

NEWSLETTER

GANIT-MITRAM

A BI-ANNUAL NEWSLETTER OF THE DEPARTMENT OF MATHEMATICS

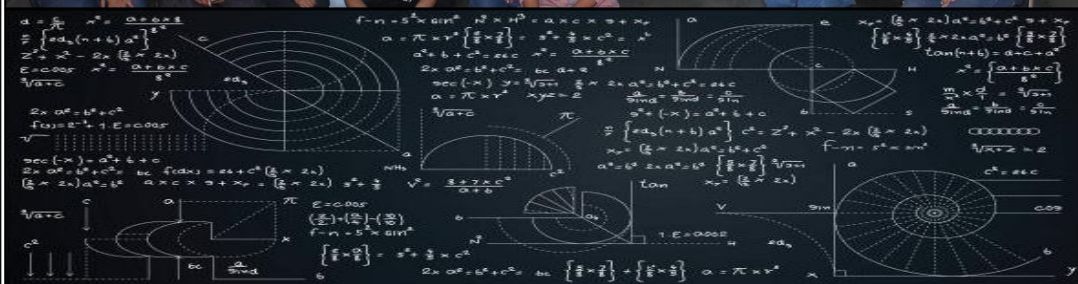
Mission & Vision

Vision:

The Department of Mathematics envisions to become the carrier of the glory of the land of learning, in particular the learning of mathematics, which India was from time immemorial. The Department strives to be a part of the renewed journey of independent India in the path of excellence.

Missions:

1. To impart quality education in the Postgraduate level of Applied Mathematics.
2. To impart necessary mathematical knowledge at the undergraduate and Postgraduate levels of technological studies.
3. To produce quality research at par with the world standards.
4. To train up Ph.D. students in various disciplines of Mathematics.
5. To create an academic environment capable of attracting brilliant and motivated students.



From the Desk of HoD

I feel privileged to introduce GANIT-MITRAM, the NEWSLETTER of the Department of Mathematics, IEST, Shibpur. We are entrusted with the teaching of Mathematics for the students of all the Engineering branches of the Institute which we are sincerely performing since the time of inception of the Institute. Besides we have our own Postgraduate and Ph.D. programs which we run successfully. Our Faculty Members have expertise in different domains of Mathematics. The contributions of the Department in several fields of Applied Mathematics have been considerable. The M.Sc. in applied Mathematics program has been in high demand amongst the takers of the course for several past years. Our Ph.D. program is also popular amongst the students with about 100 Research Scholars on an average registered in the program. We are 14 Faculty Members committed to making the Department of Mathematics into a research-intensive Postgraduate teaching Department in tune with the objectives of IEST, Shibpur.



Prof. Parbati Saha
HoD, Department of Mathematics

Our Courses

Engineering Mathematics

Mathematics is taught to **all Engineering branches** in IEST, Shibpur.

M.Sc.

- There are currently **66 PG students** enrolled (**32** in second sem. and **34** in fourth sem.).

Ph.D.

- Degree Awarded in last 6 months: **03**
- Registered Research scholars on the average: **100**

➤ We are **14 Faculties** and **4 Staff members**.

OUR EXPERTISE

- Astrophysics
- Atomic & Molecular Scattering Theory
- Complex Analysis
- Cosmology
- Decision Theory
- Dynamical Systems
- Elasticity
- Fluid Dynamics
- Fractional Differential Equations
- Functional Analysis
- Fuzzy Logic
- Fuzzy Mathematical Systems
- Game Theory
- Integral Equations
- Linear Algebra
- Machine Learning
- Management Studies

- Mathematical Biology
- Mathematical Statistics
- Nonparametric inference
- Operator Theory
- Operations Research
- Optimization
- Partial Differential Equations
- Quantum Information Theory
- Relativity
- Reliability Theory
- Solid Mechanics
- Statistical Modelling
- Supply Chain Management

EVENTS

- **Aritra Das** from Australian National University, presented a talk on **Quantum Fisher Information** on December 11, 2024, highlighting significant advancements in the field of quantum information theory.
- On December 22, our department proudly celebrated **Ramanujan Day** to honor the legendary mathematician Srinivasa Ramanujan and his remarkable contributions to mathematics. The event featured engaging lectures, presentations, and discussions highlighting Ramanujan's groundbreaking work and its lasting impact.



