

# Conference Program

## YARMOUK MATHEMATICS CONFERENCE 2021

*Differential Equations: Analysis, Modeling and Numerical Computations*

18-20 September 2021

**All times are in JORDAN local time (GMT+3)**

## Day 1: Saturday (18/9/2021)

### Opening Session (10 am - 10:30 am)

10:00-10:02	The Royal Anthem of Jordan	
10:02-10:10	Conference Chairman Speech	Dr. Mohammad Al-Jamal
10:10-10:20	Faculty of Science Dean Speech	Prof. Khalid Al-Batayneh
10:20-10:30	Yarmouk University President Speech	Prof. Islam Massad

### Session 1 Chair: Dr. Mohammad Al-Jamal Cochair: Dr. Heyam Al-Jarrah (10:30 am - 1:20 pm)

#### Zoom Link:

<https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxGekVUNEJOVzRPbDZYdz09>

Meeting ID: 226 073 6009

Passcode: j6UMi8

Time	Presenter	Presentation Title
10:30-11:25	Prof. Martin J. Gander (Plenary Talk)	On the Invention of Iterative Methods for Linear Systems
11:25-11:50	Prof. Fathalla Rihan	Qualitative and Quantitative Features of Delay Differential Equations and Applications to Biology
11:50-12:05	Dr. Sanket Tikare	Ulam Stabilities for Volterra Integro-dynamic Equations on Time Scales
12:05-12:20	Mr. Muhammad Nasir	Mixed convection flow of tangent-hyperbolic nanofluid in frames of Cattaneo-Christov dual diffusion theory

<b>12:20-12:35</b>	Dr. Svetlana Budochkina	Variational analysis of a class of second-order ordinary differential equations
<b>12:35-12:50</b>	Ms. Soraya Abdelaziz	Monotone iterative sequences for nonlinear initial-boundary value problems of fractional order
<b>12:50-13:05</b>	Dr. Rafed MOUSSA	Some properties of traces of Bessel's Dirichlet form
<b>13:05-13:20</b>	Dr. Billel Gheraibia	Energy decay of solutions for a system of Kirchho-type equations with dynamic boundary conditions and source terms
<b>Session 2</b>	<b>Chair: Prof. Mohammed Al-Refai</b>	<b>Cochair: Dr. Jebrel Habeb</b>
<b>(3 pm - 6:40 pm)</b>		
<b>Zoom Link:</b> <a href="https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxGekVUNEJOVzRPbDZYdz09">https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxGekVUNEJOVzRPbDZYdz09</a>		
Meeting ID: 226 073 6009 Passcode: j6UMi8		
<b>Time</b>	<b>Presenter</b>	<b>Presentation Title</b>
<b>15:00-15:45</b>	Prof. Ravi P. Agarwal <b>(Plenary Talk)</b>	Unbounded solutions of third order three-point boundary value problems on a half-line
<b>15:45-16:20</b>	Prof. Thabet Abdeljawad	From fractional operators with ML kernels (AB) to the operators with generalized ML kernels and Prabhakar operators
<b>16:20-16:55</b>	Prof. Qasem Al-Mdallal	Analysis of some generalized ABC-fractional logistic models
<b>16:55-17:10</b>	Prof. Ahmed Aberqi	Fractional $p(x, \cdot)$ – Laplacian problem with indefinite weights

<b>17:10-17:25</b>	Prof. Mohammad Sajid	Fractals and Chaos in Differential Equations
<b>17:25-17:40</b>	Mr. Abdelbadie YOUNES	On a class of fractional elliptic systems involving nonlocal gradient terms
<b>17:40-17:55</b>	Ms. Ahlem Merah	Global existence and Blow-up of solutions of nonlinear Kirchhof-type equations with weak fractional dissipation
<b>17:55-18:10</b>	Dr. Mhamed Elmassoudi	Existence of a renormalized solutions to a nonlinear system in Orlicz spaces
<b>18:10-18:25</b>	Ms. NAZLI IRKIL	Polynomial Decay of Solutions for a p- Laplacian Hyperbolic Type Equation with Logarithmic Source Term
<b>18:25-18:40</b>	Dr. Kerioui Nadjah	Modeling the effects of fractional orders and economic profit on the dynamics of a harvested singular bioeconomic system with Holling type III functional response

