

#### ABOUT THE VELLORE INSTITUTE OF TECHNOLOGY

Vellore Institute of Technology (VIT) was founded in 1984 as Vellore Engineering College by the Chancellor Dr. G. Viswanathan. VIT attracts students from different states of India and countries because of its academic excellence. The credentials of VIT in academics and research have placed 10th position among the research and 9th position in the university category in India by NIRF, Govt. of India. The world ranking body namely the QS has given 4 STAR rating to VIT, with that VIT becomes the first institution in India to have the 4 STAR rating. In addition to this, the consortium of industries, FICCI has adjudged VIT as the “Excellence in Faculty”. VIT has completed 4 cycles of NAAC accreditation and has been rated as “A++” grade institution. VIT has introduced many innovations in academic processes which add value to every student. FFCS (Fully Flexible Credit System), PBL (Project Based Learning) for better learning, fully digitized academic portals that assist students in equipping themselves for 2025 marketplace. Hack-a-thon, Make-a-thon, Math-a-thon, Stat-a-thon as part of curriculum exercise which kindles the interest and the curiosity of students, which motivates them to be better problem solvers, last module in every subject being handled by the industrial experts, making the students contextualize the concepts they study in the classroom, are a few of the innovations that VIT has introduced.

#### ABOUT THE SCHOOL OF ADVANCED SCIENCES

School of Advanced Sciences, VIT consists of Mathematics, Physics and Chemistry Departments. The school offers M.Sc. and Ph.D. programmes in all these disciplines. The School comprises qualified and research oriented faculty members whose expertise are in the frontier areas in sciences. Faculty members of SAS have received national and international recognized funded projects to the tune of 10 cores on-going projects in SAS. Several

research projects of the school are financially supported by some of the leading funding agencies such as NBHM, UGC, CSIR, DRDO, DST, DBT, and Others.

#### ABOUT THE DEPARTMENT OF MATHEMATICS

The Department of Mathematics at VIT, Vellore, holds a prominent position in the academic landscape, earning a QS World Subject Ranking of 201-250 in 2025, and ranking 7th within India. Recently, the department secured funding for DST-FIST project, further enhancing its research capabilities. The faculty’s areas of expertise span a wide spectrum, including algebra, analysis, differential equations, applied mathematics, optimization techniques, statistics, data science, theoretical physics, and computational sciences. The department offers Ph.D. programmes in Mathematics, Statistics and Data Science in addition to M.Sc. (Data Science), M.Sc. (Business Statistics), Integrated M.Sc. (Computational Statistics and Data Analytics) and Integrated M.Sc. (Mathematics) programmes.

#### ABOUT THE SEMINAR

This seminar aims to highlight the important role of modern methods and linear algebra techniques in solving differential equations with its applications arising in science and engineering. The seminar focuses on spectral methods and matrix-based approaches used to analyze and solve complex differential equations. The program brings together researchers and students to share recent developments, research ideas, and practical applications. It provides a platform for knowledge exchange and encourages interdisciplinary collaboration in the fields of mathematics, computational science, and engineering. Participants will gain a deeper understanding of modern algorithms for solving differential equations using numerical methods and linear algebra techniques.



**VIT**<sup>®</sup>  
Vellore Institute of Technology  
(Deemed to be University under section 3 of UGC Act, 1956)

**One day Seminar**  
on

***Modern Methods and Linear Algebra  
Techniques for Solving Differential  
Equations and Their Applications***

**Hybrid Mode**

**6<sup>th</sup> April 2026**

Organized by

**DEPARTMENT OF MATHEMATICS  
SCHOOL OF ADVANCED SCIENCES  
VELLORE INSTITUTE OF TECHNOLOGY  
VELLORE – 632014**

**Coordinators**  
**Dr. C.Monica**  
**Dr. D.Anuradha**



## Topics to be covered

- ✓ Linear Algebra
- ✓ Differential equations
- ✓ Matrices and Array operations
- ✓ Numerical methods
- ✓ Systems of Linear Differential Equations
- ✓ Spectral Methods
- ✓ Real life applications

## ORGANIZING COMMITTEE

### Honourable Patron

Dr. G. Viswanathan, Founder & Chancellor

### Chief Patrons

Dr. Sankar Viswanathan, Vice President

Dr. Sekar Viswanathan, Vice President

Dr. G.V. Selvam, Vice President

Dr. Sandhya Pentareddy, Executive Director

Ms Kadhambari S.Viswanathan, Assistant Vice President

### Patrons

Dr. V.S, Kanchana Bhaaskaran, Vice Chancellor

Dr. Partha Sarathi Mallick, Pro-Vice Chancellor

Dr. T. Jayabharathi, Registrar

### Chairman

Dr. K. Karthikeyan, Dean, SAS

### Convener

Dr. SK. Khadar Babu, HoD, Mathematics, SAS

## RESOURCE PERSONS:

1. Dr. G. Chandhini  
Associate Professor,  
National Institute of Technology Karnataka,  
Surathkal
2. Dr. P. Prakash  
Assistant Professor,  
Amrita Vishwa Vidyapeetham, Coimbatore
3. Dr. T. Poornima,  
Associate Professor,  
Vellore Institute of Technology, Vellore

Use this Registration link to register and pay the programme registration fee.

Registration Link: <https://events.vit.ac.in/>

## IMPORTANT DATES

Last Date for Registration: 5<sup>th</sup> April 2026

Programme Dates: 6<sup>th</sup> April 2026.

## IMPORTANT POINTS

- ✓ Maximum 75 participants will be accommodated in the program.
- ✓ Detailed program schedule and online link will be sent on registered e-mails on or before 5<sup>th</sup> April, 2026.
- ✓ Registration fee amount: Rs.150+GST (offline) & Rs.100+GST (online).
- ✓ E-Certificates will be issued to all the participants with 100% attendance

## TARGET AUDIENCE

This seminar is open to all undergraduates post graduates and researchers.

## CONTACT DETAILS

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