OUR JOURNAL PUBLICATIONS

1. Akhtar, P., Karmakar, S., Sahoo, D. and Samanta, G., "Dynamical analysis of a prey–predator model in toxic habitat with weak Allee effect and additional food", *Int. J. Dynam. Control*, Vol. 12, (2024) 3963–3986.
2. Banik, B., Alam, S. and Chakraborty, A., "Analysis of Economic Setback of Different Countries Due to COVID-19 Surge by Advanced

- Multi MOORA Strategy Under Pentagonal Neutrosophic Realm”, *Process Integr Optim Sustain*, Vol. 8, (2024) 975–991.
3. Barman, S., Jana, S., Majee, S., Das, D. K. and Kar, T. K., “Complex Dynamics of a Fractional-order Epidemic Model with Saturated Media Effect”, *Nonlinear Dynamics*, Vol. 112(20), (2024) 18611-18637.
 4. Behera, S. and Saha Ray, S., “A new Laguerre wavelet-based method for solving Fredholm integral equations with weakly singular logarithmic kernel”, *Mathematical Methods in the Applied Sciences*, Vol. 48(2), (2024) 1701-1724.
 5. Bera, S., Khajanchi, S. and Kar, T. K., “Stochastic Persistence, Extinction and Stationary Distribution in HTLV-I Infection Model with CTL Immune Response”, *Qualitative Theory of Dynamical Systems*, Vol. 23(Suppl 1), (2024) 265.
 6. Bhandari, S. K., Saha, P., Guria, S., Das, P. and Choudhury, B. S., “Simultaneous Solution of a Fuzzy Global Optimization Problem Using a Fixed Point Method”, *New Mathematics and Natural Computation*, Vol. 22(07), (2024) 2450005.
 7. Biswas, S., Bhutia, L. T., Kar, T. K., Bhunia, B. and Das, E., “Spatiotemporal analysis of a modified Leslie–Gower model with cross-diffusion and harvesting”, *Physica D: Nonlinear Phenomena*, Vol. 470, (2024) 134381.
 8. Biswas, S., Bhutia, L. T. and Kar, T. K., “Impact of the herd harvesting on a temporal and spatiotemporal prey–predator model with certain prey herd behaviors and density-dependent cross-diffusion”. *The European Physical Journal Plus*, Vol. 139(12), (2024) 1101.
 9. Chaudhary, H., Debnath, U., Maurya, S. K., Mustafa, G. and Atamurotov, F., “Addressing the rd Tension using Late-Time Observational Measurements in a Novel deceleration Parametrization”, *Journal of High Energy Astrophysics*, Vol. 43, (2024) 268-279.
 10. Chaudhary, H., Debnath, U., Pacif, S. K. J., Molla, N. U., Mustafa, G. and Maurya, S. K., “Observational Constraints of the Parameters of Horava-Lifshitz Gravity”, *Annalen der Physik*, Vol. 536(10), (2024) 2400181 (1-8).
 11. Chaudhary, H., Debnath, U., Rahaman, F., Mustafa, G. and Atamurotov, F., “Early and Late Observational Tension: Exploring

