

### Chief Patron

Dr. A. S. Ganesan, Chancellor, VMRF-DU  
Dr. Anuradha Ganesan  
Hon'ble Madam Chancellor, VMRF-DU

### Chair Person

Dr. G. Selvakumar, Principal, AVIT.

### Coordinator

Dr. L. Chitra, Professor & Head, EEE, AVIT

### Co-Coordiators

Dr. K. R. Devabalaji, Assoc. Professor, EEE, AVIT  
Mr. S. Prakash, AP(Gr-II), EEE, AVIT

### Registration Form

Name :  
Date of Birth :  
Designation :  
Institution with Address :  
E-Mail ID :  
Academic Qualification :  
Accommodation : Yes (or) No

Signature

Mr. / Ms. / Dr ..... is an employee/ Student of our institution and he / she is sponsored to attend the SERB sponsored National Seminar on Digital Twin for Sustainable Energy Management

Date :  
Place :  
Signature of Sponsoring Authority with Seal

### Resource Persons

Sessions will be handled by Eminent Speakers from

- Siemens
- National Institute of Wind Energy
- VI Microsystems
- National Institute of Technical Teachers' Training and Research
- Ministry of Micro, Small and Medium Enterprises
- Reputed Autonomous Institutions & Universities.

### Course Contents

The National Seminar will focus on the following main themes:

- Grid Integration Optimization
- Technologies in Digital Twin
- Digital Twin – Real time Monitoring of Renewable Energy System
- Predictive Maintenance – Digital Twin Technology
- Digital Twin applications in Energy Storage
- Energy Management Systems
- DCS and IIOT integrated Energy Management system.
- Digital Twin in Smart Battery Management System using OPAL RT.

### Target Audience

Faculty Members, Research Scholar, UG/PG students from the recognized Institution or Industry Professionals can attend the seminar.

Scan for  
Registration



No Registration  
Fee

**Click here or Please log in for registration**  
<https://forms.gle/NNB7XS5HCj1bA1hX6>

- TA will be provided for outstation participants subject to satisfying the Norms.
- Participants are required to fill out the Google registration form by **March 25, 2024.**

### Contact Details

**Dr. L. Chitra, Professor & Head, EEE**  
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**AVIT**  
AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY



विज्ञान एवं प्रौद्योगिकी विभाग  
DEPARTMENT OF  
**SCIENCE & TECHNOLOGY**



**National Seminar On**

## Digital Twin for Sustainable Energy Management



**01<sup>st</sup>-05<sup>th</sup> April 2024**

**Organized By**

**Department of Electrical and Electronics Engineering, AVIT**

**Sponsored by**  
**Science and Engineering Research Board (SERB)**



**VINAYAKA MISSION'S RESEARCH FOUNDATION**  
Deemed to be University under section 3 of the UGC Act 1956



### About VMRF-DU

Vinayaka Mission's Research Foundation (VMRF) – Deemed to be University had its inception in the year 1981. In 1982, the Founder Chairman Dr. A. Shanmugasundaram, instituted the Vinayaka Mission's College of Pharmacy in Salem, the pioneer institution of Vinayaka Missions. In the year 2001 the "Deemed to be University" status was conferred on Vinayaka Missions by The Ministry of Human Resources Development, Government of India, with the recommendations of the UGC Under Section 3 of the UGC Act, 1956 as an acknowledgement of its excellence, satisfaction of the highest level of academic standards and best infrastructural facilities provided to achieve pre-eminence in education and by virtue of this recognition Vinayaka Missions transcended to becoming Vinayaka Missions Research Foundation (VMRF) as the 48th University in India.

The VMRF-DU is accredited by NAAC with 'A' Grade and placed in 151-200 band in NIRF Ranking. It has 25 Constituent colleges/schools including 2 Engineering colleges, 3 medical colleges, Dental College, Law, Allied Health Sciences etc. located at Salem, Chennai, Puducherry and Karaikal catering quality higher education to nearly 15,000 students. The university offers programmes in 14 different disciplines.

### About AVIT

Aarupadai Veedu Institute of Technology (AVIT) was established in the year 1998 as an affiliated institution under the University of Madras. Later it was affiliated to Anna University, Chennai.

In 2004, the institution was brought under the ambit of Vinayaka Mission's Research Foundation (VMRF) – Deemed to be University Salem under sec.3 of UGC act 1956. AVIT is approved by All India Council for Technical Education (AICTE), Govt of India. AVIT is placed in the Band Excellent Category in the ARIIA Ranking. The institution is located on Rajiv Gandhi Salai (Old Mahabalipuram Road) in a sprawling 24.11-acre land with a built-up area of 5.65 Lakhs Sq.ft. The institution is committed to impart quality

education to the students from different socio-economic backgrounds. The institution offers under-graduate and post-graduate programmes in Engineering and Technology in different disciplines including Master of Business Administration (MBA) programme.

### About EEE

The Department of Electrical and Electronics Engineering was established in the year 1998. The Department offers full time undergraduate course in the Electrical and Electronics Engineering and Mechatronics Engineering. The department also offers part-time under graduate course in Electrical and Electronics Engineering and a post graduate course in Power System Engineering. The Department has well equipped laboratories with state of the art facilities. The thrust area of research of the department are Renewable Energy, Power Electronics and Drives Control, Power system and automation. The department has Centre of Excellence for Solar Energy. The department also take cares of the operation and maintenance of 126 kWp Grid Connected Solar Power Plant which supplied around 600 Units per day.

The department has partnered with leading industrial firms to bolster faculty and student projects and facilitate in-plant training. Faculty members are highly qualified with significant teaching and research experience. Notably, the department secured funding for various projects, including a National Conference on Emerging Trends in New Renewable Energy Sources and a preventive women's safety app project. Additionally, funds were allocated for initiatives like a mobile reverse osmosis-based water purification system and a DC micro-grid-based solar PV generation project for rural areas. These endeavors have garnered recognition from our university and notable dignitaries, including the Chief Minister of Pondicherry and the Director of Government Hospital, Chennai. Furthermore, students have achieved accolades in national and international events.

### About DST-SERB

The Science and Engineering Research Board (SERB) is a statutory body established through an Act of Parliament in 2008 under the Department of Science and Technology, Government of India. SERB's primary objective is to promote basic research in science and engineering disciplines by providing financial assistance to researchers, funding agencies, and academic institutions across India.

It supports various research programs, fellowships, grants, and scholarships to foster innovation and scientific excellence in the country. SERB plays a crucial role in advancing scientific knowledge, promoting interdisciplinary research, and nurturing a vibrant research ecosystem in India. We received funding under the scheme "Financial Assistance to Professional Bodies and Seminar/Symposia" by SERB India.

### Scope of the Workshop

The objective of the five-day national seminar on "Digital Twin for Sustainable Energy Management" is to explore the potential of digital twin technology in revolutionizing energy management practices for sustainability. The seminar aims to facilitate discussions, knowledge sharing, and collaboration among experts, researchers, industry professionals in the field of energy management and digital twin technology.

Amidst rising global energy demand and environmental challenges like climate change, there's a growing push for sustainable energy management practices. Digital twin technology, replicating physical assets digitally, offers a promising solution. By merging real-time data, advanced analytics, and simulation, digital twins empower stakeholders to optimize energy usage, predict maintenance needs, and analyze scenarios, fostering informed decisions for sustainability.