

Recent Trends in Mathematics and its Applications

FIVE DAY ONLINE WORKSHOP
ON
***“RECENT TRENDS IN MATHEMATICS
AND
ITS APPLICATIONS”***

28th October 2020 to 1st November 2020



ORGANIZING TEAM

Patron

Professor (Dr.) Goutam Sutradar
Director, National Institute of Technology, Manipur

Convener

Dr. Chanam Barchand Singh,
Associate Professor & Head, Department of Mathematics,
National Institute of Technology, Manipur

Coordinator

Dr. Sunil Panday
Assistant Professor, Department of Mathematics,
National Institute of Technology, Manipur

Sponsored by

TEQIP-III

Technical Education Quality Improvement Programme-III

Organized By

**Department of Mathematics
National Institute of Technology, Manipur
Imphal, India- 795004**

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ABOUT NIT, MANIPUR

National Institute of Technology Manipur, a centrally funded institution is set up to impart quality technical education at various levels of higher learning. It is one of the ten new NITs established and developed as "Institute of National Importance" by an act of Parliament in 2007. NIT Manipur started its first session with the three branches of Engineering-Electrical & Electronics Engineering, Electronics & Communication Engineering and Computer Science Engineering. The functioning of the institute was started at its temporary campus at Takyelpat, Imphal under the mentorship of NIT, Agartala. As one of the National Institutes of Technology (NIT), the Institute has the responsibility of providing high quality education in Engineering, Technology and Sciences to produce competent technical and scientific manpower for the country. The Institute has acquired 341 hectares of land in the lush green areas of Langol, Imphal. The Institute now has five departments of Engineering viz CSE, EEE, ECE, Civil, Mechanical and three departments of basic science viz. Mathematics, Physics, Chemistry and one Humanities department. The Institute offers B.Tech., M.Tech, M.Sc. and PhD programmes in several disciplines of Engineering, Technology, Sciences and Humanities.

ABOUT THE COURSE

This workshop is intended to upgrade the existing knowledge in research and create deeper interest in mathematics. This workshop helps to develop the academic leadership, knowledge, sound presentation skills and attitudes necessary to pursue further research in mathematics to participants. The mathematical understanding required in the research journey in engineering and natural sciences will be enhanced through this workshop.

TOPICS TO BE COVERED

The scope of the workshop includes:

1. An introductory note on Algebraic number theory,
2. Continuity-A journey from real to abstract topological spaces,
3. Applications of Mathematics in Natural World and Human Anatomy, Fractal Geometry and Applications,
4. Convergences of Sequences of Numbers and Functions, Feigen Baum Universality,
5. Chaos and Strange Attractors in Nonlinear Mathematical Models,
6. Mathematical Modelling of Non-linear Systems and Some physical flow Models,

OBJECTIVES OF THE COURSE

The main objective of this workshop is to bring together the Experts, Faculty Members, Scientists, Research Scholars, PG students from Universities, Colleges, Scientific Organizations, NITs, IITs, IIITs, Engineering Colleges and other Institutions of Higher Education from all over the country to discuss the recent trends and developments in the broad topics of the workshop and to promote exchange of ideas in various applications of mathematics in science and engineering. This workshop will provide an opportunity to young researchers to learn the current state of research & techniques.

TARGET AUDIENCE

Faculty Members/Research Scholars/ PG students from Universities, Colleges, NITs, IITs, IIITs, Engineering Colleges, other Institutions of Higher Education, Engineers & Scientists from Industry and R&D organizations.

REGISTRATION FEE

There is no registration fees from any participants.

REGISTRATION DEADLINE

The participants are requested to register for the workshop on or before 26th Oct 2020.

Kindly register through this link:

<https://docs.google.com/forms/d/e/1FAIpQLSdQi7SpwZz5ZHN2ejemdAJJsrBIB6nTK3qd6JzqQQQVgDv5fg/viewform>

The number of participants are limited to 50. Shortlisted candidates will be informed through email.

