



MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(Deemed to be University)

(NAAC Accredited with A++ Grade)

DEPARTMENT OF ENGINEERING MATHEMATICS & COMPUTING

e-Newsletter

JULY –SEPT, 2024

visit us at: <https://web.mitsgwalior.in/academics/departments/engineering-mathematics-computing>



Bessel Friedrich Wilhelm (1784-1846)

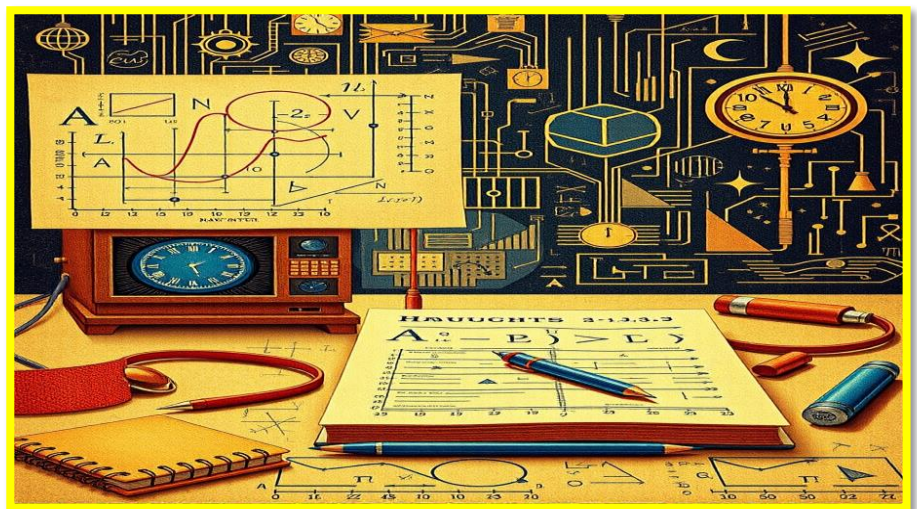
Friedrich Wilhelm Bessel was a German astronomer, mathematician, physicist, and geodesist. He is well-known for Bessel functions of First and Second kind. He was the first astronomer who determined reliable values for the distance from the sun to another star by the method of parallax.

Vision

The Department of Engineering Mathematics & Computing was setup in 2020 to impart knowledge of mathematics and computer science that serve the growth of 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 of mathematical thinking with knowledge of computing. Mathematics is a fundamental intellectual tool in computing, but computing is 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 scientists in the field of Mathematics & Computing.

PUBLICATIONS

PAPER PUBLICATIONS

- **D. K. Jain**, Altaf A. Bhat, Farooq Ahmad : q-Fractional Integral Inequalities Involving Saigo's Operator, Shodh Sahitya, International Peer Reviewed e-Research Journal, Vol.9, July 2024, E-ISSN 2584-2447. <https://shodhsahitya.in/wp-content/uploads/2024/07/1.-q-Fractional-Integral-Inequalities-Involving-Saigos-Operator-D.-K.-Jain.pdf>
- Shiv Mangal, Preeti Deolia, O. P. Misra, Joydip Dhar, and **Vijay Shankar Sharma**: "Modeling spread and control of multidrug-resistant tuberculosis in India." The European Physical Journal Plus 139, no. 9 (Sep. 2024): 1-23. <https://link.springer.com/article/10.1140/epjp/s13360-024-05639-5>
- Shahjad Ali, Salman Ahmad, Mohammad Usama, Raisul Islam, Azhar Shadab, Rajesh Kumar Deolia, **Jitendra Kumar**, Ayoob Rastegar, Ali Akbar Mohammad, Shadab Khurshid, Vahide Oskoeit, Seyed Alireza Nazari (2024): Geographical Analysis of Fluoride and Nitrate and its Probabilistic Health Risk Assessment utilizing Monte Carlo Simulation and GIS in Potable Water in Rural Areas of Mathura Region, Uttar Pradesh, Northern India, Heliyon Elsevier Ltd., e-37250, Vol. 10 (17), pp. 1-13, <https://doi.org/10.1016/j.heliyon.2024.e37250>
- Anil Kumar, Pinky Saxena, Kuldeep Sharma, **Jitendra Kumar**, Satya Narain Mishra and Vinod Kumar (2024): Differential Equation-Based Mathematical Model to Assess the Effect of a Flood Disaster on a Population, African Journal of Biological Sciences (AJBS), Vol. 6 (SI-4), pp. 2919-1924. <https://doi.org/10.48047/AFJBS.6.Si4.2024.2919-2924>



