

INTERNATIONAL JOURNAL OF
MICROWAVE AND WIRELESS TECHNOLOGIES

CONTENTS

EDITORIAL		
EuCAP 2022 special issue		
Oscar Quevedo-Teruel and Zvonimir Sipus	1271	
EuCAP 2022 SPECIAL ISSUE		
Circularly polarized global navigation satellite systems metasurface antennas in sub-wavelength metallic cavities		
Laura García-Gámez, Loïc Bernard, Ronan Sauleau, Sylvain Collardey, Kouroch Mahdjoubi, Philippe Pouliguen and Patrick Potier	1273	
Substrate integrated waveguide pedestal filtering-antenna and -arrays for 5G radio frequency front-ends		
Elmine Meyer, Cornelis Versteeg, Leanne Johnson, Petrie Meyer and Ulf Johannsen	1283	
Adaptive triple-fed antenna and thinned RF-chip integration into ultra thin flexible polymer foil		
Serafin B. Fischer-Kennedy, Sefa Özbek, Shuo Wang, Markus Grözing, Jan Hesselbarth, Manfred Berroth and Joachim N. Burghartz	1291	
Fill level measurement of low-permittivity material using an M-sequence UWB radar		
Tim Erich Wegner, Stefan Gebhardt, and Giovanni Del Galdo	1299	
OSCILLATORS		
A new class of spatial harmonic magnetrons with potentials for CW and sub-THz operation		
Nasrin Nasr Esfahani, Dmytro M. Vavriv and Klaus Schünemann	1308	
FREQUENCY MIXERS		
A novel dual-BJT avalanche pulse generator with mixer effect		
Emrah Telli and Bahadır S. Yildirim	1319	
A 38-GHz demodulator with high image rejection in 65 nm-CMOS process		
Tian-Wei Huang, Yi-Cheng Huang, Chen Chien, Kun-Chan Chiang and Jeng-Han Tsai	1327	
RFID AND SENSORS		
A symmetric bar chart-shape microwave sensor with high Q-factor for permittivity determination of fluidics		
Moein Navaei, Pejman Rezaei and Sina Kiani	1334	
A planar microwave sensor for noninvasive detection of glucose concentration using regression analysis		
Tilakdhari Singh, Piyush Kumar Mishra, Aditya Pal and Vijay Shanker Tripathi	1343	
BIOMEDICAL APPLICATIONS		
FDTD-based SAR calculation of a wearable antenna for wireless body area network devices		
Hüseyin Şerif Savcı and Fatih Kaburcuk	1354	
ANTENNA DESIGN, MODELLING AND MEASUREMENTS		
A novel isolation improvement technique using fractal neutralization line with dual band rejection attributes in a compact UWB MIMO antenna		
Jeet Banerjee, Abhik Gorai and Rowdra Ghatak	1361	
An FSS-based shared-aperture antenna for 5G/Wi-Fi communication and indoor 5G blind compensation		
Yu Lu Fan, Xian Qi Lin and Xinmi Yang	1373	
Penta-band rectangular slot antenna for multi-function wireless communication with linear and circular polarizations		
Haiyang Wang, Xiaoming Liu, Xiaofan Yang, Zhibin Fang, Ran Zhang and Ye Wang	1382	
A detailed insight of 2 × 2 high isolation wideband dual notched band MIMO antenna with evolution initiated by theory of characteristics mode		
Manish Sharma, Tathababu Addepalli, Rajasekhar Manda, T. Vidyavathi and Prabhakara Rao Kapula	1392	
Microstrip antennas on 3D-printed magneto-dielectric substrates: fabrication and efficiency study		
Constantine Kakoyiannis, Jakub Sorocki, Ilona Piekarcz and Matthias Geissler	1412	
Design and analysis of single layer Ku/K band integrated element reflectarray antenna		
Kavitha Narayanasamy, Gulam Nabi Alsath Mohammed and Kirubaveni Savarimuthu	1424	
Axial ratio beamwidth enhancement of a low-profile circularly polarized antenna using defected ground structures		
Mrityunjay Kumar Ray, Kaushik Mandal, Gholamhosein Moloudian and Ali Lalbakhsh	1434	
Two-port miniaturized textile antenna for 5G and WLAN applications		
Pankaj Jha, Anubhav Kumar and Asok De	1443	

Cambridge Core

For further information about this journal
 please go to the journal web site at:

[cambridge.org/mrf](https://www.cambridge.org/mrf)



CAMBRIDGE
 UNIVERSITY PRESS