



**3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during the year 2022**

<b>Year</b>	<b>Number of Publications</b>	
<b>2022</b>	<b>Books</b>	<b>7</b>
	<b>Conferences</b>	<b>16</b>



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### 3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during 2022

Year : 2022

NAME OF THE FACULTY	TITLE OF THE BOOK/CHAPTERS PUBLISHED	TITLE OF THE PAPER	TITLE OF THE PROCEEDINGS OF THE CONFERENCE	YEAR OF PUBLICATION	ISBN/ISSN NUMBER OF THE PROCEEDING	WHETHER AT THE TIME OF PUBLICATION AFFILIATING INSTITUTION WAS SAME YES/NO	NAME OF THE PUBLISHER	Page No.
Dr.B.Kalaavathi	Supply Chain Management	-	-	2022	978-93-84634-36-0	Yes	ARS Publications	6-7
Dr. L. Selvam	Machine Learning Principles and Application	-	-	2022	978-613-8-90976-7	Yes	Scholar Press	8
Dr. N.B. Mahesh Kumar	Wireless Sensor Network	-	-	2022	978-93-84634-Yes	36-0	Notion Press	9
Dr.R.Jayabharath Dr.P.Veena Dr.P.Manikandan	Linear integrated Circuits	-	-	2022	978-81-19056-05-7	Yes	Charulatha Publications	10-12
Dr.P.Manikandan	Linear integrated Circuits	-	-	2022	978-81-19056-05-8	Yes	Charulatha Publications	13-15
Ms.M.Jeyabharathi	Design of Monopole Ground Graphene Disinserted THz Antenna for Future Wireless Systems	-	-	2022	9789811922800	Yes	Springer	16

Dr.M.Vimaladevi	E-Commerce	-	-	2022	-	Yes	Charulatha Publications	17
Mr.V.Gopinath	-	Augmented Reality In E-Commerce	International Conference on Progressive Research in Quality Data Engineering (PRIDE-2022)	2022	-	Yes	SRM Institute of Science and Technology	18
Mr.K.Vinoth	-	Respiratory Disease Symptomatic mode uuisng Machine Learning	International Conference on Science and Innovative Engineering	2022	-	Yes	Jawahar Engineering College	19
Mr.V.Gopinath	-	Face Pin: Biometric Authentication System for ATM using Deep Learning	International Conference on Science and Innovative Engineering	2022	-	Yes	Jawahar Engineering College	20
Mrs.R.Deebika	-	NoQ an Online Scheduling and Token Generation for Bank Customers Queue Management System	National Conference on Emerging Trends in Engineering & Technology	2022	-	Yes	Nandha College of Technology	21
Mr.K.Vinoth	-	A Game Play Of Ai & Machine Learning In The Cyber Security Field	National Conference on Emerging Trends in Engineering & Technology	2022	-	Yes	Nandha College of Technology	22
Mr.V.Prakasham	-	Autonomous Navigation using Deep Reinforcement Learning in Ros	National Conference on Emerging Trends in Engineering & Technology	2022	-	Yes	Nandha College of Technology	23
P.Nithya	-	DIGI ELECT (Online Voting System)	International Conference on Science and Innovative Engineering	2022	-	Yes	Jawahar Engineering College	24

Dr.M.Vimaladevi	-	AI and Machine Learning	National Conference on Emerging Trends in Engineering & Technology	2022	-	Yes	Nandha College of Technology	25
Dr.R.Jeyabharath	-	EV Communication System using IoT Mechanism	National Conference on Recent Trends In Engineering, Technology & Management	2022	-	Yes	SND College of Engineering & Research Centre, Yeola, Nashik, Maharashtra	26
Dr.P.Veena	-	Cracked Egg Detection For Poultry Industry Using IoT	National Conference on Recent Trends In Engineering, Technology & Management	2022	-	Yes	SND College of Engineering & Research Centre, Yeola, Nashik, Maharashtra	27
Dr.T.Srihari	-	Innovative IoT Enabled Bed for Infants Equipped with an Quick Dry Sheet Changer at Bed Wetting	Virtual International Conference on Technological Advancement in Computers and Communication	2022	-	Yes	Adhiparasak thi Engineering College, Melmaruvathur, Tamil Nadu	28
Dr.C.Santhakumar	-	Web Of Things Based Monitor And Controlling The Induction Furnace	Virtual International Conference on Technological Advancement in Computers and Communication	2022	-	Yes	Adhiparasak thi Engineering College, Melmaruvathur, Tamil Nadu	29
Dr.A.Murugesan	-	Labview Based Cell Balancing In Battery Management System	Virtual International Conference on Technological Advancement in Computers and Communication	2022	-	Yes	Adhiparasak thi Engineering College, Melmaruvathur, Tamil Nadu	30

