

**38<sup>th</sup> Annual Conference of the Ramanujan Mathematical Society (RMS 2023)**  
**December 22-24, 2023**  
**IIT Guwahati**

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**DAY-1 (December 22, 2023)**

<b>22<sup>nd</sup> Dec</b>	8:00-8:55 Registration (Auditorium)	9:00-9:10 Inauguration (Auditorium)	9:10-10:05 Plenary 1 (Auditorium)	10:05-10:35 High Tea (Auditorium)	10:50-11:50 ST 1, 2 (Core-5)	11:55-12:55 ST 3, 4 (Core-5)	1:00-2:30 Lunch (Conference Center)	2:40-4:00 CT (Core-5)	4:00-4:20 Tea (Core-5)	4:20-5:00 CT (Core-5)	5:20-6:15 Public Lecture (Auditorium)	6:20-7:20 GBM (Auditorium)
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**DAY-2 (December 23, 2023)**

<b>23<sup>rd</sup> Dec</b>	9:00-9:55 Plenary 2 (Auditorium)	10:00-10:30 Tea (Auditorium)	10:45-11:45 ST 5, 6 (Core-5)	11:50-12:50 ST 7, 8 (Core-5)	1:00-2:30 Lunch (Conference Center)	2:40-3:40 ST 9, 10 (Core-5)	3:45-4:05 CT (Core-5)	4:05-4:25 Tea (Core-5)	4:25-5:45 CT (Core-5)	6:00-6:55 Plenary 3 (Auditorium)
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**DAY-3 (December 24, 2023)**

<b>24<sup>th</sup> Dec</b>	9:00-9:55 Plenary 4 (Auditorium)	10:00-10:30 Tea (Auditorium)	10:45-11:45 ST 11, 12 (Core-5)	11:50-12:50 ST 13, 14 (Core-5)	1:00-2:30 Lunch (Conference Center)	2:40-3:40 ST 15, 16 (Core-5)	3:45-4:05 CT (Core-5)	4:05-4:25 Tea (Core-5)	4:25-5:25 CT (Core-5)	5:40-6:35 Plenary 5 (Auditorium)	6:40-7:00 Valedictory (Auditorium)
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\*Auditorium: Dr. Bhupen Hazarika Auditorium    \*ST: Symposia Talks    \*CT: Contributory Talks

\*Average walking time from Auditorium to Core-5 is 10 minutes

## Plenary/Public Talks

Venue: Dr. Bhupen Hazarika Auditorium

(December 22-24, 2023)

Talk	Date	Time	Speaker	Title of the talk
Plenary 1 (Professor R. Balakrishnan's Endowment Lecture)  Chair: Anupam Saikia	22 Dec	9:10-10:05	M. S. Raghunathan (CBS Mumbai)	Two Alumni of Loyola College, Chennai
Public Lecture  Chair: Jugal Verma	22 Dec	5:20-6:15	K. Ramasubramanian (IIT Bombay)	The History and Historiography of the Discovery of Calculus in India
Plenary 2  Chair: Panchugopal Bikram	23 Dec	9:00-9:55	Kallol Paul (Jadavpur University)	Geomtery of the space of linear operators from the perspective of Birkhoff-James orthgonality
Plenary 3  Chair: Tony J. Puthenpurakal	23 Dec	6:00-6:55	Gurmeet Kaur Bakshi (Panjab University)	Units in integral group rings
Plenary 4  Chair: Anand Sawant	24 Dec	9:00-9:55	Indranil Biswas (TIFR Mumbai)	Nonabelian Hodge Theory
Plenary 5  Chair: Rajen Kumar Sinha	24 Dec	5:40-6:35	Manjunath Krishnapur (IISc Bangalore)	Nodal sets and nodal domains of random eigenfunctions of the Laplacian

## Algebra

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

DAY-1 (December 22, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Algebra	5G1	10:50-12:55	Indranath Sengupta (IIT Gandhinagar)	Join of affine semigroups
			Ramakrishna Nanduri (IIT Kharagpur)	On componentwise linearity of edge ideals of weighted oriented graphs
			Prosenjit Das (IIST, Thiruvananthapuram)	A criterion to determine residual coordinates of $A^2$ -fibrations
			Kumari Saloni (IIT Patna)	Buchsbaumness of the associated graded rings of filtrations

DAY-2 (December 23, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Algebra	5G1	10:45-12:50	Jugal K. Verma (IIT Bombay)	Noetherian symbolic Rees algebras
			Neeraj Kumar (IIT Hyderabad)	Rees algebra of maximal order Pfaffians and its diagonal subalgebras
			Mousumi Mandal (IIT Kharagpur)	A study of $V$ -number for some monomial ideals
			Clare D'Cruz (CMI Chennai)	Symbolic powers of ideals, resurgence and Waldschimid constant
		2:40-3:40	Tony J. Puthenpurakal (IIT Bombay)	Bockstein cohomology of mcm modules over Gorenstein isolated singularities
			Vivek Mukundan (IIT Delhi)	On the resurgence and asymptotic resurgence of homogeneous ideals

## Algebra

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Algebra	5G1	10:45-12:50	Suprajo Das (IIT Bombay)	A density function of the epsilon multiplicity
			Rabeya Basu (IISER Pune)	Projective modules, classical K-theory and linear algebra
			Dipankar Ghosh (IIT Kharagpur)	Auslander-Reiten conjecture and finite homological dimension of Hom
			Soumi Tikader (Diamond Harbour Women's University)	Monic inversion principle and complete intersection

\*Each Symposia talk is of 30 minutes duration including discussions

## Algebra

(Venue: Academic Complex - Core 5)

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<b>DAY-1 (December 22, 2023): Contributory Talks</b>				
<b>Subject</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Algebra Chair: Clare D'Cruz	5G1	2:40-4:00  (Parallel Session-I)	Aakash Choudhary (IIT Delhi)	Existence of primitive pairs with two prescribed traces over finite fields
			Ayan Ghosh (Jadavpur University)	Trigonometric thin sets and statistically characterized subgroups
			Aniruddha Saha (IIT Hyderabad)	Vanishing of (co)homologies and CM modules of minimal multiplicity
			Dimple Rani Goyal (Panjab University)	A characterisation of matrix rings
Algebra Chair: Ramakrishna Nanduri	5006	2:40-4:00  (Parallel Session-I)	Sugata Mandal (RMVERI, Howrah)	Skew forms and Galois theory
			P M S Sai Krishna (IIT Bombay)	An algebraic characterization of the affine three space in arbitrary characteristic
			Chitra Venugopal (IIT Hyderabad)	Rees algebra of maximal order Pfaffians and its diagonal subalgebras
			Jyotsna Sharma (IIT Delhi)	Fields with primitive elements having primitive image under rational functions
Algebra Chair: Prosenjit Das	5G1	4:20-5:00  (Parallel Session-II)	Shruti Priya (IIT Kharagpur)	A note on Ratliff-Rush filtration, reduction number and postulation number of $m$ -primary ideals
			Praveen Manju (IIT Delhi)	$(\sigma, \tau)$ -derivations of group rings with applications
Algebra Chair: Kumari Saloni	5006	4:20-5:00  (Parallel Session-II)	Tapas Kumar Roy (IIT Kharagpur)	On combinatorial characterization of generators of toric ideal of weighted oriented graphs
			B. Prajapati (Dr. B.R. Ambedkar Uni. Delhi)	Composition of generalized derivations act as a Jordan product in prime rings

