

THE INTERNATIONAL CONFERENCE ON FRACTIONAL DIFFERENTIATION AND ITS APPLICATIONS (ICFDA 2023)

<https://www.ajman.ac.ae/en/icfda2022>

Conference Program

icfda22@ajman.ac.ae

DAY 1

Tuesday, 14 March 2023

REGISTRATION

08:00 – 10:00

OPENING CEREMONY

10:00 - 11:00

Hall #1

- 10:00 – 11:00
- National Anthem
 - Holy Quran
 - Short Video (Ajman University)
 - Dr. Khaled Assaleh, Vice Chancellor for Academic Affairs
 - Dr. Shaher Momani, Conference Chair
 - Dr. Dumitru Baleanu, Chair of International Scientific Committee
 - Honoring Ceremony

PLENARY SESSION #1

Chair: Reyad El-Khazali

11:00 – 13:00

HALL #1

11:00 – 11:45

Dumitru Baleanu

Generalised fractional operators with applications

11:45 - 12:30

Roberto Garrappa

Variable-order fractional calculus: from old to new approaches

12:30 - 13:00

Memorial Session:

Prof. Jose Antonio Tenreiro Machado

Speakers:

Dumitru Baleanu, Virginia Kiryakova, Francesco Mainardi, Carla Pinto, Shaher Momani, Reyad El-Khazali, Alexandra Galhano

13:00 - 14:00

LUNCH BREAK

PARALLEL SESSIONS #1 14:00 – 16:00				
14:00 - 16:00	Parallel Session 1.1 Chair: Changpin Li Hall #1	Parallel Session 1.2 Chair: Mohammed Al-Smadi Hall #2	Parallel Session 1.3 Chair: Yeliz Karaca Hall #3	Parallel Session 1.4 Chair: Mudassar Imran Hall #4
14:00 - 14:30	Reyad El-Khazali (Invited Speaker)		Arran Fernandez (Invited speaker)	Rachid Malti (Invited speaker)
	Analysis and Design of $L\alpha C\beta L\gamma$ filters in Grid Connected Inverters		Abstract algebra in fractional calculus: general parametrised families with semigroup properties	Stability of incommensurate fractional and distributed parameter systems, a constraint satisfaction problem approach
14:30 - 14:45	Enyu Fan; Changpin Li	Sverre Holm	Andrés J. Serrano-Balbontín; Inés Tejado; Blas M. Vinagre	Patrick Lanusse; Tudor-Bogdan Airimitoie; Evgeny Shulga; Stephane Maurel
	Numerical Simulation of Blow-Up Solution to the Caputo-Hadamard Fractional Differential Equation	Natural Occurrence of Fractional Derivatives in Physics	Fractional Integrate-And-Fire Neuron: Analog Realization and Application to Neuromorphic Control	Principles of a Safe and High Performing CRONE Control of Nonlinear Systems
14:45 - 15:00	Maja Jolic; Sanja Konjik; Darko Mitrovic	Radwa Essam; Ahmed Elsaid; Waheed Zahra	Marina V. Shitikova	Patrick Lanusse; Tudor-Bogdan Airimitoie; Stephane Maurel; Evgeny Shulga
	A New Approach in Solving Fractional Nonlinear Control Problems	Bio-Heat Transfer in Skin Tissue Using Fractional Weinbaum-Jiji Model	Analysis of Free Non-Linear Vibrations of a Fractionally Damped Cylindrical Shell Under the Condition of the Two-To-One Internal Resonance	Optimal CRONE Control of the Intake Manifold Pressure of a Spark Ignition Internal Combustion Engine
15:00 - 15:15	Aljowhara H Honain; Khaled M Furati	Muhammad Farman	José Antonio Zárate-Ramos; Jorge Rodríguez-Hernández; Jesús Cruz-Domínguez; Nezh Nieto-Gutiérrez; Carlos Sánchez-López	Huifan Shi; Yanhong Liu; Pengchong Chen; Ying Luo; Yang-Quan Chen
	Rational Approximation for Oscillatory Mittag-Leffler Function	Modeling and Analysis of Smokers Model With Constant Proportional Fractional Operators	Arbitrary Order PID Controller Design for an Inverted Pendulum System	Fractional-Order Dynamics Modeling for Continuum Robots
15:00 - 15:30	Prakash Singh; Shilpi Jain; Praveen Agarwal	Dimitar Prodanov	Tzon-Tzer Lu	Derek Hollenbeck; Kevin Zheng; Demetrius Zulevic; Yang-Quan Chen
	Computer Algebra for Unified Integrals Involving a Multivariate Mittag-Leffler Function	The Wright Function - Hypergeometric Representation and Symbolical Evaluation	Picard's Iteration for Solving Fractional Ordinary Differential Equations	Swarm Robotic Source Seeking With Fractional Fluxotaxis
15:30 - 15:45	Sangeeta Devi; Asv Ravi Kanth	Nesrine Harrouche	N. Tabouche , A. Berhail , M. Matar , J. Alzabut , A. Selvam , D. Vignesh	Tiantian Jiang; Yong Wang
	Computational Simulations for Fractional-Order HIV-1 Infection Framework With Power Law and Exponential Decay Kernels	Numerical Simulation of Nonlocal Caputo-Fabrizio Fuzzy Fractional Volterra Integral Equation in Hilbert Space	Existence and Stability Analysis of Solution for Mathieu Fractional Differential Equations with Applications on Some Physical Phenomena	Design of the Robust Fractional Bayesian Filter With Randomly Delayed Measurements
15:45 - 16:00	Hilal İrgan; Nusret Tan	Mohammed Alabedalhadi	Mohammad Abdel Aal	Yan-Qiao Wei; Dayan Liu; Changchun Hua; Yang-Quan Chen; Driss Boutat
	Smith Predictor Based PID Controllers Design With Bode's Ideal Transfer Function Reference Model for High Order Time Delay Systems	Singular and Bright Wave Solutions for the Local Fractional (3+1)-Dimensional Kadomtsev-Petviashvili Model	Applying RK algorithm on fuzzy fractional boundary value problem.	Algebraic Estimation Method of Multiple Disturbances for a Class of Fractional Order Linear Systems
16:00 - 16:30	COFFEE BREAK			

