



جامعة الشارقة
UNIVERSITY OF SHARJAH

THE 2ND SHARJAH INTERNATIONAL CONFERENCE ON MATHEMATICAL SCIENCES (UOS-SICMS26)

14th - 15th January 2026

SPONSORS:



Pearson



Cengage

$$\sqrt{a^2} = |a| = \begin{cases} a, a \geq 0 \\ -a, a < 0 \end{cases} \quad u_i = R_i i_i + \sum_{j=1}^{j=2q} L_{i,j} \frac{di_j}{dt} + \omega \sum_{j=1}^{j=2q} i_j \frac{dL_{i,j}}{d\varphi}$$

$$(a-b)(a^2+ab+b^2)=a^3-b^3 \quad \int x^\alpha \cdot dx = \frac{x^{\alpha+1}}{\alpha+1} + c \quad \sqrt{\sum_{i=1}^n (x_i - y_i)^2}$$

$$\sin \alpha = 2 \sin \frac{\alpha}{2} \cdot \cos \frac{\alpha}{2} \quad (x^n)' = nx^{n-1} \quad \sqrt[n]{\frac{a}{b}} = \sqrt[n]{\frac{a}{b}} \quad \sin \alpha = 2 \sin \frac{\alpha}{2} \cdot \cos \frac{\alpha}{2}$$

$$M = \frac{1}{2} \sum_{i=1}^{i=2q} i_i \sum_{j=1}^{j=2q} i_j \frac{dL_{i,j}}{d\varphi} \quad \frac{\pi}{2} - \text{ArcSin}(x) \quad u_i = R_i i_i + \sum_{j=1}^{j=2q} L_{i,j} \frac{di_j}{dt} + \omega \sum_{j=1}^{j=2q} i_j \frac{dL_{i,j}}{d\varphi}$$

$$y = x \cdot 2 \quad \frac{\pi}{2} - \text{ArcSin}(x) \quad u_i = R_i i_i + \sum_{j=1}^{j=2q} L_{i,j} \frac{di_j}{dt} + \omega \sum_{j=1}^{j=2q} i_j \frac{dL_{i,j}}{d\varphi}$$

$$\sin \alpha = 2 \sin \frac{\alpha}{2} \cdot \cos \frac{\alpha}{2} \quad \text{ctg} \alpha + \text{ctg} \beta = \frac{\sin(\alpha + \beta)}{\sin \alpha \sin \beta} \quad x_{1,2} = \frac{-b \pm \sqrt{D}}{2a}$$



Scientific Program of the SICMS26 Conference

Day One: January 14, 2026			
Time	Activities		
8:00	Busses leave hotels		
8:30 - 9:30	Registration		
9:30 – 10:20	Conference Opening and Conference Group Photo		
Keynote and Invited Talks: M9-ALBayrouni Theatre Chair of the Session: Belkacem Said Houari			
Time	Speaker	Affiliation	Title
10:30-11:15	László Székelyhidi	Max Planck Institute for Mathematics in the Sciences, Germany	Order in chaos: can we predict turbulent dynamics?
11:15-11:45	Martin Bohner	Missouri University of Science and Technology, USA	Logistic differential and difference equations with periodic carrying capacity
11:45-12:00	Transfer to M3A by Busses from M11 parking		
Parallel Sessions-I			
Parallel Session 1: Applied Mathematics (Venue: M3A-Room 127) Chair of the Session: Physics-1			
Time	Speaker	Affiliation	Title
12:00-12:30	Invited Speaker Toka Diagana	University of Alabama, USA	Global Dynamics of p-adic Biological Models on the Projective Line
12:30-12:45	Muhammad Azeem Khan	Universiti Tunku Abdul Rahman, Malaysia	Extreme wave statistics and freak-wave identification for floating offshore wind turbine design
12:45-13:00	Mo'tassem Al-arydah	Khalifa University, UAE	Impact of immunity delay and distributed waning on disease dynamics in an age structured SVEIR model

