



PROF. M.V. KARTIKEYAN, PHD, CENG, FIEEE
FNAE, FIET, FVEDS, FIE, FIETE, HUMBOLDTIAN

BRIEF BIO-SKETCH

DIRECTOR

*Indian Institute of Information Technology, Design & Manufacturing (IIITDM)-Kancheepuram
Melakottaiyur, Vandalur-Kelambakkam Road, Chennai- 600127, India*

Voice : 044-2747-6302/6300, Email : director@iiitdm.ac.in, kartik@ieee.org, URL: www.iiitdm.ac.in

Professor M.V. Kartikeyan received Master of Science and Ph.D. degrees specializing in Advanced Electronics & Radio Physics and Microwave Engineering from Banaras Hindu University and IIT-BHU, Varanasi, India, in 1985 and 1992, respectively. He was a Research Scientist with the Central Electronics Engineering Research Institute, Pilani, India, from 1989 to 2001. He was with Institut für Hochleistungsimpuls- und Mikrowellentechnik, Karlsruhe Institute of Technology, Karlsruhe, Germany (1996, 1998-2000, 2001-2003; and during summers in 2004, 2005, 2006, 2007, 2008, 2011, 2012).

He joined the Department of Electronics and Computer Engineering, Indian Institute of Technology Roorkee (IITR), India, as an Associate Professor, in 2003, and elevated to Full-Professor in 2009. He worked as Head of the Institute Computer Center (January 2012- April 2014) and Head of the Department of Electronics and Communication Engineering (May 2013 – February 2016). He moved to IIT-Tirupati on deputation in 2020. At present, he is the Director of IIITDM-Kancheepuram, since October 2022.

Prof. Kartikeyan is the principal author of 5 books. He has published more than 350 research papers in peer reviewed transactions/journals and conferences. His current research interests include high power millimeter wave and terahertz sources; RF Circuits, Antennas and Systems; Metamaterials and fractals; Computational Electromagnetics; and RF and microwave design with soft computing and machine learning techniques.

Prof. Kartikeyan is a Fellow of IEEE, INAE, IET, VEDS, IE, and IETE Prof. Kartikeyan served as a member of the Vacuum Electronics Technical Committee of IEEE Electron Devices Society (IEEE-EDS-VETC) during 2018-2021. Since 2022, he is serving VETC as a corresponding member. He is in the Editorial Board of the International Journal of Microwave and Optical Technology (IJMOT).

Prof. Kartikeyan is a recipient of the Hildegard-Maier Research Fellowship for Electrical Sciences of the Alexander von Humboldt Foundation (1998-2000) and the Alexander von Humboldt Research Fellowship (2001-2003, 2011, 2012).

PROFILE OF PROF. M.V. KARTIKEYAN

International Research Awards for Professional Recognition

- # Recipient of the *Alexander von Humboldt Fellowship* (from July 2001 to June 2003, June/July 2011, June/July 2012).
- # Recipient of the *Hildegard–Maier Research Fellowship for Electrical Sciences by the Alexander von Humboldt Foundation* (from December 1998 to January 2000).

Academic and R&D Experience

Research and Development:–

Around 34 years of R&D experience at Central Electronics Engineering Research Institute (CEERI), Pilani, India, Institut für Hochleistungsimpuls- und Mikrowellentechnik (IHM), Karlsruhe Institute of Technology (formerly Forschungszentrum Karlsruhe), Germany, Indian Institute of Technology Roorkee, Indian Institute of Technology Tirupati, and IIITDM-Kancheepuram, India. Managed the following Grant-in-aid Sponsored Projects:

Year	Sponsoring Agency	External Cash Flow	PI or Co-PI	Status
1991–99	DAE	≈ Rs. 290 Lacs	Co-PI	Completed
2000–01	DAE	≈ Rs. 100 Lacs	Co-PI	Completed
2004–07	MHRD	Rs. 8 Lacs	PI	Completed
2006–15	DST	Rs. 84.60 Lacs	PI	Completed
2014–15	DRDO	Rs. 9.60 Lacs	PI	Completed
2015–18	DST	Rs. 380.00 Lacs	PI/Coordinator	FIST Grant
2016–18	DRDO	Rs. 30.00 Lacs	PI	On-going
2016–19	DRDO	Rs. 59.75 Lacs	Co-PI	Completed
2017–20	DRDO	Rs. 36.10 Lacs	PI	Completed
2017–20	DST	Rs. 40.49 Lacs	Co-PI	Completed
2017–20	RICET	Rs. 16.00 Lacs	PI	Completed
2017–18	MHRD (SMILE)	Rs. 208.73 Lacs	Co-PI	Completed
2018–20	MHRD (SMILE)	Rs. 45.00 Lacs	PI	Completed
2022-25	DST	Rs. 61.81 Lacs	PI	In Progress

Academics/R&D:–

- * Dean, Faculty Affairs, Indian Institute of Technology Tirupati (IITT), India (Since November 2020 - October 2022)
- * Associate Dean, Faculty Affairs, Indian Institute of Technology Roorkee (IITR), India (Since April 2017 - September 2020).
- * Chairman, Library Advisory Committee, Indian Institute of Technology Roorkee (IITR), India (Since May 2016 - April 2019).
- * Academic Chairperson, Electronics & ICT Academy, Indian Institute of Technology Roorkee (IITR), India (Since 2015 - Till date).
- * Head, Department of Computer Science and Engineering, Indian Institute of Technology Roorkee (IITR), India (Since October 2017 - July 2018).
- * Head, Department of Electronics & Communication Engineering, Indian Institute of Technology, Roorkee (IITR), India (May 2013-February 2016).