PARALLEL SESSIONS #2 16:30 – 19:00					
Parallel Session 2.1 Chair: Arran Fernandez Hall #1		Parallel Session 2.2 Chair: Iqbal Batiha Hall #2		Parallel Session 2.3 Chair: Suheil Khuri Hall #3	Parallel Session 2.4 Chair: Praveen Agrawal Hall #4
16:30 - 17:00	Honggsuang Sun (Invited speaker)	Yongguang Yu (Invited speaker)		Shunan Chen; Xuefeng Zhang; Taoqi Deng; Yang-Quan Chen	Yuanye Hu; Fudong Ge; Yang-Quan Chen
	A discussion on nonlocality: from fractional derivative model to peridynamic model	Mean-square asymptotic stability of fractional-order nonlinear stochastic dynamic system and its application on complex networks		Guaranteed Cost Control for Uncertain Fractional Order Systems	Optimal Control of Nonlinear Reaction-Diffusion Systems Using a Team of Mobile Actuators With Fractional Dynamics
				Rasheed Abdulkader	Osama Fuad Abdel Aal; Jairo Viola; Yang-Quan Chen
Proportional-Integral Controller Based on Fractional Calculus for a Microgrid System	Bode's Ideal Cut-Off Based Virtual Reference Feedback Tuning Controller Design				
17:00 - 17:15	Issam Louhichi	Sondos Muhammed Syam		Abrar Ahmad Atieh Sobuh; Sofiane Khadraoui	Fumin Li; Ying Luo; Yang-Quan Chen
	An Approach for the Approximate Solution of the Fractional Troesch's Problem	Operational Matrix Method for Solving Fractional System of Riccati Equations		Hysteresis Compensation and Fractional-Order IMC Design for Piezoelectric Actuators	Optimal FOPID Error Voltage Control Dead-Time Compensation Based on FOPI Current Control for PMSM Servo System
17:15 - 17:30	Shweta Kumari; Mani Mehra	Thaahirah Shireen Mohamed Rasied		Ramazan Menak; Nusret Tan	Xiaolin Yuan; Guojian Ren; Yongguang Yu
	L1 Type Approximation of a Temporally Loaded Time-Fractional Diffusion Equation	Adapting the Conventional Packet Scheduling Algorithms for Simultaneous Support of 5G Multimedia Traffic Mix		Design of Robust Integer/Fractional Order PID Controller Based on Bode's Ideal Transfer Function and H-Infinity Robust Performance Condition	Dynamics Analysis of Fractional Differential Equations With Brownian Motion
17:30 - 17:45	Priya K. Singh; Santanu Saha Ray	Manal Walid Kamel Al Muzini		Ghania Idiri; Said Djennoune; Maamar Bettayeb	Yuli He; Yong Wang
	"Shifted Jacobi Operational Matrix Method to Solve Stochastic Fractional Differential Equation	A Study of Fractional-Order Monkeypox Mathematical Model With Its Stability Analysis		Optimal Parametrization Approach of the Diffusive Representation of a Non-Integer Order Dynamical System	A Novel Fractional Order Speedest Gradient Descent Method and Its Application
17:45 - 18:00	Lalchand Verma; Ramakanta Meher	Kalaiyarasi Arunachalam		Sarah Kassim; Ouerdia Megherbi; Hamid Hamiche; Maamar Bettayeb	Vivek Aggarwal
	Analytical Approach for Time-Fractional Sharma-Tasso-Olver Equation With Non-Singular Kernel	Machine Learning Approach to SIR Mathematical Model		Implementation on Microcontroller Devices of a Secure Communication Scheme Based on Fractional-Order Chaotic Systems	Physics Informed Neural Network for Solving Fractional Order Poisson Equation
18:00 - 18:15	Vishalkumar J. Prajapati; Ramakanta Meher	Özlem Defterli; Dumitru Baleanu		Katia Hannoun; Ouerdia Megherbi; Hamid Hamiche; Maamar Bettayeb; Mourad Lahdir; Mourad Laghrouche	Zoran Vosika
	An Analytical Investigation of Time-Fractional Sharma-Tasso-Olver Equation Arising in Physical Sciences	A Fractional Lagrangian Approach for Two Masses With Linear and Cubic Nonlinear Stiffness		Image Watermarking Scheme Based on a Fractional-Order Discrete-Time Chaotic System	New Type of Fractional Path Integrals and Derivatives
18:15 - 18:30	Muhammad Abubakar Isah; Asif Yokus	Dragan T. Spasic; Snezana Mikulic-Gutman		Omar Mohamed Mohamed Gad Sayed Ahmed; Stih Sana; Sofiane Khadraoui; Raouf Fareh; Maamar Bettayeb	Hui Fu
	Rogue Waves and Stability Analysis of the New (2+1)-KdV Equation Based on Symbolic Computation Method via Hirota Bilinear Form	How Can We Recognize Early Osteoarthritis by In-Vivo Examination?		Tracking Control of a Rotary Flexible Joint Using Fractional PID With a Prescribed Performance Function	Physical Meaning of the General Fractional Calculus
18:30 - 18:45	Yuehua Jiang	Koichi Unami		LiJuan Jiang	Snezhana Hristova
	Fractional Derivative Norton-Power Creep Equation	Fractional Interpolation of the Unit-Hydrograph Method and the Lumped Flow Routing Method in Hydrology		LBM Simulation of Non-Newtonian Fluid Seepage Based on Fractional-Derivative Constitutive Model	Mittag - Leffler Stability for Non-Instantaneous Impulsive Generalized Proportional Caputo Fractional Differential Equations
18:45 - 19:00			Abdel-Haleem Abdel-Aty	Ahmed Zahed	Saud Owyed
			Computational and Numerical Simulations of the Modified Equal-Width Equation With Applications in Nonlinear Despersive Media	Hadamard-Caputo Implicit Fractional Differential Inclusions With Nonlocal Conditions	Computational and Numerical Simulations of the Modified Equal-Width Equation With Applications in Nonlinear Despersive Media

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DAY 2
Wednesday, 15 March 2023

REGISTRATION
08:00 – 09:00

PLENARY SESSION #2
Chair: Shaher Momani
09:00 – 11:00
HALL #1

09:00 – 09:45	Virginia Kiryakova Special Functions and Fractional Calculus: The Common Game Players
09:45 - 10:30	Yangquan-Chen Two Triangles: Complexity / Inverse Power Law / Fractional Calculus; and Fractional Calculus / Renormalization Group / Machine Learning (FC-RG-ML)
10:30 - 11:00	Samir Hadid History of Fractional Calculus During: 1950-2000
11:00 - 11:30	COFFEE BREAK

PARALLEL SESSIONS #3 11:30 – 13:00				
11:30 - 14:00	Parallel Session 3.1 Chair: Rachid Malti Hall #1	Parallel Session 3.2 Chair: Yangquan-Chen Hall #2	Parallel Session 3.3 Chair: Khaled M Furati Hall #3	Parallel Session 3.4 Chair: Dumitru Baleanu Hall #4
11:30 - 12:00	Jichun Li (Invited speaker)	Duarte Valerio (Invited speaker)	Blas M. Vinagre (Invited speaker)	Tasawar Hayat (Invited speaker)
	Finite element analysis and simulation for time-fractional Maxwell's equations	Fractional derivatives to study cancer and its treatments	On Calculus, Time, and Feedback: Steps Toward the Mind	Role of Hydromagnetics in Peristalsis
12:00 - 12:15	Jean-François Duhé; Stéphane Victor; Pierre Melchior; Youssef Abdelmoumen; François Roubertie	Amel Hioual; Adel Ouanna; Shafer Momani; Taki-Eddine Oussaeif	Sumit Kumar; Gaurav Sundaram; Snehan Shourya; Rajib Kumar Jha	Rabha Ibrahim
	Online System Identification of Heat Transfers in Lungs With the LMRPEM-2 Method	Finite-Time Stability of ABC Type h-Fractional Discrete Neural Networks: Gronwall Inequality and Stability Criterion	A Novel Signal Detector Based on Approximated Fractional Integrator in Frequency Domain	K-Symbol Atangana-Baleanu Fractional Operators in a Complex Domain
12:15 - 12:30	Adrian Josue Guel Cortez; Eun-jin Kim; Harold Chamorro	Adel Ouanna; Amina-Aicha Khennaoui; Giuseppe Grassi; Viet-Thanh Pham; Zohir Dibi; Shafer Momani	Abrar Ansar; Marwan Abukhaled; Suheil Khuri	Samir B Hadid; Rabha Ibrahim
	Parameter Estimation of Fractional-Order Systems via Evolutionary Algorithms and the Extended Fractional Kalman Filter	Hardware Implementation of a Two-Dimensional Fractional Map With Hidden Attractors	A Multi-Step Differential Transform Approach for a Nonlinear Fractional COVID-19 Pandemic Model	K-Symbol Fractional Complex Transform on Some Cantor Domains
12:30 - 12:45	Ryad Ghanam; Edward L Boone	Amele Taieb	Dolat Khan	Suzan J Obaiys
	A-Optimal Experimental Designs for Fractional Partial Differential Equations Concerning Flow Through Porous Materials	Generalized Ulam-Hyers Stability of Nonlinear Fractional Boundary Value Problem	Analysis of Bi-Generalized Entropy Generation of Casson Nanofluid With Inclined Magnetic Field: A Regression Approach	On a New Fractional Integral Operator Convolved With a Fractional k-Symbol Raina Function: Stability
12:45 - 13:00	Stéphane Victor; Rachid Malti; Abir Mayoufi	Dorota Mozyrska	Nadir Djeddi; Mohammed Al-Smadi; Shafer Momani; Nesrine Harrouche	Saleh S. Almuthaybiri; Jagan Mohan Jonnalagadda; Christopher C. Tisdell
	System Identification of the Global Climate Temperature by Output Error Method	Comparison of Two Types of Fractional Variable-Order Digital PID Controllers	Numerical Evaluation of Fractional Forced Duffing Equation With Non-Classical Boundary Conditions by Reproducing-Kernel Method	The Precise Number of Solutions to Fractional Boundary Value Problems via Shooting Methods
13:00 - 14:00	LUNCH BREAK			

PARALLEL SESSIONS #4 14:00 – 16:00				
	Parallel Session 4.1 Chair: Rachid Malti Hall #1	Parallel Session 4.2 Chair: Tasawar Hayat Hall #2	Parallel Session 4.3 Chair: Durate Valerio Hall #3	Parallel Session 4.4 Chair: Yongguang Yu Hall #4
14:00 - 16:00				
14:00 - 14:30	Raoul R. Nigmatullin (Invited speaker)	Carla Pinto (Invited speaker)	Changpin Li (Invited speaker)	Soumia Elouissi; Shafer Momani; Banan Maayah
