अटल बिहारी वाजपेयी भारतीय सूचना प्रौद्योगिकी एवं प्रबंधन संस्थान ग्वालियर
Atal Bihari Vajpayee Indian Institute of Information Technology and Management Gwalior

विश्वजीवनामृतं ज्ञानम्

Anusandhan National Research Foundation

Sponsored by ANRF

A Five-Day Workshop on

AI and Machine Learning for Biological Systems

From Mathematical Modeling to Data-Driven Approaches

Under the Aegis of
Indian Society for Mathematical Modeling and Computer Simulation (ISMMACS)

17–21 February 2027 | ABV-IIITM Gwalior, Madhya Pradesh, India

About the Workshop

The five-day workshop brings together students and researchers from mathematics, engineering and biological sciences to explore mathematical modelling and AI/ML for understanding complex biological systems. It integrates traditional modeling with data-driven approaches through expert lectures and hands-on computational sessions.

Objectives

- Introduce mathematical modeling, AI/ML and neural networks
- Hands-on training in PINNs and SINDy
- Model discovery, parameter estimation and prediction
- Foster interdisciplinary collaboration

Key Topics

- Mathematical modeling of biological systems
- AI and ML for biological applications
- Neural networks and deep learning
- Physics-Informed Neural Networks (PINNs)
- Sparse Identification of Nonlinear Dynamics (SINDy)
- Data-driven modeling and model discovery
- Case studies and real-world applications
- Hands-on computational sessions

Resource Persons

Prof. B. V. Rathish Kumar — IIT Kanpur
Prof. Ranjit K. Upadhyay — IIT (ISM) Dhanbad
Prof. Sudeshna Sinha — IISER Mohali
Prof. Sitabhra Sinha — IMSc Chennai
Prof. P. S. Rao — IIT (ISM) Dhanbad
Dr. Bapan Ghosh — IIT Indore
Prof. Nitu Kumari — IIT Mandi
Dr. Surabhi Pandey — ICMR HQ, New Delhi
Dr. Prashant Kumar Srivastava — IIT Patna
Prof. Joydip Dhar — ABV-IIITM Gwalior
Prof. Rajesh Pandey — IIT BHU, Varanasi
Prof. A. K. Mishra — BHU, Varanasi

Registration Fee (Inclusive of GST)

Category	With accommodation (5 nights)	Without accommodation
Early Bird (up to 31 Dec 2026)	₹3,000	₹2,000
Regular (1–31 Jan 2027)	₹3,500	₹2,500
ISMMACS Member	₹3,000	₹2,000

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ABV-IIITM FDP Account

Save your payment receipt.

02 | REGISTER ONLINE

Complete the registration form

Enter your details and upload the payment receipt.

CLICK HERE TO REGISTER

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Early bird deadline: 31 December 2026

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Bank: Bank of India, IIITM Campus, Gwalior

Account No.: 945210110009380

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Accommodation for residential participants will be arranged in the Institute Guest House.

Patron: Prof. S. N. Singh
Director, ABV-IIITM Gwalior

Convener: Dr. Anuraj Singh
Department of Engineering Sciences, ABV-IIITM Gwalior

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Mathematics + AI + Biology = A Healthier and Sustainable Tomorrow