## Algebra

(Venue: Academic Complex - Core 5)

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Algebra Chair: Neeraj Kumar	5G1	3:45-4:05	Sandeep Singh (Akal University, Talwandi Sabo)	On the relationship Between different Automorphism Groups of a Finitely Generated Group
Algebra  Chair: Vivek Mukundan	5G1	4:25-5:45	Pradeep Rai (IIT BHU)	Quantum codes from skew constacyclic codes over the ring $R = F_q[u_1, u_2, \dots, u_r]/\langle u_i^3 - u_i, u_{ij} - u_{ji} \rangle$
			Himanshu Rewri (IIT Delhi)	Isotropy group of Lotka-Volterra derivations of $K[X_1, \dots, X_n]$
			Tanay Saha (Mizoram University)	On the distance to the nearest non-prime polynomial matrix
			Anoot Kumar Yadav (IIT Patna)	Ratliff-Rush filtration, Hilbert coefficients and reduction number of integrally closed ideals

<b>DAY-3 (December 24, 2023): Contributory Talks</b>				
Algebra Chair: Suprajo Das	5G1	3:45-4:05	P Prakash (MIT, Manipal)	Ideals of S-semigroups
Algebra  Chair: Rabeya Basu	5G1	4:25-5:25	Tushar Singh (MNNIT Allahabad)	Existence of S-primary decomposition in S-Noetherian rings
			Shashi Ranjan Sinha (IIT Hyderabad)	On Auslander's depth formula
			Annoy Sengupta (IIT Kanpur)	Hammocks for non-domestic string algebras

**\*Each contributory talk is of 18 minutes duration including discussions**

## Algebraic Geometry

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Algebraic Geometry	5001	10:50-12:55	Omprokash Das (TIFR Mumbai)	Contraction Problem and Minimal Model Program (MMP) of Kahler Varieties
			Buddhadev Hajra (TIFR Mumbai)	Eilenberg-MacLane Spaces in Algebraic Surface Theory
			Tanya Kaushal Srivastava (IIT Gandhinagar)	Derived vs K- vs L-equivalences
			Sanjay Amrutiya (IIT Gandhinagar)	Otabes fundamental group scheme

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Algebraic Geometry	5001	10:45-12:50	Neena Gupta (ISI Kolkata)	The Abhyankar-Sathaye Epimorphism Conjecture
			Rahul Gupta (IMSc Chennai)	Kernel of the cycle class map
			Archana Morye (University of Hyderabad)	Grobner basis and its geometric implications
			Sarbeswar Pal (IISER TVM)	Fano manifolds of Picard number one whose co-tangent bundle is algebraically completely integrable system and its endomorphisms
		2:40-3:40	Umesh Dubey (HRI Allahabad)	Semi-Tannakian subcategories of loop quiver bundles
			Gopinath Sahoo (TIFR Mumbai)	Tensor t-structures on the derived categories of schemes

## Algebraic Geometry

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Algebraic Geometry	5001	10:45-12:50	V. Uma (IIT Madras)	Equivariant Grothendieck ring of flag Bott manifolds
			Jyoti Dasgupta (IIT (ISM) Dhanbad)	Logarithmic connections on toric principal bundles
			Suratno Basu (TCG CREST, Kolkata)	Existence of Ulrich Bundles on some surfaces of general type
			Aditya Subramaniam (IISER Tirupati)	Seshadri constants and curve arrangements

\*Each Symposia talk is of 30 minutes duration including discussions



## Algebraic Graph Theory

(Venue: Academic Complex - Core 5)

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DAY-1 (December 22, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Algebraic Graph Theory  Chairs: Bhaba Kumar Sarma, Sivaramakrishnan Sivasubramanian	5002	10:50-12:55	Sivaramakrishnan Sivasubramanian (IIT Bombay)	Four point condition matrices of edge weighted trees
			Shamik Ghosh (Jadavpur University)	Graphs from rings
			Ranveer Singh (IIT Indore)	Ramanujan graphs (the optimal expanders)
			Projesh Nath Choudhury (IIT Gandhinagar)	Blowup-polynomials of graphs

DAY-2 (December 23, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Algebraic Graph Theory  Chairs: Shamik Ghosh, Shariefuddin Pirzada and M. Rajesh Kannan	5002	10:45-12:50	Shariefuddin Pirzada (University of Kashmir)	Ihara zeta function and Ramanujan graphs
			Anirban Banerjee (IISER Kolkata)	Hypergraph symmetries and its spectrum
			Sumit Mohanty (IIM Ranchi)	On the spectral radius of block graphs with prescribed dissociation number $\phi$
			S.K.Panda (IIT Kharagpur)	On the signless Laplacian spectrum of K-uniform hypergraphs
		2:40-3:40	Hiranmoy Pal (NIT Rourkela)	A characterization of state transfer on double subdivided stars
			S Selvaraja (IIT Bhubaneswar)	The Herzog-Hibi-Ohsugi conjecture on powers of vertex cover ideals of chordal graphs

## Algebraic Graph Theory

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Algebraic Graph Theory  Chairs: Sasmita Barik, Komal Lochan Patra and Debajit Kalita	5002	10:45-12:50	Kamal Lochan Patra (NISER Bhubaneswar)	On the minimum cut-sets of the power graph of a finite cyclic group
			Rakesh Jana (IIT Bombay)	The bipartite Laplacian matrix of a nonsingular tree
			Debajit Kalita (Tezpur University)	Minimizing algebraic connectivity over graphs constructed with given blocks
			Lavanya Selvaganesh (IIT BHU)	Eccentricity matrix and corona product of graphs - an overview
		2:40-3:40	M. Rajesh Kannan (IIT Hyderabad)	On the eccentricity matrices of trees: inertia and spectral symmetry
		Sasmita Barik (IIT Bhubaneswar)	Singular graphs and the reciprocal eigenvalue property	

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## Algebraic Graph Theory

(Venue: Academic Complex - Core 5)

<b>DAY-1 (December 22, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Algebraic Graph Theory  Chair: Projesh Nath Choudhury	5002	2:40-4:00	A Harshitha (MIT, Manipal)	Randic index of a graph with self-loops
			Anita Arora (IISc Bangalore)	Eccentric graph of trees and their cartesian products
			Samiron Parui (NISER Bhubaneswar)	On some general operators of hypergraphs
			Manjil P. Saikia (Ahmedabad University)	Alternating sign matrices with vertical symmetry and plane partitions
Algebraic Graph Theory  Chair: Shamik Ghosh	5002	4:20-5:00	Anwita Bhowmik (IIT Guwahati)	Hypergeometric functions for Dirichlet characters and Peisert-like graphs on $Z_n$
			Sumanta Borah (Dibrugarh University)	On generalized Randic matrix of digraphs

