

2022 6th International Conference on Millimeter-Wave and Terahertz Technologies (MMWaTT 2022)

**Tehran, Iran
13-15 December 2022**



**IEEE Catalog Number: CFP2267J-POD
ISBN: 979-8-3503-1253-9**

**Copyright © 2022 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

***** *This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP2267J-POD
ISBN (Print-On-Demand):	979-8-3503-1253-9
ISBN (Online):	979-8-3503-1252-2
ISSN:	2157-0965

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Performance Analysis of OFDM and GFDM Techniques Over Additive White Impulsive Noise Channels	1
<i>Mohsen Sheikh-Hosseini, Somayeh Ahmadi</i>	
Adjustable Beam Antenna Using High Impedance Surface with Graphene Parts and Photonic Bandgap for THz Applications	6
<i>Hossein Omidi, Saughar Jarchi</i>	
Reconfigurable Graphene-Based Metasurface for THz Transmission Angle Control	11
<i>Maryam Mokhayer, Saughar Jarchi, Reza Faraji-Dana</i>	
Mutual Coupling Reduction in Multiple-Input Multiple-Output Antenna Based on Metamaterial at Low THz Frequency Band	14
<i>Mohammad Hossein Aghamohammadi, Saughar Jarchi, Aliakbar Zamani</i>	
A Confocal Ellipsoidal Reflector System for Millimeter-Wave Applications	18
<i>Mohammad Hossein Koohi Ghamsari, Mehdi Ahmadi-Boroujeni, Saeed Babanejad</i>	
The Effect of Rough Surface Diffused Scattered Field on Shadow Region in 150GHz for Future 6G Communication Systems	22
<i>Sina Sheybani, Amir Ahmad Shishegar</i>	
A Low Profile and Low Cross-Polarization Metasurface Antenna for 5G Mm-Wave Applications	26
<i>Hamed Hamlbar Gerami, Robab Kazemi</i>	
Pattern Scanning of THz Elliptical Apertures Antenna Array Design for Intensity Enhancement in Spectroscopy	31
<i>Amir Saman Zare Andalani, Nosrat Granpayeh</i>	
High Performance Low Cost Transition Connectors for 5G mmWave Applications	36
<i>Abolfazl Azari, Anja K. Skrivelvik, Hadi Aliakbarian, Ramezan Ali Sadeghzadeh</i>	
Electrical Control of a THz Beam Generated Through Nonlinear Metasurfaces Based on Multiple Quantum Wells	40
<i>Amin Ghahremani, Mohammad Neshat, Zahra Shaterzadeh Yazdi, Taher Zahedi</i>	
Study of mmW Leaky-Wave Radiation from a Cylindrically Modulated Surface Impedance.....	45
<i>Ehsan Sadeghi, Mohammad Neshat</i>	
A More Generalized Scattering Matrix for the Analysis of Active Modulated Metasurfaces	49
<i>M. S. Khatami, L. Yousefi, M. Dehmollaian</i>	
Thermally Tunable Wideband and Bifunctional plasmonic-VO ₂ Metasurface in THz Region	53
<i>Navid Naghshpour, Tavakol Pakizeh</i>	
Theoretical Design of a Switchable Chiral Meta-Atom in the Terahertz Band Using Phase Change Material	59
<i>Saeed Ghayouri, Tavakol Pakizeh</i>	
Yagi-Uda Frequency Reconfigurable THz Graphene-Based Antenna.....	63
<i>Fariba Ghasemzadeh, Ali Pourziad</i>	

High-Gain Fan-Beam Leaky-Wave Antenna Using Symmetrical Long-Slots for 5G Millimeter-Wave Base Station Applications	67
<i>Mohaddeseh Shahrbandian, Hadi Aliakbarian, Reza Yazdani, Donghyun Bill Kim</i>	
Temperature-Dependent Behavior of the Dirac Like Point in the Two Dimensional Photonic Crystal-Based ZRIM in the Cryogenic Region.....	71
<i>Amir Hosein Ghaffari, Hesam Zandi</i>	
A Closed-Form Design Method for GRIN Lens Design	76
<i>Hossein Eskandari, Mehrdad Shokoh-Saremi, Tomáš Tyc</i>	
Optimized Isolation and Cloaking of Two Closely Spaced and Interleaved Patch Array Antennas Via Elliptical Metasurfaces for 5G Applications	81
<i>Reza Masoumi, Robab Kazemi</i>	
Multibeam 5G Conical Leaky-Wave Antenna Based on Holographic Technique	86
<i>Mohammad Amin Chaychi Zadeh, Nader Komjani, Sajjad Zohrevand</i>	
Design of MIMO SSPP Holographic Leaky-Wave Antenna for 5G Wireless Application.....	91
<i>Sajjad Zohrevand, Nader Komjani, Mohammad Amin Chaychizadeh</i>	
Resonant Field Enhancement in All-Dielectric Metastructures Supporting THz Bound States in the Continuum.....	96
<i>Seyedeh Bita Saadatmand, Vahid Ahmadi, Seyedeh Mehri Hamidi</i>	
A High Gain, Wide-Band, and Wide-Angle mmWave Power Harvester Using Luneburg Lens	101
<i>Masoud Alipour Shirazi, Mohammad Khalaj-Amirhosseini, Amir Saman Nooramin</i>	
Design and Analysis of Wideband THz Micro Size Patch Antenna for 6G Application	107
<i>Waleed A. Khan, Affan Bin Muhammad</i>	

Author Index