

Curriculum Vitae

Y K Awasthi, PhD

Professor

Manav Rachna International Institute
of Research & Studies (MRIIRS Deemed to be University)
FET, Electronics & Communication Engineering
Sector-43, Delhi Suraj Kund Road,
Faridabad HR-121004, India
Office No. +91-129-426-8781, CUG-02
M. No. +91-9650311062
Email: ykawasthi.fet@mriu.edu.in



Professional Summary:

Design, analysis, optimization, fabrication, and characterization of miniaturized RF and microwave components and devices based on new breakthroughs in microwave theory and techniques.

Educational Qualifications :

- **Ph.D. (2012)** (RF & Microwave Electronics): Department of Electronic Science, University of Delhi South Campus, New – Delhi 110021. **Thesis Advisor:** Prof. (Dr.) A K Verma
- ❖ **Title of Thesis:** Modeling & Analysis of Anisotropic Multilayer Microstrip Line & Study of Pulse Propagation.
- Course Work with M. Tech (Microwave Electronics), Department of Electronic Science, University of Delhi, New-Delhi, July 2004-May 2006
- **M. Sc** (Electronics & Computational Physics.): Institute of Basic Science, Dr. B.R.A. University, Agra. 2001

Working Experience : 20+ Years

- **01st May 2019 – till date:** FET, Department of ECE, Manav Rachna International Institute of Research and Studies, Faridabad Haryana.
Subject Taught- B. Tech (Electromagnetic Waves, Microwave Engineering, Antenna & Wave Propagation, Satellite & Space Communication, Electrical Circuit Analysis and Fiber Optics)
Subject Taught- M. Tech (Computational Electromagnetics, Antenna Theory & Design & Modern Optical Communication and MIMO System)
Subject Taught- Ph. D Course Work (Computational Electromagnetics & Its Applications and Power System Analysis, Microwave Theory and Techniques, mmWave Technology)
- ❖ **Broad Area of Research:** Modeling high-frequency passive/active RF/microwave components, THz antennas, Meta-material sensor, Absorber & cloaking, Computational Electromagnetics, Optical Communication, etc.
- **22nd August 2012 – 30th April 2019:** Department of ECE, Manav Rachna University, Faridabad Haryana.
- **Guest Faculty:-** Design, Simulation & Modeling in a CSIR-EMPOWER Project based on a new concept related to “RF MEMS phase shifter in MEMS & Micro-sensors Group”, Central Electronics Engineering Research Institute (CEERI), Pilani- INDIA, May-July 2012
- Jan. 2011 - May 2011: Department of Electronics, Sri Aurobindo College Malviya Nagar, Delhi University, New Delhi. Computational Skill, Basic Electronics Lab.
- July 2006 – May 2009: Department of Electronic Science, University of Delhi South Campus, New-Delhi-110021. M. Tech. (Microwave Engineering) - Numerical Techniques, Computational Electromagnetics, and Microwave Integrated Circuits (MIC`s).
- Aug 2001 – May 2004: Dr. B. R. Ambedkar University, Agra.
M. Sc. (Electronics) Semiconductor Electronics & Digital Electronics.

Research Guidance / Supervision: Ph.D

S. No.	Title	Candidate's Name and Affiliation	Year of Registration	Status
1.	Design & Analysis of Planar Microwave Antennas for Wireless Applications	Ms. Sonali Sinha Department of ECE, MRIIRS (Deemed to be University), Faridabad HR	July-2018	On-Going
2.	Design & Computational Analysis of Antennas for Microwave & THz Regime	Ms. Sunita Joshi Department of ECE, Manav Rachna University, Faridabad HR	Jan-2016	On-Going
3.	Design and Computational Analysis of	Ms. Yogita Khanna	Jan-2016	Awarded

	Metamaterials for Microwave and THz System	Department of ECE, Manav Rachna University, Faridabad HR		2021
4.	Intelligent Models and Algorithms for Deregulated Electricity Market	Ms. Manisha Hooda Department of ECE, Manav Rachna University, Faridabad HR	Jan-2016	Awarded 2021
5.	Intelligent Power Quality Improvement Under Deregulated Environment	Ms. Niharika Pathak Department of ECE, Manav Rachna University, Faridabad HR	Jan-2016	Awarded 2021
6.	Design & Analysis of Microwave Components for MIMO System	Mr. Gaurav Saxena Delhi Technological University, Delhi India	July-2014 (Part-Time)	Awarded 2020
7.	Design of Passive Microwave Components & Antenna with DGS on Si-substrate	Mr. Manish Sharma Banasthali University, Banasthali Rajasthan	Sept-2012	Awarded 2017

