

ABOUT THE WORKSHOP: This workshop aims to provide participants with a comprehensive understanding of the key concepts that underpin modern computational methods and data-driven technologies. It focuses on building strong foundational knowledge by connecting mathematical principles with practical applications, enabling participants to interpret and analyze real-world problems effectively. The workshop emphasizes the importance of data, model behavior, and efficient representation techniques in extracting meaningful insights. By integrating theory with application-oriented perspectives, it helps participants develop analytical thinking and problem-solving skills, preparing them to explore advanced topics and apply computational techniques across diverse domains.

PREREQUISITES: No prior experience in computational Intelligence is required; the workshop focuses on building a strong mathematical foundation from the ground up.

TARGET AUDIENCE: The Workshop is designed for faculty members, research scholars, and UG and PG students of engineering/research institutions.

OBJECTIVES OF THE WORKSHOP: By the end of this workshop, participants will be able to:

- Understand how machine learning models learn from data, and how data quality, bias–variance, and overfitting impact model
- Learn how linear regression models relationships, minimizes error, and interprets data for prediction and insight.
- Foundations of Singular Value Decomposition and Low-Rank Approximation
- Applications of Singular Value Decomposition in Image Compression Across Diverse Domains

ORGANIZING COMMITTEE

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Fouder & Chancellor, VIT

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Dr. D. Rajan Babu,
Associate Dean, SAS, VIT, Vellore
Dr. Khadar Babu S K,
Head, Department of Mathematics, VIT, Vellore

FACULTY COORDINATORS:

Dr. Parvez Alam,
Dr. Tabinda Nahid,
Department of Mathematics, SAS, VIT-Vellore



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

One-day Workshop

on

Mathematical Foundations of Computational Intelligence

27th April 2026



Organized by
Department of Mathematics
School of Advanced Sciences (SAS)
Vellore Institute of Technology (VIT)
Vellore – 632014, Tamil Nadu, India.

ABOUT THE INSTITUTE: Vellore Institute of Technology (VIT) was established in 1984 as Vellore Engineering College by its founder and Chancellor, Dr. G. Viswanathan. Over the years, it has grown into a globally recognized institution, attracting students from across India and over 60 countries due to its strong academic reputation. In 2001, VIT was granted university status by the Ministry of Human Resource Development, Government of India, in recognition of its excellence in academics, research, and extracurricular activities. Today, VIT operates five campuses in Vellore, Chennai, Amravati, Bhopal, and Bengaluru. The institute has achieved impressive rankings in the National Institutional Ranking Framework (2025), including 21st overall and 16th in engineering. It holds accreditations from NAAC, IET (UK), and ABET (USA), and follows a world-class academic system. VIT has also earned global recognition through QS, THE, and ARWU rankings.

ABOUT THE SCHOOL: The School of Advanced Sciences (SAS), established in 1984, includes the Departments of Mathematics, Physics, and Chemistry. It is committed to delivering high-quality teaching and research with global impact. The School has a strong team of 232 experienced and dedicated faculty members, actively engaged in research, publications, and industry collaborations. SAS offers a range of postgraduate programs, including Master's degrees in Data Science, Business Statistics, Physics, and Chemistry, along with Integrated Master's programs in related disciplines. Additionally, it provides Ph.D. programs in emerging research areas across Mathematics,

Physics, and Chemistry, fostering innovation and academic excellence.

ABOUT THE DEPARTMENT: The Department of Mathematics at Vellore Institute of Technology, established in 1984, aims for excellence in academics and research at both national and international levels. With 136 faculty members, the department supports engineering programs while actively engaging in diverse research areas. It offers Ph.D. programs in Mathematics, Statistics, and Data Science, along with M.Sc. and Integrated M.Sc. programs in Mathematics, Data Science, and Business Statistics. The department emphasizes a comprehensive curriculum and promotes advanced research in emerging fields such as AI, Machine Learning, and Data Science. Ranked 104th globally and 5th nationally in Mathematics by QS, it is recognized for quality research. The department is also supported by DST-FIST funding of ₹2.71 crores, strengthening its research infrastructure and academic initiatives.

ABOUT THE RESOURCE PERSONS: The workshop features two distinguished speakers, Dr. Abdul Wahid, Assistant Professor, Department of Computer Science and Engineering, Indian Institute of Information Technology Dharwad, and Dr. Nazim Khan, Department of Mathematics, National Institute of Technology Calicut. Both bring strong expertise in computational intelligence and mathematics, combining academic excellence with rich research experience, ensuring an insightful and enriching learning experience for all participants.



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IMPORTANT INFORMATION :

Last date of registration: **23 April 2026**

Date of confirmation: **24 April 2026**



[Payment and Registration Link](#)

Registration fees (Inclusive of GST)

Student/
Research
Scholar
₹ 100/-

Faculty
member
₹ 120/-

Mode & Venue: Offline, SJT-507, VIT Vellore

Travel & Accommodation: Not provided

What's Included:

- Welcome Kit for all participants
- Certificate of Participation
- Working Lunch and Refreshments

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