

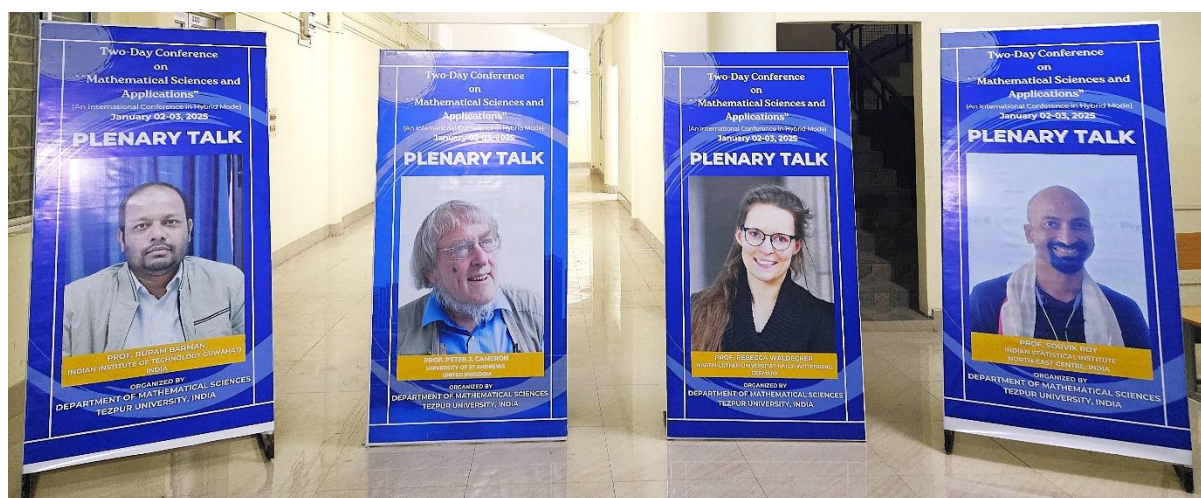
Two-Day Conference on Mathematical Sciences and Applications (CMSA-2025)

An International Conference in Hybrid Mode

January 02--03, 2025

Department of Mathematical Sciences, Tezpur University

The Department of Mathematical Sciences, Tezpur University organized a Two-Day Conference on Mathematical Sciences and Applications (CMSA-2025), An International Conference in Hybrid Mode, from January 02--03, 2025, featuring the latest advancements in the field of mathematical sciences and applications. The conference featured four esteemed speakers like Prof. Peter J. Cameron (University St Andrews, Scotland), Prof. Rebecca Waldecker (Martin-Luther-Universität Halle-Wittenberg, Germany), Prof. Rupam Barman (Indian Institute of Technology Guwahati, India) and Prof. Souvik Roy (Indian Statistical Institute North-East Centre, India).



The conference included four sessions of plenary talks and seventeen sessions of contributory talks on topics and cutting-edge research on group theory, ring theory, field theory, number theory, graph theory, coding theory, game theory, cryptography, geometry, differential equations, fluid dynamics, functional analysis, optimization, mathematical modelling, mathematical biology, mathematical physics, statistics, etc. There were 90 speakers in those contributed talk sessions from different countries of the world. Those sessions were chaired by Prof. Dhiren Kumar Basnet, Dr. Bipul Kumar Sarmah, Dr. Pankaj Kumar Das, Dr. Deepjyoti Goswami, Dr. Yengkhom Satyendra Singh (faculty members of the Department of Mathematical Sciences, Tezpur University), Dr. Bijoy Krishna Debnath, Dr. Somnath Paul (Department of Applied Sciences, Tezpur University), Dr. Deiborlang Nongsiang (North-Eastern Hill University), Dr. Jituparna Goswami (Gauhati University), Dr. Dimple Jyoti Mahanta (Kaziranga University), Dr. Sujit Talukdar (Assam Don Bosco University), Dr. Jayanta Bhattacharyya (Joya Gogoi College), Dr. Parama Dutta (Lakhimpur Girls' College) and Dr. Arjun Singh Chetry (Digboi College). All the sessions of the conference were hosted by Ms. Silpi Sikha Das, Mr. Abhishek Sarma, Mr. Firdous Ee Jannat, Ms. Bidushi Sharma, Ms. Payal Tak, Ms. Darsana Devi, Ms. Puspita Paul, Mr. Pranjal Talukdar and Ms. Achal Agarwal (research scholars of the Department of Mathematical Sciences, Tezpur University).



In his plenary talk, Prof. Cameron talked about the ADE affair, Prof. Waldecker discussed the classification of finite simple groups: History and Applications, Prof. Barman spoke on Hypergeometric series in arithmetic geometry and Prof. Roy spoke on the aggregation of choice functions.