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
Algebraic Graph Theory Chair: Hiranmoy Pal	5002	3:45-4:05	Idweep J. Gogoi (Dibrugarh University)	On Zagreb energies of some graph operations
Algebraic Graph Theory  Chair: Hiranmoy Pal	5002	4:25-5:45	N. Konch (B. Borooah College, Assam)	Some results on $A_{\alpha}$ -spectra of graphs with pockets
			Smrati Pandey (IIT BHU)	Eccentricity matrix of distance regular graphs
			Jesmina Pervin (IIT BHU)	Structural characterization of connected graphs with integer-valued Q-spectral radius
			Shashwath S Shetty (MIT, Manipal)	On the first Zagreb index of graphs with self-loops

**DAY-3 (December 24, 2023): Contributory Talks**

Algebraic Graph Theory Chair: K. L. Patra	5002	3:45-4:05	Priyanka Singh (Pt. Deendayal Energy University)	Almost self-centered index of some graphs
Algebraic Graph Theory Chair: Debajit Kalita	5002	4:25-5:05	Gete Umbrey (JNC, Pasighat, Arunachal Pradesh)	Extraction and combination method of Boolean logic simplification
			K V Madhumitha (MIT, Manipal)	KG Sombor energy of graphs with self loops

**\*Each contributory talk is of 18 minutes duration including discussions**

## Complex Analysis

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Complex Analysis  Chairs: Swadesh Kumar Sahoo, Sabyasachi Mukherjee	5101	10:50-12:55	Sabyasachi Mukherjee (TIFR Mumbai)	Matings, holomorphic correspondences, and abers slice
			P. Muthu Kumar (IIT Kanpur)	Model spaces invariant under composition operators
			Sushil Gorai (IISER Kolkata)	Uniform approximation on polynomial polyhedral
			Swadesh Kumar Sahoo (IIT Indore)	Geometry of the Cassinian metric

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Complex Analysis  Chairs: Bappaditya Bhowmik, Srihari Sreedharan and G. P. Balakumar	5101	10:45-12:50	Srihari Sreedharan (IISER TVM)	The entropy of a certain semigroup of holomorphic maps
			Ritu Agarwal (MNIT Jaipur)	Gap theorems in bicomplex space
			G. P. Balakumar (IIT Palakkad)	Limits of an increasing sequence of complex manifolds
			Diganta Borah (IISER Pune)	Some remarks on the squeezing function
		2:40-3:40	Bappaditya Bhowmik (IIT Kharagpur)	Area theorems for certain classes of functions having quasiconformal extensions
			Vasudeva Rao Allu (IIT Bhubaneswar)	Bohr radius for Banach spaces on simply connected domains

## Complex Analysis

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Complex Analysis  Chairs: Guru Prem Prasad, Abhijit Banerjee and Sanjeev Singh	5101	10:45-12:50	Abhijit Banerjee (Kalyani University)	A survey on the existence and forms of solutions of different variants of Fermat type functional equations
			Sanjeev Singh (IIT Indore)	On starlikeness of regular Coulomb wave functions
			Sivaguru (TIFR CAM Bangalore)	The Friedrichs operator and circular domains
			Guru Prem Prasad (IIT Guwahati)	Baker domains in the dynamics of meromorphic functions
		2:40-3:40	Sairam Kaliraj (IIT Ropar)	Area-minimizing minimal graphs over non-convex domains
			Gorachand Chakraborty (Sidho Kanho Birsha University)	On rotational domains for meromorphic functions

**\*Each Symposia talk is of 30 minutes duration including discussions**

## Complex Analysis

(Venue: Academic Complex - Core 5)

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DAY-1 (December 22, 2023): Contributory Talks				
Subject	Venue	Time	Speaker	Title of the talk
Complex Analysis  Chair: P. Muthu Kumar	5101	2:40-4:00	Molla Basir Ahamed (Jadavpur University)	Generalized Bohr inequalities for certain classes of functions on unit disk
			Sabir Ahammed (Jadavpur University)	Bohr phenomeon for class of analytic self-maps on the unit disk and class of subordination
			Partha Pratim Roy (Jadavpur University)	Sharp bound of third Hankel determinant for inverse coefficients of starlike function of order $1/2$
			Subhadip Pal (IIT Bhubaneswar)	Multidimensional Bohr radii for vector-valued holomorphic functions
Complex Analysis  Chair: Sushil Gorai	5101	4:20-5:00	Abhishek Pandey (IIT Bhubaneswar)	Visibility in quasihyperbolic geometry: a notion of strict negative curvature in the Riemannian sense
			Vibhuti Arora (NIT Calicut)	Successive coefficients for functions in the spirallike family

## Complex Analysis

(Venue: Academic Complex - Core 5)

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Complex Analysis Chair: Srihari Sreedharan	5101	3:45-4:05	Jiju Mammen (IIT Palakkad)	On retracts of balanced domains of holomorphy
Complex Analysis  Chair: Diganta Borah	5101	4:25-5:45  (Parallel Session-I)	Simi Bhuyan (Gauhati University)	Boundedness of generalized Hilbert-type operators on certain analytic function spaces
			Subham Chatterjee (SKB University)	On K-meromorphic functions with Siegel disk
			Apolo Chutia (Gauhati University)	Bohr inequalities for certain two parameter Cesaro averaging operators
			Gaurav Kumar (IIT Guwahati)	Dynamics of two one-parameter families of meromorphic functions involving sine and cosine hyperbolic functions
Complex Analysis  Chair: Bappaditya Bhowmik	5106	4:25-5:25  (Parallel Session-I)	Soumyadip Majee (SKB University)	Study on the residual Julia sets of transcendental semigroups
			Nitai Mandal (SKB University)	Study on the dynamics of root finding maps
			Adithya Mayya (MIT, Manipal)	Location of zeros of one parameter family of rational harmonic trinomials

<b>DAY-3 (December 24, 2023): Contributory Talks</b>				
Complex Analysis Chair: Sanjeev Singh	5101	3:45-4:05	Tanchar Molla (Dumkal College, WB)	Generalization of the Enestrom-Keakeya-theorem through polynomial coefficients relaxation
Complex Analysis  Chair: Guru Prem Prasad	5101	4:25-5:25	Soumen Pal (IIT Bhub)	The Julia sets of Chebyshev's method with small degrees
			Jasbir Parashar (IIT Ropar)	Meromorphic harmonic spirallike functions with a pole at the origin
			Shalini Rana (University of Delhi)	Radii of starlikeness of ratios of analytic functions with fixed second coefficients

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## Functional Analysis

(Venue: Academic Complex - Core 5)