	Can self-similar processes be reflected by power-law dependencies?	Probabilistic analysis of a foundational class of non-integer second-order linear differential equations in Classic Mechanics	Exponential asymptotics in fractional-derivative problems: analysis and computation	The Spectral Method for the Numerical Solutions of Fractional Volterra-Fredholm Integro-Differential Equations Hadeel Fareed Alabraq; Shatha Hasan; Shafer Momani; Mohammed Al-Smadi
				Analytic Solution for Fuzzy Conformable Pharmacokinetic Model
14:30 - 14:45	Muhammad Abubakar Isah	Amal Mohammad Almatarneh	Giuseppe Grassi; Amina-Aicha Khennaoui; Adel Ouanna; Viet-Thanh Pham	Kai Diethelm
	Stability Analysis and Soliton Solutions of the Nonlinear Evolution Equation by Homoclinic Technique Based on Hirota Bilinear Form	Ulam-Hyers Rassias Stability of Boundary Value Problems for Caputo-Hadamard-Type Fractional Differential Equations	Three-Dimensional Chaotic Fractional Maps Without Fixed Points: Dynamics, Coexisting Hidden Attractors and Hardware Implementation	Diffusive Representations for the Numerical Evaluation of Fractional Integrals
14:45 - 15:00	Muhammad Arif	Yash Vats; Mani Mehra; Dietmar Oelz; Saurabh R. Gandhi	Yeliz Karaca; Dumitru Baleanu; Mati ur Rahman; Shafer Momani	Arpit Sourav Mohapatra
	Analysis of Constant Proportional Caputo Operator on the Unsteady Oldroyd-B Fluid Flow With Newtonian Heating, Ramped Velocity and Temperature	Fractional Order Modified Treves Model: Simulation and Learning	Multicompartmental Mathematical Models of Infectious Dynamic Diseases With Time Fractional-Order Derivatives	Mitigating the Effects of Op-Amp Non-Idealities by Fractional Order Notch Filter
15:00 - 15:15	Reetha Thomas; Bakkyaraj Thangarasu	Brajesh Kumar Jha; Hardagna Vora; Hardik Joshi	Babak Shiri; Dumitru Baleanu	Kheireddine Choutri; Raouf Fareh; Mohammad habibur Rahman; Maamar Bettayeb; Mohand Lagha
	A Comparative Study of Lie Symmetry Analysis and Invariant Subspace Methods to Fractional Hunter-Saxton Equation	A Fractional Approach to Study of Calcium Advection Distribution and VGCC in Astrocyte	Constant Order Systems of Fractional Differential Equations are Not Vector Order Systems!	Reinforcement Learning-Based Fractional Order PID Controller for Upper-Limb Rehabilitation Robot
15:15 - 15:30	Shweta Dubey; Madhusree Kundu; Snehashish Chakraverty	Juan Pablo Ugarte; Catalina Tobon; Andrés Felipe Hernández	Amin Jajarmi; Dumitru Baleanu	Nabil Tahmi and Abdallah Derbal
	Application of Block Pulse Function in Simulating System of Differential Equations	Potassium Currents Affect the Rotor Dynamics in a Fractional-Order Model of Atrial Fibrillation	A General Form of Fractional Derivatives for Modelling Purposes in Practice	Some multiple Dirichlet series of completely multiplicative arithmetic functions
15:30 - 15:45	Majid Ghorbani; Aleksei Tepljakov; Eduard Petlenkov	Meet Nileshkumar Rana; Brajesh Kumar Jha; Hardagna Vora	Kiran Kumar Saha; N. Sukavanam	Carla M.A. Pinto
	Fractional-Order Interval Polynomials, Stability and Robust Stability Analysis and FOMCON Implementation	Approximation of Calcium Diffusion in Huntingtinc Nerve Cell	Existence of Unique Solutions to Fractional Differential Equations With Integral Boundary Conditions	Fractional calculus in classic mechanics: an example
15:45 - 16:00	Amin Benaissa Cherif; Fatima Zohra Ladrani; Ahmed Hammoudi	Javiera P Miranda Ordenes; Rodrigo M Mejias Herrera; Norelys Aguila Camacho	Shorouk M. Alissa; Ahmed El-Sayed; Hind Hashem	
	Riemann-Liouville Fractional Derivative for the Tempered Distribution	Fractional Adaptive Controllers for a Grinding Circuit in Mining	On Chandrasekhar Hybrid Caputo Fractional Modeling for Thermostat via Hybrid Boundary Value Conditions in Banach Algebra	
16:00 - 16:30	COFFEE BREAK			

