



Introduction to Special Issue on Future of Wireless Communication and 6G Networks

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Wireless communication is the fastest and efficient communication model, enabling us to connect across the globe anytime. Wireless technologies are proliferating at a substantial rate allowing people to communicate even from rural regions making their lives better. The existing network that we use today consumes high data and battery usage, which restricts users with limited internet usage. Hence, future generation needs a network with reliable speed and wide data coverage. Definitely, 6G networks are expected to resolve these issues and revolutionize the globe with advanced systems for faster and effective communication. This special issue brings together researchers from various backgrounds to discuss the 6G network that integrates artificial intelligence and the internet of space things for super-advanced space communication of unidentified aerial objects. In parallel, this special issue also encourages the researchers and practitioners to share insights on the future of 6G networks and their expansion in various fields like imaging, space technology and ultra-speed sampling techniques, deep learning, and big data analytics. The primary objective of this special section is to

understand features of 6G networks like speed, data transfer and storage.

This special section includes eight articles, the first article deals with optimal regression sampling estimation methods for wireless communication technology to improve performance and shortcomings of the existing sampling survey methods. The second article presents a wireless sensor network communication technology to improve the performance of the composition rule perception algorithm of the national art plane system. The third article presents a distance teaching platform network for English courses designed for communication engineering, innovatively combining network technology with the education field. The fourth article focuses on using the evaluation index on machine learning for network intrusion detection. This paper benefits from the principle of structural risk minimization to pre-process the data, learn and train the data, calculate important features of data, and reduce the data dimension. Subsequently, the technique presented in the paper increases accuracy and efficiency and effectively reduce the false alarm rate for network intrusion detection.

The fifth paper in the series is an article on designing an online monitoring system of distribution transformer collaborating cloud and Internet of Things for reducing long response time and improved performance. In the sixth paper the author presents a situational English language information intelligent retrieval algorithm based on a wireless sensor network model and communication routing mechanism for shortening the retrieval time and accuracy improvement. The seventh article in this special issue presents a virtual three-dimensional model construction method based on mobile communication technology. This technology not only helps in transforming and updating the ageing residential buildings but also make them concise, real, and energy saving. Finally, the eighth article introduces the power corridor visualization technology for UAV line inspection data in carrying out visualization processing through data acquisition level image denoising. This approach in turn improves the

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accuracy of UAV line inspection and ensure the safety of the power system.

The response from the research community for this special issue was significant, and all the articles that are approved for publication have undergone a double-blinded review process to meet the standards of the journal. We ensure that this special issue interprets the importance and need of 6G networks for future wireless communication systems, which will revolutionize the entire communication medium with its advances in security and efficiency. We are very much grateful to all the authors for their innovative contributions and all the reviewers for their timely efforts. Finally, we thank the Editor-in-Chief for offering us the privilege to edit this special issue in this reputed journal. Three more papers related to this SI will appear in the next issue of the journal.

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Mamoun Alazab is an Associate Professor at the College of Engineering, IT and Environment at Charles Darwin University, Australia. He received his PhD degree in Computer Science from the Federation University of Australia, School of Science, Information Technology and Engineering. He is a cyber security researcher and practitioner with industry and academic experience. Alazab's research is multidisciplinary that focuses on cyber security and digital forensics of computer systems with a focus on

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