

# Programme-23<sup>rd</sup> IPMC 2023

## Kar Peng Shum Day

**Professor Kar Peng Shum** (02.01.1940 – 08.06.2023)

He was Honorary Director of the Institute of Mathematics at Yunnan University Kunming, PRC. He will be remembered not only for his remarkable achievements and dedication to the field of mathematics but also for his genuine passion for promoting education around the world. He has collaborated in research with leading experts in his field, in particular, Yonghua Xu, Leonid A. Bokut, B.H. Neumann, Cong Xin Wu, Liang Zhang, Ann Chi Kim and Qaiser Mushtaq. He visited Pakistan three times for the IPMC on the invitation of Professor Qaiser Mushtaq.

### Saturday 26<sup>th</sup> August 2023, Face-to-Face

09:00 – 09:10	<b>Recitation</b>
09:10 – 09:30	<b>Inaugural Speech</b> <b>Emeritus Professor Dr. Qaiser Mushtaq, Quaid-i-Azam University, Islamabad</b> <b>Convener 23<sup>rd</sup> IPMC 2023</b>
09:30 – 09:50	<b>Introduction to the IPMC Series</b> <b>Dr. Muhammad Sarwar Saeed, Secretary Organizing Committee, IPMC</b>
09:50 – 10:10	<b>Chief Guest Speech</b> <b>Professor Dr. Niaz Ahmad Akhtar (Sitara-i-Imtiaz)</b> <b>Vice Chancellor, Quaid-i-Azam University, Islamabad</b>
<b>Short Break</b>	
10:20 – 10:40	<b>Dr. Tahir Mahmood, International Islamic University, Islamabad</b> Fuzzy Sets and Their Applications in Group Theory
10:50 – 11:10	<b>Dr. Shahida Bashir, University of Gujrat, Gujrat</b> An Efficient Model for the Approximation of Intuitionistic Fuzzy Sets in terms of Soft Relations with Applications in Decision Making
11:20 – 11:40	<b>Dr. Muhammad Javaid, University of Management and Technology, Lahore</b> On Fractional Metric Dimensions of Connected Graphs
11:50 – 12:10	<b>Dr. Khizar Hayat, University of Kotli, AJ&amp;K</b> Type-2 Soft Graphs
12:20 – 12:40	<b>Dr. Amna Kalsoom, International Islamic University, Islamabad</b> Fixed Point Property for Semitopological Semigroups
<b>Lunch Break</b>	
<b>Keynote Lecture</b>	
14:00 – 14:40	<b>Emeritus Professor Dr. Qaiser Mushtaq, Quaid-i-Azam University, Islamabad</b> Coset Diagrams for the Modular Group
14:50 – 15:10	<b>Dr. Muhammad Naseer Khan, Govt. Postgraduate College Rawalakot AJ &amp; K</b> The Structures of Path Coalgebra of a Weak Hopf Quiver
15:20 – 15:40	<b>Dr. Usman Ali, University of Management and Technology, Lahore</b> Computing Zagreb Connection Indices of the Cartesian Product for Molecular Networks
15:50 – 16:10	<b>Mr. Syed Sikander Shirazi, Muhammad Ali Jinnah University, Karachi</b> Jensen-Steffensen, Jensen-Mercer and Niezgodna's Inequalities for Convexifiable Functions with Applications
16:20 – 16:40	<b>Dr. Kifayat Ullah, Riphah International University, Lahore Campus</b> Spherical and T-Spherical Fuzzy Sets for Decision Making Problems
<b>Tea</b>	

## M. M. Deza Day

**Professor Michel Marie Deza** (27.04.1939 – 23.11.2016)

He was an eminent Professor of mathematics specializing in combinatorics, discrete geometry and graph theory. He retired as a Director of the famous French National Centre for Scientific Research (CNRS). Professor Deza visited Pakistan for IPMC twice on the invitation of Professor Qaiser Mushtaq.

