

Guest Editorial

THIS MINI-SPECIAL issue of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES includes seven expanded articles from the sixth IEEE MTT-S International Wireless Symposium (IEEE IWS 2019) held on May 19–22, 2019, in Guangzhou, China.

IWS is held annually in China to provide an international forum for presentations and exchanges of the latest technical achievements and developments in theories, components, circuits, systems, and applications related to the existing and emerging wireless technologies. The conference features parallel technical session tracks, workshops, student paper competitions, FLASH competition, Women in Microwaves and Wireless, Young Professionals panel session, and an exhibition showcasing the latest wireless commercial products and services. The first IEEE MTT-S IWS was held on April 13–18, 2013, in Beijing, China. Since then, the IWS has been held in Xi'an, Shenzhen, Shanghai, and Chengdu, China, from 2014 to 2018. After 2017, IWS, the International Conference on Microwave and Millimeter Wave Technology (ICMMT), and the China National Conference on Microwave and Millimeter Waves (NCMMW) are joined together and held concurrently as the China Microwave Week (CMW).

The IWS 2019 focuses on the convergence of MHz to THz technologies for 5G and beyond. It is a very successful event. A record-high number of 420 articles are received from 27 countries and regions. The 125 technical program committee (TPC) members review all the articles and evaluate their technical merits and interests to the community with a double-blind review manner. Finally, a total number of 312 abstracts, including 31 invited talks, are accepted for presentation, and 293 articles are accepted for the IEEE Xplore publication. They are presented in 33 oral sessions and 10 poster sessions from Monday to Wednesday, forming the largest IWS event so far.

The presentations cover many relevant topics in the areas of wireless technologies, including microwave photonics, THz theory and techniques, wireless power transfer, IoT and RF devices and systems, 5G systems, and microwave and millimeter-wave systems and components such as antennas and filters, radar systems, modeling techniques, and integrated circuits. The keynote speeches are delivered by three outstanding scientists: Dr. Wentao Wang, Huawei Technologies Co., Ltd., China; Prof. Dominique Schreurs, University of Leuven, Belgium; and Prof. Minoru Fujishima, Hiroshima University, Japan. They present the opportunities and challenges for 5G

millimeter-wave antennas, MHz to THz emerging developments; and the advances of THz one-chip CMOS transceivers, with inspiring achievements and ideas.

The authors of articles accepted and presented during IEEE IWS 2019 were invited to submit substantially expanded versions of their works for publication in this Mini-special issue. A total of 21 extended articles are submitted, and 7 articles are finally accepted for publication, after a rigorous review process.

The articles published in this mini-special issue cover wide topical areas for components and system applications, including broadband absorber, frequency divider, power combiner, filters, and wireless power transfer for capsule endoscopy.

We would like to express our thanks to Prof. Luca Pellegrini and Prof. José Carlos Pedro (Editors-in-Chief of this TRANSACTIONS) for their instructions and the opportunity to publish this mini-special issue. We would also like to thank Prof. Kamran Ghorbani (Associate Editor of this TRANSACTIONS) for his help and assistance in the article review and decision process. We sincerely appreciate Prof. Bin Li, South China University of Technology, China, and Prof. Zhihao Jiang, Southeast University, China, who are the IWS2019 Technical Program co-chairs. Particularly, we sincerely thank the TPC members Prof. Wenjie Feng, Nanjing University of Science and Technology, and Dr. Wenhai Zhang, South China University of Technology, for their working tirelessly in the review processes. Finally, we are extremely grateful to the authors of all the submitted articles for their efforts and contributions to this mini-special issue, and to the reviewers for devoting their valuable time and expertise to reviewing the submitted manuscripts.

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Dr. Chiao was a recipient of the Lockheed Martin Aeronautics Company Excellence in Engineering Teaching Award, the Tech Titans Technology Innovator Award, the Research in Medicine Award in the Heroes of Healthcare, the IEEE Region 5 Outstanding Engineering Educator Award, the Excellent Performance Award, and the Edith and Peter O'Donnell Award in Engineering by The Academy of Medicine, Engineering and Science of Texas. He has been the Chair of several international conferences, including the 2018 IEEE International Microwave Biomedical Conference (IMBioC). He was the Chair of the IEEE MTT-S Technical Committee 10 "Biological Effect and Medical Applications of RF and Microwave," the Technical Program Chair of the 2019 IEEE International Wireless Symposium, and an Associate Editor of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES. He is also the Founding Editor-in-Chief of the IEEE JOURNAL OF ELECTROMAGNETICS, RF, AND MICROWAVES IN MEDICINE AND BIOLOGY. He was a Distinguished Microwave Lecturer of the IEEE MTT-S from 2012 to 2014. He was also a Distinguished Lecturer of the IEEE Sensors Council from 2017 to 2019.



Wenquan Che (Senior Member, IEEE) received the B.Sc. degree from the East China Institute of Science and Technology, Nanjing, China, in 1990, the M.Sc. degree from the Nanjing University of Science and Technology (NUST), Nanjing, in 1995, and the Ph.D. degree from the City University of Hong Kong (CITYU), Hong Kong, in 2003.

In 1999, she was a Research Assistant with the City University of Hong Kong. In 2002, she was a Visiting Scholar with the Polytechnique de Montréal, Montreal, QC, Canada. She was a Professor with NUST from 2008 to 2018. In December 2018, she joined the South China University of Technology, Guangzhou, China, as a Full Professor. From 2007 to 2008, she conducted academic research at the Institute of High Frequency Technology, Technische Universität München, Munich, Germany. From 2005 to 2006 and 2009 to 2016, she was with the City University of Hong Kong, Hong Kong, as a Research Fellow and a Visiting Professor, respectively. She has authored or coauthored over 250 internationally refereed journal articles and over 100 international conference papers. Her current research interests include microwave and millimeter-wave circuits and systems, microwave monolithic integrated circuits, antenna technologies, and the medical applications of microwave technologies.

Dr. Che is currently an Elected Member of the IEEE MTT-S AdCom for the term of 2018–2020. She was a recipient of the 2007 Humboldt Research Fellowship presented by the Alexander von Humboldt Foundation of Germany, the 5th China Young Female Scientists Award in 2008, and the Distinguished Young Scientist awarded by the National Natural Science Foundation Committee of China in 2012. She is also the Editor-in-Chief of *Microwave and Optical Technology Letters* for the term of 2019–2022 and a Reviewer of the IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES, the IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, the IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, and the IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS.