

Coverage Report

Mphasis IIT Madras Quantum Lab Media Tour

August 14, 2024

Online

The New Indian Express

[IIT-M plans to set up quantum hub in Chennai \(newindianexpress.com\)](https://www.newindianexpress.com)

CHENNAI: IIT Madras has submitted a proposal to set up a thematic quantum communication hub in Chennai and a decision would likely be taken up by the Department of Science and Technology by the end of this month, according to IIT-M professor Anil Prabhakar.

Prabhakar, from IIT-M department of electrical engineering, said that the country is setting up four thematic hubs in the domains of quantum computing, quantum communication, quantum sensing metrology, and quantum material devices.

“We are aspiring to be a quantum communications hub. The proposals are being evaluated,” said Prabhakar while providing a tour of the Rs 21 crore quantum lab, funded by Mphasis, on the campus on Wednesday.

The lab aims to accelerate fundamental and applied research in quantum computing.

Quantum communication takes advantage of the laws of quantum physics to secure data transmission through protocols offering a highly secure alternative to traditional encryption methods.

The professor added that the department will also be announcing technical groups for the hubs. “A quantum hub consists of four or five technical groups, which form the governing board. The hub will then call for proposals and create what are called spoke institutions, where smaller amounts of research gets done,” he said.

The National Quantum Mission got approval from the Union Cabinet on April 19, 2023, with an outlay of `6,004 crore.

CNBC TV18

[IIT-Madras-Mphasis's quantum computing lab key to proposed Chennai hub](#)

IIT-Madras and Mphasis are advancing their quantum lab collaboration, focusing on research in areas like quantum optimisation and communication. The initiative aims to democratise quantum technology access, support startups, and establish a robust quantum communication network in Chennai.

Two years after joining hands to build a quantum lab on campus, IIT-Madras and IT solutions provider Mphasis are seeing their joint efforts to research quantum computing in full swing.

In 2022, both organisations announced that they would establish a laboratory on the IIT campus in Chennai to promote fundamental and applied research in quantum technology, among other objectives.

"Over a period of five years, our research will focus on the expanses of quantum optimisation, quantum finance, quantum chemistry, quantum communication, quantum error-correction and quantum tomography," said Professor Anil Prabhakar from the Department of Electrical Engineering at IIT Madras.

"The lab built through this partnership will harness the potential of quantum technology and uncover the areas expected to achieve early gains with quantum computers and migrate real-world use cases onto quantum computers," he added.

One of the purposes of the lab, Prabhakar said, was to build a quantum communication hub in Chennai, a proposal for which has been made to the Department of Science and Technology, with a decision in this regard expected soon. The lab is also expected to democratise access to learning quantum tech and help start-ups in the quantum domain to harness its output.

Through it all, establishing a strong quantum communication network through the lab and the proposed quantum communication hub is one of the key outcomes the lab and IIT-Mphasis partnership hopes to bring about. "Mphasis is at the forefront in using quantum computers for machine learning, optimisation and simulation," said Ramanathan Srikumar, Chief Solutions Officer at Mphasis.

"We expect quantum computing to be a significant driver in solving future problems, especially with the research focus to be on information, communication and computing," he added, "The research will bring together faculty from different engineering and science disciplines, and focus on enhancing industrial applications of quantum technology."

In April 2023, the Union Cabinet approved the establishment of the National Quantum Mission at a total cost of ₹6,003 crore to be deployed till 2031 to fund and scale-up scientific and industrial R&D in quantum technology. The aim was to make India a leading nation in developing quantum technology and its applications.

Print

The New Indian Express

IIT-M plans to set up quantum hub in Chennai

C SHIVAKUMAR @ Chennai

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