

SRM University-AP, Amaravati to Establish Quantum Secure Communications Test Bed with C-DOT and Amaravati Quantum Valley

Under the visionary directions of Hon'ble Chief Minister of Andhra Pradesh, Sri N. Chandrababu Naidu Garu, the State has been proactively advancing capabilities in Quantum Technologies with a strong focus on Quantum Security, Cyber Resilience, and Future Communication Infrastructure. The initiative gains significance at a time when governments, regulators, and financial institutions globally are reviewing preparedness against emerging cybersecurity challenges due to Quantum and AI impacting banking systems, digital infrastructure, and strategic communication networks.

In this direction, on World Telecommunication and Information Society Day on May 17th, SRM University-AP, Amaravati, has come forward to establish a state-of-the-art Quantum Security Test Bed in Communications and Cyber Space in collaboration with Centre for Development of Telematics (C-DOT) and Amaravati Quantum Valley. The initiative marks a significant advancement in India's efforts towards building quantum-secure communication systems, cyber resilience, and next-generation secure digital infrastructure.

As the first university in India to establish a dedicated quantum laboratory, SRM University-AP, Amaravati, has consistently positioned itself at the forefront of the nation's quantum movement. With pioneering infrastructure, global academic collaborations, and a rapidly expanding ecosystem of advanced research, the university is emerging as one of India's most influential centres for quantum science and deep-tech innovation.

C-DOT, the premier R&D centre of the Department of Telecommunications, Government of India, is spearheading indigenous development of communications technologies. It is playing a pivotal role in building India's quantum-secure communication ecosystem through development of state-of-the-art Quantum Communication solutions based on Quantum Key Distribution (QKD) as well as Post-Quantum Cryptography (PQC).

The upcoming Quantum Security Test Bed is supported by C-DOT's research around quantum communications & security solutions combined with AI & next generation telecom networks and will serve as a high-impact platform for research, testing, and innovation in quantum cryptography, secure communication networks, distributed quantum computing and cyber resilience. The initiative also aligns with the broader national vision of strengthening India's quantum ecosystem under the National Quantum Mission (NQM). The initiative further strengthens Andhra Pradesh's growing reputation as a national hub for frontier technologies and future-ready innovation.

Prof. Ch. Satish Kumar, Vice-Chancellor of SRM University-AP, Amaravati, stated, "Quantum technology will redefine global power structures in communication,

cybersecurity, and strategic technologies over the coming decades. At SRM University-AP, Amaravati, we are not merely participating in this transformation – we are helping shape it. The Quantum Security Test Bed represents our commitment to building India’s technological sovereignty and creating globally competitive quantum capabilities from Andhra Pradesh.”

Dr. Raj Kumar Upadhyay, CEO, C-DOT stated, “Quantum technologies will define the trust, security, and strategic resilience of future digital societies. India must build indigenous capabilities, strong academic ecosystems, and collaborative innovation platforms to lead this transformation globally. The Quantum Security Test Bed at SRM University-AP is an important step towards realizing that vision.”

Mr. C V Sridhar, Mission Director, Andhra Pradesh State Quantum Mission - Amaravati Quantum Valley, remarked, “Amaravati Quantum Valley was envisioned as a catalyst for India’s quantum ambitions, and this collaboration with SRM University-AP, Amaravati and C-DOT represents the kind of ecosystem-driven innovation required to position India among the global leaders in quantum security and quantum communication technologies.”

The university expressed profound gratitude to Sri N. Chandrababu Naidu, Hon’ble Chief Minister of Andhra Pradesh, for his visionary leadership in advancing emerging technologies in the state, and to Sri Nara Lokesh, Hon’ble Minister for Human Resources Development, Information Technology and Electronics, for championing innovation-driven growth and enabling transformative academic-industry collaborations. The university also acknowledged the invaluable support of Dr. Raj Kumar Upadhyay in driving this landmark initiative forward.

With this collaboration, SRM University-AP and Amaravati Quantum Valley reinforce their commitment to advancing India’s leadership in quantum innovation, cybersecurity research, and next-generation secure technologies, supporting the nation’s emergence as a global quantum powerhouse.