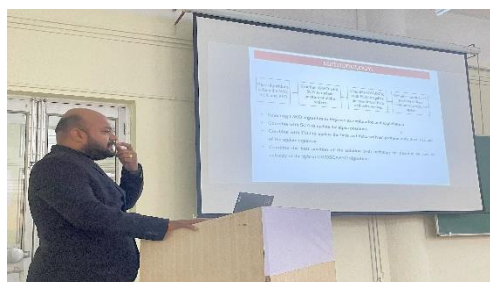


On January 02, 2025, the conference begins with an inaugural session. In his inaugural address, Prof. Raza Rafiqul Hoque, Dean Academic Affairs, Tezpur University, who was attended the inaugural session on behalf of hon'ble Vice Chancellor of Tezpur University Prof. Shambhu Nath Singh, mentioned the importance of mathematics in science by recalling the story of the Nobel laureate theoretical physicist Prof. Abdus Salam and his mathematics teacher Prof. Anilendra Ganguly. Prof. Robin Kumar Dutta, Dean, School of Sciences, Tezpur University, talked about the importance of participation in conference by mentioning the upcoming Tezpur University Science Graduate Research Conclave (February 10--11, 2025). The Head of the Department of Mathematical Sciences, Tezpur University, and Chairman of the Organizing Committee, CMSA-2025, Prof. Shuvam Sen talked about the history of the department and background story of this conference. Prof. Sen also mentioned the relevance of this conference in the context of National Educational Policy (NEP) 2020 of India. Prof. Rupam Barman, Department of Mathematics, Indian Institute of Technology Guwahati, recalled his long association with the Department of Mathematical Sciences, Tezpur University, and emphasized the importance of participating and organizing workshops and conferences. The Coordinator of CMSA-2025, Dr. Rajat Kanti Nath, Assistant Professor, Department of Mathematical Sciences, Tezpur University, talked about the conference and the participants. Dr. Nath mentioned that there were 103 participants from various countries like USA, South Korea, Iran, Palestine, Algeria and India and this conference became a place of gathering of mathematicians

of three generations as Prof. Barman and Prof. Sen were his teachers and there were many of his students among the participants.



Finally, Dr. Nath hosted a small book release session where all the dignitaries released the Book of Abstracts of the conference. Prof. Debajit Hazarika, Prof. Dhiren Kumar Basnet, Dr. Bipul Kumar Sarmah, Dr. Pankaj Kumar Das, Dr. Deepjyoti Goswami, Dr. Yengkhom Satyendra Singh along with Dr. Biswajit Das (Deputy Coordinator of CMSA-2025) and other members of the department were also present in the inaugural session. The inaugural session was hosted by two research scholars Ms. Silpi Sikha Das and Mr. Abhishek Sarma of the department.



After two plenary talks and 50 contributed talks in 9 parallel sessions, Day-1 of CMSA-2025 ended with a conference dinner.



On January 03, 2025, there were two plenary talks by Prof. Souvik Roy and Prof. Rebecca Waldecker and 40 contributed talks in 8 parallel sessions.



Day-2 of CMSA-2025 ended with a valedictory session where participants shared their experience and feedback. Certificates of participation were also distributed in that session. Among other participants Ms. Walaa Nabil Taha Fafous, a former international research scholar of the department from Palestine, also joined through google meet and recalled her memories with the university.



The conference hosted four distinguished invited speakers, 13 session chairs and 103 participants from different research institutes in India and abroad, such as University St Andrews, Martin-Luther-Universität Halle-Wittenberg, Arizona State University, Tulane University, Pohang University of Science and Technology, University of Neyshabur, Kosar University of Bojnord, Universite of Laghouat Algeria, University of Jijel, University of M'sila, University Centre Abdelhafid Boussouf -Mila, University of Batna 2, Djillali Liabes University of Sidi Bel Abbes, University of Science and Technology Houari Boumediene, University of Tlemcen, Setif 1 University Ferhat Abbas, Abdelhamid Ibn Badis University, University of Souk-Ahras, University of Brothers Mentouri-Constantine 1, Badji-Mokhtar University, Mostaganem University, USTO-MB University of Oran-Algeria, Echahid Cheikh Larbi Tebessi University, University of Becher, Indian Institute of Technology Guwahati, Indian Statistical Institute North-East Centre, Indian Institute of Technology Dhanbad, Indian Institute of Information Technology Guwahati, National Institute of Technology Manipur, North-Eastern Hill University, Institute of Advanced Study in Science and Technology, Gauhati University, Rajiv Gandhi University, Cotton University, Kaziranga University, Assam Don Bosco University, The Assam Royal Global University, etc. Needless to mention that there were participants from Tezpur University and nearby colleges such as Tezpur College, Darrang College, B. P. Chaliha College, Sonapur College, B. Boroah College, Arya Vidyapeeth College, Kamrup College, Birjhora Mahavidyalaya, Basugaon College, Lakhimpur Girls' College, Digboi College, Cachar College, etc. It is noteworthy that all the 46 participants were joined virtually while the rest Indian participants were joined in person.



Prof. Cameron was also present in one of the contributory talk sessions and enriched the session with his valuable comments and suggestions. The special question-answer session by Prof. Waldecker within her plenary talk was a remarkable. Interactions with Prof. Barman, Prof. Roy and Prof. Basnet along with other session chairs were also well-appreciated by the participants. The discussions among the speakers, session chairs and participants open up new vistas in research collaborations.



The organizers of CMSA-2025 express their deepest gratitude to all individuals whose efforts and support have made this event possible. The organizers extend heartfelt thanks to the speakers, chairs, and presenters for sharing their expertise and insights, which have enriched the conference. The organizers are grateful to all participants for their active engagement and valuable contributions. The organizers also acknowledge the dedication of the volunteers, whose tireless efforts have been critical to the seamless planning and execution of the conference. Finally, the organizers thank Tezpur University for providing all the necessary support to conduct CMSA-2025.