Y.Kalimuthu	-	Design of Intelligent System Monitoring Injection Molding Machine using IoT	Virtual International Conference on Technological Advancement in Computers and Communication	2022	-	Yes	Adhiparasakthi Engineering College, Melmaruvathur, Tamil Nadu	31
Dr.S.Premalatha	-	Flood Monitoring and Alerting System Using IoT	First international conference on recent innovations in robotics, construction and mechanical sciences	2022	-	Yes	K S Rangasamy college of Technology	32
Ms.M.Jeyabharathi	-	Super Compact FR-4 compatible 28 GHz antenna for 5G Handheld Devices	Distributed Computing and Optimization Techniques: Select Proceedings of ICDCOT 2021	2022	-	Yes	Springer Nature Singapore	33

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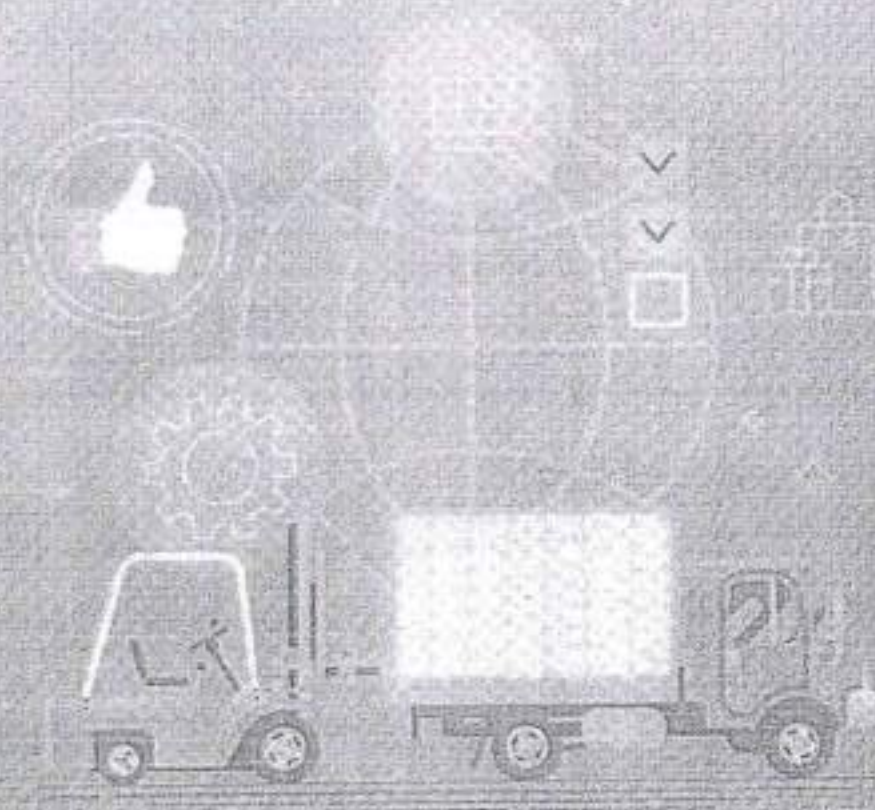
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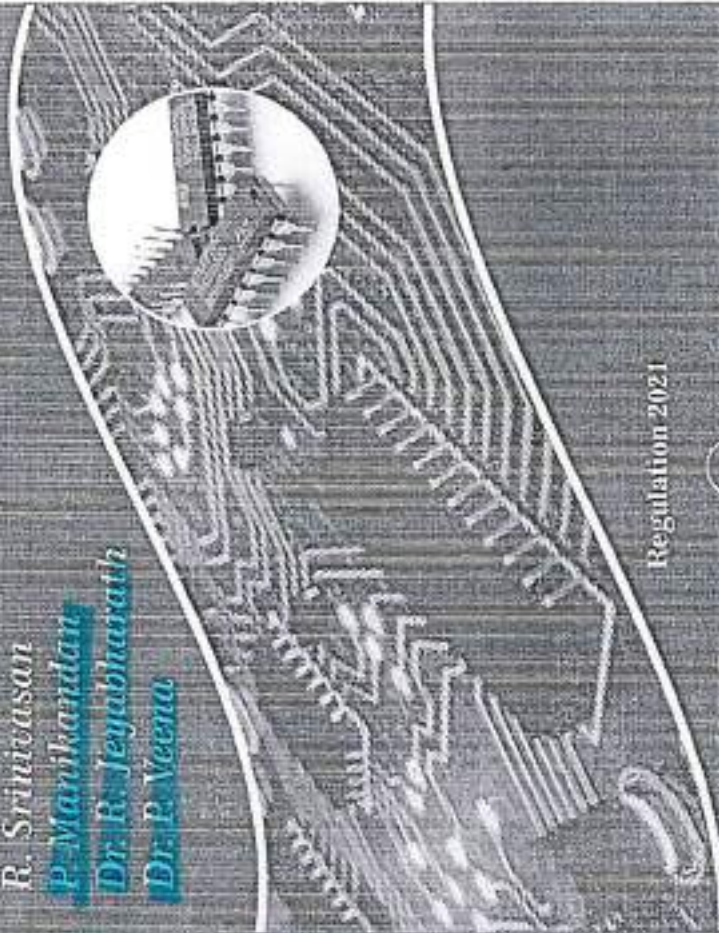
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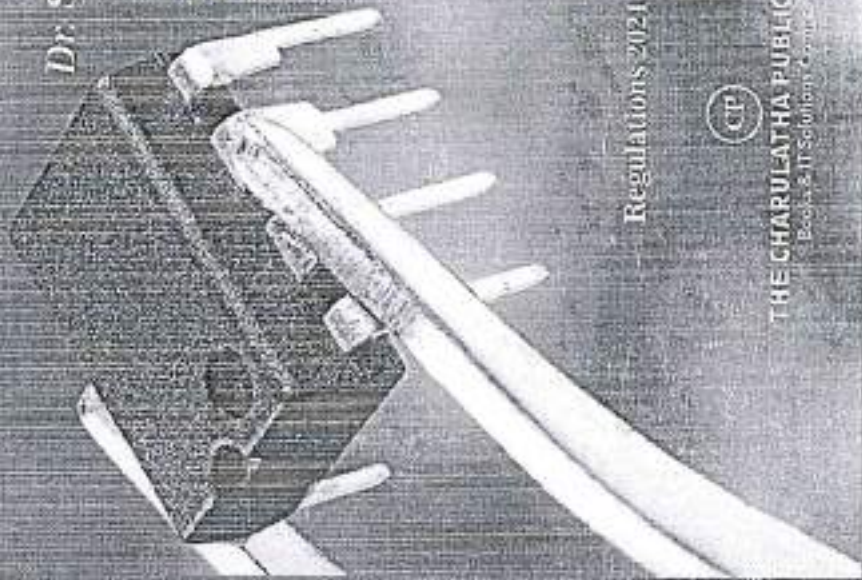
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# Design of Monopole Ground Graphene Disc-Inserted THz Antenna for Future Wireless Systems



