



NSTF Discussion Forum: Quantum Science and Technology in South Africa (SA)

19-20 November 2025

The [National Science and Technology Forum \(NSTF\)](http://www.nstf.org.za) is hosting a discussion forum in partnership with the [South African Quantum Technology Initiative \(SA QuTI\)](http://www.saqti.org.za).

Programme

Day 1: 9:00-14:00

Time starting	Time ending	Topic	Speaker/ Organisation
09:00	9:10	Welcome to participants & introductions	Ms Jansie Niehaus , Executive Director: NSTF
9:10	9:40	SA QuTI overview	Ms Jodie Watson , Project Manager: South African Quantum Technology Initiative (SA QuTI) @SA_QuTI
09:40	10:10	Quantised Single Electron Pumping – Electrons Go Surfing	Prof Mark Blumenthal , Associate Professor: Solid State Physics and Nanotechnology, University of Cape Town (UCT) @UCT_news
10:10	10:30	Q&A	ALL
10:30	11:00	The Colourful World of Quantum Dots	Prof Neerish Revaprasadu , Senior Professor, Department (Dept) of Chemistry, Natural Science Building, University of Zululand (UniZulu)

			@UNIZULUongoye
11:00	11:30	Towards an intelligent quantum camera	Prof Andrew Forbes , Distinguished Professor, University of the Witwatersrand (Wits); Director: SA QuTi @WitsUniversity @SA_QuTI
11:30	12:00	Unlocking the quantum design of photosynthesis for bio-inspired solar technologies	Prof Tjaart Krüger , Associate Professor: Dept of Physics, University of Pretoria (UP) @UPTuks
12:00	12:30	The Product Journey: From Spark to Shelf	Mr Rory Pentz , Lecturer; Head: Quantum Research Group, Cape Peninsula University of Technology (CPUT); Member: SA QuTI @CPUT
12:30	12:45	Q&A	All
12:45	13:15	Enlightening medicine with quantum-enriched isotopes	Ms Leerin Perumal , Head of Enlightened Isotopes, ASP Isotopes @ASPIsotopes
13:15	14:00	Q&A and discussion	All

Day 2: 9:00-14:00

Time starting	Time ending	Topic	Speaker/ Organisation
09:00	9:10	Welcome to participants & introductions	Ms Jansie Niehaus , Executive Director: NSTF
9:10	9:40	A Quantum Computing Access Strategy – A Growth Pathway Tailored for Africa	Mr Mervyn Christoffels , Director: Center for High Performance Computing, Council for Scientific and Industrial Research (CSIR) @CSIR
09:40	10:10	Quantum Computing, A Journey – Technological Advances and Contributions to Growing the Research Community in SA	Dr Sibusisiwe Makhanya , Research Manager & Leader at IBM Research Africa @IBM

10:10	10:30	Q&A	ALL
10:30	11:00	Tackling Climate Challenges with Quantum Computing	Ms Shivani Pillay , PhD Candidate: Computer Science, University of KwaZulu-Natal (UKZN), CEO and Co-Founder: Fraqtal Technologies @UKZN
11:00	11:30	Quantum technologies for solving complex problems to unhackable communications	Dr Isaac Mphele Nape , Lecturer and Researcher: School of Physics, Structured Light Lab, Wits & IBM Collaboration (Research Office), Wits @WitsUniversity
11:30	12:00	Quantum Teleportation: From qubits to optical images	Prof Thomas Konrad , Director of the Centre for Quantum Computing and Technology, School of Agriculture and Science ;Research Professor: UKZN @UKZN
12:00	12:30	Automated Variational Ansatz Design	Prof Francesco Petruccione , Professor: Quantum Computing, School of Data Science and Computational Thinking, Stellenbosch University (SU); Director: National Institute for Theoretical and Computational Sciences (NITheCS) @NITheCS @StellenboschUni
12:30	12:45	Q&A	All
12:45	13:15	The Cryptographic Time Bomb: How Quantum Computing Will Redefine Cybersecurity	Ms Noori Mohammad , Founder: Doyen Cyber
13:15	13:45	Diamond-Based Hybrid Qubit System for Quantum Computation Technology	Prof Somnath Bhattacharyya , Personal Professor: Wits @WitsUniversity
13:45	14:00	Q&A and discussion	All

Presentations, proceedings, and media release will be made available on the [event page](#).

Video clips will be posted to this website page, as well as the [NSTF YouTube platform](#) (see details below)

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Hashtags: #IYQ2025 #YearOfQuantum #QuantumScienceAndTechnology #QuantumForAll #Quantum2025
#BridgingTheQuantumDivide #QuantumInclusion #QuantumSustainability #Quantumbiosensing
#cybersecurity #Quantumtechnologies



National Science and Technology Forum (NSTF)

- Independent non-profit stakeholder body and network
- Voice for the science, engineering, technology (SET) and innovation community
- Includes private and public sectors
- Promoting SET and innovation in South Africa since 1995

SET for socio-economic growth