- Dark Energy Parametrizations in Horava-Lifshitz Gravity via Baryon Acoustic Oscillations”, *Physica Scripta*, Vol. 99, (2024) 105037.
12. Chaudhary, H., Debnath, U., Roy, T., Maity, S., Mustafa, G. and Arora, M. “Constraints on the Parameters of Modified Chaplygin-Jacobi and Modified Chaplygin-Abel Gases in $f(T)$ Gravity Model”, *International Journal of Geometric Methods in Modern Physics*, Vol. 21, (2024) 2450248.
 13. Chaudhary, H., Pacif, S. K. J., Debnath, U., Rahaman, F. and Mustafa, G., “Cosmological test of dark energy parametrizations within the framework of Horava-Lifshitz gravity using via Baryon Acoustic Oscillation”, *Chinese Physics C*, Vol. 48, (2024) 115109.
 14. Choudhury, B. S., Mandal, M.K. and Samanta, S., “Joint remote state preparation protocol for non-maximally entangled w-states and fidelity analysis in noisy environments”, *International Journal of Quantum Information*, Vol. 22(07), (2024) 2450005.
 15. Choudhury, B. S., Metiya, N. and Kundu, S., “Some aspects of a coupled system of nonlinear integral equations”, *Stud. Univ. Babes-Bolyai Math.*, Vol. 69 (4), (2024) 927-943.
 16. Choudhury, B. S., Mandal, M.K. and Samanta, S., “Two protocols for telecloning of Bell-like states with and without ancilla qubit”, *J. Phys. A: Math. Theor.*, Vol. 57, (2024) 345302.
 17. Das, B. K., Sahoo, D., Santra, N. and Samanta, G., “Modeling predator–prey interaction: effects of perceived fear and toxicity on ecological communities”, *Int. J. Dynam. Control*, Vol. 12, (2024) 2203–2235.
 18. Das, K. P., Bhar, P. and Debnath, U., “Anisotropic Quark Stars with an Interacting Quark Equation of State in Extra Dimension”, *European Physical Journal C*, Vol. 84, (2024) 952 (1-15).
 19. Das, K. P., Debnath, U. and Ray, S., “Thin-shell Gravastars in the Effect of Graviton Mass: Linearized Stability and Dynamics”, *Physics of the Dark Universe*, Vol. 46, (2024) 101691 (1-15).
 20. Das, K. P., Karmakar, A. and Debnath, U., “Color Flavor Locked Strange Stars in de Rham-Gabadadze-Tolley like Massive Gravity”, *European Physical Journal C*, Vol. 84, (2024) 1213 (1-16).
 21. Das, K. P. and Debnath, U., “Effect of Rainbow Function on Radial Oscillations and Some Other Properties of Chaplygin Dark Star”, *European Physical Journal Plus*, Vol. 139, (2024) 988 (1-16).

22. Das, R., Das, D. K., and Kar, T. K., "Qualitative analysis of TB transmission dynamics considering both the age since latency and relapse", *Mathematics and Computers in Simulation*, Vol. 225, (2024) (939-967).
23. Das, R., Das, D. K. and Kar, T. K., "Analysis of a chronological age-structured epidemic model with a pair of optimal treatment controls", *Physica Scripta*, Vol. 99(12), (2024) 125240.
24. Das, N. and Saha Ray, S., "Dynamical investigation of the perturbed Chen-Lee-Liu model with conformable fractional derivatives," *Zeitschrift fur Naturforschung - Section A Journal of Physical Sciences*, Vol. 79(10), (2024) 997–1010.
25. Das Mandal, J., Debnath, U. and Pradhan, A., "Dark Energy and Dark Matter Interaction: A Nonlinear Dynamical System Study", *International Journal of Geometric Methods in Modern Physics*, Vol. 21, (2024) 2450238.
26. Dey, S., Kar, T. K. and Kuniya, T., "Global dynamics and threshold behavior of an SEIR epidemic model with nonlocal diffusion", *Mathematics and Computers in Simulation*, Vol. 226, (2024) (91-117).
27. Dutta, P., Santra, N., Samanta, G. and De la Sen, M., "Nonlinear SIRS Fractional-Order Model: Analysing the Impact of Public Attitudes towards Vaccination, Government Actions, and Social Behavior on Disease Spread", *Mathematics*, Vol. 12, (2024) 2232 (1-28).
28. Karmakar, A., Debnath, U. and Rej, P., "Polytropic stellar structure in 5D Einstein-Gauss-Bonnet gravity", *Chinese Journal of Physics*, Vol. 90, (2024) 1125-1142.
29. Karmakar, S. and Sarkar, S. P., "Instantaneous Heat Source Response in a Rotating Orthotropic Thermoelastic Medium Using Three-Phase-Lag Model". *Mech. Solids*, Vol. 59, (2024) 1614–1634.
30. Kumar, G., Bera, S., Samanta, G. and Maiti, M., "Optimal profit in two-level trade credit EOQ model with default risk and reminder cost under finite time horizon having time-dependent demand and deterioration", *RAIRO-Operations Research*, Vol. 58 (5), (2024) 3895-3921.
31. Kundu, R., Debnath, U., Chaudhary, H. and Mustafa, G., "Gravitational Lensing of Dark Energy Models and LambdaCDM