K. Vasu Babu, Gorre Naga Jyothi Sree, Kumutha Duraisamy,  
M. Jeyabharathi, and Sudipta Das

**Abstract** This paper demonstrates the basic circular patch and monopole ground plane with graphene patch underneath the substrate. The designed radiator performance has been evaluated in terms of chemical potentials, S-parameters, E-field, H-field and VSWR. In this design, using the substrate of polyimide with lower dielectric constant 3.5 and the thickness is  $40.0 \mu\text{m}$  has been considered in antenna design. In this design, the ground plane, patch and feed line are designed with copper having resistivity and conductivity are  $1.68 \times 10^{-8} \Omega\text{-m}$  and  $5.8 \times 10^7 \text{ S/m}$ , respectively. The designed structure has been fed with microstrip feeding line of impedance  $49.68 \Omega$ . The current design structure has an impedance of real part is nearly zero, and imaginary part is with negative value which is resonating at 1.6 THz. The current designed structure is used in the applications like homeland defence and image of video rate systems. The simulation and designing of current THz system using CST MW Studio 2018 are based on the technique of FDTD.

**Keywords** Antenna · Tunable · Graphene · Terahertz · Strip radiator · E-field · H-field

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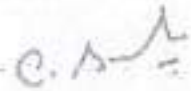
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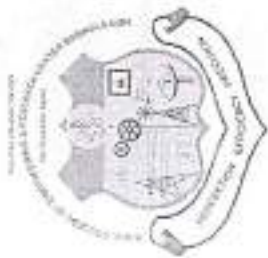
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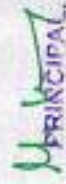
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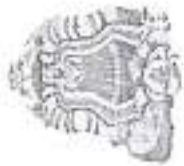
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# Super Compact FR-4 Compatible 28 GHz Antenna for 5G Handheld Devices



K. Jayanthi, D. Kumutha, and **M. Jeyabharathi**

**Abstract** 5G is a very fast-growing technology with no limitation in real-time application. Millimeter-wave (mm-wave) band is a perfect choice to accomplish the bandwidth requirements and throughput for future 5G mobile applications. The frequency band deliberated are 28, 38, 60, and 73 GHz in 5G bands. A Super compact planar antenna for future 5G mobile communication is proposed which operates at 28 GHz. The prototype uses FR-4 substrate which has a dielectric constant of 4.4 and a loss tangent of 0.02. The antenna has a compact size of  $10.87 \times 12.364 \text{ mm}^2$  with a dielectric height of 1.6 mm. The dimensions have been calculated using design equations and it is designed in HFSS 15.0 software. The patch is loaded with a U-shaped slot attached with the stub while the Ground of the antenna is not disturbed. Implementation of full ground is the perk of this project. The antenna resonates at 28 GHz, ranging between 26.32 to 30.26 GHz. The impedance bandwidth is obtained to be 3.94 GHz. The antenna parameters such as Return loss, Gain, Efficiency, and VSWR are measured and observed to be good. The antenna exhibits a very good return loss for 28 GHz at  $-32 \text{ dB}$  and VSWR less than 2. The design complexity of proposed antenna is low since it consists of single layer. Generally defective ground structures are used to enhance the bandwidth and gain but without affecting ground structure the same can be achieved in the proposed design.

**Keywords** 5G communications · FR-4 · Millimeter wave (mmW) · MIMO · VSWR

## 1 Introduction

Nowadays, the Millimeter wave (MMWs) is predicted significantly for developing in the Fifth Generation (5G). Mostly, 5G is carried out with the many features that

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