PARALLEL SESSIONS #5					
16:30 – 18:30					
Parallel Session 5.1 Chair: Roberto Garrappa Hall #1		Parallel Session 5.2 Chair: Virginia Kiryakova Hall #2		Parallel Session 5.3 Chair: Yangquan-Chen Hall #3	Parallel Session 5.4 Chair: Carla Pinto Hall #4
16:30 - 16:45	Rahul Goyal; Shilpi Jain; Praveen Agarwal	Omar Obaidat; Shrideh Al-Omari		Stihi Sana; Raouf Fareh; Sofiane Khadraoui; Kheireddine Choutri; Maamar Bettayeb	Ibrahim Olatunji Sarumi
	Elzaki Transform of Pathway Fractional Integrals Involving Extended Hypergeometric Functions in the Kernel	Certain Results Associated With q-Fractional Integrals and Some Application		Tracking Fractional Power Rate Sliding Mode Control for a 4DOF Manipulator Robot	Reaction Coefficient Identification Problem for a Time-Fractional Diffusion Equation
16:45 - 17:00	Asma Moussaoui; Banan Maayah; Samia Bushnaq	Imen Assadi; Bensouici Tahar; Abdelfatah Charef		Faris N AtaAllah; Shayok Mukhopadhyay; Habib-ur Rehman; Hassan Khalid	Indrani Ray; Arpit Sourav Mohapatra; Karabi Biswas
	A Modified Optimized Decomposition Method for Solving Nonlinear Fractional Two-Point Boundary Value Problems With Dirichlet Boundary Conditions	Biometric Identification by Mean of Fractional Modeling of the ECG Signal		Battery Temperature Assessment for FOPI and PI Based Electric Vehicle Traction System	SPICE Simulation of Fractional Order Element Without Using Ladder Circuit
17:00 - 17:15	Nahid Fatima	Saleh Mughayran Alshammari		Ouerdia Megherbi; Sarah Kassim; Hamid Hamiche; Redouane Kara; Maamar Bettayeb	Mamta Kapoor; Samanyu Khosla
	On Multi-Order Fractional Differential Equation: An Analytical Solution Subject to Existing Numerical Solution	New Soliton Solutions for Fractional Spatio-Temporal Lakshmanan-Porsezian-Daniel Equation With Parabolic Law of Nonlinearity		Secure Digital Data Sharing on the Basis of Fractional-Order Chaotic Systems Under Noisy Channel	An Iterative Technique Using Yang Transform to Solve Fractional Order Klein Gordon Equation
17:15 - 17:30	Banan Maayah; Sana Abu-Ghurra	Souad Bensed Ahmed		Chaymaà Tadjedinne Karoun	Hussam Aljarrah; Mohammad Alaroud; Anuar Ishak; Maslina Darus; Shafer Momani
	An Efficient Reproducing Kernel Method for Solving Fractional Electro-Hydrodynamic Flow Differential Equation	Chaotic Attractors in Quadratic Discrete Tinkerbell System With Non-Commensurate Fractional Variable-Orders: Chaos, Complexity and Entropy		Chaos in the Variable Fractional Order Discrete-Time Neural Networks	Exact and Approximate Solutions of Heat Fractional Differential Equation Using Laplace Residual Power Series Method
17:30 - 17:45	Parthkumar P Sartanpara; Ramakanta Meher	Nilkanta Das; Santanu Saha Ray		Safar Zahra; Rachid Mansouri; Maamar Bettayeb	Rawya M Al-deiakeh; Mohammed Al-Smadi; Shafer Momani