- Using Observational data in Loop Quantum Cosmology”, *Journal of High Energy Astrophysics*, Vol. 43, (2024) 239-247.
32. Kundu, R., Debnath, U. and Pradhan, A., “Viscous Modified Chaplygin gas with spherical top-hat collapse in Modified Theories of Gravity”, *Physica Scripta*, Vol. 99, (2024) 095024 (1-16).
 33. Mandal, M.K., Choudhury, B. S., Samanta, S. *et al.* “Fidelity improvement in remote preparation of 3-qubit non-maximally entangled states through noisy environment”, *Quantum Stud.: Math. Found.*, Vol. 11, (2024) 491–504.
 34. Molla, N. U., Ali, A., Debnath, U. and Gunasekaran, S. S., “Investigating the Shadows and Strong Gravitational Lensing of Modified Bardeen Black Holes”, *Physica Scripta*, Vol. 99, (2024) 075019 (1-21).
 35. Mondal, B., Kar, C., Dutta, D. and Das, P., “Optimal ordering strategy for deteriorating items with maximum lifetime using trade credit financing under imprecise environments”, *RAIRO-Oper. Res.*, Vol. 58, (2024) 4861–4888.
 36. Mondal, D., Garai, T., Roy, G. C. and Alam, S., “Evaluating the nuclear power plant safety system under neutrosophic environment”, *Neutrosophic Sets and Systems*, Vol. 72, (2024) 286-303.
 37. Mukherjee, P., Debnath, U., Chaudhary, H. and Mustafa, G., “The estimation of parameters of generalized Cosmic Chaplygin gas and new variable modified Chaplygin gas and Accretions around Black Hole in the background of Einstein-Aether gravity”, *European Physical Journal C*, Vol. 83, (2024) 930 (1-13).
 38. Naskar, S., Alam, S. and Garai, A., “Profitable reverse chain of any dual-channel supply chain with product quality concerns under dynamic decision support system”, *International Journal of Systems Science: Operations & Logistics*, Vol. 11(1), (2024) 2369187.
 39. Parmar, P., Mandal, S. and Sarkar, S. P. “Study of Generalized Two-Temperature Magneto Thermoelastic Problem Involving Memory Dependent Derivative under Fuzzy Environment” *Mech. Solids*, Vol. 59, (2024) 2366–2386.
 40. Patra, S., Jana, S., Adak, S. and Kar, T. K., “A deep learning architecture using hybrid and stacks to forecast weekly dengue

- cases in Laos”, *The European Physical Journal B*, Vol. 97(8), (2024) 110.
41. Saha, P., Mandal, M.K., Choudhury, B. S. and Samanta, S., “Hybrid bidirectional quantum communication with different levels of control with simulation”, *Communications in Theoretical Physics*, Vol. 77(1), (2024) 015104.
 42. Santra, N., Saha, S. and Samanta, G., “Exploring cooperative hunting dynamics and PRCC analysis: insights from a spatio-temporal mathematical model”, *J. Phys. A: Math. Theor.*, Vol. 57, (2024) 305601 (1-47).
 43. Santra, N. and Samanta, G., “Modeling the dynamics of tumor–immune response: a reaction–diffusion approach integrating chemotherapy effects and global sensitivity analysis”, *The European Physical Journal Plus*, Vol. 139, (2024) 775 (1-31).
 44. Sardar, A. and Debnath, U., “Constraining the Entropy corrected (m, n) Type Pilgrim Dark Energy in Fractal Cosmology”, *European Physical Journal C*, Vol. 84, (2024) 1074 (1-18).
 45. Singha, A. K., Debnath, U. and Pradhan, A., “Cosmographic Analysis of the Dynamics of Universe in Higher Dimensional Compactified Space with Tachyonic Field”, *Canadian Journal of Physics*, Vol. 102, (2024) 486-495.
 46. Sisodia, M., Mandal, M. K. and Choudhury, B. S., “Hybrid multi-directional quantum communication protocol”, *Quantum Inf Process*, Vol. 23, (2024) 310.