### Sunday, 27<sup>th</sup> August 2023-Online

<b>08:50 – 09:00</b>	<b>Welcome address by the Convener of the 23<sup>rd</sup> IPMC 2023 Emeritus Professor Dr. Qaiser Mushtaq, Quaid-i-Azam University, Islamabad</b>		
<b>09:00 – 09:40</b>	<b>Keynote Lecture</b> <b>Professor Khalik Guseinov, Eskisehir Technical University, Turkiye</b> Continuity of $L_p$ Balls and an Application to Input-Output System Described by the Urysohn Type Integral Operator		
<b>09:50 – 10:30</b>	<b>Keynote Lecture</b> <b>Dr. Loredana Simcic, University of Rijeka, Croatia</b> Uniqueness of a Generalized Solution for a Micropolar Real Gas Flow with Spherical Symmetry		
	<b>Channel A</b>	<b>Channel B</b>	<b>Channel C</b>
<b>10:40 – 11:00</b>	<b>Dr. Maram Alossaimi</b> The Poisson spectrum of a class of Poisson algebras	<b>Miss Sabah Baibeche</b> Numerical analysis for nonlinear wave equations with micro temperatures	<b>Dr. Rebiha Benterki</b> Phase portraits of Piecewise differential Systems with a Pseudo equilibria
<b>11:05 – 11:25</b>	<b>Dr. Milica Kolundžija</b> The generalization of Sherman-Morrison-Woodbury formula for the generalized Drazin inverse	<b>Miss Abibssi Imane</b> Existence of mild solutions for second order partial functional perturbed pseudo integro-differential with finite state dependent delay	<b>Mrs. Nardjis Lachachi</b> Mild Solutions For Perturbed Partial Evolution Equations with Finite State-Dependent Delay involving Caputo's Fractional order Derivative
<b>11:30 – 11:50</b>	<b>Dr. Saima Mustafa</b> Subclasses of Analytic functions based on Hpergeometric and Cho-Kwon-Srivastava Operators	<b>Dr. Rebiha Saffidine</b> Necessary and Sufficient condition for observability of a class of hybrid control systems	<b>Mr. Babar Sultan</b> Boundedness of fractional integrals on grand weighted Herz spaces with variable exponent
<b>11:55 – 12:15</b>	<b>Mrs. MA Mateos Camacho</b> Some results of the Total Triple Roman Domination in Graphs	<b>Dr. Lila Ihaddadene</b> On the stabilization of an Navier's elastic model for thin plates	<b>Mr. Ibrahim Merabet</b> Open Problem in the Calculus Of Variations
<b>12:20 – 12:40</b>	<b>Dr. Ammara Nosheen</b> Interval valued Jensen's inequalities for h-convex functions on time scales	<b>Dr. Kheireddine Biroud</b> Nonlocal Elliptic Systems with Gradient Source Terms	<b>Miss Hayat Bensella</b> On diophantine equation related to linear reccurent sequences and Baker's method
<b>12:45 – 13:00</b>	<b>Dr. Mehamdia Abd elhamid</b> Extension of modified Hestenes-Stiefel conjugate gradient method to non parametric estimation	<b>Ms Nour Elhouda Allaoui</b> Existence and regularity of Pseudo-monotone operator with irregular data	<b>Miss INES GARTI</b> Well-posedness of solutions for the generalized Boussinesq equations
<b>13:00 – 14:00</b>	<b>Break</b>		