Research Guidance / Supervision: M.Tech

S. No.	Title	Candidate's Name and Affiliation	Year	Status
1.	Design and Optimization of Ultra-wideband (UWB) Antenna using Electromagnetic Band-Gap (EBG) Structure	Ms. Geetika Department of ECE, Manav Rachna University, Faridabad	2015-2016	Completed
2.	Wideband and Multiband Planar Antennas for Wireless Communication & Medical Application	Ms. Taruna Department of ECE, Manav Rachna University, Faridabad	2015-2016	Completed
3.	Design Microstrip Patch Antenna With Defected Ground Structure (DGS)	Ms. Neha Gambhir Jaipur National University, Jaipur	2010-2011	Completed

Conference & Workshop/Training Programs Conducted :

- **Session Chair**, "Springer International Conference on Robotics, Automation & Communication Engineering for Industry 4.0 (ICRACI4.0-2021)", 4th - 5th Feb 2022, 11:00 AM onwards, FET-ECE-ME, MRU.
- **Session Chair**, "Springer International Conference on Renewable Technologies in Engineering (ICRTE-2021)", 15th April 2021, 11:30 onwards, FET, MRIIRS.
- **Invited Speaker**, "Technology Assistance from R&D labs and other Institutions", DST Sponsored Technology based Entrepreneurship Development Program (Online) 10.45 AM-12.00 PM, 08th Feb. 2021
- **Invited Speaker**, "How To Publish Research Articles" Online, MRIIRS, Faridabad, 02nd Jan. 2021.
- **Invited Speaker**, "Writing a Research Proposal", SGT University, Gurugram, 14th Sep. 2019
- **Invited Speaker**, "How To Publish Research Articles" AF21, MRIIRS, Faridabad, 27th April 2019.
- **Invited Speaker**, "Literature Review Analysis" Central library, MRIIRS, Faridabad, 6th March 2019.
- **Invited Speaker**, Entrepreneurship Awareness Camp (EAC) "Mechanism of product selection and technology-assistance from R & D labs and others on the choice of technology" DAVIM, Sector 8 Faridabad, HR 26th-29th March 2019.
- **Invited Speaker**, Entrepreneurship Awareness Camp (EAC) "Mechanism of product selection and technology-assistance from R & D labs and others on the choice of technology" Government Polytechnic for Women's Sector 8 Faridabad, HR 27th Feb 2019.
- **Member, Advisory Board, 30-31th March**, ICRAMSTEL2019, Greater Noida UP
- **Invited Speaker**, "Research Awakening: An Endeavour to Enhance Research Outcome" MRIIRS, Faridabad, 16th Feb. 2019.
- **Invited Speaker**, "Research Methodology", SGT University, Gurugram, 14th Jan 2019
- **Invited Speaker**, "Workshop on Research & Innovation", SGT University, Gurugram, 24th Dec 2018
- **Invited speaker and TPC member**, "International Conference on Advances in Physics (CAP-S)", April 23-25, 2018, Guilin, China.
- **Member, National Advisory Board**, "International Conference on Applied Sciences, Engineering Technology and Management (ICASET M)", DRK Institute of Science and Hyderabad, Telangana, 2nd-3rd November 2017.
- **Invited Speaker & Member**, Organizing Committee, "6th World Conference on Applied Science, Engineering and Technology (WCASET-2018)", 2nd - 3rd January 2018, Goa.
- **Member**, Organizing Committee, "International Conference on next-generation computing and communication Technology" (ICNGCCT-17) Annamacharya Institute of Technology and Science, Rajampet, India on 18th-19th March 2017
- **Member**, Technical Program Committee, "Futuristic Spectrum of Mechanicompuctronics & Applied Sciences 2016" (FSMCAS2016) Dr. Bhim Rao Ambedkar University, Agra, India from 24-28 Oct 2016.
- **Secretary**, National Conference on "Emerging Trends & Innovations in Electronics and Telecommunication Engineering" (ETIETE-2016), June 28th 2016.
- **Member**, International Committee, "International Conference on Intelligent Communication, Control and Devices", University of Petroleum & Energy Studies, Dehradun, India, 2 & 3 April 2016.
- **Conducted**, Summer-training program on "Microwave Planar Antenna Design for different Applications" for B.

Tech. students of ECE Department of MRU, from 08.06.2015 to 30.06.2015.

