

INTERNATIONAL WORKSHOP ON QUANTUM MATHEMATICS AND IMAGING FOR SMART MANUFACTURING AND INDUSTRY 4.0 (QMI-2025)

This workshop bridges quantum mathematics and imaging with smart manufacturing and Industry 4.0, fostering interdisciplinary innovation and practical applications.



Monday - Friday 15-19, December 2025



Time 09.00 AM - 04.00 PM



Kamarajar Auditorium VIT Chennai,

Visit us at: https://qmi2025.onrender.com

ORGANIZED BY

Department of Mathematics School of Advanced Sciences VIT - Chennai, 600 127







ABOUT VIT

Founded in 1984, VIT has made a mark in the field of higher education in India imparting quality education intertwined with extensive application-oriented research in a multi-cultural ambience. VIT aims to provide quality higher education on par with institutes of 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, honorable Dr. G. Viswanathan, the Founder and Chancellor, a visionary who transformed VIT into a Centre of Excellence in higher technical education. The MHRD, Government of India ranked VIT the 8th Best University, the 11th Best Research Institution and the 11th Best Engineering Institution in India (NIRF Ranking, Govt. of India 2024). As per QS World University Rankings by Subject 2024, Engineering and Technology subject areas of VIT are the 163th Best in the Asia and the 21th Best in Southern Asia.

ABOUT SAS

The School of Advanced Sciences (SAS) at Vellore Institute of Technology (VIT) Chennai, comprises Department of Mathematics, Physics and Chemistry. It offers the following programmes:

- Ph.D
- M.Sc Data Science, M.Sc Physics, M.Sc Chemistry The school also offers a plethora of core and elective courses facilitating B.Tech, M.Tech, MCA, Integrated M.Tech, Management and Law programmes.

ABOUT QMI-2025

QMI-2025 is an international five-day workshop dedicated to advancing the integration of quantum mathematics and imaging technologies in the context Manufacturing and Industry 4.0. The title 'QMI' highlights the convergence of mathematical foundations, quantuminspired techniques, and imaging innovations, fostering interdisciplinary collaboration across science, engineering, and industrial domains. Designed as a synergy of theory and practice, the workshop provides a platform to explore the transformative role of quantum mathematics and cutting-edge imaging in enabling intelligent, efficient, and sustainable manufacturing systems. Participants will gain insights in-depth into theoretical frameworks, computational tools, and industrial applications, while also engaging with emerging trends and future directions. QMI-2025 aspires to spark innovation, inspire cross-disciplinary research, and empower attendees to contribute to the evolving landscape of Industry 4.0 through the lens of quantum mathematics and imaging.

TOPICS TO BE COVERED

- Quantum Mathematics
- Industrial Imaging
- Quantum Computing for Digital Twins
- Quantum Machine Learning
- Smart Manufacturing

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Keynote Speakers



Prof. Dr. Raveendran ParamesranHonorary Professor
Dept of Electrical Engineering, University
Malaya, Kuala Lumpur, Malaysia



Prof. Dr. Kurunathan Ratnavelu Honorary Professor, Institute of Mathematical Sciences, Faculty of Science, University Malaya, Malaysia



Dr. Tobias HaugSenior Researcher, Quantum physicist,
Senior researcher, Technology Innovation
Institute, Abu Dhabi, UAE



Prof. Jack Jacquier
Professor, Department of Mathematics,
Faculty of Natural Sciences,
Imperial College London, England



Dr. Marcin PawłowskiAssociate Professor, Associate Professor,
International Centre for Theory of
Quantum Technologies, Gdansk
University of Technology, Gdańsk, Poland



Mr. Vivian Gomes Chief Marketing Officer Movate, Frisco, Texas, United States



Dr. P. BalasubramaniamProfessor, Department of Mathematics,
The Gandhigram Rural Institute-Deemed
to be University,
Dindugal, Tamil Nadu



Dr. T. KalaiselviHead of the Department, Department of
Computer Science and Technologies, The
Gandhigram Rural Institute (Deemed to be
University), Dindugal, Tamil Nadu



Dr. Balasubramanian RamanProfessor, Head of Computer Science &
Engg and iHUB Divyasampark Chair
Professor, IIT Roorkee, Uttarakhand



Dr. Karthiyaini SAssistant Director , V-NEST, Professor, School of Electronics Engineering, VIT-Chennai.



Dr. Kunwar Singh Associate Professor, Department of CSE, National Institute of Technology, Trichy, Tamil Nadu



Dr. Aswath BabuAssistant Professor, IBM Qiskit
Advocate, Assistant Professor, IIIT
Dharwad



Dr. Mustafizur RahamanResearch Scientist
IBM Quantum Research Scientist,
Bengaluru



Dr. Jayakumar Vaithiyashankar IBM Educator CEO Anuthantra



Ms. Nivedita DeyQuantum Mentor, A. K. Choudhary School of IT, University of Calcutta, West Bengal

Committee Members

CHIEF PATRON

PATRONS

Co-PATRONS

Dr. G. Viswanathan

Founder & Chancellor

Mr. Sankar Viswanathan

Vice President

Dr. Sekar Viswanathan

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Dr. V. S. Kanchana Bhaaskaran

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Dr. K. Sathiyanarayanan

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Dr. P.K. Manoharan

Additional Registrar

CONVENOR

Dr. N. Ramesh Babu

Assistant Professor (Grade-1)

CO-CONVENORS

Dr. S. Harshavarthini

Assistant Professor (Grade-2)

Dr. N. Padmaja

Assistant Professor (Grade-1)

ORGANIZING MEMBERS

Faculties -

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REGISTRATION

ELIGIBILITY CRITERIA

The workshop is open to postgraduate students, Ph.D. scholars, and international participants, as well as faculty members and industry professionals from central/state/private academic institutions/colleges/universities with an interest in quantum computing. Only a limited number of participants will be selected. Preference will be given to postgraduate and Ph.D. scholars in Mathematics.

Category	Fees details
UG/PG Students	₹ 500
Research Scholar	₹ 750
Faculty/Industrial Delegates	₹ 1000
International Delegates	\$ 50

ACCOMMODATION

Accommodation will be arranged for participants on prior request either at the university guest house or at the nearby hotels reachable from the venue.

