Scientific Program

Day I: Thursday November 23, 2023		
Time	**Speaker**	**Title of the talk**
8:30—9:00	Registration & Information	
9:00—9:30	Opening	
9:30—10:30	**Keynote Speaker I, Chaired by Prof. Gennady Bocharov**- **IT Building, Auditorium, Female Side**	
	Prof. Andreas Meyerhans Spain: Universitat Pompeu Fabra	**Pathogenic virus infections: on fate regulation and functional cure strategies**
10:30—11:00	**Coffee Break**	
11:30—12:00	**Keynote Speaker II, Chaired by Andreas Meyerhans - IT Building, Auditorium, Female Side**	
	Prof. Gennady Bocharov Russian Academy of Sciences, Moscow	**Understanding the pathogenesis of virus infections using mathematical models based on delay differential equations**
12:00—13:00	**Invited Talks, Chaired by Dr. Abdessamad and Prof. Farrrukh Mohamadov - IT Building, Auditorium, Female Side**	
12:00-12:30	Prof. Radouane Yafia Morocco: Ibn Tofail University	Turing Bifurcation Induced by Cross-Diffusion and Amplitude Equation in Oncolytic Therapeutic Model
12:30-13:00	Prof. Abdulla Azamov Uzbekistan: Institute of Mathematics	Cinematographic Method for Mathematical Modeling of Heat Transfer and Exchange Processes in Geometrically Complicated Bodies
13:00—14:30	Lunch	
14:30—16:00	**Invited Talks, Chaired by Prof. R. Yafia - IT Building, Auditorium, Female Side**	
14:30-15:00	Prof. Fathalla Rihan UAE: UAEU	Qualitative and Quantitative Features of DDEs and Applications to Immunology
15:00-15:30	Dr. Attila Denes Hungary: University of Szeged	Malaria dynamics with bimodality of incubation period in hostsina seasonal environment
15:30-14:00	Dr. Ardak Kashkynbayev Kazakhstan: Nazarbayev University (AUA)	Traveling wave speed and profile of a "go or grow" glioblastoma multiforme model

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16:00—18:00	Day I: Parallel Session I, Chaired by, Dr. C. Rajivganthi, E1-1055 Female side	
16:00-16:20	Prof. Syed Abbas **India: Indian Institute of Technology Mandi**	Analysis and stability of a social interacon model with age-structure and law enforcement
16:20-16:40	Dr. Rajivganthi, C **India: Vellore Institute of Technology**	Control Analysis of Nilaparvata Lugens with Wolbachia using Sterile Insect Techniques
16:40-17:00	Dr. Hebatallah Alsakaji **UAE: UAEU (AUA)**	Optimal Control of Stochastic Michaelis-Menten Kinetics Based Tumour-Immune Interaction with Time Delay
17:00-17:20	Prof. Mohamed N. Anwar **Egypt: Faros Uni.**	Deterministic and Stochastic SIRC Epidemic model with Time-Delay for COVID-19
17:20-17:40	Prof. Y. A. El-Khatib **UAE: UAEU (AUA)**	The SEIR model With Unreported Cases and Markovian Switching
17:40-18:00	Ms. Ghilmana Sarmad **UAE: UAEU (AUA)**	Exploring the Influence of Fear on the Progression of an Infectious Disease in a Delayed Spatiotemporal Epidemic Model Featuring Both Local and Nonlocal Dispersion

16:00—18:00	Day I, Parallel Session II Chaired by Prof. Samares Pal E1-1045 Female side	
16:00-16:20	Dr. Tri Thanh Pham **(AUA)** **Kazakhstan: Nazarbayev University**	Multivariate models for assessing the effects of nanoparticles on bacterial growth
16:40-17:00	Dr. K. Udhayakumar **UAE: Zayed University**	A fractional-order delay differential tumor-immune model: external treatment and optimal control strategies
16:20-16:40	Prof. Motassem Alarydah **UAE: Khalifa University**	Mathematical Model Integrating Vaccine and Variable Immunity Period in Infectious Disease Dynamics
16:40-17:00	Dr. S Dineshkumar **India: VELLORE INSTITUTE OF TECHNOLOGY**	Higher Order Numerical Scheme for singularly Perturbed Delay Differential Equations with Small Shift Arising in Bioscience
17:00-17:20	Dr. Khalid Muhammad, UAEU	Role of the NFAT-signaling network in controlling allergic skin reactions
17:20—17:40	Dr. Ahmed Elmwafy **Portugal: University of Beira Interior**	Dynamics of Cohen-Grossberg Neural Network models: Periodic Solutions and Global Exponential Stability
17:40—18:00	Ms. Taimun Qaisar, UAU	Quadratic Stochastic Process Associated with SIR Models
Dinner 7—9 PM- Dala Alsham		