## Day 2: Sunday (19/9/2021)

**Session 1 A**      **Chair: Prof. Abedel-Kareem Alomari**      **Cochair: Dr. Jenan Shtayat**      **(10 am - 1:55 pm Jordan time)**

**Zoom Link:**

<https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxEkVUNEJOVzRPbDZYdz09>

Meeting ID: 226 073 6009

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<b>Time</b>	<b>Presenter</b>	<b>Presentation Title</b>
<b>10:00-10:45</b>	Prof. Yuri Luchko <b>(Plenary Talk)</b>	Fractional relaxation equation with the nth level fractional derivative and some properties of its solutions
<b>10:45-11:30</b>	Prof. Ahmed El-Sayed <b>(Plenary Talk)</b>	Coupled System of Random and Stochastic Nonlinear Differential Equations with Coupled Nonlocal Random and Stochastic Nonlinear Integral Conditions
<b>11:30-11:50</b>	Ms. Douaa hamri	synchronization of chaotic systems of differential equations
<b>11:50-12:10</b>	Dr. Mohammad Alaroud	Fractional Series Solutions of Nonlinear Fractional Differential Equations via LRPS Technique
<b>12:10-12:25</b>	Dr. SAMI ALJHANI	Numerical Solutions of Certain New Models of the Time-Fractional Gray Scott
<b>12:25-12:40</b>	Mr. Muhammad Salman Kausar	Flow of a porous media containing a water-based nanofluid including various shapes of Cu nanoparticle
<b>12:40-12:55</b>	Prof. Soheil Salahshour	Explicit solution of fractional logistic differential equation with Caputo-Fabrizio operator

<b>12:55-13:10</b>	Dr. VOLKAN ALA	New Exact Solutions of an Optical Dromian Model via Improved Bernoulli Sub-Equation Function Method
<b>13:10-13:25</b>	Ms. Zahra El Majouti	Numerical solution of fractional integro-differential equations via meshless collocation method based on MLS approximation
<b>13:25-13:40</b>	Dr. Fatima OUAAR	Swarm Intelligence Algorithm for Numerical Optimization of ODE - Artificial Bee Colony Algorithm case
<b>13:40-13:55</b>	Ms. Asma Gafour	A Lagrangian Dual Method for Multi-Stage Stochastic Convex Semidefinite Programming
<b>Session 1 B</b> <b>Chair: Dr. Heyam Al-Jarrah</b> <b>Cochair: Dr. Ahmad Bani Abdelrahman</b> <b>(10 am - 2 pm)</b>		
<b>Zoom Link:</b> <a href="https://zoom.us/j/9242201544?pwd=NFVKTNQ3dytRQS9wdVIGUTIHVHhaUT09">https://zoom.us/j/9242201544?pwd=NFVKTNQ3dytRQS9wdVIGUTIHVHhaUT09</a>		
Meeting ID: 924 220 1544 Passcode: Z9aDX0		
<b>Time</b>	<b>Presenter</b>	<b>Presentation Title</b>
<b>10:00-10:15</b>	Dr. Hebatallah Alsakaji	A mathematical model of a COVID-19 pandemic with stochastic perturbation and time delays: Case study in the UAE
<b>10:15-10:30</b>	Mr. Sunil Maity	Probability of disease outbreak or extinction in a stochastic epidemic model for COVID-19.
<b>10:30-10:45</b>	Prof. Ismail Mageed	Solving the open problem of finding the closed form solution of the PSFFA differential equation of the time varying queueing systems
<b>10:45-11:00</b>	Dr. Yagub Aliyev	Interception and Nonlinear Differential Equations

