The 1st EuMCE 2019 Special Issue

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The 1st EuMCE – European Microwave Conference in Central Europe was held in Prague, Czech Republic, at the Prague Congress Center from 13th to 15th May 2019. The EuMCE was organized by the European Microwave Association (EuMA). EuMA thus launched a new series of conferences – idea of this was strongly supported by two EuMA past Presidents, Prof. Roberto Sorrentino and Prof. Wolfgang Heinrich, as well as by the EuMA President Frank van den Bogaart. And by many EuMA members too.

Motto of EuMCE is “Microwave and RF Event dedicated to Central Europe”, which means that the main aim of EuMCE is to support the microwave community in the Central Europe region, to promote related microwave activities, and to create a new environment, where the microwave community from the Central Europe region will meet with microwave community from all the other parts of the World.

The Conference was chaired by Prof. Jan Vrba from Czech Technical University in Prague, the TPC Chair and Co-Chair were Prof. Jan Machac from Czech Technical University in Prague, and Prof. Felix Yanovsky from National Aviation University, Kyiv, Ukraine.

The total number of contributions submitted was 170. Seventy papers have been arranged in 14 oral sessions and 44 in three interactive poster sessions. Therefore, 114 accepted papers out of 130 represent 15% rejection rate. In addition, there were 11 special sessions with altogether 40 papers. Thus, the conference program is created by 154 papers. All presented papers were submitted to the IEEE Xplore DL. Seven invited keynote lectures were placed both in the opening and closing sessions and in a plenary session. There were two Workshops included in the Conference program: “Advances in Smart Modeling Techniques for Microwave Engineering”, and “Active, non-Foster, and Time-varying Electromagnetic Structures and Systems”. The high standard Conference program was selected by the TPC composed of 55 members coming mostly from Europe. The Conference was accompanied by the exhibition of companies working in microwave and high-frequency fields organized by Horizon House.

The best conference contributions were invited to submit an extended version to the IJMWT journal. These works went through an additional review and editorial process. The selected papers reflect the most relevant topics and recent challenges in the area of microwave technologies, devices, and systems. As Associate Editors of this 1st EUMCE 2019 special issue, we would like to warmly thank all authors for accepting our invitation to submit their works, and prepare their valuable contributions. Of course, this issue would not have been possible without the involved reviewers, whom we recognize and sincerely thank for their efforts, wise advices, exhaustive criticisms, and time dedication. Additionally, we would like to thank the entire 1st EUMCE 2019 organization team for their extraordinary work. Furthermore, we sincerely acknowledge our two Editors-in-Chief: Prof. Francisco Medina and Prof. Francisco Mesa who started this Special Issue and have helped us to successfully achieve this Special Issue. To conclude, we would like to invite you to submit your other research results in the International Journal of Microwave and Wireless Technologies.

Jan Macháč received his M.Sc. degree in electronics from the Czech Technical University in 1977. He was with the Institute of Radioengineering and Electronics, Czechoslovak Academy of Sciences from 1977 to 1984 from which he received his Ph.D. degree in electronics in 1982. In this institution, he worked on semiconductor sources and detectors of light radiation. In 1984, he joined the Faculty of Electrical Engineering, Czech Technical University in Prague. He was an Assistant Professor till 1991. Since 1991 he has been an Associate Professor of electrical engineering. In 1996, he was awarded a Dr.Sc. degree in radioelectronics by the Czech Technical University. He is engaged in teaching of electromagnetic field theory and numerical methods for solution of electromagnetic field. His main scientific interests are: investigation of planar passive elements and subsystems of microwave technology, planar antennas, planar microwave filters, propagation of electromagnetic waves in periodic structures, metamaterials, and RFID techniques. Prof. Macháč is an author or co-author of more than 250 publications in scientific journals and scientific international and national conferences. He is a reviewer of IEEE Transactions on MTT, IEEE MWCL, Electronics Letters, IET Microwave Antennas & Propagation. Member of the TPC of the European Microwave Conference, 1995–1997, and 2013–till now. Secretary of the 26th European Microwave Conference in 1996. Member of the MTT-S IMS TPRC, since 2008.
Milan Švanda received the M.S. and Ph.D. degrees in Radioelectronics from the Czech Technical University in Prague, in 2007 and 2011, respectively. He currently works as a research scientist in the Department of Electromagnetic Field at CTU in Prague. He is an author or co-author of more than 50 papers published in international journals or conference proceedings and co-author of five patents. From 2019, he is an associated editor of the Radioengineering Journal. His main research activities are focused on antennas operating in close proximity to the human body, low-profile and wearable RFID and sensor antennas.

Jan Vrba, Jr. received the M.Sc. and Ph.D. degrees in electrical engineering from RWTH Aachen University (Germany) in 2006 and 2013, respectively. In 2011, he joined the Faculty of Biomedical Engineering of the Czech Technical University in Prague and in 2017 he became Associate Professor. His main research interests are the interaction of the electromagnetic fields with biological systems. In particular, he focuses on the development of microwave sensors, antennas, phantoms, and algorithms for microwave imaging as well as systems and applicators for superficial and deep microwave hyperthermia. Jan Vrba is an author or co-author of more than 70 papers published in international journals or conference proceedings. So far, he has been the principal investigator and co-investigator of six national and international scientific projects. He is a member of Management Committee of the EU project COST CA17115 “European network for innovative uses of EMFs in biomedical applications”, Executive Committee of the IEEE Czechoslovakia Section and Executive Committee of the IEEE Engineering in Medicine & Biology Society Chapter. He was TPC member and/or member of Local Organizing Committee of two international conferences – PIERS 2015 and EuMCE 2019.