	Analytical Study of Time Fractional Fisher Equation Using Homotopy Approach With a Generalized Transform	Bright and Singular Optical Soliton Solutions of Modified Nonlinear Schrodinger Equation With Conformable Fractional Derivative in Deep Water Waves		Extended State Observer With FOF-PID Controller Design: Application on a Cart-Pendulum System	Lie Symmetry Analysis of a Class of Fractional Partial Differential Equation
17:45 - 18:00	Doaa Mahmoud Fawzy; Waheed Zahra; Ayman Arafa; Ahmed Elsaid	Ammar Abuualshaikh; Farah Aini Abdullah; M Ali Akbar		Deepa Gupta; Sachin Bhalekar	Ahmad Mugbil
	Mathematical Analysis of a Non-Smooth Mosquitoes Control Model	Application of New Generalized Differential Transform Method to Solve Riccati Fractional Differential Equation		Can a Fractional Order Delay Differential Equation Be Chaotic Whose Integer-Order Counterpart is Stable?	On Logarithmic Decay of Solutions to a Fractional Integro-Differential Problem
18:00 - 18:15	Changpin Li; Dongxia Li; Zhen Wang	Clara Burgos Simón; Jc Cortes; Carla M.A. Pinto, Prof; Rj Villanueva		Saddam Gharab; Mehallel Aissa; Vicente Feliu-Batlle	Hamzeh Zureigat; Shrideh Al-Omari; Mohammed Al-Smadi; Shafer Momani
	CDG Method for the Fractional Convection Equation	Computing the Probability Density Function of a Random Compartmental Model to Describe the Dynamics of HIV. Application to Real-World Data		Control of the Water Level in a Pool of an Hydraulic Canal System Based on a Fractional Order Robust Smith Predictor Scheme	A Solution of Complex Fuzzy Time-Fractional Heat Equation by an Explicit Scheme
18:15 - 18:30	Paul Zegeling	Jia-Li Wei		Justus Nwoke; Jairo Viola; Yang-Quan Chen	Rayan Yousif Alkhatay; Maysoon M Aziz; Zahraa AL-Nuaimi
	A method-of-lines approach for space-fractional nonlinear PDEs	Q Operator to Right Hadamard Fractional Differences		Fractional-Order Modeling and Controls of a Flyback Converter for Voltage Regulation Tasks	Stability Analysis of Mathematical Models of Diabetes Type One by Using Pade Approximate
18:30 - 18:45	Fatma Al-Musalhi	Muhammad Ramzan		Qin Fan	Cheng Luo
	Analytical solutions to non-homogeneous fractional differential equations	Natural Convection Trickle of MHD Fractional Hybrid Nanofluid Flow Over a Porous Medium		Boundedness of the General Fractional Integrals and Solutions of Linear Terminal Value Problems	Data-Driven Fractional Uncertain Differential Equations for Forecast
18:45 - 19:00	Salim A. Messaoudi and Ilyes Lacheheb	Jafarali Parol		Chuan-Yun Gu	Ting-Ting Song
	On the General Stability of a Cauchy Problem Involving the Fractional Laplacian Operator	Variational Basis for Finite Element Model of Coupled Differential Equations - Functionspace Interpretation		An Inverse Problem Approach to Determine Possible Memory Length of Fractional Differential Equations	Hadamard Fractional Calculus on Time Scales
20:00 - 22:00	Gala Dinner Bahi Palace Ajman Hotel				
22:00 - 23:00	Steering Committee Meeting Bahi Palace Ajman Hotel Zoom Link will be sent to the committee members				