<b>11:00-11:15</b>	Mr. Abderrahman Abbas	On chaos in a novel fractional-order discrete neural network system.
<b>11:15-11:30</b>	Dr. Anas Altawallbeh	Effect of internal heating on the onset of double diffusive convection in a couple stress fluid saturated porous layer using thermal non-equilibrium model
<b>11:30-11:45</b>	Dr. Ahmed Bouchenak	Fractional Fourier Series with Separation of Variables Technique and It's Application on Fractional differential Equations.
<b>11:45-12:00</b>	Mr. Tugrul Comert	Blow-up of weak solutions for a higher-order heat equation with logarithmic source term
<b>12:00-12:15</b>	Dr. Amirouche Berkani	Modeling and boundary control of a viscoelastic flexible spacecraft system
<b>12:15-12:30</b>	Mr. Ali slimani	ON THE SOLUTION OF STOCHASTIC PERTURBED KELLER-SEGEL EQUATIONS
<b>12:30-12:45</b>	Dr. Amel Redjil	Optimal Control and Mean-Field Stochastic Differential Equations
<b>12:45-13:00</b>	Ms. Ataouia BAKHTAOUI	The almost complete Convergence of the robust estimator for censored time series
<b>13:00-13:15</b>	Ms. Chahinez chenouf	Global optimization of univariate holder functions
<b>13:15-13:30</b>	Ms. Esmâ Abada	Existence of solutions for a nonlinear equation involving fractional gradient with variable coefficients
<b>13:30-13:45</b>	Mr. Anil Kumar	Solution of Nonlinear Delay Differential Equations using Bell Polynomial

<b>13:45-14:00</b>	Ms. Aoudj Manal	The higher dimensional full data conductivity problem: uniqueness and reconstruction
<b>Session 2 A</b> <b>Chair: Prof. Rashid Abu-Dawwas</b> <b>Cochair: Prof. Mohammed Al-Refai</b> <b>(3 pm - 7:10 pm)</b>		
<b>Zoom Link:</b> <a href="https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxGekVUNEJOVzRPbDZYdz09">https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxGekVUNEJOVzRPbDZYdz09</a>		
Meeting ID: 226 073 6009 Passcode: j6UMi8		
<b>Time</b>	<b>Presenter</b>	<b>Presentation Title</b>
<b>15:00-15:45</b>	Prof. Dumitru Baleanu <b>(Plenary Talk)</b>	Some New Trends on Fractional Modelling in Biology
<b>15:45-16:30</b>	Prof. Abdon Atangana <b>(Plenary Talk)</b>	Fractional and fractal behaviors in nature
<b>16:30-16:55</b>	Prof. Fadi Awawdeh	Regularization of Ill-posed Inverse Problems
<b>16:55-17:10</b>	Dr. Nidal Anakira	A NEW ACCURATE PROCEDURE FOR SOLVING NONLINEAR DELAY DIFFERENTIAL EQUATIONS
<b>17:10-17:25</b>	Dr. Muhammad Mustafa	Optimal decay result for wave equations with frictional versus viscoelastic damping
<b>17:25-17:40</b>	Dr. Ahmed Boudaoui	On coupled systems of differential equations
<b>17:40-17:55</b>	Dr. Aida Irguedi	On Caputo-Hadamard type fractional impulsive with nonlinear integral conditions



