TOPICS COVERED

1. Introduction to AR/VR
2. Visualization Techniques for Augmented Reality
3. AR/VR/MR in Education and Technology
4. Computing Architectures and Modeling of VR Systemthrough UNITY
5. Google AR & VR, Google lens
6. Google Card Board & Tour creator for Virtual Reality Visualization
7. Creating VR through Blender
8. Modeling 3D object using Blender
9. AR/VR Tools and its applications
10. Working with EON XR Platform
11. EON Case Study – Education, Health & Medical, Industry
12. AR/VR in Industry 4.0
13. MATLAB Simulink for Virtual Reality

RESOURCE PERSON

Sessions will be handled by eminent persons from reputed Institutions/Industries

HOW TO APPLY?

The applicants should register at AICTE-ATAL web portal at the earliest.

Website : http://www.aicte-india-org/atal

ELIGIBILITY AND SELECTION

Faculty members from AICTE approved Engineering Colleges can apply. Selection is on "First come First Serve " basis. Selection will be intimated through mail and selected participants should confirm their participation.

REGISTRATION:

- No Registration Fee
- TA/DA will not be provided
- Selected Participants should attend program for the entire duration through online

Sairam INSTITUTIONS

ORGANIZING COMMITTEE

Chief Patron
Shri. Sai Prakash LeoMuthu
Chairman & CEO

Patrons
Dr. A. Rajendra Prasad,
Principal

Dr. T. Sheela
Dean - Networking & HOD

Co-ordinator
Dr. S. Sankari,
Associate Professor/IT

Organisers
Ms. B. Kamala, Asst. Prof.
Ms. S. Anitha Jebamani, Asst. Prof.
Ms. J. Ranjani, Asst. Prof.
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The Co-ordinator
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AICTE ATAL

Sponsored
ATAL
FACULTY DEVELOPMENT PROGRAM ON

AUGMENTED REALITY / VIRTUAL REALITY AND ITS APPLICATIONS

04.10.2021 TO 08.10.2021

organised by

DEPARTMENT OF INFORMATION TECHNOLOGY

Sri SAI RAM ENGINEERING COLLEGE

An Autonomous Institution

Sai Leo Nagar, West Tambaram, Chennai - 600 044.
www.sairam.edu.in

ABOUT THE COLLEGE

Sri Sairam Engineering College, Chennai, established in the year 1995 by MJF Ln Leo Muthu, Chairman of Sapthagiri Educational Trust, is a non-profitable, and non-minority institution. A well defined vision to provide world-class engineering education and highly committed mission to achieve, sustain and foster unmatched excellence in technical education with dedicated leadership facilitate Sri Sairam Engineering College to be in the best of educational institutions in the country. Since its inception, our institution has grown into a vast conglomerate of magnificent buildings, state-of-the art and sophisticated laboratories internet centers, modern library and a superlative sports complex-each a land mark in itself across 300 acres. The college is an Autonomous Institution from the academic year 2020-2021, Affiliated to Anna University, Chennai and is also approved by the All India Council for Technical Education, New Delhi. Our students are motivated to be technologically superior and ethically strong, who in turn shall contribute to the advancement of society and humankind to build a better nation through quality education with team spirit. Sri Sairam Engineering College is an ISO 9001: 2015 Certified institution and all the NBA eligible disciplines of Engineering and Management have been accredited by the National Board of Accreditation. The institution has also been accredited by the NAAC in A+ with 3.37 CGPA for a period of 5years.

DEPARTMENT OF INFORMATION TECHNOLOGY

The department of Information Technology, established in the year 1999 with an intake of 44 students has now grown exemplarily with an admirable intake of 180 students. The department presently has a dedicated team of 30 faculties. Students are made to embolden future technology and master the art of computing by encouraging them to think futuristic by catalyzing research and its related activities through the R&D cell. As a result of the department's forthright Research activities, numerous students from the Department of Information Technology have placed their foot prints in numerous International and National forum. Our student's projects have been funded by various reputed institutions like DST, AICTE etc, and have been in the limelight for solving various social issues. Every year, the department gets numerous awards for introducing innovation awards.

OBJECTIVES OF THE PROGRAM

Online learning can feel spotlessly clean sometimes; broken up from the reality of authentic tasks and interactions. In health & safety training, being told about the dangers of working at height is not the same as actually experiencing a moment of vertigo high up on scaffolding. Technologies that replace or extend our perception of reality offer immersive experiences that mimic, with surprising fidelity, the real world. These provide safe environments to learn new skills and apply them without risk of consequence to others. Augmented Reality/Virtual Reality means computer-generated simulations that integrate the real world (AR) or are entirely self-contained (VR). AR applications move around in the real world. With VR, we have to remain in the same location because we cannot see our surroundings

Augmented reality, in computer programming is a process of combining or “augmenting” video or photographic displays by overlaying the images with useful computer-generated data. Augmented reality is commonly used in electronic first-person shooter games to add environmental, health, and other information to players' viewpoints. Robotic technology applications are being combined with AR &VR functions in different industries such as healthcare, object detection, manufacturing, crime department, and urban planning. It is an interdisciplinary field which interacts and combines with various engineering branches of electrical, electronics, mechanical and computer science/information technology. Fueled by recent advances in computer vision, sensing, digitization, fabrication and understanding the dynamics of physical systems, may open for new technological advances in it.

This FDP program is designed to provide an exposure to the fundamentals of AR/VR and its implementations in the different emerging technologies namely Robotics, Artificial Intelligence, Machine learning and Deep learning. The AR/VR practice allows people to interact in a simulated scenario. Educators have found information retention improves when the individual is engaged in diverse multi-level. AR/VR allows learners to explore scenarios that are difficult or dangerous to recreate in the classroom, such as the impact of combining hazardous chemicals, the behavior of the heart during a cardiac arrest, welding training and monitoring lava flows and temperatures in an erupting volcano. Participants will gain knowledge about the basic concepts of AR/VR and its related technologies. They will expose to the AR/VR development tools like Unity and Blender.

The participants will gain confidence in the AR/VR application development by making use of Hands-on training and practice sessions. A practical session of MATLAB related with these technologies will also help the participants to work in the simulation environment. Each day, We will have a focused theme on a particular area. The course will be useful for students, faculty of engineering and sciences and industry person who are interested in the learning emerging AR/VR technology. This will aid the faculty members and research scholars from various institutions for their academic and researchpurpose.