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DAY-1 (December 22, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Functional Analysis Chair: Sandipan De	5102	10:50-12:55	Vijay Kodiyalam (IMSc, Chennai)	Unitary invariants and an application to quantum solutions of Euler's 36 officers problem
			Arup Chattopadhyay (IIT Guwahati)	Higher-order spectral shift measures in several variables
			Sasmita Patnaik (IIT Kanpur)	Selfadjoint-Ideal Semigroups for Bounded Operators
			Bata Krishna Das (IIT Bombay)	de Branges-Rovnyak spaces which are complete Nevanlinna-Pick spaces

DAY-2 (December 23, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Functional Analysis Chair: Ranjana Jain	5102	10:45-12:50	Soumyashant Nayak (ISI Bangalore)	Algebraic aspects and functoriality of the set of a liated operators
			Dhriti Ranjan Dolai (IIT Dharwad)	Smoothness of the integrated density of states (IDS) for the Anderson model on the Bethe lattice
			Debabrata De (NISER Bhubaneswar)	On symmetric embedding of purely atomic von Neumann algebras
			Diptesh Saha (ISI Kolkata)	Non-commutative Neveu decomposition and associated ergodic theorems
Chair: Sasmita Patnaik		2:40-3:40	Sayan Chakraborty (TCG CREST, Kolkata)	Classi cation of crossed product $C^*$ -algebras of noncommutative tori by cyclic groups
			Keshab Chandra Bakshi (IIT Kanpur)	A family of new subfactors arising from Hadamard matrices

## Functional Analysis

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Functional Analysis  Chair: Soumayashant Nayak	5102	10:45-12:50	Ranjana Jain (Delhi University)	Centres of certain tensor products of Banach algebras
			Rahul Kumar R (IIT Kanpur)	Mixed $q$ -deformed Araki-Woods von Neumann algebras
			Monojit Bhattacharjee (BITS Goa)	Beurling quotient modules on the polydisc
			Sandipan De (IIT Goa)	Classification of pairs of commuting isometries with compact normal cross commutators
Chair: Sayan Chakraborty		2:40-3:40	Kunal Krishna Mukherjee (IIT Madras)	
			Issan Patri (ISI Delhi)	The Eros-Marechal topology on the space of von-Neumann algebras

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## Functional Analysis

(Venue: Academic Complex - Core 5)

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<b>DAY-1 (December 22, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Functional Analysis Chair: Samya Kumar Ray	5102	2:40-4:00	Malay Mandal (CMI Chennai)	Operator Space structures of non-commutative unitary $C^*$ -algebra
			Shamim Sohel (Jadavpur University)	Extreme contractions on some special Banach spaces
			Souvik Ghosh (Jadavpur University)	On some geometric constants in a Banach space
			Arvish Dabra (IIT Delhi)	Arens regularity of the Orlicz Figa-Talamanca Herz Algebra
Functional Analysis Chair: Sasmita Patnaik	5102	4:20-5:00	Mansi Mishra (IIT BHU)	The Weyl Transform of a measure
			Ritika Singhal (IIT Delhi)	Vector-Valued Properties of Weyl Transform

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
Functional Analysis Chair: Debabrata De	5102	3:45-4:05	Uday Shankar Chakraborty (Assam University)	A Bishop-Phelps-Bollobas type property for Banach spaces with respect to minimum norm of bounded linear operators
Functional Analysis Chair: Dhriti Ranjan Dolai	5102	4:25-5:45	Sureshkumar M (IISER Bhopal)	Rokhlin Dimension: Permanence Properties and Ideal Separation
			Santu Bera (IIT Kanpur)	A spectral dichotomy for commuting $\mathfrak{M}$ -isometries with negative core operator
			Shubham Jain (IIT Kanpur)	Toeplitz operators on the $\mathfrak{N}$ -dimensional Hartogs triangle
			Pradip Debnath (Tezpur University)	Multivalued Geraghty contractions and their best proximity points

## Functional Analysis

(Venue: Academic Complex - Core 5)

<b>DAY-3 (December 24, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Functional Analysis Chair: Ranjana Jain	5102	3:45-4:05	Praveen Sharma (Shri Vishwakarma Skill University)	Interpolation Results for Convergence of Implicit Euler Schemes with Accretive Operators
Functional Analysis Chair: Panchugopal Bikram	5102	4:25-5:25  (Parallel Session-I)	Arshad Khan (Shiv Nadar Inst. of Eminence)	Nearly Invariant Brangesian Subspaces
			Sugirtha Gayathri (IIT Hyderabad)	Kowalski-Słodkowski Theorem for Condition Spectrum
			Mohana Rahul Nandan (IIT Hyderabad)	A Generalized GKZ theorems and Kowalski-Słodkowski theorem for Reproducing kernel Hilbert space
Functional Analysis Chair: Kunal Krishna Mukherjee	5106	4:25-5:25  (Parallel Session-I)	Krishna Bhattacharjee (The ICFAI University, Tripura)	New fixed point theorem on complete b-metric space by using Rus contraction mapping
			Suman Kumar (IGNTU Amarkantak, MP)	Controllability of Second Order Differential Systems with Nonlinear Control
			Kousik Dhara (IISc Bangalore)	Two Truncated Matrix Moment Problems

**\*Each contributory talk is of 18 minutes duration including discussions**

## Geometry and Topology

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Geometry and Topology  Chairs: Anima Nagar and Rukmini Dey	5004	10:50-12:55	Radhika Gupta (TIFR Mumbai)	Combinatorial isoperimetric inequality for the free factor complex
			Abhijit Pal (IIT Kanpur)	Boundary at Infinity
			Pradip Kumar (SNIoE)	Constructing Zero Mean Curvature Surfaces in Euclidean Space and in the Lorentz-Minkowski Space.
			Aritra Bhowmick (IISER Kolkata)	Fibration with a Section and H-Splitting of the Looped Total Space

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Geometry and Topology  Chairs: Riddhi Shah, Dheeraj Kulkarni and Arijit Dey	5004	10:45-12:50	Ved Datar (IISc Bangalore)	Diameter rigidity for Kahler manifolds with positive bi-sectional curvature
			Arijit Dey (IIT Madras)	Brauer group of moduli space of parabolic bundles
			Abhijeet Ghanawat (TIFR Mumbai)	Trisections of 4-manifolds and their Murasugi sum
			Bidyut Sanki (IIT Kanpur)	A proof of Aougab-Huang conjecture
		2:40-3:40	Rukmini Dey (ICTS Bangalore)	Pull back coherent states and some applications
			Anima Nagar (IIT Delhi)	Transitivity in dynamical systems given by closed relations

## Geometry and Topology

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Geometry and Topology  Chair: Mahuya Datta	5004	10:45-12:20	Riddhi Shah (JNU)	The structure of Cartan subgroups in connected locally compact groups
			Apratim Chakraborty (TCG CREST, Kolkata)	Cabling Legendrian and Transverse Knots
			Dheeraj Kulkarni (IISER Bhopal)	On The Cost Function Associated With Legendrian Knots