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	Day II: Friday November 24, 2023	
9:00—10:00	Keynote Speaker I, Chaired by Gennady Bocharov IT Building, Auditorium, Female Side	
	Prof. V. Volpert France: CNRS University Lyon 1	Mathematical modelling of respiratory viral infections
10—11 AM	Invited Talks Chaired by Prof. Vitaly Volpert	
10:00-10:30	Prof. Kalyan Das India: NIFTEM	Time Lag Prey Predator Model with Allee Effect
	Prof. Samares Pal India: Indian Inst. of Information Technology	A Seasonally Forced Eco-Epidemic Predator-Prey Model for the Impacts of Fear and its Carry-Over effect with Selective Predation
10:30—11:00 Coffee Break		
11:00—12:30	Day II, Parallel Session I: Chaired by Dr. Ibrahim Elmojtaba E1-1055 Female side	
11:00-11:20	Prof. Mario Lefebvre Canada: Polytechnique Montréal	Explicit solutions to delay differential equations and first-passage times of delayed Wiener processes
11:20—11:40	Dr. Dipo Aldila (AUA) Indonesia: Universitas Indonesia	Bifurcation analysis on the impact of novel TB vaccine
11:40-12:00	Dr. Tahani Al Sariri Oman: Sultan Qaboos University	Optimal heat transport induced by magnetic nanoparticle delivery in vascularized tumors
12:00-12:20	Dr. Kifah Almaqrashi Oman: Sultan Qaboos University	Mathematical Analysis and Parameter Estimation of a Two-Patch Zika Model
12:20-12:40	Mr. Zhangir Nuriyev Kazakhstan: Nazarbayev University (AUA)	Finite-time synchronization for fuzzy shunting inhibitory cellular neural networks

11:00—12:30

	Day II, Parallel session II, Chaired by Dr. Ardak KASHKYNBAYEV E1-1045 Female side	
11:00-11:20		
11:20—11:40	Dr. Soundararajan Ganesan Kazakhstan: Nazarbayev University (AUA)	Robust Exponential H∞ Filtering for Discrete-Time Complex-Valued Neural Networks with Time-Varying Delays
11:40-12:00	Ms. Aisha TURSYNKOZHA Kazakhstan: Nazarbayev University (AUA)	Structured dynamics of the cell-cycle at multiple scales
12:00-12:20	Dr. Abduzhappar Gaipov Kazakhstan: Nazarbayev University (AUA)	In-depth epidemiology and modeling of the future trends of communicable and non-communicable diseases in Kazakhstan using aggregated big data from the Unified National Electronic Healthcare System
12:20-12:40	Mrs. Madina Otkel Kazakhstan: Nazarbayev University (AUA)	Finite-time/fixed-time synchronization of memristive shunting inhibitory cellular neural networks via sliding mode control
11:00—12:30	Dr. Kathiresan Sivakumar Kazakhstan: Nazarbayev University (AUA)	Multi-stability analysis of fractional-order quaternion-valued neural networks with time delay
12:30—14:30	Lunch Break	

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14:30—16:50	Day II, Parallel Session III: Chaired Prof. Mario Lefebvre, E1-1055 Female side	
14:30-14:50	Dr. Abdessamad Tridane UAE: UAEU (AUA)	Dynamics of A Delayed Spatiotemporal HBV Infection Model with Capsids, CTL Immune Response and General Incidence Function
15:10-15:30	Dr. Adel Hashish UAE: UAEU (AUA)	Improved lung model for predicting aerosol deposition in lung airways
15:30-15:50	Prof. Abdallah Rababah UAE: UAEU (AUA)	Degree Reduction of Bezier Curves
15:50-16:10	Mr. Americo Matusse South Africa: University of Pretoria	Traveling Wave Solutions on Synergistic Co-infection Model in CRP Diseases
16:10-16:30	Mr. Ibrahim Nali Morocco: University of Szeged	Dynamical analysis of an HIV infection model including quiescent cells and immune response
16:30-16:50	Dr. Ayham Zaitouny UAE: UAEU	Differential Expression Network Analysis to unravel important questions about cancer immunotherapy

14:30—16:50	Day II, Parallel session IV: Chaired by Prof. Mohammed Syam E1-1045 Female side	
14:50-15:10	Ms. Sondos M. Syam Malaysia: Universiti Malaya (AUA)	Numerical method for solving integro-differential model of biological species living together
15:10-15:30	Dr. Mehmet Gumus Turkey: Zonguldak Bülent Ecevit University	Stability and Bifurcation analysis of an SIR Epidemic Model
15:30-15:50	Dr. Emad E. Elmahdy Saudi Arabia: King Saud University (AUA)	Reliability Modelling of Heterogeneous Data by Using Different Competing Weibull Mixture Models
15:50-16:10	Ms. Shraddha Salwahan India: Indian Institute of Technology	Optimal Control of a a Periodically Switching Epidemic Model
16:10-16:30	Dr. Mohamed Saadaoui Algeria: Amaar Tleidji University	Existence and stability of solution for fractional wave equation of $\beta(x)$-Laplace type with viscoelasticity

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