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DAY 3

Thursday, 16 March 2023

PLENARY SESSION #3

Chair: Marina V. Shitikova

09:00 – 9:40

09:00 - 9:40	Praveen Agrawal (Keynote speaker) Fractional Analysis of Infectious Diseases Hall #1
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PARALLEL SESSIONS #6

09:45 – 11:30

Parallel Session 6.1 Chair: Praveen Agrawal Hall #1	Parallel Session 6.2 Chair: Marina V. Shitikova Hall #2	Parallel Session 6.3 Chair: Khaled M Furati Hall #3	Parallel Session 6.4 Chair: Suzan J Obaiys Hall #4
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09:45 - 10:00	Praveen Agrawal; Shilpi Jain; Rahul Goyal On a New Class of Hypergeometric Function	Shaher Momani; Amel Hioual; Adel Ouanna; Iqbal Batiha Fractional Neural Networks: Finite Time Stability and Its Application to Synchronization	Id ouaziz Saida, EL Khomssi Mohammed Strategies and dynamics for optimal control of the corruption model	Dr. Manoj Sharma Applications of Fractional Calculus in Kinetic Equations
10:00 - 10:15	Mazin Khader Aljazzazi; Ahmed Bouchenak; Shaher Momani; Mohammed Al-Smadi Elimination of the Nondifferentiation Problem and the Discontinuity Problem by the Conformable Definition	Iqbal Bateha; Noureddine Djenina; Adel Ouanna; Taki-Eddine Oussaeif; Leila Ben Aoua; Shaher Momani Control of Chaos in Incommensurate Fractional Order Discrete System	Mohammad Esmael Samei, Azam Fathipour On multi-point nonlinear differential system equations of q-fractional derivative with integral boundary conditions	Dariusz Idczak Riemann-Liouville derivatives of abstract functions and Sobolev spaces
10:15 - 10:30	Iqbal Batiha Numerical Solutions of Stochastic Differential Equation Using Modified Three-Point Fractional Formula	Rahul Goyal; Parik Laxmi; Praveen Agarwal; Shilpi Jain Certain Pathway Fractional Integral Formulae Involving Extended Hypergeometric Functions	Saqib Murtaza Heat Transfer Analysis of ZnO+Al ₂ O ₃ +TiO ₂ /DW Based Ternary Hybrid Nanofluid: A Fractal-Fractional Model Via Finite Difference Approach	H. Jafaria , R. M. Ganjib , S. M. Narsalec A numerical method to solve a class of time-fractional diffusion equations
10:30 - 10:45	Mehreen Saleem On Solutions of Obstacle Problems of Fractional Order	Sumit Kumar; Gaurav Sundaram; Snehan Shourya; Rajib Kumar Jha A Novel Encryption Approach With Fractional Discrete Cosine Transform and Cascading Discrete Orthonormal Stockwell Transform	Stanislawa Kanas The (P, Q)- Quantum Differential Operator and Its Applications	Vladimir V. Kandu Analysis of Free Non-Linear Vibrations of a Fractionally Damped Cylindrical Shell Under the Condition of the Two-To-One Internal Resonance
10:45 - 11:00	Mwaffag Husein Sharadga An Analytical Solution of Fractional Diffusion Equations using the operational matrix method	Samah Horrigue; Mona Alsulami; Bayan Abdulllah Alsaedi Existence Result to a Kirchoff ψ -Hilfer Fractional Equations With p-Laplacian Operator via Nehari Method	Imran Talib Applications of Operational Matrices of Hermite Polynomials in solving Fractional-order Bagley--Torvik Differential Equations	Mohammed Al-Refai Important inequalities for general fractional operators
11:00 - 11:15	Yu Yao Backstepping Control for Fractional Discrete-Time Systems	Ahcene Merad Existence and Uniqueness of the Strong Solution of the Time Fractional Integro-Differential Equation With Integral Boundary Conditions	Kamla Kant Mishra , Shruti Dubey Controllability for a Class of Nonlinear Fractional Control System	Emanuel Guariglia Fractional derivative of the Riemann zeta function and prime numbers
11:15 - 11:30	Pshtiwan Othman Mohammed, Hari Mohan Srivastava, Faraidun Kadir Hamasalh, and Dumitru Baleanu Monotonicity analysis for delta sequential operators of fractional order	Maryam Ahmed Alyami Multiple Solution for Some P-Kirchoff Problems With ψ -Hilfer Derivative	Taylan Demir Discrete Fractional Operators and Their Applications	Samir B Hadid; Rabha Ibrahim; Suzan J Obaiys; Nadia Mg Geometric Behavior of the Generalized Hadid-Luchko Convolution Operator in the Open Unit Ball

Closing and Awarding Ceremony

11:45 - 12:15

HALL #1

Prof. Shaher Momani (Conference Chair)