- **Conducted**, Summer- training program on “Meta-materials-A New Dimension to Electromagnetics Research (From Theory to Practical Design)” for M. Tech. students of ECE Department of MRU, from 15.06.2015 to 30.06.2015.
- **Conducted**, four weeks training program on “Microwave Planar Antenna Design for different Applications” for B. Tech. students of ECE Department of MRCE during summer break from 23.06.2014 to 15.07.2014
- **Conducted**, a one-week training program on “Microwave Planar Antenna Design” for M. Tech. students of ECE Department of MRCE during summer break from 17.06.2014 to 21.06.2014
- **Conducted**, a day workshop on “Microwave Oven” on 5th April 2014 at MRCE Faridabad.
- **Conducted**, one day workshop on “WR-90 Magic Tee as a Mixer & WR-90 Circulator as a Duplexer” on 29th April 2013 at MRCE Faridabad

Conferences and Workshops Attended :

- AICTE Approved STC (Short-Term Course) on ‘Artificial Intelligence and Big Data Analysis for Electrical Engineering’ (in Collaboration with MathWorks) organized by NITTR Chandigarh, from 7th to 11th March, 2022
- Workshop on “Examination Reforms” by AICTE from 7th to 9th Feb, 2022 (Online).
- FDP on “Computational techniques for Electromagnetics” by DTU/XSL Delhi, India 27th – 31st Dec. 2021
- FDP on “ICT Tools for Teaching, Learning Process & Institutes” by MNIT Jaipur supported by MeitY, Govt. of India, Jan 13-17th, 2020
- FDP on “Natural Language Processing” by MNIT Jaipur supported by MeitY, Govt. of India, Jan 6-10th, 2020
- Short term ICT Program Sponsored by NITTR “**Optimization using MATLAB**” 27th – 31st Aug. 2018.
- Short term ICT Program Sponsored by NITTR “**Self Configured WSN**” 30th July– 03rd Aug. 2018.
- Short term ICT Program Sponsored by NITTR “**VLSI Design**” 9th – 13th Oct. 2017.
- 18th IIRS Outreach Programme on “**Basics of Remote Sensing, GIS & GNSS**” August 22nd –Nov. 26th, 2016.
- Workshop “**RF/Microwave Design and Simulation**” conducted by National Instruments-AWR Design Environment, held at Royal Plaza, Delhi, India, 12th August 2016.
- National Conference “**Reforming & Rejuvenating Indian Higher Education- A Stakeholder’s Perspective**” Organized by Education Promotion Society for India “EPSI” New-Delhi, 18th May 2016.
- FDP on the topic “**Ethics & Values at the workplace**” Organized by Manav Rachna University, Faridabad, 2nd April 2016.
- 3rd World Summit on Accreditation, **WOSA2016**, Organized by **NBA (Delhi-NCR)** in Leela Ambience, Gurgaon, 18-20th March 2016
- One Day Workshop on “**IPR: Awareness and Government Initiatives**” Faculty of Engineering & Technology, MRIU & DeitY, Ministry of Communications & IT, Govt. of India 17th June 2015.
- National Seminar on “**Basic Electromagnetics Theory, RF/Microwave Technologies, and Applications**”, Department of Electronics, MAC University of Delhi, Delhi-110096. 10-11 March 2015.
- Short Course on “**RF Circuits and Systems for Industrial Applications**”, QIP IIT Kanpur, 8-12 Sep 2014.
- 2014 ANSYS Convergence **Conference** –Le Meridian, New Delhi, 22nd May 2014.
- Workshop on “**Soft Skills**” by Infosys, MRCE Faridabad, 9-12 June 2014.
- Management Development Program (MDP) on “**Managerial Skills for Administrative Functionaries**”, MRCE Faridabad, 16-17 Jan. 2014.
- Workshop on “**Signals & Systems**” by NME-ICT, IIT Kharagpur (MHRD, Govt. of India), 2-12 Jan 2014.
- Short Course on “**Microwave Material Processing, Modeling, and Non-Destructive Testing**”, QIP IIT Kanpur, 16-20 Sep 2013.
- Workshop on “**Antenna Measurements**” by Satimo & Orbit, Hotel The Lalit, New Delhi, 26 May 2012
- “**Aerospace & Defence Symposium**”, Agilent Technologies, Hotel Le Meridian, New Delhi, 01st July 2011.
- Workshop on “**RFIC and Related Technology (IEEE MTTs)**”, Indian Institute of Technology (IITD), New Delhi 10th November 2009.
- Winter School on “**Broadband Microwave Systems and Communications**”, MiSCom-09, February 9 - 27, 2009. UGC Networking Resource Centre, Institute of Radio Physics and Electronics, University of Calcutta.
- International Conference of **Recent Advances in Microwave Theory and Applications**, Jaipur- Rajasthan, India, 2008
- “**Asia Pacific Microwave Conference (APMC)**”, New -Delhi (India), 2004