<b>17:55-18:10</b>	Prof. Mustapha AIT HAMMOU	Fractional Integro-Differential Equation with weakly Singular Kernel	
<b>18:10-18:25</b>	Mr. Ben Sorowen	Eigenvalue estimates for magnetic Schrodinger operators in a waveguide	
<b>18:25-18:40</b>	Dr. Smina Djennadi	On fractional Sturm-Liouville type problem with delay	
<b>18:40-18:55</b>	Ms. Meriem	Solutions for fuzzy nonlinear integral equations on half lines: existence and asymptotic behavior	
<b>18:55-19:10</b>	Mr. Ibrahim Lakehal	Global Well-Posedness and decay for a viscoelastic Wava equation with time delay.	
<b>Session 2 B</b>			
Chair: Prof. Abdel-Kareem Alomari		Cochair: Dr. Jenan Shtayat	
<b>(3 pm - 6:55 pm)</b>			
<b>Zoom Link:</b> <a href="https://zoom.us/j/9242201544?pwd=NFVKtnQ3dytRQS9wdVIGUTIHVHhaUT09">https://zoom.us/j/9242201544?pwd=NFVKtnQ3dytRQS9wdVIGUTIHVHhaUT09</a>			
Meeting ID: 924 220 1544 Passcode: Z9aDX0			
<b>Time</b>	<b>Presenter</b>	<b>Presentation Title</b>	
<b>15:00-15:25</b>	Ms. Wafia Fafa	Analytical approximate solutions for differential equations with the generalized Caputo-type fractional derivative	

<b>15:25-15:40</b>	Dr. Souilah Fairouz	QUASILINEAR PARABOLIC PROBLEMS IN THE LEBESGUE-SOBOLEV SPACE WITH VARIABLE EXPONENT AND L1 DATA
<b>15:40-15:55</b>	Mr. Nabil Elgroud	Successive Approximation of G-Stochastic Functional Differential Equations with Finite Delay and Their Application.
<b>15:55-16:10</b>	Ms. Gacem Ilhem	Stability analysis of a time delayed SIR epidemic model with nonlinear incidence rate
<b>16:10-16:25</b>	Dr. Houria Kamache	Energy decay of solutions for a viscolastic equation with dynamic boundary conditions and delay terms.
<b>16:25-16:40</b>	Mr. Hani Ben Abdallah	Stochastic Optimal Control Problem for a Markov regime switching Jump-Diffusion Model Under Partial Information in Infinite Horizon
<b>16:40-16:55</b>	Mr. UMAR ABUBAKAR	On new extension of the extended beta, hypergeometric functions and Riemann-Liouville fraction derivative operator defined with the extended Riemann Bessel function in the kernel
<b>16:55-17:10</b>	Ms. Nesrine Gouri	Numerical modeling of motor-inverter system using differential equations
<b>17:10-17:25</b>	Ms. Manel Abdelli	General stability result of swelling porous elastic soils with a second sound and delay term
<b>17:25-17:40</b>	Ms. Sabah Baibeche	General stability result of swelling porous elastic soils with a second sound and distributed delay term
<b>17:40-17:55</b>	Ms. May Bounif	Two-dimensional free surface flow issued from an opening of a container
<b>17:55-18:10</b>	Mr. Massoun Youssouf	Numerical study of fractional phi-4 equation using homotopy analysis method

<b>18:10-18:25</b>	Ms. Rula Alshraidah	Approximate Analytic Solution for Riccati Equation involving Fractional derivative with generalized Mittag-Leffler Kernels
<b>18:25-18:40</b>	Ms. ILHEM KADRI	CONFORMABLE LAPLACE TRANSFORM FOR FRACTIONAL DIFFERENTIAL EQUATIONS
<b>18:40-18:55</b>	Ms. Faiza Zaamoune	Hidden Patterns of Even Number of spirals of Chua Chaotic Attractor Generated by Transformation

## Day 3 Monday (20/9/2021)

**Session 1**      Chair: Dr. Jebrel Habeb      Cochair: Dr. Ahmad Bani Abdelrahman      (10 am - 2 pm)

**Zoom Link:**

<https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxGekVUNEJOVzRPbDZYdz09>

