



Editor-in-Chief: Scanning the Issue

Dear members and readers,

First of all, I would like to address and greet you all as the new editor-in-chief of the *Microwave Review*. I would also like to express my gratitude to Dr. Biljana Stojanović, past editor-in-chief, for her enormous help in arranging this issue and her effort to convey to me the great experience she has acquired during the past eight years being Editor. I hope I will be able to satisfy the high standards and expectations she has established through her excellent work and results.

The current December issue of the *Microwave Review* journal (Vol. 28, No. 2) contains five research papers. These papers present ongoing research and developments achieved by researchers in different areas and countries.

In the first paper titled *A Novel Efficient Approach for Monostatic Radar Cross Section Calculation of Perfectly Conducting Complex Targets*, a geometrical approach called linear projection-subdivision for computing the monostatic radar cross-section of canonical and complex perfectly conducting objects, which is based on the combination of geometrical and physical optics, is described. The paper is written by Yacine Bennani and Sami Hebib from Algeria, and Youssef Kebbaty from France.

The growing demand for mobile communications requires the development of new-generation mobile communication systems including 5G. A new design of a miniature patch antenna with metamaterials for 5G mobile applications is presented in the second paper titled *New Design of Metamaterial Miniature Patch Antenna with DGS for 5G Mobile Communications* and written by authors from Algeria: Fatima Z. Moussa, Souheyla Ferouani, and Yamina Belhadef. In the design, 8-CSRR (Complementary Split-Ring Resonator) cells etched in the ground plane of the antenna structure are used. The DGS (Defected Ground Structure) improves the bandwidth of the miniature printed antenna for 5G applications at a frequency range of 3.4-3.8 GHz.

The third paper titled *Study of a Mushroom-like EBG Structure Integration in Phased Antenna Array with Improving Radiation Characteristics Purposes* provides the methodology to determine requirements in the frequency domain in designing a mushroom EBG (Electromagnetic band gap) structure to improve antenna array radiation characteristics. An antenna system consists of a mushroom-like EBG structure implemented in a phased antenna array with four scanning beam states. A periodic structure of the considered type can be used in antennas where an increase in gain and narrowing of beam width radiation pattern are required, and the corresponding communication does not require a wide coverage area. The paper is written by Ivaylo Nachev and Ilia Iliev from Bulgaria.

In the current wireless communication world, multi-input and multi-output (MIMO) radiators are widely used because of their ability to support higher data rates without any need for input power enhancement. The main purpose of the fourth paper titled *Wideband Metasurface Loaded Circularly Polarized MIMO Microstrip Antenna with High Isolation* is to design and develop a dual port microstrip antenna with wideband characteristics. A metasurface is suspended over the radiator for solving two purposes: (a) acts as LP (Linear Polarization) to CP (Circular Polarization) convertor within the operating band and provides the CP waves from 13.2 GHz to 13.9 GHz, and (b) for improving the isolation level (more than 38 dB) between the antenna ports. The proposed radiator also

contains the DGS for reducing the Q-factor value and enhancing the bandwidth. The proposed antenna works from 12.2 GHz to 14.2 GHz. The authors Mukesh Tiwari, Kokab Afroz, and Mehajabeen Fatima are from India.

The problem of electronic equipment (EE) protection is relevant today. The influence of natural and intentional electromagnetic interference (EMI) is dangerous for critical EE without any adequate protection. There are many approaches to protection against USPs (Ultrashort pulses). The last, fifth paper *Ultrashort Pulse Decomposition in a Turn of a Meander Microstrip Line with Two Passive Conductors*, considers the decomposition of an ultrashort pulse in a turn of a meander microstrip line with two passive conductors into a sequence of pulses of lower amplitude. Two circuit diagrams are discussed, differing in the location of the connection of half turns. The optimal parameters of the investigated line are found, which ensure USP decomposition and the minimization of its amplitude. The authors Konstantin P. Malygin, Alexander V. Nosov, and Roman S. Surovtsev are from Russia.

Prof. Zlatica Marinkovi, chair of the IEEE MTT-S Chapter of Serbia and Montenegro, reports on chapter activities in 2021.

I would indicate that all persons involved in the preparation of this journal: the Editor-in-Chief, Associate Editor, and reviewers contribute as volunteers. Also, I would explain that the selection process of submitted papers for publication in a journal may last even several months due to the overburden of the reviewers.

I would like to acknowledge the reviewers for the efforts and time that they commit to the assessment of submitted manuscripts, which enabled the authors to disseminate their work at the highest possible quality. Without the dedication of reviewers, it would be impossible to manage an efficient peer review process!

I wish you a merry Christmas and a very happy and prosperous New Year!

Happy 2023!

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