WORKSHOP ON



THEORETICAL & COMPUTATIONAL DYNAMICS OF BIOLOGICAL SYSTEMS

APRIL 09-11, 2025 (HYBRID MODE)

Organized by

Department of Engineering Sciences ABV- Indian Institute of Information Technology and Management Gwalior

About the Institute and Department

Atal Bihari Vajpayee-Indian Institute of Information Technology & Management (ABV-IIITM) Gwalior, established in 1997 by the Ministry of Human Research & Development (MHRD), Government of India, is a premier institute dedicated to excellence in Information Technology and Management. The Department of Engineering Sciences (ES), established in 2022, is a key department to support and fulfill the mission and the vision of the institute. The Department of Engineering Sciences at ABV-IIITM Gwalior is a dynamic, multidisciplinary hub committed to both fundamental and applied research in cutting-edge engineering domains. Offering academic programs at the B.Tech. (Mathematics & Scientific Computing), M.S. (AI & Data Science), and Ph.D. levels, the department provides rigorous training and research opportunities in Mathematics and Physics, with a strong emphasis on emerging fields such as artificial intelligence in engineering, numerical simulations, and interdisciplinary problem-solving.

About the Workshop

The workshop provides a dynamic platform for • exploring disease dynamics, including ecological interactions and control strategies. It covers modeling at multiple biological levels, from genome to population, with an emphasis on biological interactions and sustainable control strategies. Participants will gain hands on experience in implementing disease models using MATLAB, Python, along with trainiing in statistical methods and advance modeling techniques. Expert led discussions and practical sessions will foster critical thinking and problem solving skills. The workshop promotes real world data analysis to develop innovative, biologically grounded solutions for public health and environmental challenges. Special lecture and panel discussions enhance collaboration and knowledge sharing among experts and participants.

Objective of the Workshop

- To understand the ecological dynamics and transmission mechanisms of infectious disease for effective control strategies.
- To apply statistical and advanced modeling techniques for comprehensive infectious disease analysis.
- To develop practical skills in implementing and simulating disease models using MATLAB and Python.
- To analyze real world disease data to propose sustainable, biologically informed control solutions.

CHIEF PATRON

Prof. S. N. Singh
Director
ABV-IIITM Gwalior

PATRON

Dr. Ajay Kumar Head of Department (ES) ABV-IIITM Gwalior

COORDINATOR

Dr. Anuraj Singh
Department of Engineering Sciences
ABV-IIITM Gwalior
anuraj@iiitm.ac.in

Registration Deadline (Extended):

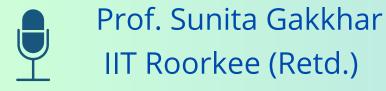
March 24, 2025

March 31, 2025



Resource Persons













Dr. Prashant Kumar Srivastava IIT Patna

Dr. Bapan Ghosh IIT Indore

Dr. Saroj Kumar Sahani SAU, New Delhi



Registration Fee*

Category	Offline	Online
Academics	Rs. 2000/-	Rs. 500/-

*The registration fee for offline participants includes registration kit, accommodation, meals, and a participation certificate. The online participants will receive the e-certificate only.

BANK DETAILS

Account Name: ABV IIITM FDP Account Account Number: 945210110009380

IFSC Code: BKID0009462

Bank name, Address, and Branch: BOI, IIITM Branch, Gwalior

Registration Link

https://forms.gle/RZfBJ9i5d73osnVJ7



For any query, please contact: +91-8982974189, tcdbs2025@gmail.com