MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A GOVT AIDED UGC AUTONOMOUS INSTITUTE AFFILIATED TO RGPV BHOPAL)

NAAC ACCREDITED WITH A++ GRADE

DEPARTMENT OF ENGINEERING MATHEMATICS & COMPUTING

visit us at: http://mitsgwalior.in/department/engineeringmathematics&computing

Cartan Elie was influential mathematician who did fundamental work in theory of Lie Group, differential system and differential Geometry. His major contribution was on hyper-complex number system. Most of his development depends on characteristic equation of linear associative algebra.

**Cartan Elie
(1869-1951)**

Vision

The Department of Engineering Mathematics & Computing was setup in 2020 to import knowledge of mathematics and computer science that serve the groom the academic potential of student and abreast with recent technological developments.
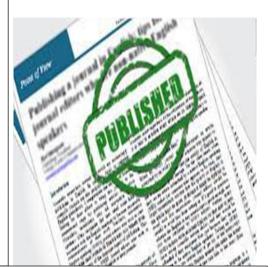

Mission

❖ To develop an ability towards critical questioning.
❖ To enhance logical attitude and aptitude ability.
❖ To nurture the computational aptitude on a global platform.

B. Tech. programme in Engineering Mathematics and Computing offers the opportunity to combine an appreciation mathematical thinking with knowledge of computing. Mathematics is a fundamental intellectual tool in computing, but computing in increasingly used as a key component in mathematical problem solving. The course concentrates on areas where mathematics and computing are most relevant to each other, emphasizing the bridges between theory and practice. It offers opportunities for budding scientist in the field of Mathematics & Computing.

PUBLICATIONS

- Altaf A. Bhat , Faiza A. Sulaiman , Javid A. Ganie , M. Younus Bhat and **D. K. Jain**; (p, q)-ANALOGUE OF THE NATURAL TRANSFORM WITH APPLICATIONS; Nonlinear Functional Analysis and Applications Vol. 28, No. 4 (Dec. 2023), pp. 1069-1086 ISSN: 1229-1595 (print), 2466-0973 (online) https://doi.org/10.22771/nfaa.2023.28.04.14, Kyungnam University Press.

- Altaf A. Bhat*, Haider Abbas Rizvi, Javid A. Ganie, Faiza A. Sulaiman , **D. K. Jain,** Differential Transform Method for Solving Volterra q-Integral Equations; Contemporary Mathematics, Vol.4, Issue 4, (Dec 2023) pp. 1222-1233**, ISSN: 2705-1064 (Print) 2705-1056 (Online), Impact factor 0.3, http://ojs.wiserpub.com/index.php/CM/** , Universal Wiser Publisher; https://doi.org/10.37256/cm.4420232549.

- **Jitendra Kumar , Vikas Shinde, Rahul Jha**, "*Comparative Analysis of Queueing Model and Artificial Neural Networks for OPD Patients*", Journal of Propulsion Technology, Vol.44,pp.3142-3153, 2023. https://doi.org/10.52783/tjjpt.v44.i5.3193 .

- Shahjad Ali , Manish Baboo Agarwal , Sitaram Verma , Raisul Islam , Rajesh Kumar Deolia, Shailendra Singh, **Jitendra Kumar**, Ali Akbar Mohammadi, Manoj Kumar Gupta, Mehdi Fattahi P. U. Nguyen, "*Variability of groundwater fluoride and its proportionate risk quantification via Monte Carlo simulation in rural and urban areas of Agra district, India*, Scientific Reports, Nature, Vol. 13, 1-13, 2023. https://www.nature.com/articles/s41598-023-46197-7

- V. Praveen Kumar, Anil Kumar Gorantla, **Jitendra Kumar** and Kanaka Durga Surapaneni, *Service Quality, Satisfaction and Loyalty on Online Marketing: An Empirical Investigation*, Journal of the Asiatic Society of Mumbai, Vol. 97(10) I, pp. 105-117, 2023

- Amit Kumar, **Atul K. Ray,** Sandip Saha, Dig Vijay Tanwar, Bhubaneswar Kumar, Mikhail A. Sheremet. (2023), " *Flow of hybrid nanomaterial over a wedge: shape factor of nanoparticles impact* ", The European Physical Journal Plus, Vol. 138, 901, 2023 **(SCI), Impact Factor –3.4. https://link.springer.com/article/10.1140/epjp/s13360-023-04535-8**

CONFERENCE ATTENDED

Dr. D. K. Mishra, "Soft Computing and its Engineering Applications, Charotar University of Science and Technology (CHARUSAT), 07-09 December, 2023.

WORKSHOP/FDP ATTENDED

❖ **Dr. Atul Kumar Ray, "**Faculty Development Program (FDP) on Introduction to Abstract and Linear Algebra, SWAYAM NPTEL, IIT Madras, Jul-Oct 2023.

❖ **Dr. Divya Chaturvedi, "**Faculty Development Program (FDP) on Introduction to Abstract and Linear Algebra, SWAYAM NPTEL, IIT Madras, Jul-Oct 2023.

EXTRA ACHIEVEMENTS

➢ **Dr. Atul Kumar Ray, "NPTEL Topper of the Course** "Introduction to Abstract and Linear Algebra", 01/11/2023
➢ **Dr. Divya Chaturvedi,** "**NPTEL Star**" - NPTEL MOTIVATED LEARNERS of Session July-Dec 2023, 26/12/2023
➢ **Dr. Atul Kumar Ray,** "**NPTEL Star**" - NPTEL MOTIVATED LEARNERS of Session July-Dec 2023, 26/12/2023
➢ **Dr. Atul Kumar Ray, Invited Talk** on "Contribution of Ramanujan in Mathematics" at ShriRam Group of College, Gwalior, 22/12/2024.

22nd December –National Mathematics Day

22nd December –National Mathematics Day

https://www.youtube.com/c/MITSLive

Link: https://youtube.com/channel/UCB4Z-cETRTnADvi-nXwwCXg

Link: https://www.instagram.com/invites/contact/?i=1wta8dhr95ncp&utm_content=p8ctdpe

Link: https://www.facebook.com/MitsMadhavIstituteOfTechnologyScienceGwalior

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