



Editor-in-Chief: Scanning the Issue

Dear members and readers,

The first issue of Microwave Review in 2026 includes six scientific papers by authors from different universities and countries—India, Algeria, Bulgaria, Austria, Germany, and Serbia. The Microwave Review journal (Vol. 32, No. 1) presents various topics related to microwaves and telecommunications through three regular research papers, one extended paper presented at the 17th International Conference on Advanced Technologies, Systems, and Services in Telecommunications (TELSIKS 2025), and two extended papers presented at the 60th International Scientific Conference on Information, Communication, and Energy Systems and Technologies (ICEST 2025). The papers presented at the TELSIKS and ICEST conferences were carefully selected by the organizers and passed an additional peer review for publication in Microwave Review.

The first paper, entitled "**An Ultra-Low-Cost Wideband Broadside Antenna Using Metallic Additive Manufacturing for Ka-Band Applications**," presents a wideband broadside antenna design for applications on mmWave 5G portable devices operating in different frequency bands. The antenna is inexpensive and simple to realize as an aperture-coupled topology on a commercially viable, low-cost substrate integrated with additively manufactured metallic radiating arms. The antenna delivers a high impedance bandwidth of 45% with unidirectional patterns across the operating spectrum. The authors are Vikas K, Karthikeya G. S, and Varun C. V, who are with the Department of Electronics and Communication Engineering, B.M.S. College of Engineering, Bangalore, India.

The authors of the second paper, Jyothi SK, Nagesh Kallollu Narayanaswamy, Vivek Singh, and Ajay Kumar Dwivedi come from the three institutions from India—Cambridge Institute of Technology, Nagarjuna College of Engineering and Technology, Bengaluru and Visvesvaraya Technological University, Belagavi. The paper, "**Parametric Analysis of Blood Dielectric Properties Using a Printed Microwave Antenna Sensor for In-Vitro Glucose Detection**," describes the design and development of a miniature printed microwave antenna sensor for in-vitro glucose detection by detecting shifts in the electrical characteristics of blood. A multi-layer phantom model incorporating skin, fat, blood, and bone components of the human fingertip was used to replicate realistic sensing settings. A comprehensive analysis of the resonance frequency shifts and signal loss in terms of relative permittivity, conductivity, and loss tangent was performed, suggesting excellent sensitivity of this compact and easy-to-fabricate antenna sensor for use in non-invasive glucose monitoring systems.

The third paper, "**Infinite Rank Attack 'IRA' against RPL based IoT Networks**," studies a modified rank attack, based on a tempered sending interval in IoT networks, which aims to disrupt the network topology and exhaust network resources. The attack has been evaluated using the default Directed Acyclic Graphs Information Object (DIO) interval, a modified DIO interval, and varying positions of the malicious node in the topology. The obtained results show a highly damaging impact caused by the attack. The paper's authors are Salah-Eddine Djeldjli, Mehdi Rouissat, Mohammed Belkheir, Allel Mokaddem, and Djamila Ziani, who are with the Nour Bachir University Center of El-Bayadh and University Aboubekr Belkaid, Tlemcen, Algeria.

The fourth paper, titled "**Reliability of the Digital Models of Open/Short-Circuited Coupled-Line Branch-Line Structures**," by Biljana P. Stošić, and Marin Nedelchev, is the extended version of the paper presented at the Conference ICEST 2025. This paper evaluates the wave digital (WD) models accuracy in application on two wideband branch-line coupler configurations with open-circuited and open/short-circuited parallel-coupled sections. The WD models were validated through simulation of the essential characteristics of the physical structure (S-parameters) by using Advanced Design System (ADS) or HFSS software. The authors are with the University of

Niš, Faculty of Electronic Engineering, Nis, Serbia and the Technical University of Sofia, Faculty of Telecommunications, Bulgaria.

The fifth paper, entitled "**A Novel Application of Waffle Iron Filters in Microwave and mm-Wave Systems: Resolving Conductive Junctions Challenges**," is the extended version of the paper presented at the conference TELSIS 2025. The paper authors are Boro M. Reljic from Austria, Slobodan M. Simic with Mauod, Belgrade, Serbia, Aleksa J. Zejak, and Zoran Golubicic with Peripolis r&d, Belgrade, Serbia. This paper demonstrates a novel solution for achievement of high conductive contacts and junctions that are particularly pronounced at higher microwave and millimeter wave frequencies. The dielectric resonator filter, which realizes the main bandpass filter response at millimeter wave frequencies, and asymmetrical waffle iron filter, which is used to confine electromagnetic waves within filter cavities but without any conductive (i.e. "low ohmic") and mechanical contacts between functional filter parts, are combined in a single composite filter in presented concept.

The authors of the sixth paper, "**Mapping the Research Landscape of Smart Metering Infrastructure Security: A Bibliometric Analysis of Trends, Themes, and Future Directions**," are Anu Sathyajith Mathew, and Axel Sikora, who are with the Institute of Reliable Embedded Systems and Communication Electronics, Offenburg University of Applied Sciences, Germany. This paper presents a bibliometric analysis of 1,889 SMI cybersecurity documents (2015-2025) from Scopus and IEEE Xplore. The analysis employed keyword co-occurrence networks with Walktrap community detection to identify thematic clusters and compared keyword frequencies across early (2015-2019) and recent (2020-2025) periods. This paper is the expanded version of the paper presented at the Conference ICEST 2025.

The call for participation at the 34th Telecommunications forum TELFOR 2026 is included at the end.

I would like to acknowledge the Reviewers' assessment of the submitted manuscripts whose dedication enables the authors to disseminate their work at the highest possible quality and improve the content of the Microwave Review journal.

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