\*Each Symposia talk is of 30 minutes duration including discussions

## Geometry and Topology

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Geometry and Topology Chair: Abhijit Pal	5004	2:40-4:00	Bidisha Samanta (Jadavpur University)	Traversable Wormholes Supported by Dark Matter and Monopoles with Semi-classical Effects
			Pooja Rani(IIT BHU)	The Brylinski Beta Function of a Double Layer
			Bhola Nath Saha (IIT Kanpur)	Filling with Separating Curves
			Manoj Prajapati (CUST Gujarat)	Dynamics of actions of automorphisms of discrete groups on certain compact spaces
Geometry and Topology Chair: Aritra Bhowmick	5004	4:20-5:00	Rohit Nageshwar (University of Delhi)	Exploring Expansivity and its Implication
			Sourav Sarkar (IIT Delhi)	On a construction of some homology $\mathbb{Z}$ -manifolds

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
Geometry and Topology Chair: Arijit Dey	5004	3:45-4:05	Rana Sardar (IIT Kanpur)	Maps between Relatively Hyperbolic Boundaries
Geometry and Topology Chair: Anima Nagar	5004	4:25-5:45	Sehar Shakeel Raina (University of Jammu)	Some Implications of Relative Covering Axioms
			Subhamoy Mondal (Presidency University, Kolkata)	Rapid fluctuations of a curve under chaotic maps
			Sushmita Yadav (IIT Jodhpur)	On Dynamical Notions of Non-Autonomous Systems
			Dhriti Sundar Patra (IIT Hyderabad)	On the characterization of cosymplectic manifolds and rigidity of the Sasakian structure

## Geometry and Topology

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Contributory Talks				
Geometry and Topology Chair: Apratim Chakraborty	5004	3:45-4:05	Susmita Sarkar (ICFAI University Tripura)	Non star - Rothberger Properties Experiencing the Residuals in an Ideal
Geometry and Topology Chair: Dheeraj Kulkarni	5004	4:25-5:05	Ankita Sharma (IIT BHU)	A Generalization of a Result of Minakshisundaram and Pleijel
			Anshu Agarwal (IIT Delhi)	Handle Decomposition for a large class of compact orientable PL-4 manifolds

**\*Each contributory talk is of 18 minutes duration including discussions**



## Groups and their Representations

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Groups and their Representations	5005	10:50-12:55	C. S. Rajan (Ashoka University)	Relative Weyl Character formula, Relative Pieri formulas and Branching rules for Classical groups
			R. Venkatesh (IISc Bengaluru)	Structure of symmetric regular subalgebras of affine Kac–Moody algebras
			Ravi Raghunathan (IIT Bombay)	Pairs of L-functions of symmetric powers of cuspidal automorphic representations
			Pooja Singla (IIT Kanpur)	Constructing Continuous Complex Irreducible Representations of $GL_3(O)$

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Groups and their Representations	5005	10:45-12:50	Manoj K. Yadav (HRI Allahabad)	Wells' fundamental exact sequence: Then and Now
			Basudev Pattanayak (IIT Bombay)	Fixed vectors under principal congruence subgroups of $GL(n)$
			Kumar Balasubramanian (IISER Bhopal)	Twisted Jacquet Module of a cuspidal representation of $GL(2n)$
			Arghya Mondal (KREA University)	Asymptotic Shur orthogonality relations
		2:40-3:40	Pralay Chatterjee (IMSc Chennai)	Lower dimensional Betti numbers of homogeneous spaces of Lie groups
			Mahendra Verma (IIT Roorkee)	The theory of Symplectic models

## Groups and their Representations

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Groups and their Representations	5005	10:45-12:50	U. K. Anandavardhanan (IIT Bombay)	The correlation coefficient in representation theory
			Amiya Mondal (IISER Berhampur)	On the bounds of Swan conductor of functorial lifts
			Shashank Vikram Singh (IISER Mohali)	Some Arithmetic Symplectic Hypergeometric Groups
			Arunava Mandal (IIT Roorkee)	Universal subspaces for Lie groups
		2:40-3:10	Shiv Parsad (IIT Goa)	On two generator subgroups of $SU(3,1)$

\*Each Symposia talk is of 30 minutes duration including discussions

## Groups and their Representations

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

DAY-1 (December 22, 2023): Contributory Talks				
Subject	Venue	Time	Speaker	Title of the talk
Groups and their Representations  Chair: Gautam Borisagar	5005	2:40-4:00	Sabyasachi Dhar (IIT Kanpur)	Compatibility of Kazhdan and Brauer Homomorphism
			Ram Karan Choudhary (IIT Bhubaneswar)	Rational Representations and Rational Group Algebra of Some Classes of $\mathbb{S}\mathbb{S}$ -groups
			Jyoti Garg (Panjab University)	Primitive idempotents in rational group algebras of monomial groups
			Digjoy Paul (IISc Bangalore)	On Kronecker coefficients for representations of finite groups

\*Each contributory talk is of 18 minutes duration including discussions

## History of Mathematics in India

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

DAY-2 (December 23, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
History of Mathematics in India	5006	10:50-11:50	Vankateswara Pai (IISER Pune)	
			K. Mahesh (IIT Kharagpur)	

## Number Theory

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Number Theory	5G2	10:50-12:55	Aditya Karnataki (CMI Chennai)	Families of $(\phi, \tau)$ -modules and Galois representations
			Guhan Venkat (Ashoka University)	Rationality of Stark-Heegner points for elliptic curves over imaginary quadratic fields
			Arnab Saha (IIT Gandhinagar)	Delta geometry and the characteristic polynomial of the Frobenius
			C. S. Rajan (Ashoka University)	On non-commensurable isospectral locally symmetric spaces

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Number Theory	5G2	10:45-12:50	Anirban Mukhopadhyay (IMSc Chennai)	Turan-Kubilius inequality
			Sneha Chaubey (IIIT Delhi)	Density of visible lattice points along polynomials
			Kummari Malleshram (IIT Bombay)	General Rankin-Selberg problem
			Sudhir Pujahari (NISER Bhubaneswar)	An all purpose Erdos-Kac Theorem
		2:40-3:40	Saranya Nair (BITS Pilani Goa)	Newton Polygons and the constant associated with the Prouhet-Tarry-Escott Problem
			Shamik Ghosh (Jadavpur Uni.)	The Goldbach Graph

## Number Theory

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Number Theory	5G2	10:45-12:50	Neelam Saikia (IIT Bhubaneswar)	Distributions of hypergeometric functions
			Gautam Kalita (IIIT Guwahati)	Supercharacter theory on $F_p^2$ and related exponential sums
			Atul Dixit (IIT Gandhinagar)	Applications of the Lipschitz summation formula and a generalization of Raabe's cosine transform
			Divyum Sharma (BITS Pilani)	Number of solutions of Thue inequalities
		2:40-3:40	Bipul Kumar Sarmah (Tezpur University)	Dissection of Euler's product
			U. K. Anandavardhanan (IIT Bombay)	Distinguished representations for Galois pairs