ADDRESS FOR COMMUNICATION

Dr. Chanam Barchand Singh, Email: barchand_2004@yahoo.co.in Ph. 9612694128	Dr. Sunil Panday, Email: sunilpanday@hotmail.co.in Ph. 7648842546
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Resource Persons Biography



Dr. T.K. Dutta was a former Professor and Head, Department of Mathematics, Gauhati University, Guwahati and is currently working as a Professor in the Department of Mathematics, Assam Don Bosco University, Assam. He was a Gold Medalist in M.Sc. (Maths) from Gauhati University and Ph. D. from University of Edinburgh, U. K., under Commonwealth Scholarship. He has 47 years of Post- Graduate teaching experience, published more than 70 research papers in different National and International Journals of repute, have produced 6 M.Phil and 16 PhD students and 3 are currently undergoing research work for PhD under his supervision, delivered a number of invited talks, completed a number of development projects of improvement of departmental library, establishment of Computer Laboratory etc. He has a number of academic foreign visits to UK, USA, Canada, France, Germany, Italy, Switzerland, Bangladesh etc. Visiting Faculty in other universities/ Institutions, Membership of Learned Bodies, In addition to having excellent academic and research exposure, Professor T.K. Dutta was engaged in various administrative responsibilities at various capacities.



Dr. Okram Ratnabala Devi, presently working as a Professor in the Department of Mathematics, Manipur University, Imphal. She received MSc in Mathematics from Poona University, now Savitribai Phule Pune University in the year 1995 with first class first. She joined the Department of Mathematics, Manipur University in August 1998 as an Assistant Professor and completed her PhD in the year 2007 from the same department. One PhD scholar completed his degree in the year 2015 under her guidance and three PhD scholars are presently working under her guidance. She has published twelve research papers in UGC Care listed journals. She has been a life member of Indian Society of History of Mathematics, Calcutta Mathematical Society, Cryptology Research Society of India, Manipur Mathematical Society, Indian Science Congress Association. She has also been involved in various administrative capacities of the University. Her research areas are on ring theory specially near-ring theory, algebraic number theory, algebraic coding theory and fuzzy algebraic systems.



Dr. Dharmendra Tripathi is currently working as an Associate Professor in the Department of Mathematics at the National Institute of Technology, Uttarakhand. Prior to joining NIT Uttarakhand, he worked for over 9 years at the level of Assistant Professor and Associate Professor at various reputed institutes like BITS Pilani Hyderabad, Manipal University Jaipur, NIT Delhi, and IIT Ropar. He received his Ph. D degree in Mathematical Modelling of Physiological flows in 2009 from Indian Institute of Technology BHU. He was awarded prestigious INAE fellowship in 2015, 2016, 2017 and 2018, postdoctoral fellowships, NBHM, Dr. D.S. Kothari and Indo-EU in 2010 etc. He has produced 4 Ph. D students and at present supervising 4, guided 20 B.Tech projects, published more than 130 papers in reputed international journals and has more than 3900 citations, 05 book chapters and presented more than 30 papers in International and National Conferences. His research work covers mathematical modelling and simulation of biological flows in deformable domains, Peristaltic flow of Newtonian and non-Newtonian fluids, microfluidics, CFD, Biomechanics, Numerical methods and biomechanics.



Dr. Khundrakpam Binod Mangang is currently working as an Assistant Professor in the Department of Mathematics, Manipur University, Manipur. Prior to joining Manipur University, he worked for 8 years at the level of Assistant Professor in the Department of Mathematics and Computer Science of the University of Mizoram. He received Gold Medal for securing Highest Marks in B.Sc Hon (Mathematics), Awarded by Manipur University, 1997. He did M. Sc. in Mathematics from the University of Delhi and received his Ph. D degree from the University of Delhi in 2007. His research work covers Topological Dynamics and Celestial Mechanics. He has produced 2 PhD students and at present supervising 3 PhD students. He published more than 11 papers in reputed international journals, presented 5 papers in International and National Conferences, delivered 6 invited talks in National and International conferences/Workshops. He successfully completed one UGC Minor Research Project and one UGC Major Research Project.