<b>14:00 – 14:40</b>	<b>Keynote Lecture</b> <b>Professor Anita Tomar, Sri Dev Suman Uttarakhand University, India</b> Some Recent Applications of Fixed Points and Fixed Figures		
<b>14:50 – 15:30</b>	<b>Keynote Lecture</b> <b>Dr. Ozen Ozer, Kırklareli University, Turkiye</b> On the Benefits of Diophantine Equations and Some Particular Types with New Perspectives' Solutions		
	<b>Channel A</b>	<b>Channel B</b>	<b>Channel C</b>
<b>15:40 – 16:00</b>	<b>Dr. Abid Ali</b> Integral subgroups of Kac-Moody groups	<b>Dr. Zaamoune Faiza</b> Extended Maximum Attractor Range to Multispirals Chaotic Attractors in Chua's system	<b>Miss Zahra Ameur</b> Some results concerning the Diophantine equation $(x^n - 1)(y^m - 1) = z^2$
<b>16:05 – 16:25</b>	<b>Dr. Irfan Younas</b> Presentations and Graphs of Inverse LA-semigroups	<b>Dr. Mebarki Maroua</b> Study of reaction diffusion system with diagonal matrix	<b>Dr. Benseghir Aissa</b> Study of the asymptotic behavior of a frictionless contact problem
<b>16:30 – 16:50</b>	<b>Dr. Muhammad Nazam</b> On Orthogonal Interpolative Iterative Mappings with Applications in Multiplicative Calculus	<b>Dr. Raouf Ziadi</b> A covering method combined with the Hook-Jeeves algorithm for continuous global optimization problems	<b>Miss Bouacida Ichrak</b> Approximate Controllability of Sobolev Type $(k, \psi)$ -Hilfer Fractional Integro-Differential Equations In Hilbert Space
<b>16:55 – 17:15</b>	<b>Dr. Tabchouche Nesrine</b> Primal-Dual Interior Point Methods for SDLCP Based on a New Type of Kernel Functions	<b>Dr. Helal Mohamed</b> Perturbed Hadamard Fractional Integral Equations in Fréchet Spaces	<b>Miss Besma Laouadi</b> A Proposed Coincidence Point Theorem Using C-Class Function
<b>17:20 – 17:30</b>	<b>Dr. Mehsin Jabel Atteya</b> Notes on Multiplicative Generalized $(\sigma, \tau)$ -Reverse Derivations with Lie Ideals of Semiprime $\star$ -Rings	<b>Dr. Zakia Tebba</b> Result of global existence and finite time blow-up in a new class of non-linear viscoelastic wave equation	<b>Miss Samiha Djemai</b> Pattern formation in reaction-diffusion system

## I.B.S. Passi Day

**Professor I.B.S. Passi** (20.08.1939 – 02.10.2021)

He was an eminent mathematician who specialized in group theory. He was a doctoral student of David Rees. After retiring as a Dean, he was appointed as an Emeritus Professor at Punjab University, India. His results on the dimension subgroups, augmentation powers in group rings received wide recognition. He visited Pakistan for IPMC on the invitation of Professor Qaiser Mushtaq.

### Monday, 28<sup>th</sup> August 2023-Online

<b>09:00 – 09:40</b>	<b>Keynote Lecture</b> <b>Dr. Taras Goy, Vasyl Stefanyk Precarpathian National University, Ukraine</b> Lucas Identities Using the Generalized Trudi Formula		
<b>09:50 – 10:30</b>	<b>Keynote Lecture</b> <b>Dr. Ferit Gurbuz, Kırklareli University, Turkiye</b> Variable Exponent Vanishing Morrey Type Spaces on Unbounded Domains		
	<b>Channel A</b>	<b>Channel B</b>	<b>Channel C</b>
<b>10:40 – 10:55</b>	<b>Dr. Ashar Ghulam</b> Constructing an example of a Fractal	<b>Miss Mehvish Sultan</b> Grand weighted Herz spaces	<b>Mr. Mbekezeli Nxumalo</b> On open maps over the Salbany compactification
<b>11:00 – 11:15</b>	<b>Dr. Harrouche Nesrine</b> Hilbert solution of fuzzy fractional boundary value problems	<b>Dr. Khalil Ahmad</b> New Exact Solutions of Burgers' Equation Using Power Index Method	<b>Ms Imane Ouakil</b> Solvability of frictional contact problem for viscoelastic materials
<b>11:20 – 11:35</b>	<b>Dr. Farheen Ibraheem</b> Supervised Computing Algorithm for Predicting Data Patterns	<b>Mr. Jabbar Ahmad</b> T-bipolar soft rings and their algebraic properties	<b>Mr. Muhammad Bilal</b> Some inequalities related to Csiszár divergence via diamond integral on time scales
<b>11:40 – 11:55</b>	<b>Dr. Djamel Abid</b> Existence Result For A Fractional Elliptic Problem Involving Critical Exponent Via Nehari Manifold	<b>Ms Marwa Khemis</b> Existence and uniqueness results of a neutral iterative differential equation via Krasnoselskii's fixed point theorem	<b>Mr. Youssouf Mezzar</b> Converting linear systems into matrix equations and vice versa using Kronecker sum decomposition
<b>12:00 – 12:15</b>	<b>Dr. Tehreem</b> Multigranulation Roughness in Semihypergroups	<b>Ms Asma Hammou</b> Duality in Spaces of p-Nuclear Operators	<b>Ms Meriem Chabekh</b> Discrete Energy Behavior of a Bresse-Timoshenko System
<b>12:20 – 12:35</b>	<b>Miss Roufaida Ketfi</b> Asymptotic analysis of solutions to the problem $\mathcal{E}^2\Delta u + \lambda u = F(u)$ on a ring in $\mathbb{R}^n$	<b>Mr. Hassan Messaoudi</b> Long-time behavior of the solution of the nonlinear piezoelectric beam system	<b>Miss Ikram Hamed</b> Risk-Neutral for System Driven by Fractional Brownian Motion
<b>12:40 – 12:55</b>	<b>Dr. Radhouane Aounallah</b> Global Existence and Energy Decay Analysis of a Timoshenko Beam System with Internal Fractional Feedback: A Lyapunov-based Approach	<b>Dr. Semmar Billel</b> Dynamical Analysis of a New Three-Dimensional Lotka-Volterra Mode with Incommensurate Conformable Fractional Order	<b>Mr. Sami Loucif</b> Exponential stability of some evolution problems with thermal effect and distributed delay
<b>13:00 – 14:00</b>	<b>Break</b>		

