



Activity report of Contemporary Developments in Mathematics and Mathematical Sciences (CDMMS-2018)

- 1. Name of the Seminars/conferences/workshops: Contemporary Developments in Mathematics and Mathematical Sciences (CDMMS-2018)**
- 2. Organized by:** Department of Mathematics, Gokhale Memorial Girls' College & ISNA
Organizing committee:

Patron: Dr. Atashi Karpha, Principal, Gokhale Memorial Girls' College

Conference Chair: Prof. Sibaji Raha, President, ISNA

Conference Co-Chair: Prof. Bandana Barua, Mentor, ISNA

Organizing Secretary: Prof. Sujata Tarafdar, Secretary, ISNA

Joint Conveners: Dr. Sumita Basu, Academic Secretary, ISNA

Dr. Mala Bhattacharjee, H.O.D., Department of Mathematics, Gokhale Memorial Girls' College

Dr. Koushik Ghosh, Joint Secretary, ISNA

Members:

Dr. Tapati Dutta, Joint Secretary, ISNA

Dr. Sarbari Ghosh, Member, ISNA

Dr. Jayjayanti Ray, Department of Mathematics, Gokhale Memorial Girls' College

Mr. Gokul Saha, Department of Mathematics, Gokhale Memorial Girls' College

Mr. Sougata Biswas, Department of Mathematics, Gokhale Memorial Girls' College

Contact Email: cdmms2018@gmail.com

3. Aim of the Seminars/conferences/workshops :

The One Day National Seminar on **Contemporary Developments in Mathematics and Mathematical Sciences (CDMMS-2018)** includes but is not confined to the following topics:



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- i. Nonlinear Systems and Dynamics
- ii. Soft Computing (Fuzzy Systems, Neural Network etc.)
- iii. Graph Theory and Applications
- iv. Information Theory
- v. Generalized Calculus and Applications
- vi. Differential Equation and Applications
- vii. Mathematical Biology

4. Date : May 19, 2018

5. Duration in hours (approximate): 10.30 a.m – 4.50 p.m

6. Number of Participants (approximate): 80

7. Name of Speakers with title of their speech, designation and Affiliation:

Name of Speakers	Title of the speech
Dr. Suparna Dutta Sinha	Differential Equations in Medicine and Biology
Dr. Shantanu Das	How Disordered (Non-Debye) Decaying Relaxation Manifests Ordered Relaxation Rate Distribution Histograms

8. Sponsoring agency: ISNA

9. Sponsored amount: TEN THOUSAND

10. Outcome of the Seminars/conferences/workshops:

Programme Schedule

10:30-11:00 am: Registration

11:00-11:30 am: Inauguration Programme

Details of Inauguration Programme:

11:00-11:05 am: Welcome Address: Prof. Sujata Tarafdar, Secretary, ISNA **11:05-**

11:15 am: Seminar Inauguration Address: Dr. Atashi Kapha, Principal, Gokhale Memorial Girls' College

11:15-11:25 am: Address about ISNA: Prof. Bandana Barua, Mentor, ISNA **11:25-11:30 am: Vote of Thanks:** Dr. Mala Bhattacharjee, H.O.D., Department of Mathematics, Gokhale Memorial Girls' College



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11:30-11:45 am: Tea Break

11:45 am-12:45 pm: Invited Talk by Dr. Suparna Dutta Sinha

Title of the Talk: Differential Equations in Medicine and Biology

Chairperson: Prof. Bandana Barua

12:45-01:45 pm: Contributory Presentations (Parallel Sessions at Hall 1 and Hall 2).....

Hall 1: Chairperson: Dr. Tanaya Bhattacharyya

Presenters:

1. Bithi Chattaraj and Sumita Basu: Modus Ponens and Modus Tollens in Linguistic Truth-Valued Propositional Logic
2. Anjana Bhattacharyya: -Almost Compactness for Crisp Subsets of a Fuzzy Topological Space
3. Anindya Dey: Group Theoretic Approach to Ordinary Differential equations
4. Srikumar Panda: An Alternative Approach for Solving Singular Integral Equation
5. Shyamasree Ghosh Dastidar: Elliptic Numerical Range of 5×5 Matrices

Hall 2: Chairperson: Dr. Jayjayanti Ray

Presenters:

1. Sweta Chakraborty and Sarbari Ghosh: Multiple Linear Regression Model: A New Approach to Quantify the Pre- monsoon Rainfall in a Metro City in India
2. Sucharita Roy: Bayes Meets Riemann: A Bayesian Characterization of Infinite Series with Application to Riemann Hypothesis
3. Sreeya Ghosh: Algebraic Structure of Shift Transition Functions of a One-dimensional Homogeneous Cellular Automaton
4. Mohammad Ali Khan: Spatiotemporal Synchronization of Logistic Map using Wave Difference through Complex Network
5. Swetadri Samadder: Investigation of Causal Relationship in Stock Exchanges Listed in BRICS, E7 and G7 Countries

01:45-02:25 pm: Lunch Break

02:25-03:25 pm: Invited Talk by Dr. Shantanu Das

Title of the Talk: How Disordered (Non-Debye) Decaying Relaxation Manifests Ordered Relaxation Rate Distribution Histograms

Chairperson: Dr. Gopinath Laha



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03:25-04:50 pm (for Hall 1)/ 03:25-04:25 pm (for Hall 2): Contributory Presentations (Parallel Sessions at Hall 1 and Hall 2)

Hall 1: Chairperson: Dr. Tapati Dutta

Presenters:

1. Subhajit Jana: Modelling and Analysis of an Epidemic System Incorporating Population Movement between Two Cities
2. Prosenjit Paul and T. K. Kar: Impact of Marine Reserve on Maximum Sustainable Yield in a Traditional Prey-Predator System
3. Samadyuti Haldar: Modeling and Analysis of an Exploited Prey-predator Model induced by Sigmoidal Functional Response in Strong Allee Effect
4. Manotosh Mandal, Soovoojeet Jana and T. K. Kar: Predator- Prey Populations in Presence of Biotic Resources
5. Soovoojeet Jana, T. K. Kar and Palash Haldar: Mathematical Analysis of an Epidemic Model with Isolation and Optimal Controls
6. Amar Nath Chatterjee : The Effect of Pulse Vaccination on the Transmission Dynamics of Rotavirus Diarrhoea
7. Joydeb Bhattacharyya: A Comparison of Autocidal Genetic Biocontrol Strategies for Potential Eradication of Invasive Fish Populations

Hall 2: Chairperson: Dr. Saurabh Niyogi

Presenters:

1. Kausik Rakshit and Shankhachur Mukherjee: Analysis of Memory and Governing Process in Solar Flare Index Data
2. Prabir Gharami: Latitudinally and Radially Differential Rotation in Rotating Low-mass Stars
3. Simantini Majumdar and Sujata Tarafdar: Applications of Fractional Calculus in Modeling Rheological and Electrical Properties of Different Materials
4. M. K. Raut and S. K. Chakrabarti: Mathematical Modeling of the Thermodynamic Properties of Molten Potassium Amalgam
5. Abhik Sur and M. Kanoria: Memory Dependent Heat Transfer in a Functionally Graded Medium



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