\*Each Symposia talk is of 30 minutes duration including discussions

## Number Theory

(Venue: Academic Complex - Core 5)

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<b>DAY-1 (December 22, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Number Theory Chair: Atul Dixit	5G2	2:40-4:00  (Parallel Session-I)	Gurinder Singh (IIT Guwahati)	Certain Diophantine Equations and New Parity Results for 21-Regular Partitions
			Shraddha Rajkhowa (Rajiv Gandhi University, Arunachal Pradesh)	Theta-Function Identities, Explicit Values for Ramanujan's Continued Fractions of Order Sixteen and Applications to Partition Theory
			Subhrajyoti Bhattacharyya (NIT Agartala)	Parity distribution and divisibility of mex-related partition functions
			Pranjal Talukdar (Tezpur University)	Identities for the Rogers–Ramanujan Continued Fraction and Functions
Number Theory Chair: Guhan Venkat	5001	2:40-4:00  (Parallel Session-I)	H. Laxmi (IIT Guwahati)	Stability Of 2-Class Groups in $Z_2$ -Extension of Certain Real Quadratic Number Fields
			Sulakashna (IIT Guwahati)	Number of $F_q$ -points on Diagonal hypersurfaces and hypergeometric function
			Pranjal Vishwakarma (IISER Pune)	The Eisenstein homology and cohomology groups for Imaginary quadratic fields
			Arshay Nimish Sheth (University of Warwick)	Euler Product Asymptotics for L-functions of Elliptic Curves
Number Theory Chair: Arnab Saha	5G2	4:20-5:00  (Parallel Session-II)	Chandan Kumar Vishwakarma (CU South Bihar)	A congruence identity on ordered partition using permutation polynomials
			Himanshu Sharma (IIT Delhi)	Monogeneity of Iterates of Polynomials
Number Theory Chair: Neelam Saikia	5001	4:20-5:00  (Parallel Session-II)	Shaik Azharuddin (IIIT Guwahati)	Transformations for Appell series over finite fields and traces of Frobenius for elliptic curves
			Jagannath Sahoo (IIT Gandhinagar)	Wiener-Ikehara Tauberian Theorem with Improved Error

## Number Theory

(Venue: Academic Complex - Core 5)

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
<b>Subject</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Number Theory Chair: Sneha Chaubey	5G2	3:45-4:05 (Parallel Session-I)	Sumukha S (IIT Gandhinagar)	A Series Associated to Rankin-Selberg L-Function and Modified K-Bessel Function
Number Theory Chair: Shamik Ghosh	5001	3:45-4:05 (Parallel Session-I)	Hirakjyoti Das (Gauhati Commerce College)	Congruences Modulo Powers of 2 for Restricted Partition Triples Due to Lin and Wang
Number Theory Chair: Anirban Mukhopadhyay	5G2	4:25-5:45 (Parallel Session-II)	Nilanjan Bag (RMVERI Howrah)	Fourth power mean of the general s-dimensional Kloosterman sums mod p
			Ashish Kumar Pandey (University of Allahabad)	On Inequalities Related with a Generalized Euler Totient Function and Lucas Sequences
			Shashank Chorge (IIT Gandhinagar)	Extreme values of Dirichlet L-functions at the critical points of the zeta function
			Meghali Garg (IIT Indore)	Equivalent criteria for the Riemann hypothesis for Chandrasekharan-Narasimhan class of L-functions
Number Theory Chair: Sudhir Pujahari	5001	4:25-5:45 (Parallel Session-II)	Flora Jeba S (CHRIST Ahmedabad University)	On K-Facile Perfect Numbers
			Archit Agarwal (IIT Indore)	A q- series identity of Uchimura and its numerous generalization
			Anirban Roy (CHRIST Ahmedabad University)	Deficient and Near $F_k$ - Perfect Numbers
			Abhishek Jha (IIIT Delhi)	On terms in a dynamical divisibility sequence having a fixed G.C.D with their indices



## Number Theory

(Venue: Academic Complex - Core 5)

<b>DAY-3 (December 24, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Number Theory Chair: Divyum Sharma	5G2	3:45-4:05	Anup Haldar (RMVERI Howrah)	Exponential Sums with Multivariable Rational Functions and their Applications to Equidistribution of Solutions of Quadratic Congruences
Number Theory Chair: Gautam Kalita	5G2	4:25-5:25  (Parallel Session-I)	Shivani Goel (IIT Delhi)	Explicit zero repulsion of Dirichlet $L$ -functions
			Himanshi Chanana (IIT Kanpur)	Sum of the triple divisor function and Fourier coefficients of $SL(3, Z)$ Hecke-Maass forms over quadratic polynomial
			Sourav Das (IIT Kanpur)	Inhomogeneous Khintchine-Groshev type theorems on manifolds over function fields
Number Theory Chair: Bipul Kumar Sarmah	5001	4:25-5:05  (Parallel Session-I)	Guru Sharan N (IIT Gandhinagar)	Modular Relations involving Generalized Digamma Functions
			Shruthi Chethan Bhat (MIT, Manipal)	Modular identities on special cases of Ramanujan's general continued fraction

**\*Each contributory talk is of 18 minutes duration including discussions**

## Numerical Analysis

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Numerical Analysis	5103	10:50-12:55	Thirupathi Gudi (IISc Bangalore)	Quasioptimal convergent adaptive fem for an indefinite elliptic PDE
			Ajit Patel (LNMIIT, Jaipur)	Primal hybrid method for gradient type non-linearity parabolic problems
			Sangita Yadav (BITS Pilani, Pilani)	Hybridizable discontinuous Galerkin method for linear hyperbolic integro-differential equations
			Deepjyoti Goswami (Tezpur University)	A three steps two-grid discontinuous Galerkin method for the Oldroyd model of order one

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Numerical Analysis	5103	10:45-12:50	Arbaz Khan (IIT Roorkee)	Divergence conforming discontinuous Galerkin finite element approximation for doubly diffusive flows
			Asha K. Dond (IISER TVM)	Convergence of adaptive FEMs for distributed elliptic optimal control problems
			Bankim Chandra Mandal (IIT Bhubaneswar)	Domain decomposition methods for linearized and non-linear Cahn-Hilliard equation
			Indranil Chowdhury (IIT Kanpur)	Error bounds for numerical approximations of fractional HJB equations
		2:40-3:40	Jhuma Sen Gupta (BITS Pilani Hyderabad)	Weak Galerkin dual mixed finite element method for linear parabolic interface problems
			Jogen Dutta (North Guwahati College)	Weak Galerkin finite element methods for second-order wave equations with polygonal meshes

## Numerical Analysis

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Numerical Analysis	5103	10:45-12:50	Bhupen Deka (IIT Guwahati)	A least-squares-based weak Galerkin finite element method for the time-harmonic Maxwells equations
			Satyajit Pramanik (IIT Guwahati)	An HOC approach on non-uniform grids for time-dependent advection-diffusion equations
			Kaushik Mukherjee (IIST TVM)	On fitted mesh method for singularly perturbed semilinear parabolic PDEs with non-homogeneous boundary data
			G M M Reddy (BITS Pilani Hyderabad)	Crank-Nicolson a posteriori error estimates for parabolic partial differential equations with small random input data
		2:40-3:10	Sudarshan Kumar K. (IISER TVM)	Lax-Wendroff flux reconstruction method for hyperbolic conservation laws

