The advent of the Internet of Things (IoT) promises us a smart future. IoT applications’ success depends on various factors, but without a reliable connection between the IoT entities (devices and sensors), its applications will not get off the ground. At present, wireless access technologies are undergoing a major generational shift. 5G and beyond networks underpin this technological transformation by enabling the industrial sector to utilise emerging technologies such as artificial intelligence (AI) and machine vision to provide massively improved visibility on all aspects of their business. With wireless access technologies, all of these devices can be seamlessly integrated into each other, offering an improved quality of services. However, wireless network connectivity is not about simply selecting the wireless network technologies. But it is most important to understand the requirements of the IoT application and then select the wireless access technologies that best fit the needs. In this special issue, we will briefly explore how IoT applications will progress around wireless access technologies and the need for new network technologies that will drive these changes.

While the IoT applications have sufficient access to the internet and other wireless technologies, the future looks different. The advances in IoT applications impose more advanced requirements to get connected to the internet, and the future of wireless technologies continue to improve as well. Hence it is essential to address the fundamental issues associated with radio spectrum, power, and transmission devices to empower speed, dependability, security, wide-area coverage, and ultra-low reliability communications for IoT applications. At the same time, with progress towards industry 4.0, it is expected that every vertical sector needs to share a common IoT platform and there come massive challenges in unifying these networks. This includes larger computational complexity and transmission latency in processing a huge volume of information and managing more terminals from the various IoT industrial sectors, which are not adequately addressed by the existing wireless communication standards. With these issues in consideration, it is crucial to envisage wireless access technologies and architectures for low-power, low-bandwidth IoT devices that require lightweight network communication protocols to manage the resource-constrained IoT devices effectively. Therefore seen from a much practical perspective, this special issue explores new innovative wireless access technologies and architectures for IoT applications from a vast array of solutions. We welcome researchers and practitioners from industry and academia to present their novel and innovative solutions.

Topics of interest include, but not limited to, the following:

- Fundamental trade-off reliable communication in IoT networks
- New wireless access technologies and frameworks for IoT applications with time-sensitive networks standards
- Advances in cognitive radio technology
- Advances in wireless network domain technologies for diverse IoT applications (cloud, virtualisation, and radio access networks)
- Intelligent software-based reconfigurable wireless networks for IoT applications
Advances in MIMO technology and multi-antenna systems for reliable communication
- Ultra-wide band communication for IoT applications to attain high capacity and extreme low latency
- Initial and random-access protocols for reliable and real-time access
- Network automation and process automation technologies for IoT (wirelessHART, Wia-Fa,Wia-Pa)
- Device to device relaying for ultra-reliable low latency IoT communication
- Coordinated multi-point (CoMP) and distributed diversity techniques

Special Issue Schedule Timeline:

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submissions Deadline</td>
<td>05.04.2022</td>
</tr>
<tr>
<td>First Reviews Due</td>
<td>10.06.2022</td>
</tr>
<tr>
<td>Second Reviews Due</td>
<td>06.08.2022</td>
</tr>
<tr>
<td>Notification of Final Decision</td>
<td>26.10.2022</td>
</tr>
<tr>
<td>Publication Date</td>
<td>As per Journal Decision</td>
</tr>
</tbody>
</table>

Guest Editor Details:

Prof. Jerry Chun-Wei Lin (FIET, SMIEEE, SMACM)
Western Norway University of Applied Sciences, Norway,
Email ID: lxunwei@acm.org, jerrylin@ieee.org