OUR CONFERENCE PUBLICATION

- Halder, S. and Dhar, A. K., “The fourth-order nonlinear evolution equation for application to deep water capillary-gravity waves including the effect of wind flow”, *Linear and Nonlinear Analysis*, Vol. 10, (2024) 1(35-44).

PH.D. AWARDED

1. **DR. SAYANI ADAK**, TITLE: **IMPLEMENTATION OF SOFT COMPUTING TOOLS FOR THEORETICAL INVESTIGATION AND ANALYSIS OF SOME EPIDEMIOLOGICAL PROBLEMS**, UNDER SUPERVISION OF **PROF. T. K. KAR**.
2. **DR. SOUMYA DAS**, TITLE: **DYNAMICAL BEHAVIOR OF PREY-PREDATOR MODEL WITH DIFFERENT FUNCTIONAL RESPONSES IN IMPRECISE ENVIRONMENT**, UNDER SUPERVISION OF **PROF. P. DAS**.
3. **DR. MOUMITA GHOSH**, TITLE: **DYNAMICS AND CONTROL OF DETERMINISTIC AND STOCHASTIC RUMOR SPREAD MODEL WITH DELAY**, UNDER SUPERVISION OF **PROF. P. DAS**.

FACULTY NEWS

(Information are obtained from the individual faculty members)

ACHIEVEMENTS

- **Dr. U. Debnath** has been recognized among the **top 2% of scientists by Stanford University** in 2024.
- **Prof. T. K. Kar** has been recognized among the **top 2% of scientists by Stanford University** in 2024.
- **Prof. T. K. Kar** has joined the **editorial board** of the following prestigious journals:
 - (a) **Mathematics and Computers in Simulation** --- a **Q1 SCI journal** published by Elsevier.
 - (b) **Nonlinear Dynamics** --- a **Q1 SCI journal** published by Springer Nature.
- **Prof. S. Saha Ray** has been recognized among the **top 2% of scientists by Stanford University** in 2024.
- **Prof. S. Saha Ray** has been empanelled as a **Member of the Expert Visit Committee(EVC) for AICTE** in December 2024.
- **Prof. G. Samanta** has been recognized among the **top 2% of scientists by Stanford University** in 2024.

INVITED TALKS DELIVERED

- PROF. B. S. CHOUDHURY DELIVERED INVITED TALK ENTITLED *“CONTRACTION MAPPINGS IN METRIC FIXED POINT THEORY”* AT ALIGARH MUSLIM UNIVERSITY, ALIGARH ON 24.08.2024.
- PROF. B. S. CHOUDHURY DELIVERED FOUR LECTURES ON *“QUANTUM COMPUTING”* AT INTERNATIONAL WORKSHOP AND CONFERENCE ON MATHEMATICAL TECHNIQUES FOR MACHINE LEARNING AND QUANTUM COMPUTING-2024 AT MADURAI AND COCHIN (JOINTLY), 02-07 DEC., 2024.
- PROF. TAPAN KUMAR KAR PRESENTED AN INVITED LECTURE ENTITLED *“EXPLICIT IMPACTS OF HARVESTING IN FOOD CHAIN MODELS”* IN SPECIAL SESSION SS94 COMPUTATIONAL AND MATHEMATICAL APPROACHES TO UNDERSTANDING COMPLEX BIOLOGICAL SYSTEMS AT THE 14TH AIMS INTERNATIONAL CONFERENCE ON ‘DYNAMICAL SYSTEMS, DIFFERENTIAL EQUATIONS, AND APPLICATIONS’ AT ABU DHABI, UAE DURING 16TH-20TH DECEMBER, 2024.
- PROF. B. S. CHOUDHURY DELIVERED AN INVITED LECTURE ENTITLED *“NEW TRENDS IN FIXED POINT THEORY”* AT INTERNATIONAL CONFERENCE OF INTERNATIONAL ACADEMY OF PHYSICAL SCIENCE AT RAIPUR, CHHATTISGARH, 20-21 DEC., 2024.
- PROF. S. SAHA RAY WAS INVITED AS AN EXPERT TO DELIVER A LECTURE ENTITLED *“A NOVEL WAVELETS OPERATIONAL MATRIX METHOD FOR THE TIME VARIABLE-ORDER FRACTIONAL MOBILE-IMMOBILE ADVECTION-DISPERSION MODEL”* IN 1ST SHORT TERM PROGRAMME (STP) ORGANIZED BY THE UGC-SPONSORED MALAVIYA MISSION TEACHER TRAINING CENTER AT INDIAN INSTITUTE OF TEACHER EDUCATION (IITE), GANDHINAGAR DURING 23RD DECEMBER TO 28TH DECEMBER 2024.