Technical Skills: Design, Fabrication, Measurements:

- **Field Simulator** –Ansys HFSS, Sonnet Professional Suite, CST Microwave Studio Suite, etc.
- **Circuit Simulator** – Puff, AWR-Microwave Office, ADS with Momentum, etc.
- **Microwave and RF Design (EDA) Tools** - PCAAD, LINPLAN, Translin, AppCAD, Origin, etc.
- **Measurements** - Network Analyzers (Agilent-PNA E8364C 10MHz-170GHz), Spectrum Analyzer (Rohde & Schwarz, FSW26- 2Hz-26.5GHz), Anechoic chamber (Satimo & Orbit)
- **Programming Language** – FORTRAN(Micro-Soft Developer Studio), MATLAB
- **Fabrication**- LPKF-S62 Milling Machine with through-hole plating& MIC-PCB Lab

Professional Membership:

- **Member**, Institute of Electrical and Electronics Engineers (IEEE-member-**92500343**)
Student Branch Counselor –IEEE MRCE (July 2013- till now)
- **Member**, IETE (The Institution of Electronics and Telecommunication Engineers)
- **Member**, Indian Association of Physics Teachers (IAPT-Life member, **L-3618**)

Reviewer and Editor:

- **Editor-in-Chief**, Journal of Sciences and Technology
- **Reviewer**, IEEE Antennas, and Propagation Magazine.
- **Reviewer**, IET Microwaves, Antennas, Propagation
- **Reviewer**, IET Electronic Letter.
- **Reviewer**, IEEE Access.
- **Reviewer**, IEEE Transactions on Antennas & Propagation
- **Reviewer**, AEUE – International Journal of Electronics and Communication, Elsevier.
- **Reviewer**, Journal of Electromagnetic Waves and Applications (JEMWA), Taylor & Francis.
- **Reviewer**, International Journal of Electronics, Taylor & Francis.
- **Reviewer**, Applied Computational Electromagnetic Society, ACES

Editorial Board Member:

- International Journal of Electrical and Electronics Engineers www.ijeee.co.in
- International Journal of Science, Technology and Management www.ijstm.com
- International Journal of Advanced Research in Science and Engineering www.ijarse.com
- International Journal of Advanced Technology in Engineering and Science www.ijates.com

Academic and other activities:

- **Member**, Doctoral Research Board (Dec. 2020-till date)
- **Member**, Research Promotion Group-Governing Council (Feb.2020 RIP-GC)
- **Member**, University Approval Committee (UGC, NAAC, AICTE, NIRF, NBA, 12B, and ABET, etc.) 2019-till now
- **Member**, University Academic Council/ Departmental BoS (2015- 2018)
- **Member**, University Research Review Committee (2015- 2019)
- **Member**, University/Departmental Research Review Committee (2015- 2019)
- **Member**, University Attendance Monitoring Committee (2013- 2015)
- **Member**, University UG/PG Course/syllabus Review Committee (2015- 2019)

Research Project:

S. No.	Title of Project	Authority	Funding Agency	Amount of Grant (in Rs.)	Duration	Date of Submission	Status
4.	Manav Rachna-Technology Enabling Centre (TEC)	Co-Cordinator	DST	Rs. 500.0 Lacs	5 Years	14 th Feb. 2022	Under Review
3.	Anti-Collision System in Vehicles at Railroad Crossing using RF Signal Transmission	Principal Investigator	Valeo-Smart technology for smarter cars, Paris, France	€5000 (Rs. 3.49 Lacs)	Six Months	17 th Feb. 2017	Start 20 th March 2017 Completed 13 th Sep 2017
2.	Wideband and Multiband Planar Antennas for Wireless Communication & Medical Application	Principal Investigator	MRCE, Faridabad	Rs. 7.00 Lacs	3 Years	16 Sept 2014 Reviewed 25/11/2014	Started (20/June/2015) Completed (July 2018)
1.	Design of CRLH [*] EBG Meta-materials for X, Ku band	Principal Investigator	MRU, Faridabad	Rs. 2.20 Lacs	2 Years	23 Sept 2015 Reviewed 25/Nov/2015	Started (20/Dec/2015) Completed (05/Nov/2018)