Parallel Session 2: Pure Mathematics (Venue: M3A-Room 129) Chair of the Session: Ali Jaballah			
Time	Speaker	Affiliation	Title
12:00-12:15	Ali Jaballah	University of Sharjah, UAE	Algebraic characterizations and equations for ring extensions
12:15-12:30	Maria Andreea Cuntan	Babeş-Bolyai University, Cluj-Napoca, Romania	New subclass of analytic functions concerning with Libera integral operator
12:30-12:45	Barkat Ali Bhayo	Lappeenranta-Lahti University of Technology, Finland	On special functions related to elliptic integrals
12:45-13:00	Sanaa Nazmi Yousef Khataybeh	Jerash University, Jordan	Approximation solution for nonlinear higher-order integro-differential equations based on Bernstein polynomials with error analysis
Parallel Session 3: Mathematical Sciences (Venue: M3A-Room 131) Chair of the Session: Chemistry-1			
Time	Speaker	Affiliation	Title
12:00-12:15	Hamid A. Said	Kuwait University, Kuwait	Onsager's variational principle and the energy equalities for the Navier-Stokes equations
12:15-12:30	Mohammad Adm	Palestine Polytechnic University, Palestine	High-accuracy eigenvalue computation for totally nonnegative matrices via the cauchon algorithm
12:30-12:45	Feras Hussein Ibrahim Shatat	Police College Abu Dhabi, UAE	Artificial intelligence in personalised education: impacts on academic achievement in higher education institutions
12:45-13:00	Osama Taani	Sharjah Education Academy, Sharjah	ChatGPT and self-regulation in teaching mathematics
13:00 - 14:00	Lunch, Prayers, and Poster Session,		

Keynote and Invited Talks (Venue: M3A-Hall) Chair of the Session: Zahid Raza			
Time	Speaker	Affiliation	Title
14:00 - 14:45	Sandi Klavžar	University of Ljubljana, Slovenia	The variety of mutual-visibility concepts and diameter two graphs
14:45-15:15	Mohammed Seaid	University of Durham, United Kingdom	Modelling the transport of phosphate slurry using non-Newtonian incompressible fluids
Parallel Sessions-II			
Parallel Session 1: Applied Mathematics (Venue: M3A-Room-127) Chair of the Session: Mostafa Zahri			
Time	Speaker	Affiliation	Title
15:20-15:35	Mostafa Zahri	University of Sharjah, UAE	Mathematical modeling and optimization of hybrid semantic-vector communication with AI agents
15:35-15:50	Igor Miroshnichenko	Tomsk State University, Russia	Mathematical modeling of conjugate heat transfer in hollow building blocks
15:50-16:05	Sukanta Halder	PDPM Indian Institute of Information Technology, Design and Manufacturing, Jabalpur	Solvability of a generalized fractional functional integral equation with real life applications
Parallel Session 2: Pure Mathematics (Venue: M3A-Room-129) Chair of the Session: Bio- 1			
Time	Speaker	Affiliation	Title
15:20-15:35	Nazia Parveen	Aligarh Muslim University, India	Structure of sigma-centralizers on triangular algebras
15:35-15:50	Rasha Majed Shat	United Arab Emirates University	On quasi-cyclic codes of index 3
15:50-16:05	Sourav Mondal	University of Sharjah, UAE	The maximal exponential aug Zagreb index of graphs with given parameters

Parallel Session 3: Mathematical Sciences (Venue: M3A-Room-131)			
Chair of the Session: Tahir Abbas			
15:20-15:35	Javid K S Jaffer	Emirates Aviation University, UAE	Prediction of departure delays using arrival time behavior in airline operations
15:35-15:50	Özlem Defterli	Cankaya University,Turkey	Advanced mathematical methods for modelling cancer dynamics and forecasting
15:50-16:05	Mohammad Alzghoul	Swinburne University of Technology, Australia	Numerical simulation study of long electric trailer fire at road tunnel environment
16:10-16:30	Coffee Break		
Parallel Sessions-III			
Parallel Session 1: Applied Mathematics (Venue: M3A-Room-127)			
Chair of the Session: Muhammad I. Mustafa			
Time	Speaker	Affiliation	Title
16:30-16:45	Muhammad I. Mustafa	University of Sharjah, UAE	Stabilization of a plate system with nonlinear boundary damping and delay
16:45-17:00	Abdur Rehman Jami	American University of Sharjah, UAE	Stability analysis of charged neutron stars and darmois junction conditions
17:00-17:15	Weiwei Sun	Beijing Normal - Hong Kong Baptist University, China	Loosely coupled schemes for fluid-structure interactions
17:15-17:30	Ruba Murhef Almahmoud	Khalifa University, UAE	Multiple scales framework for electrostatic wave packet dynamics in a multi-fluid plasma model: envelope solitons and modulational instability

