

A Textbook of

# Quantum Computing

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**Dr. Ritu Nagila** is a Ph.D. holder in Computer Science & Engineering and currently serves as an Assistant Professor in the Department of Computer Science & Engineering, School of Computer Science & Applications, IITM University, Mysore, India. She has several Scopus-indexed research publications to her credit and has also contributed to research and innovation in the domain of computer science and emerging technologies. Her research interests include artificial intelligence, machine learning, deep learning-based medical image analysis, data analytics, and advanced computing techniques. Dr. Ritu actively contributes to higher education and academic research through teaching, scholarly publications, and research-oriented projects.



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**Dr. Debabrata Dansana**, an academican and researcher currently serving as Head of the Department of Computer Science at Ravenshaw University, Bhubaneswar, has over 14 years of academic and research experience. He holds a Ph.D. in Computer Science, an M.Tech., and a B.Tech. His research areas include Artificial Intelligence, Machine Learning, IoT, Deep Learning, and Cognitive Radio Ad-hoc Networks. He has served at reputed institutions such as Kendriya Institute of Space Sciences, OIST University, SOIT (Sri Lanka University), and IIST, Bhubaneswar. Dr. Dansana has published over 35 research papers and 15 conference papers in reputed journals, including IEEE Transactions, IEEE Access, Smart Computing, Scientific Reports, and Cluster Computing. He has also authored book chapters and holds several patents in AI-driven healthcare and IoT-based systems. A recipient of multiple awards, he was a finalist in the Smart India Hackathon 2023 and the winner of the Smart India Hackathon and Toyathon. He is an active IEEE member and continues to guide young researchers in the field of intelligent computing.



**Mr. Brijesh Yadav** is associated with Mohanrao Phule Sector Company BHEL. The author obtained his M. Tech. degree in Data Science & Engineering from BITS Pilani, and PG Diploma in Data Science from IIT Bangalore. He obtained his B. Tech. degree in Electrical & Electronics Engineering from MNMCEM, UPTU in 2005. His Academic journey has over 7 years of teaching in Electrical Engineering, specifically Electrical Machines, and Power Systems and authored the books "Basic Electrical Engineering", "Artificial Intelligence in IoT" and "Data Principles of Deep Learning". He has submitted a Research Paper titled "IoT-AI Hybrid Optimization System for Real-time Supply Chain Tracking and Intelligent Route Planning" in IEEE. His industrial journey has over 18 years of experience in various areas of Power Plants.



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