PATENT

- Dr. Dinesh Kumar Saini, **Dr. Vijay Shankar Sharma**, Dr. Anuraj Singh. Title of the invention: **NOVEL DYNAMICS IN A DISCRETE-TIME TWO-SPECIES MODEL WITH HARVESTING INFLUENCES AND RATIO DEPENDENT INTERACTIONS**, Application No.202411051969 A, INDIA, Publication Date: 26/07/2024 (Published.)

PAPER PRESENTED IN CONFERENCE

- ❖ **Dr. Atul Kumar Ray**, presented a paper titled “*Electrically Conducting Micropolar Fluid Flow and Heat Transfer from a Wedge with Source/ Sink in Porous Media*”, 2nd International Conference on Recent Advances in Applied Mathematics (RAAM 2024) held at **Department of Mathematical Sciences, Indian Institute of Technology (BHU)**, Varanasi during July 03-05, 2024

WORKSHOP/FDP ATTENDED

- ❖ **Dr. Jitendra Kumar**: Two-Week *Faculty Development Program on MATLAB for Engineers and Scientists: Bridging Theory and Application*, held on 18-31 July. -2024, jointly organized by ICFI University, Jaipur, INDIA, Moulay Ismail University, MOROCCO, Private University of Fez, MOROCCO, and MathTech Thinking Foundation, India.
- ❖ **Dr. Atul Kumar Ray, Dr. Divya Chaturvedi, Dr. Minakshi**, One Week online workshop on “*Emerging Significance of Artificial Intelligence in Biomedical, Industry 5.0, Cyber Security & Data Forensics*” held between 26th to 31st August, 2024, organised by VPM’s Maharshi Parshuram College of Engineering, Velneshwar in association with Indian Society for Technical Education, New Delhi.
- ❖ **Dr. Divya Chaturvedi, Dr. Minakshi, Dr. Atul Kumar Ray**, Five days Faculty development program on “*Innovation in Recent Trends and Research Applications on Computing and Informatics*” organized by the Department of Information Technology in association with IQAC, Haldia Institute of Technology during 29 th July- 02 August, 2024.
- ❖ **Dr. Minakshi. Dr. Atul Kumar Ray, Dr. Divya Chaturvedi**, Two day online Faculty development program on “*Unveiling Emerging Research Trends in Mathematics*” organised by SRM Madurai College of Engineering and Technology, Sivagangai, Chennai during 20th to 21st August, 2024.
- ❖ **Dr. Lav Kumar Singh**, Attended and delivered a talk at 5-day **International workshop on operator theory (IWOTA-2024)**, **University of Kent, Canterbury (U.K)** held during 12-16, August 2024 (Visit sponsored by SERB-ITS scheme).