Parallel Session 2: Pure Mathematics (Venue: M3A-Room-129) Chair of the Session: Mohamad Saleh Bataineh			
Time	Speaker	Affiliation	Title
16:30-16:45	Mohamad Saleh Bataineh	University of Sharjah, UAE	Edge-maximal graphs without k-fan graphs on $2k+1$ vertices
16:45-17:00	Bilal Ahmad Rather	Samarkand International University of Technology, Uzbekistan	Independent domination sets in terms of the polynomial coefficients of a graph
17:00-17:15	Rafid Habeeb Betti Al-Mzaiel	Al-Muthanna University, Iraq	New classes of Bi-univalent functions associated with zalcman functional upper bound
17:15-17:30	Saba Zakariya Salameh Al-Kaseasbeh	Tafila Technical University, Jordan	On comaximal fuzzy ideal graphs and their structural properties
Parallel Session 3: Mathematical Sciences (Venue: M3A-Room-131) Chair of the Session: Physics-2			
Time	Speaker	Affiliation	Title
16:30-16:45	Eman Mohammad Saleem Almuhr	Applied Science Private University, Jordan	Pairwise generalized pre closed sets modulo ideals
16:45-17:00	Khaleed Ahmad Aowed Alhazaymeh	Irbid National University, Jordan	Vague UP-algebra
17:00-17:15	Zahid Raza	University of Sharjah, UAE	Topological indices and graph products
17:30	Busses Leave for Dinner and show at SAAST		
19:00 – 21:00	Conference Dinner		
21:00	Buses leave for hotels		

Day Two: January 15, 2026			
Time	Activities		
8:00	Busses leave hotels		
8:30 - 9:30	Registration		
Keynote Talks (Venue: M3A-Hall) Chairs of the Session: Abdelaziz Soufyane			
Time	Speaker	Affiliation	Title
9:30-10:15	Arnulf Meinhard Jentzen	University of Münster, Germany	Adam symmetry theorem: characterization of the convergence of the Adam optimizer
10:15-10:25	McGraw Hill Publisher		
10:30-11:10	Habib Ammari	ETH Zurich Zürich, Switzerland	Wave localization at subwavelength regime
11:10-11:30	Coffee Break		
Parallel Sessions-IV			
Parallel Session 1: Applied Statistics (Venue: M3A-Room-130) Chair of the Session: Marwan Al-Momani			
Time	Speaker	Affiliation	Title
11:30-12:00	Invited Speaker Bahadır Yüzbaşı	Inonu University, Turkey	The scaled group Lasso for high-dimensional genomic data
12:00-12:15	Marwan Al-Momani	University of Sharjah, UAE	Shrinkage approaches for ridge-type estimators under multicollinearity
12:15-12:30	Shubham Kumar Rajput	PDPM Indian IIT Design and Manufacturing, Jabalpur	Light-induced bioconvection in a partially cloudy or hazy weather conditions: A linear stability analysis
12:30-12:45	Tahir Abbas	University of Sharjah, UAE	On the monitoring of shape parameter under bayesian setups
12:45-13:00	Yousef Marwan Mousa	University of Sharjah, UAE	Confidence interval estimation using pivotal quantities for the pareto and weibull distributions using different sampling techniques