Social Program (Trip To Global Village in Dubai)

15:00 - 21:00

DAY 1 Tuesday, 14 March 2023	OPENING CEREMONY 10:00 - 11:00 Hall 1 Zoom Link: https://ajman-ac-ae.zoom.us/j/87212125368			
	PLENARY SESSION #1 Chair: Reyad El-Khazali 11:00 – 13:00 HALL 1 Zoom Link: https://ajman-ac-ae.zoom.us/j/87212125368			
	PARALLEL SESSIONS #1 14:00 – 16:00			
	Parallel Session 1.1 Chair: Changpin Li Hall #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/84685769608	Parallel Session 1.2 Chair: Mohammed Al-Smadi Hall #2 Zoom Link: https://ajman-ac-ae.zoom.us/j/82628114181	Parallel Session 1.3 Chair: Yeliz Karaca Hall #3 Zoom Link: https://ajman-ac-ae.zoom.us/j/89013981055	Parallel Session 1.4 Chair: Mudassar Imran Hall #4 Zoom Link: https://ajman-ac-ae.zoom.us/j/82819456071
	PARALLEL SESSIONS #2 16:30 – 19:00			
	Parallel Session 2.1 Chair: Rachid Malti Hall #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/83755171278	Parallel Session 2.2 Chair: Iqbal Bateha Hall #2 Zoom Link: https://ajman-ac-ae.zoom.us/j/86039775562	Parallel Session 2.3 Chair: Suheil Khuri Hall #3 Zoom Link: https://ajman-ac-ae.zoom.us/j/81360895319	Parallel Session 2.4 Chair: Praveen Agrawal Hall #4 Zoom Link: https://ajman-ac-ae.zoom.us/j/87476201332
Day 2 Wednesday, 15 March 2023	PLENARY SESSION #2 Chair: Shaher Momani 09:00 – 11:00 HALL #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/89622697519			
	PARALLEL SESSIONS #3 11:30 – 13:00			
	Parallel Session 3.1 Chair: Rachid Malti Hall #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/82777022021	Parallel Session 3.2 Chair: Yangquan-Chen Hall #2 Zoom Link: https://ajman-ac-ae.zoom.us/j/86309822073	Parallel Session 3.3 Chair: Khaled M Furati Hall #3 Zoom Link: https://ajman-ac-ae.zoom.us/j/82396924156	Parallel Session 3.4 Chair: Dumitru Baleanu Hall #4 Zoom Link: https://ajman-ac-ae.zoom.us/j/88133032362
	PARALLEL SESSIONS #4 14:00 – 16:00			
	Parallel Session 4.1 Chair: Arran Fernandez Hall #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/81421388908	Parallel Session 4.2 Chair: Tasawar Hayat Hall #2 Zoom Link: https://ajman-ac-ae.zoom.us/j/85894339732	Parallel Session 4.3 Chair: Durate Valerio Hall #3 Zoom Link: https://ajman-ac-ae.zoom.us/j/86352703896	Parallel Session 4.4 Chair: Yongguang Yu Hall #4 Zoom Link: https://ajman-ac-ae.zoom.us/j/82801944366
	PARALLEL SESSIONS #5 16:30 – 19:00			
Parallel Session 5.1 Chair: Roberto Garrappa Hall #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/82922920345	Parallel Session 5.2 Chair: Virginia Kiryakova Hall #2 Zoom Link: https://ajman-ac-ae.zoom.us/j/85031884164	Parallel Session 5.3 Chair: Yangquan-Chen Hall #3 Zoom Link: https://ajman-ac-ae.zoom.us/j/84929290938	Parallel Session 5.4 Chair: Carla Pinto Hall #4 Zoom Link: https://ajman-ac-ae.zoom.us/j/84630265949	
DAY 3 Thursday, 16 March 2023	PLENARY SESSION #3 Chair: Marina V. Shitikova 09:00 – 9:40 Hall #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/82331015223			
	PARALLEL SESSIONS #6 09:45 – 11:30			
	Parallel Session 6.1 Chair: Praveen Agrawal Hall #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/85083143789	Parallel Session 6.2 Chair: Marina V. Shitikova Hall #2 Zoom Link: https://ajman-ac-ae.zoom.us/j/81922441366	Parallel Session 6.3 Chair: Khaled M Furati Hall #3 Zoom Link: https://ajman-ac-ae.zoom.us/j/88551002030	Parallel Session 6.4 Chair: Suzan J Obaiys Hall #4 Zoom Link: https://ajman-ac-ae.zoom.us/j/88047091346
	Closing and Awarding Ceremony Prof. Shaher Momani (Conference Chair) 11:45 - 12:15 HALL #1 Zoom Link: https://ajman-ac-ae.zoom.us/j/84790184859			