Short Bio: Prof. Jerry Chun-Wei Lin received his Ph.D. from the Department of Computer Science and Information Engineering, National Cheng Kung University, Tainan, Taiwan in 2010. He is currently a full Professor with the Department of Computer Science, Electrical Engineering and Mathematical Sciences, Western Norway University of Applied Sciences, Bergen, Norway. He has published more than 400 research articles in refereed journals (IEEE TKDE, IEEE TCYB, IEEE TII, IEEE TITS, IEEE TNSE, IEEE TETCI, IEEE SysJ, IEEE SensJ, IEEE IOTJ, ACM TKDD, ACM TDS, ACM TMIS, ACM TOIT, ACM TIST) and international conferences (IEEE ICDE, IEEE ICDM, PKDD, PAKDD), 11 edited books, as well as 33 patents (held and filed, 3 US patents). His research interests include data mining, soft computing, artificial intelligence/machine learning, and privacy-preserving and security technologies. He is the Editor-in-Chief of the International Journal of Data Science and Pattern Recognition, the Guest Editor/Associate Editor for several IEEE/ACM journals such as IEEE TFS, IEEE TII, ACM TMIS, ACM TOIT, and IEEE Access. He has recognized as the most cited Chinese Researcher respectively in 2018, 2019 and 2020 by Scopus/Elsevier. He is the Fellow of IET (FIET), senior member for both IEEE and ACM.

Google Scholar Link: https://scholar.google.com/citations?user=Gd0ImD8AAAAJ

Prof. Gautam Srivastava (SMIEEE)
Brandon University, Canada,
Email ID: srivastavag@brandonu.ca

Short Bio: Dr. Gautam Srivastava (Senior Member, IEEE) has extensive Guest Editorial Experience including IEEE Trans on Fuzzy Systems, IEEE Trans on Industrial Informatics, Computer Standards and Interfaces, Applied Stochastic Modeling and Business, and many others.
Dr. Gautam Srivastava was awarded a B.Sc. from Briar Cliff University in Sioux City, Iowa, the U.S.A. in 2004, followed by an M.Sc. and Ph.D. from the University of Victoria in Victoria, British Columbia, Canada, in the years 2006 and 2011, respectively. He then worked for 3 years at the University of Victoria in the Department of Computer Science (Faculty of Engineering), where he was regarded as one of the top Undergraduate professors in Computer Science Course Instruction at the University. From there in 2014 he started a tenure-track position at Brandon University in Brandon, Manitoba, Canada, where he currently is an Assistant Professor. Dr. G (as he is popularly known) is active in research in the fields of Data Mining and Big Data. During his 6-year academic career, he has published a total of 200 papers in high-impact conferences and journals. He has also given guest lectures at many Taiwan universities in Big Data. He currently has active research projects with other academics in Taiwan, Singapore, Canada, and the U.S.A.

Google Scholar Link: https://scholar.google.ca/citations?user=qk9hEQoAAAAJ

Prof. Yu-Dong Zhang (FIET, SMIEEE)
University of Leicester, UK,

Email ID: yudong.zhang@le.ac.uk

Short Bio: Prof. Yu-Dong Zhang received his BE in Information Sciences in 2004, and MPhil in Communication and Information Engineering in 2007, from Nanjing University of Aeronautics and Astronautics. He received the PhD degree in Signal and Information Processing from Southeast University in 2010. He worked as a postdoc from 2010 to 2012 with Columbia University, USA; and as an assistant research scientist from 2012 to 2013 with Research Foundation of Mental Hygiene (RFMH), USA. He served as a Full Professor from 2013 to 2017 with Nanjing Normal University. Now he serves as Professor with School of Informatics, University of Leicester, UK. His research interests include deep learning and medical image analysis. He is the Fellow of IET (FIET), and Senior Members of IEEE, IES, and ACM. He was included in "Most Cited Chinese researchers (Computer Science)" by Elsevier from 2014 to 2018. He was the 2019 recipient of “Web of Science Highly Cited Researcher”. He won “Emerald Citation of Excellence 2017” and “MDPI Top 10 Most Cited Papers 2015”. He is included in "Top Scientist" in Guide2Research. He is the author of over 250 peer-reviewed articles, including more than 40 “ESI Highly Cited Papers”, and 3 “ESI Hot Papers”. His citation reached 15235 in Google Scholar (h-index 68), and 8947 in Web of Science (h-index 53). He has conducted many successful industrial projects and academic grants from NIH, Royal Society, GCRF, EPSRC, MRC, British Council, and NSFC.

Google Scholar Link: https://scholar.google.com/citations?user=A5lqlN8AAAAJ