



Faculty Development Program



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

Event Outcome

Title : Frontiers of Quantum Computing and Agentic AI in Next-Generation Healthcare Systems

Date : 2025-11-24 - 2025-11-28

Time : 10:00 - 17:30

Venue : PRP405

- To gain a comprehensive understanding of the fundamentals of quantum computing, agentic artificial intelligence, and their convergence in the healthcare domain
- To Learn the quantum algorithms such as quantum machine learning, quantum optimization, and quantum image processing can be applied to solve complex biomedical problems
- To design autonomous, reasoning-based AI agents capable of clinical decision-making, diagnostics, and patient care automation.
- To explore hybrid architectures that combine quantum computational power with intelligent agent systems for advanced healthcare applications
- To understand the role of quantum cryptography and ethical AI principles in ensuring secure, transparent, and accountable healthcare systems

**Resource Person 1 - Details****Name :** Dr Malaya Kumar Nath**Designation :** Assistant Professor , Electronics and Communication Engineering**University/ Company :** nit puducherry, puducherry**Address :** India, 609609.**Resource Person 2 - Details****Name :** Mr Jai Ganesh**Designation :** SENIOR AI ARCHITECT LEAD, Ericsson**University/ Company :** Ericsson, Chennai**Address :** India, 600097.**Resource Person 3 - Details****Name :** Muhammed Raees P C**Designation :** Founder and CEO, Edutecnica Private Ltd**University/ Company :** Edutecnica Private Ltd, Kerala**Address :** India, 560048.**Resource Person 4 - Details****Name :** Dr V Sathiesh Kumar**Designation :** Assistant Professor , Department of Electronics Engineering**University/ Company :** MIT Campus, Chennai**Address :** India, 600044.**Resource Person 5 - Details****Name :** Dr A Manju**Designation :** Assistant Professor, Department of Computing Technologies**University/ Company :** SRMIST Kattankulathur, chennai**Address :** India, 603203.**Resource Person 6 - Details****Name :** Rajarajan G**Designation :** Assistant Professor Sr. Grade 1, School of Computer Science and Engineering**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 7 - Details****Name :** Balakrishnan S**Designation :** Associate Professor Grade 2, School of Advanced Sciences**University/ Company :** VIT, Vellore**Address :** India, 632014.**Resource Person 8 - Details****Name :** Sudhanshu Arya**Designation :** Assistant Professor Sr. Grade 1, School of Electronics Engineering**University/ Company :** VIT, Vellore**Address :** India, 632014.

Resource Person's Profile :

1. Profile of Dr Malaya Kumar Nath

He completed his BE Electronics and Telecommunication Engineering Biju Patnaik University of Technology Rourkela, Orissa 2003, M.Tech ECE-Signal Processing Indian Institute of Technology Guwahati 2008, PhD EEE-Signal Processing Indian Institute of Technology Guwahati 2017. His research domain includes Medical Signal and Image Processing, deep learning.

2. Profile of Mr Jai Ganesh

Mr. Jai Ganesh Suresh is a seasoned Deep learning and AI expert with over 11 years of experience in various fields. He has worked with prominent organizations and has a strong training and development background, focusing on AI, Robotics, and Python. He has conducted over 800 workshops, including FDP events, guest lectures, and international presentations. He is a record holder in the India Book of Records for conducting the number of people involved in the Artificial Intelligence Workshop.

3. Profile of Muhammed Raees P C

Muhammed Raees P C is a good trainer of hardware in the field of Machine Learning and Deep Learning.

4. Profile of Dr V Sathiesh Kumar

Dr. V. Sathiesh Kumar has been working as an Assistant Professor (Selection Grade) in the Department of Electronics Engineering MIT Campus Anna University, Chennai. He is also acting as a Deputy Director Planning Development RUSA Co coordinator, Anna University. He has about 13 years of teaching experience at Anna University and Anna University affiliated Engineering Colleges.

5. Profile of Dr A Manju

Her Phd in quantum inspired computational intelligence for robotic control from IIT ROORKEE (2013) BE EEE (govt College of engineering Erode Tamilnadu) AND ME APPLIED ELECTRONICS (anna university)
Completed iitmadras certificate course in Quantum computing and various other FDP ...conducted FDP Handling quantum course at srm University and working on qml and PQC

6. Profile of Rajarajan G

He completed Alagappa Chettiar Government college of Engineering and Technology B.E Computer science and Engineering Graduated in 2010
Pavendar Bharathidasan College of Engineering and Technology
M.E Computer Science and Engineering Graduated in 2012
Anna University Ph.D

7. Profile of Balakrishnan S

He completed his B.Sc A.M.JAIN College, Chennai. University of Madras, M.Sc Dept. of Nuclear Theoretical Physics University of Madras, Chennai and Ph.D from Department of Physics National Institute of Technology (NIT) Tiruchirappalli

8. Profile of Sudhanshu Arya

He completed his Post doctorate from School of Systems and Enterprises at Stevens Institute of Technology, Hoboken, New Jersey, USA. Pukyong National University, Busan, South Korea
Ph.D.
Department of Artificial Intelligence Convergence, Information and Communications Engineering
Graduated in 2022
National Institute of Technology Rourkela, India (NIT-R)
Master of Technology (MTech.)
Department of Communications and Networks
Graduated in 2017

The rapid convergence of Quantum Computing and Agentic Artificial Intelligence (AI) is revolutionizing the future of healthcare systems. Quantum computing offers unprecedented computational capabilities for solving complex medical challenges such as molecular modelling, genomic sequencing, and real-time data analytics, far beyond the reach of classical computers. Meanwhile, Agentic AI characterized by autonomy, reasoning, and adaptive decision-making enables intelligent healthcare systems capable of proactive diagnosis, personalized treatment, and dynamic resource management. This Faculty Development Programme on Frontiers of Quantum Computing and Agentic AI in Next-Generation Healthcare Systems aims to explore the interdisciplinary integration of these emerging technologies. The programme will highlight quantum-enhanced machine learning models for disease prediction, quantum cryptography for securing electronic health records, and agentic AI frameworks for clinical decision support and telemedicine. Participants will gain insights into quantum algorithms, multi-agent architectures, and hybrid quantum-AI platforms driving innovation in precision medicine and smart healthcare ecosystems. Emphasis will also be placed on ethical, explainable, and sustainable adoption of these technologies in real-world medical applications. By the end of the FDP, participants will develop a conceptual and practical understanding of how Quantum Computing and Agentic AI can collaboratively transform healthcare towards a more intelligent, secure, and patient-centric paradigm.

Matlab,Python

**Coordinator's: Prof. JAFFINO 18825 - Assistant Professor Sr. Grade 2 - SENSE
Prof. NISHA J S 19629 - Assistant Professor Sr. Grade 1 - SENSE**