

Mathematics In-house Symposium 2026

Venue: KCB 522

Department of Mathematics
Indian Institute of Technology Madras

DAY-I

9:20–9:30	Inauguration	Arindama Singh, HoD, Dept. of Math., IITM
Session I	Chair: Ch. Srinivasa Rao	
9:30–9:55	Saurav Samantaray	Higher order Asymptotic-Preserving penalized numerical schemes for the Euler-Poisson system in the quasineutral limit
10:00–10:25	Jiya Rose Johnson	Transfinite Diameter, Logarithmic Capacity, and the Logarithmic Potential Operator
10:30–10:55	Parmar Parth Talshi	Linear Stability Analysis of a Power-Law Fluid Flow in a Fluid-Porous Channel Using a One-Domain Approach
Coffee Break		
Session II	Chair: Ramesh Kasilingam	
11:10–11:35	N. Narayanan	Colorings and Geometric Configurations
11:40–12:05	Sweta Patra	Rank-One Perturbations of the Identity: A Classification of Inverse Z -Matrices
12:10–12:35	T. Divyadevi	On the distance matrices of bi-block graphs
Lunch Break		
Session III	Chair: R. Radha	
14:15–14:40	Shamim Sohel	Ball-covering property of Banach spaces: an orthogoinality approach
14:45–15:10	Surjit Kumar	Weakly Spherical Tuple of Operators
15:15–15:40	Anmary Tonny	Some properties of symplectic eigenvalues
Coffee Break		
Session IV	Chair: Shruti Dubey	
15:55–16:20	Puja Sonawane	Generalized Sampling and Approximation in Shift-Invariant Spaces
16:25–16:50	German Philo H	Homogenization of Elliptic Partial Differential Equations Using Two-Scale Convergence
16:55–17:20	S. K. Sahu	Construction of Hybrid Fractal Interpolation Function

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Session I	Chair: Neelesh S Upadhye	
9:30–10:55	Dipnit Biswas	Tableau Reconstruction from 3-minors
10:00–10:25	Nitin Bartwal	Approximation Theory of Neural Networks
10:30–10:55	Kesav S. Krishnan	Statistical Mechanics of the Focusing Non Linear Schrödinger Equation
Coffee Break		
Session II	Chair: TBA	
11:10–11:35	Uma V	Equivariant K-theory of cellular toric bundles and related spaces
11:40–12:05	Arijit Mukherjee	Classification of products of Hilbert schemes of points on surface
12:10–12:35	Somnath Mondal	Boothby-Wang duality for quotients of R^{2n} via group 2-cocycle
Lunch Break		
Session III	Chair: TBA	
14:15–14:40	Sumesh K.	The Mathematical Structure of Quantum Gaussian States and Channels
14:45–15:10	Samapti Pratihari	Unipathic matrices and their inverses
15:15–15:40	Jeba Singh	Grothendieck-Witt groups and sub-integral extensions
Coffee Break		
Session IV	Chair: TBA	
15:55–16:20	Debajyoti De	When Arithmetic Meets Geometry: From Square Numbers to Rational Triangles
16:25–16:50	Ravi Kalwaniya	Deterministic Prime Generation Beyond $N \pm 1$
16:55–17:20	Manohar Kumar	Componentwise linearity of support-two monomial ideals and Fröberg's analogue.