

KEYNOTE/PLENARY

Title:

Next-Generation Wi-Fi: Performance Issues and Research Challenges

Speaker:

Prof. Nurul Sarkar

**Director of the Networking and Security Research Centre,
Auckland University of Technology (AUT), New Zealand**

Abstract

There has been tremendous growth in the deployment of Wi-Fi technologies (IEEE 802.11 standards) in recent years. This growth is due to the flexibility, low cost, simplicity, and user mobility offered by the technology. Such networks are being deployed widely in homes, offices, apartments, schools, shops, hotels, warehouses, factories, and almost anywhere that people live and work. This talk will highlight some of the most recent developments in Gigabit Wi-Fi such as the latest Wi-Fi 7 (802.11 be) and ongoing research activities in the next generation wireless network technologies. Network performance issues and challenges in protocol design and system deployment scenarios will be discussed. Empirical results will be presented to support the discussion. This is a knowledge-sharing talk suitable for a general audience.

Biography



Nurul I. Sarkar (Senior Member, IEEE) is a distinguished academic and computer scientist specializing in network design, modeling, and performance evaluation. He currently serves as a Professor and Director of the Networking and Security Research Centre at Auckland University of Technology (AUT) in New Zealand. He received a PhD in Electrical, Computer, and Software Engineering (Field: wireless networks) from the University of Auckland, New Zealand. Prof Sarkar is a regularly invited keynote speaker, chair, and committee member for various national and international fora. He is a research assessor for MBIE and The Royal Society of NZ. He has published over 220 articles (25+ Q1 journals since 2018) in network and communications, including the IEEE Communications Magazine, IEEE Internet of Things Journal, IEEE Transactions on Vehicular Technology, IEEE Transactions on Network and Service Management, IEEE Transactions on Education, Ad Hoc Networks, and Computer Communications. “Improving the Performance of Wireless LANs: A Practical Guide,” his second book has been published by Taylor and Francis in January 2014. Prof Sarkar is a member of many professional organisations and societies. He was on the Editorial Review Boards of several prestigious journals and was a Guest Editor for the IEEE Communications Magazine. He has spent periods of research leave in South Korea, China, and Japan in recent years. He was the conference General Co-Chair for the ITNAC’19 and the TPC Co-Chair for ICOIN’24-26 and the IEEE ICC’14. His research interests include wireless network protocols, cognitive radio ad hoc networks, IoT, UAV, and cloud/fog/edge networking.