

INTERNATIONAL JOURNAL OF
MICROWAVE AND WIRELESS TECHNOLOGIES

CONTENTS

RADAR

Hyper beamforming with single-sideband time-modulated phased arrays for automotive radar
 Yue Ma, Chen Miao and Wen Wu 1453

Countering self-protection interrupted sampling repeater jammer against chirp radar
 Samer Baher Safa Hanbali 1460

POWER AMPLIFIERS

Design of a wideband highly efficient GaN HEMT power amplifier for multiband applications
 Xuefei Xuan, Zhiqun Cheng, Zhiwei Zhang and Tingwei Gong and Chao Le 1468

RFID AND SENSORS

Flexible SIW humidity sensors based on nanodiamond sensing films
 Chang-ming Chen, Lu Chen, Yao Yao and Ye Peng 1475

LOW NOISE AMPLIFIERS

A super-heterodyne passive 35 GHz millimeter-wave imaging system for detecting hidden objects
 Hamideh Khosousi Sani, Shahram Mohanna and Amir Nader Askarpour 1483

PASSIVE COMPONENTS AND CIRCUITS

Design of dual-band Wilkinson power divider based on novel stubs using PSO algorithm
 Seyed Abed Zonouri, Mohsen Hayati and Mehran Bahrambeigi 1495

A broadband Butler-based dual-polarized omni-directional antenna
 Xiaoqing Wu, Lin-Ping Shen and Lijun Zhang 1507

BIOMEDICAL APPLICATIONS

A compact and economical AMC backed antenna solution for wearable biomedical applications
 Mohit Yadav, Muquaddar Ali and R. P. Yadav 1514

A novel wearable monopole antenna with controlled SAR using metamaterial
 K. Ramasamy, B. A. Sapna and M. Jayasheela 1524

METAMATERIALS AND

PHOTONIC BANDGAP STRUCTURES

Low-profile closely coupled dual-band MIMO antenna using double layer metasurface
 Dayu Qiao, Liping Han, Yufeng Liu, Wenmei Zhang and Member, IEEE 1537

Design of low-profile high-gain wideband circularly polarized low RCS single-layer metasurface antenna using characteristics mode analysis
 Sourabh Rana and Priyanka Jain 1545

Highly miniaturized wideband angular stable linear-circular and linear-cross polarization converter for Ka-band satellite applications
 Mohammad Abdul Shukoor and Sukomal Dey 1557

ANTENNA DESIGN, MODELLING AND MEASUREMENTS

A CPW-fed dual band four-port MIMO antenna based on liquid crystal polymer for flexible IoT applications
 Jie Zhang, Chengzhu Du, Lingru Pei and Hongye Liu 1570

A compact quasi-Yagi antenna for FMCW radar-on-chip-based through-wall imaging
 Anand Kumar, Easha Easha, Debdeep Sarkar and Gaurab Banerjee 1579

Compact modified hourglass-shaped aperture-coupled antenna for radar applications
 P. Priyalatha, Runa Kumari and Sourav Nandi 1592

Four ports MIMO printed antenna with high isolation for UWB and X-band systems
 Ahmed A. Ibrahim, Amira Eltokhy and Ahmed Fawzy Daw 1601

Magnetically tuned SIW patch antenna based on nematic liquid crystal for 5G applications and satellite communication systems
 Adel Kouki, Fakher Sboui and Lassaad Latrach 1610

A four-port wideband filtering monopole MIMO array for sub-6 GHz 5G communications
 Jasmine Vijithra Ayyappan, Gulam Nabi Alsath Mohammed and Sangeetha Subbaraj 1620

ERRATUM

System architecture for a compact high range resolution frequency comb OFDM radar — ERRATUM
 Alexander Quint, Benjamin Nuss, Axel Diewald and Thomas Zwick 1630