Published Books/Book Chapter:

- **Book Title:** UWB Technology & Its Application: **Chapter**-Theory & Design of UWB Antenna, **Publication**-InTech-ISBN 978-953-51-6725-9, 2018

Startups Mentoring:

Company Name	Funding Agency	Entrepreneurs	Incubation Amount	Started Date	Status
Stalleon Technologies Pvt. Ltd	NewGen IEDC scheme, NSTEDB Division, DST and MRIIRS	Sudhanshu Kumar Jha, Joy Singh and dhananjay	2.5 Lacs	September 14, 2021	On going...

Design Registration: Filed/Published/Registered:

S. No.	Title of Patent	Applicant	Inventors	Application No.	Application Filed Date	Status
4.	Adjustable Kitchen Slab	Dr.Yogendra Kumar Awasthi, and etc.	Dr.Yogendra Kumar Awasthi, and etc.	359957-001	05/03/2022	Under Examination
3.	Dual Fluid Container	Dr.Yogendra Kumar Awasthi, Dr.Rajat Gera, Dr. Priyanka Chadha, Venkatesh Bharti	Dr.Yogendra Kumar Awasthi, Dr.Rajat Gera, Dr. Priyanka Chadha, Venkatesh Bharti	358311-001	10/02/2022	Under Examination
2.	Dual liquid Bottle or Flask	Dr.Yogendra Kumar Awasthi, Dr.Rajat Gera, Dr. Priyanka Chadha	Dr.Yogendra Kumar Awasthi, Dr.Rajat Gera, Dr. Priyanka Chadha	357140-001	21/01/2022	FER Received
1.	Multipack Liquid Bottle	Dr.Yogendra Kumar Awasthi, Dr.Rashmi Agrawal, Venkatesh Bharti	Dr.Yogendra Kumar Awasthi, Dr.Rashmi Agrawal, Venkatesh Bharti	351046-001	09/10/2021	FER Received (Reply Submitted)

Utility Patents/Copyrights: Filed/Published/Granted:

S. No.	Title of Patent	Applicant	Inventors	Application No.	Application Filed Date	RQ Filed Date	Status
8.	Lead-Acid battery cell reconfigurable arrangement for enhanced battery life	MRU, Faridabad HR, INDIA	Y K Awasthi, Yogita Khanna, etc.	202111061504	29/12/2021	-	Provisional filed
7.	A Device for Electromagnetic Absorption and Navigation	MRIIRS, Faridabad HR, INDIA	Y K Awasthi, Gaurav Saxena, Priyanka Jain	202111011544	18/03/2021	25/02/2022	Published
6.	Biomarker Identification in Biological Fluid	Y K Awasthi, Leena Bhardwaj, etc.	Y K Awasthi, Leena Bhardwaj, etc.	202011052383	01/12/2020	01/12/2020	FER Received (14/12/2021)
5.	DNA Isolation From Dental Pulp Irrespective of Tooth Condition	Y K Awasthi, Leena Bhardwaj, etc.	Y K Awasthi, Leena Bhardwaj, etc.	202011049027	10/11/2020	-	RQ Filed
4.	Microwave Sensing Device for Dielectric Characterization of Materials	MRIIRS/MRU, Faridabad HR, INDIA	Y K Awasthi, Yogita Khanna, Anshuman Gupta	201911031072	01/08/2019	27/08/2020	RQ Filed
3.	Planar Super-wideband Equal Power Divider / Combiner for RF & Microwave	MRIIRS/MRU, Faridabad HR, INDIA	Y K Awasthi, Gaurav Saxena	201911031519	05/08/2019	27/08/2020	RQ Filed
2.	System & Method for Estimation of Shooting Distance of a Weapon Through Its Gun Shot Residue (GSR)	Leena Bhardwaj, Y K Awasthi, etc.	SGT University Gurugram, HR, INDIA	201911026879	04/07/2019	-	Secracy Direction (In DRDO)
1.	Anti-Collision System for Vehicles at Rail Road Crossings	Y K Awasthi, Abhijeet, Tarun, Vibhu, Vansh	Y K Awasthi, Abhijeet, Tarun, Vibhu, Vansh	201811013089	05/04/2018	06/02/2020	Granted

Place: MRIIRS, Faridabad,
Date: 10/03/2022

Signature
(Dr. Y K AWASTHI)
