

ABOUT VIT

Founded in 1984, VIT has made a mark in the field of higher education in India imparting quality education in a multi-cultural ambience, intertwined with extensive application-oriented research. VIT aims to provide quality higher education on par with International Standards. It persistently seeks and adopts innovative methods to improve the quality of higher education on a consistent basis. VIT was established by the well-known educationalist and former parliamentarian, Dr. G. Viswanathan, Founder and Chancellor, a visionary who has transformed VIT into a center of excellence in higher technical education. VIT is ranked among the top 701-800 Universities in the world and one of the top 8 Institutions in India (Shanghai ARWU Ranking 2023). VIT is the 8th best University, the 11th best research institution, and the 11th best engineering institution in India (NIRF Ranking, Govt. of India 2023). The Engineering and Technology subject areas of VIT are the 240th best in the World and the 9th best in India as per QS World University Rankings by Subject 2023. VIT secured A++ grade in the 4th cycle in NAAC Accreditation. It is ranked within the top 200 Universities in Asia (QS - Asia University Rankings 2022).

ABOUT VIT CHENNAI

VIT Chennai is a globally engaged, competitive, comprehensive, and research-enriched campus strategically positioned in the capital city of Tamil Nadu, to respond to major industrial, social, economic and environmental demands and challenges. It has been a pioneer in the transformation of higher education in the country by introducing application-based learning to produce industry-ready professionals. The campus has a cosmopolitan atmosphere with students from all parts of the globe. VIT Chennai is ably spearheaded by Vice Presidents, Mr. Sankar Viswanathan, Dr. Sekar Viswanathan, Dr. G.V. Selvam, Executive Director Dr Sandhya Pentareddy, Assistant Vice President Ms. Kadhambari S. Viswanathan, and Vice Chancellor and Pro-Vice Chancellor Dr. V.S. Kanchana Bhaaskaran. They share in the mission to make VIT a global center.

THE FOCUS OF VIT CHENNAI IS:

- To maximize the Industrial Connectivity
- To create Centers of Excellence in contemporary areas of research
- To enrich Technological and Managerial Human Capital nurtured in a multicultural ambience
- To provide a common platform for the agglomeration of ideas of personnel from various walks of life for learning enrichment
- To create opportunities and exploit the available resources to benefit industry/society
- To encourage participation in the National Agenda of Knowledge building
- To foster international collaborations for mutual benefits in areas of research
- To maximize the Industrial Connectivity
- To create Centers of Excellence in contemporary areas of research
- To enrich Technological and Managerial Human Capital nurtured in a multicultural ambience

EXPECTED OUTCOME

- **Understanding of IoT enabled sensing technology:** Enhance the knowledge and skills of the participants in designing Analog, Digital, RFID, microcontroller and IoT based real-time cloud server data storage and analysis.
- **Knowledge about the AI implementation on Healthcare:** Through this FDP program, participants will understand various AI algorithms for novel healthcare applications in areas such as imaging and diagnoses, risk analysis, lifestyle management, monitoring and advanced filtering and image processing techniques.
- **Familiarization of machine learning enabled Nanomaterial for Renewable energy:** Participants will familiarise about the adaptation of novel techniques in nanomaterial based renewable energy production and efficient storage based on machine learning techniques.
- **Knowledge about the AI technique for Cyber Security:** Participants will visualise current challenges that ML techniques face in protecting cyberspace against attacks.
- **Understanding of Autonomous Unmanned vehicular Technology:** Participants can get a detailed guidelines and a mitigation strategy for the development of autonomous and unmanned vehicle systems on real-time decision making in critical situations and a solid understanding of ROS concepts.



A Five-Day Virtual FACULTY DEVELOPMENT PROGRAMME (FDP)

on

Artificial Intelligence and Its Impact on Advanced Healthcare and Renewable Energy Driven Unmanned Autonomous System (AI-HCARE-UAS)

17-21 April 2024

Organized by

School of Electronics Engineering (SENSE) in collaboration with Faculty Development Centre Vellore Institute of Technology Chennai



VIT – A place to learn; A chance to grow

ABOUT THE SCHOOL OF ELECTRONICS ENGINEERING (SENSE)