**\*Each Symposia talk is of 30 minutes duration including discussions**

## Numerical Analysis

(Venue: Academic Complex - Core 5)

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DAY-1 (December 22, 2023): Contributory Talks				
Subject	Venue	Time	Speaker	Title of the talk
Numerical Analysis Chair: Ajit Patel	5103	2:40-4:00	Sudhakar Chaudhary (IITRAM Ahmedabad)	Symmetric fractional order reduction method with L1 scheme on graded mesh for time fractional nonlocal diffusion-wave equation of Kirchhoff type
			Nilay Mondal (The ICFAI University Tripura)	Development of a model for drug delivery into the diseased tissues by reversible electroporation
			Chandralekha Mahanta (NIT Arunachal Pradesh)	Synergistic Effects of Darcy and Viscous Dissipation in Nanofluid Flow over a Vertically Permeable Plate with Magnetic Field Induction
			Krishna Yamanappa Poojara (IISER Bhopal)	An Efficient High Order Quadrature for Weakly Singular Operators and its Applications in Wave Scattering Problems
Numerical Analysis Chair: Deepjyoti Goswami	5103	4:20-5:00	Sunita Choudhary (IIT Ropar)	Least square method for wave interaction with a tunnel and a submerged porous plate over a trench-type bottom
			Archana Arya (IIIT Delhi)	Higher Order Mixed Finite Element Discretizations of Maxwell's Equations

## Numerical Analysis

(Venue: Academic Complex - Core 5)

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
Numerical Analysis Chair: Jogen Dutta	5103	3:45-4:05	Niranjan Bora (Dibrugarh University)	On Polynomial Two Parameter Eigenvalue Problem
Numerical Analysis  Chair: Arbaz Khan	5103	4:25-5:45	Raghunath Bandha (IIT Guwahati)	A new Space Transformed Finite Element Method (ST-FEM) for elliptical interface problems in $\mathbb{R}^n$ with spherical interfaces
			Sachin Kumar (IIT Guwahati)	Nonsymmetric Interior Penalty Galerkin Method for Black-Scholes PDE Modelling European Options
			Gopinath Sadhu (IIT Guwahati)	A Multiphase Model on Asymmetric Growth of an Avascular Tumour
			Rupchand Sutradhar (IIT Guwahati)	Intracellular Dynamics of Hepatitis B Virus Infection: A Mathematical Model and Global Sensitivity Analysis of its Parameters

<b>DAY-3 (December 24, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Numerical Analysis Chair: G M M Reddy	5103	3:45-4:05	Sandip Maji (IIT Guwahati)	NIPG Method for Nonlinear Time-Fractional Integro-Partial Differential Equations
Numerical Analysis  Chair: Satyajit Pramanik	5103	4:25-5:25	Saurabh Bansal (IIT Guwahati)	A Fourth-Order Accurate Numerical Method for Black-Scholes PDEs Arising in Option Pricing
			Aniruddha Seal (IIT Guwahati)	An Efficient Computational Technique for Semilinear Time Fractional Diffusion Equation
			Jaya Agnihotri (IIT Delhi)	Divergence Free Entropy Stable Schemes for Two-Fluid Relativistic Plasma Flow Equations

**\*Each contributory talk is of 18 minutes duration including discussions**

## Partial Differential Equations

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Partial Differential Equations	5104	10:50-12:55	Saikatul Haque (HRI Allahabad)	Ill-posedness of Hartee Equation
			Ved Datar (IISc Bangalore)	Non-linear PDEs on Kahler manifolds and positivity conditions
			Debanjana Mitra (IIT Bombay)	Lack of null controllability of certain linear transport-parabolic coupled systems
			Saikat Mazumdar (IIT Bombay)	Existence results for the higher-order Q-curvature equation

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Partial Differential Equations	5104	10:45-12:50	Kartick Ghosh (IISc Bangalore)	Coupled Kähler-Einstein AND Hermitian-Yang-Mills equations
			Alok Kumar Sahoo (Dept of Higher Edu., Odisha)	Global compactness result and multiplicity of solutions for a class of critical exponent problem in the hyperbolic space
			Aashirwad Naveen Ballal (IISc Bangalore)	The supercritical deformed Hermitian Yang-Mills equation on compact projective manifolds
			Debdip Ganguly (IIT Delhi)	Sharp quantitative stability of Poincaré-Sobolev inequality in the hyperbolic space
		2:40-3:40	Sheela Verma (IIT BHU)	Shape optimization problem for Steklov-Dirichlet eigenvalues
		Sarika Goyal (Netaji Subhas Uni. of Tech.)	Quasilinear Schrödinger Equations Involving Choquard Type Critical Nonlinearity	

**Partial Differential Equations**  
**(Venue: Academic Complex - Core 5)**

<b>DAY-3 (December 24, 2023): Symposia Talks</b>				
<b>Symposia</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Partial Differential Equations	5104	10:45-12:20	Souptik Chakraborty (IIT Bombay)	Some quantitative Sobolev-type inequalities
			Abhrojyoti Sen (TIFR CAM Bangalore)	Fine boundary regularity for fully nonlinear mixed local-nonlocal problems
			Subrata Majumdar (IIT Bombay)	Controllability of the linearized compressible Navier-Stokes system with Maxwell's law

**\*Each Symposia talk is of 30 minutes duration including discussions**

## Partial Differential Equations

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

DAY-1 (December 22, 2023): Contributory Talks				
Subject	Venue	Time	Speaker	Title of the talk
Partial Differential Equations Chair: Saikatul Haque	5104	2:40-4:00	Abhilash Tushir (IIT Delhi)	Discrete Time-Dependent Wave Equation for the Schrodinger Operator with Unbounded Potential
			Diksha Gupta (IIT Delhi)	Existence and multiplicity of positive solutions for a class of elliptic equations involving subcritical and critical non linearities in the hyperbolic space
			Uttam Kumar (IIT Kanpur)	Boundary blow up solutions for equations involving fractional p-Laplacian operator
			Ritabrata Jana (IISER TVM)	Positive solutions for fractional $p$ - Laplace problem with indefinite sign
Partial Differential Equations Chair: Debanjana Mitra	5104	4:20-4:40	Vinayak Mani Tripathi (IIT Bhilai)	Nehari Manifold Method for Singular Double Phase Problem with Optimal Control on Parameter



## Partial Differential Equations

(Venue: Academic Complex - Core 5)