Parallel Session 2: Applied Mathematics (Venue: M3A-Room-131) Chair of the Session: Salim A. Messaoudi			
Time	Speaker	Affiliation	Title
11:30-11:45	Salim A. Messaoudi	University of Sharjah, UAE	On the global existence and energy decay of a logarithmically damped wave equation
11:45-12:00	Arwa Baabdulla	United Arab Emirates University, UAE	Homogenization of a reaction diffusion equation can explain influenza a virus load data
12:00-12:15	Ahmad Mostafa ElGuindy	Cairo University, Egypt	Some aspects of Fourier analysis in modularity and number theory
12:15-12:30	Raja'a Sharief Hussein Al-Naimi	Emirates Aviation University, UAE	The α -Bergman space and Toeplitz operators in the α -conformable fractional setting
12:30-12:45	Ahmad Rafiqi	American University of Sharjah, UAE	Geodesic lengths in the space of conformal or complete metric structures on surfaces
12:45-13:00	Cristian Enache	American University of Sharjah, UAE	Comparison results for the p -torsional rigidity on convex domains
Parallel Session 3: Pure Mathematics (Venue: M3A-Room-133) Chair of the Session: Mahmoud Benkhalifa			
11:30-11:45	Mahmoud Benkhalifa	University of Sharjah, UAE	Algebraic invariants of graphs via rational homotopy theory
11:45-12:00	Issam Louhichi	American University of Sharjah, UAE	Toeplitz operators with biharmonic symbols
12:00-12:15	Madeleine Al-Tahan	Abu Dhabi University, UAE	A study of (m,n) -hyperfilters in the framework of ordered semihypergroups
12:15-12:30	Mark Sukaiti	Khalifa University, UAE	On the generalized Azreg-Aïnou metric and modified Newman-Janis algorithms
12:30-12:45	Muhammad Imran	Prince Mohammad Bin Fahd University (PMU), Saudi Arabia	On topological indices of apex trees and extremal graphs
13:00 - 14:00		Lunch, Poster Session, and Prayers	

Invited Talks (Venue: M3A-Hall) Chair of the Session: Firas Ahmed			
Time	Speaker	Affiliation	Title
14:00 - 14:30	Dumitru Băleanu	Lebanese American University, Lebanon	Theory and applications with modified Mittag-Leffler kernel
14:30-15:00	Masood khalique	African Institute for Mathematical Sciences Mahikeng, South Africa	Applications of Lie groups to differential equations
Parallel Sessions-V			
Parallel Session 1: Applied Mathematics (Venue: M3A-Room-130) Chair of the Session: Physics-1			
Time	Speaker	Affiliation	Title
15:00-15:15	Sithy Shakira	Gandhigram Rural Institute - University, India	Impact of time delay on the dynamics of an SIR model with logistic susceptible growth
15:15-15:30	Zuhal Kucukarslan Yuzbasi	Firat University, Turkey	Geometric methods for evolution equations and self-similar solutions
15:30-15:45	Khaled Suleiman Al Mashrafi	A'Sharqiyah University, Oman	The mathematical model of the fluid dynamics of bounded cartesian plumes
15:45-16:00	Belal Batiha	Jadara University, Jordan	Numerical solution of fuzzy variable-order time fractional diffusion equation using modified explicit method
Parallel Session 2: Pure Mathematics (Venue: M3A-Room-131) Chair of the Session: Firas Ghanim Ahmed			
Time	Speaker	Affiliation	Title
15:00-15:15	Firas Ghanim Ahmed	University of Sharjah, UAE	Predictor–corrector derivative-free algorithms for nonlinear equations with basin of attraction analysis
15:15-15:30	Fethiye Müge Sakar	Dicle University, Turkey	Radii of convolutions of bounded harmonic close-to-convex mappings
15:30-15:45	Alina Alb Lupas	University of Oradea, Romania	Some results involving Atagana-Baleanu fractional integral of hypergeometric function
15:45-16:00	Georgia Irina Oros	University of Oradea, Romania	Univalence properties and differential subordination theory applications of certain new operators