The School of Electronics Engineering (SENSE) at VIT Chennai was established for imparting state-of-the-art education, training and research in the field of Electronics & Communication Engineering and allied areas. The school offers two B.Tech programmes, one in Electronics and Communication Engineering and the other in Electronics and Computer Engineering. It also offers two M.Tech programmes, one in Embedded Systems and the other in VLSI Design. In addition, Ph.D. research programme is offered in the areas of Electronics, Communication and Computer Engineering and their allied fields. The school has modern state-of-the-art laboratories in the areas of Semiconductor Devices, Micro and Nano Devices, Analog Circuit Design, Digital System Design, Digital Signal Processing, Embedded Systems and Architecture, Microprocessors and Microcontrollers, Communication Engineering, Wireless Technologies, Internet of Things (IoT), Microwave and Optical Communication, Computer Networks and Advanced VLSI Design.

ABOUT THE PROGRAMME:

The FDP is a 5-day programme conducted in virtual mode with live lectures, and interactive sessions. The programme will consist of keynote lectures, technical sessions, and panel discussions. The technical sessions will include presentations from experts in academia and industry on the latest advancements in the themes mentioned. The panel discussions will provide an opportunity for the participants to interact with the experts and discuss the challenges and opportunities in the emerging fields of Automation, IoT-Enabled Sensing Technologies, Artificial Intelligence for Advanced Healthcare, Autonomous Unmanned Vehicle and Renewable energy.

TOPICS COVERED

- ✓ Emerging IoT technology for sensing application
- ✓ Artificial Intelligence and its impact on Healthcare
- ✓ Advanced filtering and image processing

- ✓ Integration of machine learning and Nanomaterial for Renewable energy
- ✓ Advanced machine learning technique for Cyber Security
- ✓ Advanced Autonomous technology for unmanned vehicle

The contents that shall be covered during the FDP are outlined below:

Date	Time	Topic
17/04/2024	10.30 AM – 12.30 PM	Mr. Nagaraj Selvaraj: Digital Audio signal processing and its Real time applications
17/04/2024	2.30 PM – 4.30 PM	Dr. Raja Rout: Guidance Algorithm for ROS Based Mobile Robots
18/04/2024	10.30 AM – 12.30 AM	Ankit R. Patel: Nexus of human-centered design, human factors, and autonomous vehicles
18/04/2024	2.30 PM – 4.30 PM	Prof. Prem Kumar Singh : Turiyam Graph Based Robotics Path Exploration and its mathematical Consensus
19/04/2024	10.30 AM – 12.30 AM	Dr. Abhishek Rudra Pal : Fundamental of robotics simulation using ROS
19/04/2024	2.30 PM – 4.30 PM	Prof. Ajay Kumar Khan : Application of Artificial Intelligence for Cyber Security
20/04/2024	10.30 AM – 12.30 PM	Dr. Manoj kumar Singh: From Thin film solar cell fabrication to optimization of perovskite solar cell using machine learning and verification by simulation
20/04/2024	2.30 PM – 4.30 PM	Prof. Md Atiqur Rahman Ahad: Artificial Intelligence and Machine Learning in Healthcare
21/04/2024	10.30 AM – 12.30 AM	Dr. Soumyajit Ghosh: AI and Machine Learning Applications in Electronics and Electrical engineering
21/04/2024	2.30 PM – 4.30 PM	Dr. Debanjan Acharya: A glimpse of Micro Sensor used in IoT

ORGANISERS

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WHO CAN ATTEND?

Faculty members, working professionals, and research scholars pursuing research in the area of industrial robotics, postgraduate. and undergraduate students who are interested in robotics.

REGISTRATION FEE DETAILS

Students, Research Scholars, and Faculty	Rs. 150/-
Industry Personnel	Rs. 300/-

IMPORTANT DATES

Last Date for Registration	15 th April 2024
Intimation of Confirmation	16 nd April 2024
Workshop Dates	17 th , 18 th , 19 th , 20 th and 21 th April, 2024

REGISTRATION & PAYMENT LINK FOR PARTICIPANTS
<https://www.vitchennaievents.com>

STEPS FOR REGISTRATION AND PAYMENT

For students, research scholars, staff, and faculty: Select FDP under Events, and click AI-HCARE-UAS-STUDENT.

For Industry Personnel: Select FDP under Events, and click AI-HCARE-UAS-INDUSTRY

FACULTY COORDINATORS

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