



## **Quantum Information Science and Engineering program at UTC**

UTC Advisory Board Meeting

January 8, 2024

Reinhold Mann  
Vice Chancellor for Research

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### **UTC Program Vision**

Establish a QISE program at UTC with excellence in education & workforce development, innovation and economic development, well-connected to our community in Chattanooga and beyond.

- College of Arts & Sciences
- College of Engineering and Computer Science
- Four departments – Mathematics, Physics & Chemistry, Electrical Engineering, Computer Science & Engineering

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## History

- 7/2022 - UTC Quantum Initiative (QI) launched
- 8/2022 – Dr. Tian Li, TX A&M, joins UTC (Q sensing)
- 9/2023 – Partnership Agreement with EPB signed
- 11/2023 – UTC connected to EPB Q network
- 2/2024 – NIST Community Project approved, investment to establish the UTC Quantum Center
- 3/2024 – American Physical Society-TV features UTC QI at March meeting
- 3/2024 – Proceedings of National Academy of Science invites paper on Q sensing (Dr. Li)
- 4/2024 – UTC joins Chattanooga Quantum Collaborative
- 4/2024 – Dr. Rick Mukherjee (Hamburg U) accepts offer, move complete 12/2024
- 5-2024 – TVA supports use case pilot project
- 7/2024 – MOU with ORNL Quantum signed, collaborative R&D, education and WFD
- 8/2024 – Dr. Tian Li awarded grant from highly competitive NSF ExpandQISE program
- 9/2024 – QISE Governor's Chair search approved by UT-ORII
- 9/2024 – UTC Center for Professional Education offers Introduction to QISE course for professionals in the work force, first cohort of engineers from Volkswagen
- 12/2024 – Draft proposal – Graduate Program in QISE

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## Education & workforce development- QISE

- **Credit certificate in QISE plan to offer Minor in QISE**
  - Intro to QISE
  - Physic Concepts
  - Mathematics Concepts
  - Quantum Computing
- **Quantum Computing for Computer Scientists – Grad course offered in CS Dept**
- **Plan to offer Minor in QISE**
- **QaaS – access to Quantum Computing assets**
- **Non-credit certificate - Introduction to QISE, Center for Professional Education**
  - First cohort of engineers from Volkswagen Sep/Oct 2024 – 18-hour course

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**Rick Mukherjee**

 LinkedIn: [Rick Mukherjee](#)
**Current Roles:**

- Director of UTC Quantum Center
- Associate Research Professor of Physics

**Previous Roles:**

- Staff Scientist, Hamburg University, Germany
- Research Fellow, Imperial College London, UK
- Postdoctoral Fellow, Rice University, USA

**Education:**

- PhD in Physics, Max Planck Institute for the Physics of Complex Systems, Dresden, Germany
- MS in Mathematical Physics, Cambridge University, UK
- BSc In Physics, St. Xaviers College, Mumbai University, India

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**Tian Li**

 LinkedIn: [Tian Li](#)
**Current Roles:** CTO of UTC Quantum Center & Assistant Professor of Physics


**Previous Role:**

- Postdoctoral Fellow, Institute for Quantum Science & Engineering, Texas A&M University

**Education:**

- PhD in Physics, Joint Quantum Institute, Natl. Inst. of Stards & Technology & the Univ. of Maryland
- MS in Physics, University of Nevada

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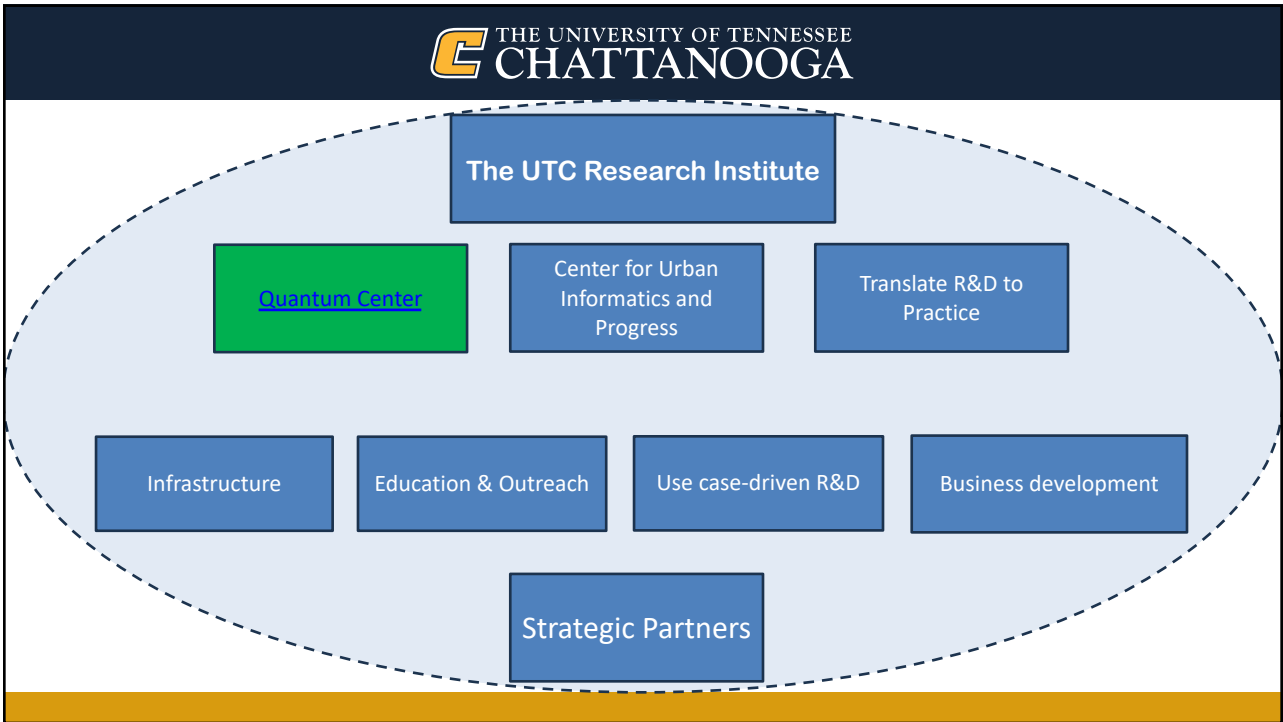


## Staffing

Infrastructure	Education	Use case-driven R&D	Business Development
Dr. Li	Dr. Tatiana Allen Dr. Cox Dr. Li Dr. Liang Mr. Freeze Dr. Howard-Baptiste Dr. Mukherjee	Dr. Li Dr. Liang Dr. Mukherjee Dr. Mina Sartipi  1-2 Research Faculty 4 post-docs 4 Graduate students	Dr. Reinhold Mann, interim Dr. Li Dr. Mukherjee

Search to fill UTC/ORNL Governor's Chair position in Quantum Science and Technology is underway

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