- * Head, Institute Computer Center, Indian Institute of Technology, Roorkee (IITR), India (January 2012-April 2014)
- * Full–Professor since September 2009 in the Department of Electronics and Communication Engineering, Indian institute of Technology Roorkee (IITR), India.
- * Associate Professor from July 2003 to August 2009 at Indian Institute of Technology Roorkee IITR), India.
- * Research Scientist at the Institut für Hochleistungsimpuls– und Mikrowellentechnik, Karlsruhe Institute of Technology, Karlsruhe, Germany, from July 2001 to June 2003 (with a special bequest of the *AvH Stiftung, Bonn, Germany, for long–term cooperation*).
- * Research Scientist in Central Electronics Engineering Research Institute, Pilani, India, from January 1989 to June 2001.
- * Number of Theses Guidance:–
 - Ph.D.** :- 18 completed and 13 in progress
 - M.Tech.** :- 49 completed
 - B.Tech.** :- 68 completed

Publications

Total: \approx 362

Books: 5 [4 for Springer–Verlag and 1 for CRC Press]

Journals: \approx 120

Conferences: \approx 237

Academic, R&D, and Industrial Links

India :- DRDO (MTRDC, LRDE, DLRL, RCI), CSIR (CEERI), BEL, IIT-BHU, DAE (RR-CAT, IPR)

Abroad :- KIT (IHM, IHE), Germany; FIR Center, Fukui University (Japan); MMPL, Oulu University (Finland); University of Agder, Norway

Fellowship/Membership of Academies/Professional Bodies

Fellow :- FIEEE (USA), FNAE (India), FIET (UK), FIETE (India), FIE (India), FVEDS (India)

Member :- EuMA (EU), PSSI (India)

Professional Practice :- Chartered Engineer (CEng), Engineering Council, UK [Regd. Nr.# 678716]

Other Significant Technical Services/Contributions

Technical/Advisory Committee Services : (i) Corresponding Member, Vacuum Electronics Technical Committee (VETC), IEEE Electron Devices Society, USA, (ii) Member, International Advisory Committee, International Symposium on Microwave and Optical Technology

Editorial Services : International Journal of Microwave and Optical Technology (IJMOT)

Review Services : IEEE Trans. Electron Devices/ Microwave Techniques/ Plasma Science, Journal of Infrared, Millimeter and Terahertz Waves (JIMT), International Journal of Microwave and Optical Technology (IJMOT), EuMA Journal on Microwave and Wireless Technologies (Cambridge University), Progress in Electromagnetics Research (PIER, Academy of Electromagnetics), Int. J. RF Microwave Computer Aided Engineering (Wiley)

Outlook

- To excel in the field of High Power Millimeter Wave and Terahertz Engineering (sources and components); RF Circuits, Antennas and Systems; Metamaterials and Fractals; Computational Electromagnetics; and Soft-computing & Machine Learning Techniques in Microwave Domain.



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DETAILED RESUME

DIRECTOR

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Voice : 044-2747-6302/6300, Email : director@iiitdm.ac.in, kartik@ieee.org, URL: www.iiitdm.ac.in

Education

- * Ph.D. in 1992 from Indian Institute of Technology (IIT-BHU), Banaras Hindu University, Varanasi, India.
- * Master of Science in 1985 from the Banaras Hindu University, Varanasi, India.

Areas of Research Interest

- High Power Millimeter Wave and Terahertz Engineering (sources and components); RF Circuits, Antennas and Systems; Metamaterials and Fractals; Computational Electromagnetics; and Soft-computing & Machine Learning Techniques in Microwave Domain.

Professional Experience

Work Experience in Various R&D Areas :-

- * Design and Development of Planar Antennas and Filters for Wireless Communications (July 2003 – till date).
- * Investigations on Metamaterials, Defected Ground Structures, and Fractals for Planar Microwave Circuits/Antennas (July 2003 – till date).
- * Design of Specific Gyrotrons for thermonuclear fusion reactors and other ISM Applications (July 2003 – till date).
- * Design and development of high power gyrotrons for plasma fusion and industrial applications (Jan–Sept 1996, Dec. 1998 – Jan. 2000, July 2001–June 2003, at KIT, Karlsruhe, Germany).
- * Design and development of specific high power microwave sources and allied Transmission Line Components for Accelerators and Synchrotron Radiation Sources (Jan. 1989 – June 2001, CEERI, Pilani, India).