STUDENT'S CORNER

POST-DOCS/JOB

- DR. AKTAR SEIKH JOINED AS ASSISTANT PROFESSOR IN BRAINWARE UNIVERSITY, BARASAT.
- DR. SAMPURNA SENGUPTA JOINED AS ASSISTANT PROFESSOR AT SCHOOL OF IT, AI AND CYBERSECURITY, RASHTRIYA RAKSHA UNIVERSITY, GANDHINAGAR.
- DR. SAYANI ADAK HAS BEEN OFFERED POSTDOCTORAL POSITION AT CENTRE FOR SOFT COMPUTING RESEARCH, ISI KOLKATA.

- SUVANKAR MAJEE HAS BEEN OFFERED POSTDOCTORAL POSITION AT AMRITA SCHOOL OF ENGINEERING, AMRITA VISHWA VIDYA PEETHA, BENGALURU.
- MANOJ KR. MONDAL HAS BEEN OFFERED POSTDOCTORAL POSITION AT COCHIN INSTITUTE OF SCIENCE AND TECHNOLOGY, KERALA.

RESEARCH SCHOLARS' ACADEMIC OUTREACH

- ESITA DAS, PRESENTED A PAPER TITLED "IMPACT OF ASYMPTOTIC AND TRANSIENT DYNAMICS OF HARVESTED PREY-PREDATOR MODELS AT EQUILIBRIUM" AT THE 3RD INTERNATIONAL CONFERENCE ON APPLIED MATHEMATICS IN SCIENCE AND ENGINEERING (AMSE-2024) DURING 25-27TH JULY 2024 AT ITER CAMPUS-1, BHUBANESWAR, INDIA ORGANISED BY SIKSHA 'O' ANUSANDHAN (DEEMED TO BE UNIVERSITY) AND CO-ORGANIZED BY NIT ARUNACHAL PRADESH.
- MST. SEBI KHATUN, KIRITI BHUSHAN MAHATO AND DIPTI DOLAI PARTICIPATED IN THE "INTERNATIONAL WORKSHOP ON APPLIED DIFFERENTIAL EQUATIONS: MATHEMATICAL MODELING AND SCIENTIFIC COMPUTING-IWADE" IN ONLINE MODE ORGANISED BY VIT, INDIA AND UNIVERSITY OF SALAMANCA, SPAIN. (OCT,2024)
- SUBHAJIT SARKAR ATTENDED NATIONAL WORKSHOP ON "DATA ANALYSIS IN COSMOLOGY AND PYTHON" IN THE DEPARTMENT OF MATHEMATICS, SARDAR PATEL UNIVERSITY, VALLABH VIDYANAGAR-388120, GUJARAT DURING OCTOBER 21-24, 2024.
- PLABAN SAHA PRESENTED A PAPER TITLED "ASYMMETRIC CYCLIC QUANTUM COMMUNICATION WITH HIERARCHICAL CONTROL" IN THE CONFERENCE "INTERNATIONAL WORKSHOP & CONFERENCE ON MATHEMATICAL TECHNIQUES FOR MACHINE LEARNING AND QUANTUM COMPUTING, IWCMLQC, 2024" ORGANIZED BY DEPARTMENT OF MATHEMATICS, CUSAT DURING DECEMBER 5-7, 2024.
- PRAJJWAL PARMAR PRESENTED A PAPER, AND SUBHADIP KARMAKAR AND SHANTANU MANDAL ATTENDED IN "INTERNATIONAL SEMINAR ON APPLICATIONS OF MATHEMATICS IN SCIENCE & TECHNOLOGY" ORGANIZED BY DEPARTMENT OF MATHEMATICS, GURU GHASIDAS VISHWAVIDYALAYA (A CENTRAL UNIVERSITY), BILASPUR, CHHATTISGARH DURING DECEMBER 19-20, 2024.