<b>14:00 – 14:40</b>	<b>Keynote Lecture</b> <b>Prof. Shi Yin, Hebei Agricultural University, China</b> Artificial intelligence-driven bioenergy system: Digital green innovation partner selection of bioenergy enterprises based on interval fuzzy multi-criteria decision making		
<b>14:50 – 15:30</b>	<b>Keynote Lecture</b> <b>Professor Vijay Kumar, Manav Rachna International Institute of Research &amp; Studies, Faridabad, India</b> Generalized Theorem for 0-Cauchy Completion in Partial Fuzzy Metric Space		
	<b>Channel A</b>	<b>Channel B</b>	<b>Channel C</b>
<b>15:40 – 15:55</b>	<b>Dr. Bilal Basti</b> A hybrid model for a class of multidimensional nonlinear free energy equations	<b>Miss Nawal Bettayeb</b> On Caputo Tempered Fractional Differential Equations	<b>Mr. Mohammed Amine Benmelouka</b> An abstract approach for the study of an elliptic problem
<b>15:55 – 16:10</b>	<b>Mr. Ubaid ur Rehman</b> Bipolar Complex Fuzzy Linguistic set	<b>Prof. Mohamed Dalah</b> An implicit scheme for the fractional advection equation : Codes Matlab	<b>Dr. Djamila Benterki</b> The existence of solutions of nonlinear Mindlin-Timoshenko with thermodifusion effects
<b>16:10 – 16:25</b>	<b>Mrs. Lina Chetioui</b> Numerical solution of general fractional Riccati differential equation	<b>Ms Chaima Saadi</b> Existence results for non-linear fractional problem involving a distributional Riesz gradient	<b>Dr. Selmani Wissame</b> Attractors and Strange Attractors
<b>16:25 – 16:40</b>	<b>Miss Lynda Mezghiche</b> New results for a housefly model with iterative source term	<b>Dr. Nazeran Idrees</b> Distance Two Labeling of Olive tree, W-graph and H-graph	<b>Dr. Kaid Mohammed</b> Existence of solution for nonlinear FDEs
<b>16:40 – 16:55</b>	<b>Dr. Munir Ahmed</b> Weak Hopf Algebra and Kaplansky's Sixth Conjecture	<b>Kainat Naeem</b> Advancing Convex Optimization: Modern and Current Evolution and Future Directions	
<b>Conclusion</b>			

**NOTE: There are three parallel channels of talks.**

**Talks including keynote lectures listed in the column colored blue will be held in Channel A**

**Talks listed in the column colored red will be held in Channel B**

**Talks listed in the column colored green will be held in Channel C**