

National Level Five-Day Faculty Development Program

on

Quantum Computing:

From Fundamentals to Industry Applications

(01.12.2025 to 05.12.2025)



Organized by

School of Computer Science Engineering and Information Systems Vellore Institute of Technology Vellore 632 014, Tamil Nadu, India

ABOUT VIT

VIT was founded in 1984 as Vellore Engineering College by the Chancellor, Dr. G. Viswanathan. From its humble beginnings, the institution has grown exponentially to more than 45,000 students. It was conferred the University status in 2001 in recognition of its excellence in academics, research, and extracurricular initiatives. Currently, VIT has 5 campuses - in Vellore, Chennai, Amaravati (AP), Bangalore and Bhopal (MP). VIT has been consistently ranked among the best institutions of the country and is aspiring to emerge as a global leader. The National Institutional Ranking Framework (NIRF) of the MHRD, Government of India, has identified VIT as the best Private Engineering Institution in India. With students from all the states of India and from more than 70 countries. the cosmopolitan VIT provides an appropriate ambience for holistic learning and comfortable living. Sports, games and cultural activities are an integral part of student life on campus. VIT holds an exemplary placement record by consistently placing more than ninety percent of the students in good companies. The VIT's linkages provide ample international opportunities for students and faculty to gain global exposure. VIT alumni, spread across the world, are serving the most advanced as well as the most deprived.

ABOUT SCORE

The School of Computer Science Engineering and Information Systems (SCORE) at VIT focuses on Information Technology, Software Engineering, and Domain-Specific Applications,

preparing students with advanced knowledge, global competency, and a commitment to societal progress. According to the QS Subject Rankings, VIT's Computer Science and Information Systems program is ranked 136th globally. SCORE offers diverse programs, including B.Tech, M.Tech, B.Sc. (Computer Science), BCA, MCA, and Ph.D. The school's key research areas encompass Artificial Intelligence, Machine Learning, Big Data, Cloud Computing, Quantum Computing, Data Mining, Image Processing, Cyber Security, Intelligent Systems, IoT, and Software Engineering. With a strong focus on research and industry collaboration, maintains industry-supported SCORE laboratories, a strong placement record, and active partnerships with leading organizations. The school is driven by a dedicated team of faculty, including several recognized among the Top 2% Scientists in the world (Stanford University, USA, 2024), supported by visiting professors and industry experts committed to excellence in teaching and innovation.

ABOUT THE FDP

The Faculty Development Program on Quantum Computing aims to enhance the knowledge and skills of faculty members in this emerging domain by offering an in-depth understanding of the underlying physics, mathematics, and computational models. The program provides a balanced blend of theory and practice, covering quantum information principles, quantum algorithms, and programming techniques. Participants will also gain exposure to current research trends and industry applications in

quantum computing. By the end of the FDP, attendees will be equipped to incorporate quantum computing concepts into their teaching, research, and collaborative projects across multidisciplinary areas.

CONTENTS OF THE FDP

- Physics and Mathematics of Quantum Computing
- Quantum Computing Building Blocks
- Ouantum Information
- Quantum Algorithms
- Quantum Programming Models
- Quantum Machine Learning
- R&D and Industry Applications

TARGET GROUP

Faculty members, research scholars, and professionals who are interested in Quantum Computing and its applications.

RESOURCE PERSONS

Dr. Aswani Kumar Cherukuri, VIT, Vellore

Dr. Ganesan K, VIT, Vellore

Dr. Balakrishnan S, VIT, Vellore

Dr. Arun Pandian J, VIT, Vellore

Dr. Senthilvelan, Bharathidasan University, Tiruchirappalli

Mr. Jagan Natarajan, IBM Quantum Support, India

Mr. Nagendra Nagaraja, QpiAI, Bengaluru

Mr. Murali Meenakshi Sundaram, Stratinfinity Inc., Chennai

REGISTRATION DETAILS

The program will be held offline at VIT, Vellore. The registration fee for external faculty and industry participants is ₹5000 (inclusive of GST). Participation is limited to 60 members on a first-come, first-served basis. Accommodation is not included in the registration fee.



https://forms.gle/YTeq5WLRRc5YffBS7

IMPORTANT DATES

Registration Open : 12.11.2025 Last Date for Registration : 24.11.2025 Confirmation of Participation :26.11.2025

CONTACT DETAILS

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