<b>DAY-2 (December 23, 2023): Contributory Talks</b>				
Subject	Venue	Time	Speaker	Title of the talk
Partial Differential Equations  Chair: Sarika Goyal	5104	3:45-4:05	Sarbani Pramanik (IISER TVM)	On a class of infinite semipositone problems for $(p,q)$ Laplace operator
Partial Differential Equations  Chair: Debdip Ganguly	5104	4:25-5:45	Shubham Garg (IIT Jodhpur)	Mathematical analysis of coupled mode theory
			Sanjit Biswas (IIT Kanpur)	Ground State Solution of a Schrodinger Type Equation Involving Anisotropic $p$ -Laplacian Operator via Pohozaev Manifold
			Jyotirmoy Rana (IIT Hyderabad)	Study of Unsteady Solute Dispersion in Pulsatile Viscoelastic Fluid Flow
			Sivaram P (IISc Bangalore)	$L^\infty$ estimate for degenerate transverse complex Monge-Ampere equation and its application

<b>DAY-3 (December 24, 2023): Contributory Talks</b>				
Partial Differential Equations  Chair: Souptik Chakraborty	5104	4:25-5:05	Abhijit Shit (IIT Guwahati)	Fractional Model for Blood Flow in a Stenosed Artery under MHD Effect through Porous Medium
			Yashonanda Mahesh Maurya (SVKM's NMIMS)	Finite Meijer G-transform for Solving Steady-state Temperature Problems

**\*Each contributory talk is of 18 minutes duration including discussions**

## Probability Theory

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

<b>DAY-1 (December 22, 2023): Symposia Talks</b>				
Symposia	Venue	Time	Speaker	Title of the talk
Probability Theory	5105	10:50-12:55	Soudeep Deb (IIM Bangalore)	Nonparametric estimation of shape-constrained time series regression model
			Sayar Karmakar (University of Florida)	The spread of an epidemic: a game-theoretic approach
			Moumanti Podder (IISER Pune)	On the ergodicity of a class of 1-dimensional probabilistic cellular automata with size-3 neighbourhoods
			Arijit Chakrabarty (ISI Kolkata)	Clustering of large deviations in moving average processes: short and long memory regimes

<b>DAY-2 (December 23, 2023): Symposia Talks</b>				
Symposia	Venue	Time	Speaker	Title of the talk
Probability Theory	5105	10:45-12:50	Anish Sarkar (ISI Delhi)	Convergence of drainage networks to Brownian web and some applications
			Nishant Chandgotia (TIFR CAM Bangalore)	The Dimer Model in 3 dimensions
			Soumyarup Sadhukhan (IIT Kanpur)	Committee formation under constraints through randomized voting rules on separable domains
			Krishanu Maulik (ISI Kolkata)	Memories in Motion - Understanding the Effect of Memory on Random Walks
		2:40-3:40	Arvind Ayyer (IISc Bangalore)	An asymmetric K-exclusion process
			Sohom Bhattacharya (University of Florida)	Inference and Ranking in mixed-membership models

## Probability Theory

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Probability Theory	5105	10:45-12:50	Souvik Roy (ISI Kolkata)	Elicitation with Random Mechanisms: A Characterization
			Somabha Mukherjee (National University of Singapore)	Limit theorems and phase transitions in Tensor Curie-Weiss Ising and Potts Models
			Kartick Adhikari (IISER Bhopal)	On the diameter of the Linial-Meshulam Model
			Biltu Dan (IISc Bangalore)	Partial divisibility of random sets and powers of completely monotone functions

\*Each Symposia talk is of 30 minutes duration including discussions

## Probability Theory

(Venue: Academic Complex - Core 5)

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<b>DAY-1 (December 22, 2023): Contributory Talks</b>				
<b>Subject</b>	<b>Venue</b>	<b>Time</b>	<b>Speaker</b>	<b>Title of the talk</b>
Probability Theory  Chair: Moumanti Podder	5105	2:40-3:40	Archi Roy (IISER Pune)	Nonparametric method of multiple structural break detection in time series
			Rik Ghosh (IIT Guwahati)	Optimal Adaptive SMART Designs with Binary Outcomes
			Ravi Kumar (IIT Hyderabad)	Standby Redundancy Allocation for Series and Parallel Systems

\*Each contributory talk is of 18 minutes duration including discussions

## Women in Mathematics

(Venue: Academic Complex - Core 5)

Core-5 class rooms have Green Chalk Boards and Projectors

### DAY-1 (December 22, 2023): Symposia Talks

Symposia	Venue	Time	Speaker	Title of the talk
Women in Mathematics	5106	10:50-12:55	Anisa Chorwadwala (IISER Pune)	Optimisation of a mixed Steklov Dirichlet eigenvalue
			K S Senthil Raani (IISER Berhampur)	Distances in sets
			Anuradha Jha (IIIT Guwahati)	Analysis of upwind difference scheme on Shishkin-Bakhvalov mesh for singularly perturbed two parameter parabolic problem with discontinuous coefficients
			Tanusree Khandai (IISER Mohali)	Demazure filtrations of tensor product modules and character formula

### DAY-2 (December 23, 2023): Symposia Talks

Symposia	Venue	Time	Speaker	Title of the talk
Women in Mathematics	5106	10:45-12:50	Dhanya Rajendran (IISER TVM)	On the double phase elliptic problems with singular growth
			Sunanda Naik (Gauhati University)	Cesaro operator and its generalization on Bloch type spaces
			Prohelika Das (Cotton University)	On $\alpha$ -spectrum of Unicyclic Graphs and Some Estimations
			Farha Sultana (IIIT Guwahati)	Tampered random variable modeling for multiple step-stress life test
		2:40-3:40	Sangita Jha (NIT Rourkela)	Fractal dimension and fractional calculus of non-stationary zipper $\alpha$ -fractal functions
			Helen K Saikia (Gauhati University)	Some special kinds of reversible and symmetric rings

## Women in Mathematics

(Venue: Academic Complex - Core 5)

DAY-3 (December 24, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
Women in Mathematics	5106	10:45-12:50	Munmun Hazarika (Tezpur University)	Shift and other operators on the Hardy-Hilbert space
			Manideepa Saha (NIT Meghalaya)	On Lorentz cone semipositivity of matrices
			Sunanda Saha (VIT, Vellore)	A Robust numerical solver for a blood flow problem in an elastic stenotic artery imposed with a generalized Womersley solution
			Minerva Mukhopadhyay (IIT Kanpur)	Bayesian variable selection under high dimensional settings with grouped covariates

\*Each Symposia talk is of 30 minutes duration including discussions

## Women in Mathematics

(Venue: Academic Complex - Core 5)

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DAY-1 (December 22, 2023): Contributory Talks				
Subject	Venue	Time	Speaker	Title of the talk
Women in Mathematics Chair: Sriparna Bandopadhyay	5106	2:40-3:20	Prakriti Rai (Amity University)	A Generalized Class of Humbert-Hermite Polynomials
			Shilpi Biswas (IIT Guwahati)	A Model of Load-Sharing Systems Using Piecewise Linear Approximation to Cumulative Hazard

\*Each contributory talk is of 18 minutes duration including discussions