

**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

## Number Theory

(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
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

DAY-2 (December 23, 2023): Symposia Talks				
Symposia	Venue	Time	Speaker	Title of the talk
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 Mallesham (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

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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**