Parallel Session 3: Mathematical Sciences (Venue: M3A-Room-133)			
Chair of the Session: Abrar Inayat			
Time	Speaker	Affiliation	Title
15:00-15:15	Abrar Inayat	University of Sharjah, UAE	Thermodynamic and thermo-kinetic modelling analysis of biomass/coal bottom ash blends for biomass gasification process through a model-free approach
15:15-15:30	Naresh Kumar	University of Nizwa, Oman	Data scientific approach for predicting majority of resin canal resources from Boswellia sacra in Dhofar (Oman) utilizing ensemble models
15:30-15:45	Mohammed Hussin Talafha	RISE, University of Sharjah, UAE	Modelling solar magnetic field evolution with physics-informed neural networks and wso synoptic maps
15:45-16:00	Anis Allagui	University of Sharjah, UAE	Thermodynamic and fractional-order dynamic analysis for determining the true energy stored in porous electrode systems
16:00-16:20	Coffee Break		
Parallel Sessions-VI			
Parallel Session 1: Applied Mathematics (Venue: M3A-Room-130)			
Chair of the Session: Aziz Takhirov			
Time	Speaker	Affiliation	Title
16:20-16:35	Aziz Takhirov	University of Sharjah, UAE	Numerical schemes for approximating steady grade-two fluid equations in two dimensions
16:35-16:50	Edoardo Tasini	University of Sharjah, UAE	Thermohydraulic performance analysis of triply periodic minimal surface (TPMS) inserts
16:50-17:05	Hamzeh Zureigat	Jadara University, Jordan	Application of artificial neural networks to intuitionistic fuzzy volterra integro-differential equations
17:05-17:20	Mahmood Khalid Jasim	University of Nizwa, Oman	Anisotropic charged stars in $f(r,t)$ gravity: more accurate non-singular solutions achieved via gravitational decoupling and minimal geometric deformation
17:20-17:35	Daria-Ştefania Lupaş	University of Oradea, Romania	Fuzzy study regarding the fractional integral applied to the q-multiplier transformation

Parallel Session 2: Pure Mathematics (Venue: M3A-Room-131) Chair of the Session: Mohammad Alakhrass			
Time	Speaker	Affiliation	Title
16:20-16:35	Fethiye Müge Sakar	Dicle University, Turkey	On Janowski-type harmonic functions associated with Bessel functions
16:35-16:50	Mohammad Alakhrass	University of Sharjah, UAE	General numerical radius for products of sectorial matrices
16:50-17:05	Abdullah Mohammed Alsoboh	A'Sharqiyah University, Oman	On the Ma--Minda type of Bi-univalent functions defined by subordination in balloon-shaped domains
17:05-17:20	Khalifa Zayid Al Shaqsi	University of Nizwa, Oman	On new subclasses of neutrosophic touchard-based analytic functions
17:20-17:35	Firas Ghanim Ahmed	University of Sharjah, UAE	Advancing oscillation theory for neutral delay DE
17:30	Busses Leave for Hotel		

Poster Presentations

Sr#	Speaker	Affiliation	Title	Date, Time, and Venue
1	Geerthanar Selvathasan	University of Moratuwa, Sri Lanka	An analytical approximation for side relations in 60°-angled triangles	14th -15th January 13:00 - 14:00 M3A-Lobby
2	Israa Tareq Ahmad Al Sawafta	University of Sharjah, UAE	Numerical simulation of parabolic trough solar collector using nanofluids	
3	Norah Ahmed Alsulaim	Onaizah Colleges, Saudi Arabia	A provably secure interpretable al-guided matrix-based	
4	Norah Saud Almutairi	Onaizah Colleges, Saudi Arabia	Applications of the q-Srivastava-Attiya operator involving a certain family of univalent functions with finitely many fixed coefficients	
5	Gomathy Krishnan	Higher Colleges of Technology, UAE	Enhancing numerical literacy for employability: a study on the efficacy of digital learning platforms	
6	Predrag Vuković	University of Zagreb, Croatia	Hilbert-type inequalities obtained via local fractional calculus	
7	Kholood Mohammad Alsager	Qassim University, Saudi Arabia	A contemporary algebraic attribute of m-polar Q-hesitant fuzzy sets in BCK / BCI algebras and applications of career determination	