PERCEPTIONS

MATHEMATICAL MODELLING USES MATHEMATICAL TOOLS TO CHARACTERIZE AND STUDY PRACTICAL ISSUES FROM THE REAL WORLD. IT BRIDGES THEORETICAL CONCEPTS AND EMPIRICAL OBSERVATIONS THAT CONSIDER THE SOCIAL, ECONOMIC, AND CULTURAL ASPECTS OF HUMAN SOCIETY. FROM UNDERSTANDING THE SPREAD OF PANDEMICS TO CONSERVING ENDANGERED SPECIES BY MODELLING THEIR POPULATION DYNAMICS, IT PLAYS A CRUCIAL ROLE IN SHAPING PUBLIC HEALTH POLICIES AND CONSERVATION EFFORTS. BEING A RESEARCH SCHOLAR OF THE DEPARTMENT OF MATHEMATICS, IEST, SHIBPUR, I HAVE THE OPPORTUNITY TO BE A PART OF THIS STYLE OF THINKING TO INCORPORATE REAL-WORLD ISSUES IN MATHEMATICAL MODELLING.

ESITA DAS
(SENIOR RESEARCH FELLOW)

IN THE PERIOD OF ABOUT TWO YEARS DURING WHICH I AM WORKING AS JUNIOR RESEARCH FELLOW ON QUANTUM COMMUNICATION TECHNOLOGY, IT HAS BEEN MY FEELING THAT A GREAT FUTURE OF HUMANITY AWAITS US IN WHICH HITHERTO UNEXPLORED CAPABILITIES OF TECHNOLOGY WILL BE AVAILABLE THROUGH THE APPLICATIONS OF QUANTUM LAWS. I AM HAPPY TO BE A PART OF IT THROUGH MY RESEARCH INITIATIVES.

PLABAN SAHA
(JUNIOR RESEARCH FELLOW)

SOLID MECHANICS AND THERMOELECTRICITY REVEAL THE SECRETS OF STRUCTURAL RESILIENCE, WHILE BIO-THERMOMECHANICS AIDS ADVANCEMENTS IN MEDICAL THERAPEUTIC TREATMENTS. MATHEMATICS SERVES AS THE BACKBONE, UNITING THESE FIELDS TO SOLVE COMPLEX PROBLEMS. THIS SYNERGY HIGHLIGHTS HOW INTERDISCIPLINARY RESEARCH DRIVES PROGRESS, SHAPING SOLUTIONS FOR CHALLENGES IN ENGINEERING, HEALTHCARE, AND BEYOND.

PRAJJWAL PARMAR
(SENIOR RESEARCH FELLOW)

COSMOLOGY IS THE MOST INNOVATIVE WAY TO PERCEIVE THE UNIVERSE IN THE LANGUAGE OF MATHEMATICS. WE HAVE ACQUIRED THROUGH OUR WORDS A MEANINGFUL MOTIVATION TO COMBINE OUR MATHEMATICAL KNOWLEDGE WITH A LAW OF PHYSICS TO CONDUCT STUDIES THAT CAN ANSWER FUNDAMENTAL QUESTIONS ABOUT EXISTENCE, EVOLUTION AND ORIGIN OF UNIVERSE.

PUJA MUKHERJEE
(SENIOR RESEARCH FELLOW)

EDITORIAL TEAM

- ❖ **Editor-in-chief:** HoD, Mathematics (Prof. Parbati Saha)
- ❖ **Editors:** Prof. B. S. Choudhury (Faculty Member)
 - Dr. S. Alam (Faculty Member)
 - Dr. U. Debnath (Faculty Member)
 - Mr. Subhajit Sarkar (Research Scholar)