



**INDIAN INSTITUTE
OF TECHNOLOGY**
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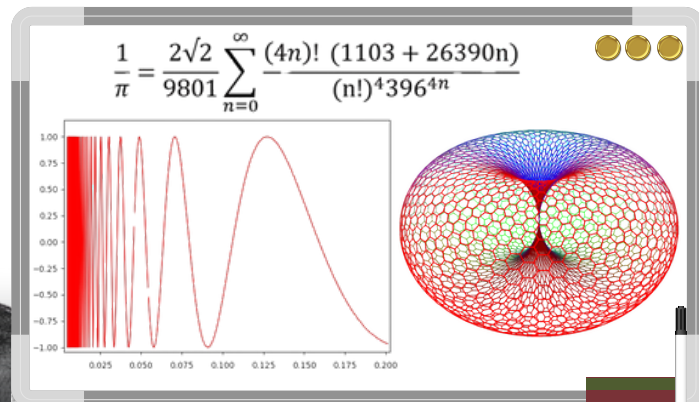
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Department of Mathematics and Computing*



EVENT

Prof. A. Prasad (Course Coordinator) and **Prof. A. Antony Selvan** (Course Co-coordinator) organized a Short-Term Program on "Wavelet Analysis and Applications", under the Malaviya Mission Teacher Training Programme (MMTTP) during November 10-15, 2025. The programme was designed to strengthen participants' understanding of Fourier and wavelet analysis, highlighting their theoretical foundations and effectiveness in analysing non-stationary signals. It introduced modern mathematical tools with clear and intuitive explanations, bridging theory with practical applications such as signal processing and data analysis. By the end of the course, participants were able to use these techniques confidently to solve complex problems and understand data more clearly.



SPONSORED PROJECTS

Bilingual (English and Hindi) LLM Framework for Real-Time Interpretation of Tailing Dam Break Simulations for Improved Emergency Planning and Decision Support, TEXMiN Foundation, A. K. Pandey (PI), **S. Kumawat** (CoPI), S. K. Das (CoPI), N. K. Sahu (CoPI), 21.62 Lakh, November 2025.

PUBLICATIONS

- G. K. Verma, A. Singh, and **A. K. Singh**, Function-Correcting b-symbol Codes for Locally (λ, ρ, b) -Functions. IEEE Transactions on Information Theory, 2025 (DOI: 10.1109/TIT.2025.3633259).
- V. Tiwari and **P. K. Kewat**, Construction of good cyclic codes and quantum error correcting codes using reversed Dickson polynomials. Discrete Mathematics, 349, 3, 114885, 2026.
- A. Pal, D. Prajapati, **S. Mondal**, and D. Kundu, Implementation of order-restricted inference, optimal design and model misspecification in step-stress model with progressive first- failure censored data. Annals of Operations Research, 2025, pp.1-37. (DOI: 10.1007/s10479-025-06931-y)

INVITED TALKS

- **Prof. A. K. Singh** delivered an invited talk on “Coding Theory and the Impact of AI” at the 72nd Annual Conference of BGP – An International Meet, held in Lucknow University. [8 November 2025]
- **Prof. T. Ojha** delivered an invited Lecture on “The Next Evolution in Future IoT Networks” at the EPIC 2025, an international conference organized at SRM University-AP. [6-8 November 2025]
- **Prof. A. K. Singh** delivered an invited talk on Quantum Computing at the FDP on Advances in Scientific Computing, held at HBTU Kanpur on [14 November 2025]
- **Prof. A. K. Singh** delivered an invited talk on Post-Quantum Cryptography: An Overview of Code-Based Cryptography at the National Instructional Workshop on Cryptology (NIWC 2025), organized under the auspices of the Cryptology Research Society of India (CRSI), at IIITDM Kurnool, Andhra Pradesh. [24 November 2025]
- **Prof. H. K. Mishra** delivered a guest lecture on “Near-optical performance of square-root measurement for general score function and quantum ensemble”, at BIT Mesra, Department of Mathematics. [28 November 2025]

FACULTY ACHIEVEMENT

Prof. M. K. Singh was awarded “Change Maker Award-Academia”, conferred by India Education Forum and India Employable Forum on 7th Nov., 2025 at Mumbai.



MATHEMATICS AND COMPUTING NEWS

- **A new tool is revealing the invisible networks inside cancer:** Spanish researchers have created a powerful new open-source tool, RNACOREX, that helps uncover the hidden genetic networks driving cancer. [[Read More](#)]
- **Scientists just teleported information using light:** Quantum communication is edging closer to reality thanks to a breakthrough in teleporting information between photons from different quantum dots—one of the biggest challenges in building a quantum internet. [[Read More](#)]
- **AI creates the first 100-billion-star Milky Way simulation:** Researchers combined deep learning with high-resolution physics to create the first Milky Way model that tracks over 100 billion stars individually. [[Read More](#)]

EDITORIAL TEAM

Prof. S P Tiwari (HOD), Prof. Atul Kumar Verma, Prof. Tamoghna Ojha, Tarun Kr Das.
Contact : gananam@iitism.ac.in