OTHER NOTABLE ACHIEVEMENTS OF THE FACULTIES

- ❖ **Dr. D. K. Jain**, Member of Board of Studies (BoS), Department of Mathematics, UIT RGPV Bhopal (Meeting Held on 22/08/2024)
- ❖ **Dr. D. K. Jain**, Member of Selection Committee for Post of Assistant Professor, Statistics cum Statistician, LNIPE Gwalior, Held on 16/07/2024
- ❖ **Dr. D. K. Jain**, Ph.D. Viva Voce Examiner of Mathematics, School of Sciences, ITM University, Gwalior, Held on 31/08/2024
- ❖ **Dr. Atul Kumar Ray**, Reviewer, International Journal of Numerical Methods in Heat and Mass Transfer, SCI, 09/08/2024
- ❖ **Dr. Vijay Shankar Sharma**, Reviewer, Nonlinear Dynamics, SCI, 06/08/2024
- ❖ **Dr. V. P. Shinde**, Reviewer, Journal of Mathematics and Computational Sciences, SCOPUS 20/09/2024

ACTIVITIES AND ACHIEVEMENTS BY STUDENTS OF THE DEPARTMENT

S/No.	Enrolment Number	Name	Year	Name of the Event	Level of Event
1	0901MC211027	Divyanshi Nagpal	Final	Tata crucible campus quiz	International
2	0901Mc211027	Divyanshi Nagpal	Final	National space quiz	National
3	0901MC211027	Divyanshi Nagpal	Final	Coursera certificate	National
4	0901MC231065	Shivansh Arora	Second	Independence day ceremony 2024 (winner in the national level quiz conducted by Ministry of Defence in July 2024)	National
5	0901MC231065	Shivansh Arora	Second	Intern at Scindia Research Centre	Institute
6	0901MC221020	Arpit Yadav	Pre-Final	Swayam Nptel	National
7	0901MC231065	Shivansh Arora	Second	RBI@90 QUIZ	National
8	0901MC231065	Shivansh Arora	Second	MPTFS and Pench Tiger Reserve - TIGER DAY QUIZ 2024	National
9	BTMC24O1053	HARSHIT BHATNAGAR	First	NATIONAL APTITUDE OLYMPIAD	National

10	BTMC24O1053	HARSHIT BHATNAGAR	First	IOQM	National
11	0901MC211061	Sonali Patel	Final	X- Calibre 2K24	Institute
12	0901MC211061	Sonali Patel	Final	BYTE THE BITS	Institute
13	0901MC211061	Sonali Patel	Final	TECH TRIVIA	Institute
14	0901MC221015	Anupam Awasthi	Pre-Final	SWAYAM NPTEL	National
15	0901MC211061	Sonali Patel	Final	Gurukul Quest 2024	National
16	0901MC211061	Sonali Patel	Final	National Space Quiz	Institute
17	0901MC231065	Shivansh Arora	Second	The Independence Quiz (Organized by Scindia Research Centre)	National
18	0901mc231031	Jitendra Yadav	Second	RBI 90 QUIZ	National
19	0901mc211030	Harsh Kushwaha	Final	National level Gurukul Quest 2024	National
20	0901MC231065	Shivansh Arora	Second	National Space Day Quiz (Hosted by ISRO & mygov) - (Won cash prize of INR 1000 as secured among top 200 participants of total 3,66,308 participants)	National
21	0901MC211061	Sonali Patel	Final	National Space Day Quiz	State
22	0901mc211061	Sonali patel	Final	Swachh Bharat Mission Quiz 2024	State
23	0901mc211061	Sonali patel	Final	Eat Right Quest	State
24	0901mc211061	Sonali patel	Final	Quantitative Aptitude for Interview	Institute
25	0901MC221004	Ajit shrivas	Pre-Final	Check mate chess tournament	Institute

Certificates of the students are in the following drive folder

https://drive.google.com/drive/folders/1c5PjaVAJHnyFwUVfWA_30Fc0QSUzQnLyM2w7JhGYh_GA0FkGLPjEhP3WU-srOIAGwT3qn1H-?usp=sharing

Congratulation to all Students of MAC

SOME GLIMPSES



DEPARTMENTAL/INSTITUTIONAL SOCIAL MEDIA ACCOUNTS



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

Link: https://www.youtube.com/@mits_mathematicscomputing2531



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



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



Departmental Editorial Board
E-Newsletter Coordinator

Dr. Atul Kumar Ray and Dr. Vijay S. Sharma