# 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)**

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

#### **DAY-2 (December 23, 2023)**

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

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

<sup>\*</sup>Auditorium: Dr. Bhupen Hazarika Auditorium \*ST: Symposia Talks \*CT: Contributory Talks

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

(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					
			Radhika Gupta	Combinatorial isoperimetric inequality for the free factor					
Geometry and	5004	10:50-12:55	(TIFR Mumbai)	complex					
Topology			Abhijit Pal	Boundary at Infinity					
			(IIT Kanpur)						
Chairs: Anima			Pradip Kumar	Constructing Zero Mean Curvature Surfaces in Euclidean					
Nagar and Rukmini			(SNIoE)	Space and in the Lorentz-Minkowski Space.					
Dey			Aritra Bhowmick	Fibration with a Section and H-Splitting of the Looped Total					
			(IISER Kolkata)	Space					

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

(Venue: Academic Complex - Core 5)

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

<sup>\*</sup>Each Symposia talk is of 30 minutes duration including discussions

(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				
			Bidisha Samanta	Traversable Wormholes Supported by Dark Matter and				
Geometry and	5004	2:40-4:00	(Jadavpur University)	Monopoles with Semi-classical Effects				
Topology			Pooja Rani(IIT BHU)	The Brylinski Beta Function of a Double Layer				
			Bhola Nath Saha (IIT Kanpur)	Filling with Separating Curves				
Chair: Abhijit Pal			Manoj Prajapati	Dynamics of actions of automorphisms of discrete groups				
			(CUST Gujarat)	on certain compact spaces				
Geometry and	5004	4:20-5:00	Rohit Nageshwar	Exploring Expansivity and its Implication				
Topology			(University of Delhi)					
Chair: Aritra Bhowmick			Sourav Sarkar (IIT Delhi)	On a construction of some homology \$d\$-manifolds				

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

(Venue: Academic Complex - Core 5)

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

<sup>\*</sup>Each contributory talk is of 18 minutes duration including discussions