Meeting ID: 226 073 6009

Passcode: j6UMi8

Time	Presenter	Presentation Title
10:00-10:45	Prof. Saeid Abbasbandy <b>(Plenary Talk)</b>	A new class of polynomial functions: Definition and some applications
10:45-11:30	Prof. Murat Sari <b>(Plenary Talk)</b>	Modelling Realistic Behaviours
11:30-11:45	Prof. Jaouad Danane	Stochastic COVID-19 Levy noise model with isolation strategy and vaccination: Analysis and simulation
11:45-12:00	Dr. Amel Redjil	Singular optimal Control Problems
12:00-12:15	Dr. Souraya Fareh	The existence of two weak solutions for nonlocal problem involving the fractional $p(x)$ –Laplacian operator
12:15-12:30	Dr. TIKIALINE BELGACEM	Asymptotic behavior for a nonlinear axially moving viscoelastic string with general relaxation functions
12:30-12:45	Dr. Abdelkrim Salim	On $k$ –Generalized $\psi$ –Hilfer Boundary Value Problems with Retardation and Anticipation

<b>12:45-13:00</b>	Dr. Riadh Hedli	Application of the generalized exponential expansion method to the fifth-order Korteweg-de Vries equation
<b>13:00-13:15</b>	Mr. Omar Benslimane	Existence Of Solutions For $(p(x), q(x))$ – equations Via The Mountain Pass Theorem And Fountain Theorem With Cerami Condition
<b>13:15-13:30</b>	Prof. Nabila Barrouk	On the existence of unique positive global solutions of a class of parabolic fractional reaction diffusion systems
<b>13:30-13:45</b>	Dr. Karek Chafia	Homogenization of quasilinear elliptic problems with nonlinear Robin condition and L1 data

**Session 2**    Chair: Dr. Mohammad Al-Jamal    Cochair: Prof. Rashid Abu-Dawwas    (3:25 pm - 6:40 pm)

**Zoom Link:**

<https://zoom.us/j/2260736009?pwd=ZWtEYm9sdmxGekVUNEJOVzRPbDZYdz09>

Meeting ID: 226 073 6009

Passcode: j6UMi8

<b>Time</b>	<b>Presenter</b>	<b>Presentation Title</b>
<b>15:25-15:40</b>	Prof. AMAR OULDHAMMOUDA	Asymptotic Behavior of a Stokes Problem in Porous Media with Non-Homogeneous Slip Boundary Conditions and L1 Data
<b>15:40-15:55</b>	Prof. Nouressadat Touafek	Stability, periodicity and oscillation of the solutions of a general system of difference equations of second order
<b>15:55-16:10</b>	Dr. Sarah Otsmane	On the global existence of solutions to a class of complex-valued quadratic heat equation
<b>16:10-16:25</b>	Dr. Soumia SAIDI	A study of a coupled system by a differential inclusion and a fractional differential equation

<b>16:25-16:40</b>	Dr. Nesrine SEMCHEDINE	General stabilization of a thermoelastic systems with a boundary control of a memory type
<b>16:40-16:55</b>	Dr. Samira LECHEHEB	Existence of distributional solutions for fractional elliptic system involving new operator
<b>16:55-17:10</b>	Ms. Noura LAKSACI	An application of Perov fixed point Theorem on the space $W^{1,1}(a, b) \times W^{1,1}(a, b)$
<b>17:10-17:25</b>	Mr. ISSAM EL HAMDI	On robust stability of delayed stochastic systems
<b>17:25-17:40</b>	Dr. Lahcene Rabhi	Existence results of mild Solutions for nonlocal fractional delay integro-differential evolution equations Via Caputo conformable fractional derivative
<b>17:40-17:55</b>	Dr. Fares Kamache	Existence of weak solutions for a Nonlinear fractional boundary value systems
<b>17:55-18:10</b>	Dr. abdellatif boutiara	On a Generalized Fractional Caputo Sturm-Liouville-Langevin q-Difference Problem with Ulam-Hyers-Rassias Stability in Banach space.
<b>18:10-18:25</b>	Ms. Chaima Bousbiat	Analysis of second order BDF/spectral discretization of the time-dependent Stokes problem
<b>18:25-18:40</b>	Mr. Adel Lachouri	Nonlinear generalized fractional differential equations with generalized fractional integral conditions
<b><i>Closing Ceremony</i></b>		