances in decomposability, local properties and generalized inverses		

II. Closing Ceremony

Time	Session	Location
11:00 – 11:15	Official closing of the conference by the chair and members of the organizing committee	Zaghouan Room

The Organizing Committee expresses its deepest gratitude to all keynote speakers, partners, and participants for their invaluable contributions to ICAOTA 2026, and looks forward to welcoming you at future editions of the conference