Academics and R&D:–

S.No.	Designation	Organization with Address	Position	Duration
1.	Director	IITDM-Kancheepuram	Director/Professor	10/2022-Till Date
2.	Professor	IIT-Tirupati Dept. of Electrical Engineering	Professor (on Deputation) Dean, Faculty Affairs	10/2020-09/2022 11/2020-09/2022
3.	Professor	IIT-Roorkee	Professor Head, Dept. CSE Head, Dept. ECE Head, ICC Chairman, Inst. Library Adv. Cmt. Chairman, E&ICT Academy Associate Dean Faculty Affairs	09/2009-09/2020 10/2017-07/2018 05/2013-02/2016 01/2012-04/2014 05/2016-04/2019 2015-Till Date 04/2017-09/2020
4.	Associate Professor	IIT-Roorkee	Associate Professor	07/2003-09/2009
5.	Visiting Scientist	KIT/IHM Karlsruhe Germany	AvH Fellow Hildegard-Maier Fellow (AvH Bequest) CSIR-DLR Fellow	07/2001-06/2003 10/1998-01/2001 01/1996-09/1996
6.	Scientist	CEERI-Pilani	Scientist (B&C)	01/1989-06/2001

Grant-in-aid Sponsored Projects (as Principal/Co- Investigator):–

Year	Sponsoring Agency	External Cash Flow	PI or Co-PI	Status
1991–99	DAE	≈ Rs. 290 Lacs	Co-PI	Completed
2000–01	DAE	≈ Rs. 100 Lacs	Co-PI	Completed
2004–07	MHRD	Rs. 8 Lacs	PI	Completed
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Teaching Experience (Courses Offered and Research Guidance) :–

List of courses offered :–

- Antenna Theory & Design (PG)
- Computational Techniques for Microwaves (PG)
- RF Receiver Design for Wireless Applications (PG)
- Microwave & Millimeter Wave Integrated Circuits (PG)

- Fiber Optic Systems (PG)
- Microwave Engineering (PG)
- RF & Microwave MEMS (PG)
- RF-CAD Lab Based Project (PG)
- Microwave Theory & Techniques (UG)
- Antennas & Wave Propagation (UG)
- Engineering Electromagnetics (UG)
- Basic Electronics (Devices & Circuits) (UG)
- Microwaves Laboratory (UG)
- Advanced Microwaves Laboratory (PG)
- Wireless Communication Laboratory (PG)
- Basic Electronics Laboratory (UG)

Research Guidance:-

⇒ Ph.D. (s) Completed:

18. Alok Mishra (ECE/2023): *Some Studies on Specific Gyrotron Modules*; Co-supervisors: Prof. D. Singh, Dr. Anirban Bera, CSIR-CEERI, Pilani.
17. Sambaiiah Pelluri (ECE/2021): *Investigation on Compact Substrate Integrated Waveguide Filters*.
16. Raj Kumar (ECE/2020): *Investigation on Radiating elements for Electronically Steered Phased Array Antenna for Airborne SATCOM*.
15. Kumar Goodwill (ECE/2020): *Investigations on Metasurfaces for Antennas*.
14. S. Yuvaraj (ECE/2019): *Investigations on Megawatt Class Sub-THz Wave Coaxial Cavity Gyrotron Oscillators*.
13. Savitesh M. Sharma (ECE/2018): *Modelling of Multi-Gate, MultiFIN FinFET for High Frequency Applications*; Co-supervisor: Dr. Sudeb Dasgupta (IITR).
12. Sukwinder Singh (ECE/2017): *Analysis of coaxial cavity with triangular corrugations on the insert for gyrotrons*.
11. Gaurav Singh Baghel (ECE/2017): *Investigations on multi-frequency high power gyrotron oscillators*.
10. Leeladhar Malvya (ECE/2017): *Some studies on MIMO antennas with diversity techniques for wireless applications*; Co-supervisor: Dr. R. Panigrahi (IITR)
9. Jagannath Malik (ECE/2016): *Compact UWB and MIMO antennas for high-speed communications*.
8. Amanpreet Kaur (ECE/2016, External Candidate from Thaper Univeersity): *Studies on stacked patch antennas for WLAN applications*; Co-supervisor: Prof. Rajesh Khanna (Thaper University)
7. Pravin Prajapati (ECE/2015): *Investigations on polarization agile planar antennas with defected ground structures*; Co-supervisor: Dr. A. Patnaik (IITR)
6. Jaswinder Kaur (ECE/2014, External Candidate from Thaper Univeersity): *Multi-frequency wideband microstrip patch antenna for wireless applications*; Co-supervisor: Prof. Rajesh Khanna (Thaper University)
5. Arjun Kumar (ECE/2014): *Investigation on Microstrip Filters with Defected Ground Structure*.

4. Ashwini Kumar Arya (ECE/2012): *Design Study of Specific Microstrip Antennas with Defected Ground Structure*; Co-supervisor: Dr. A. Patnaik (IITR)
 3. Narendra Chauhan (ECE/2009): *Soft Computing for Design Applications of Microwave Domain*; Co-supervisor: Dr. Ankush Mittal (IITR)
 2. Basudeb Ghosh (ECE/2009): *Investigations on Fractal Apertures in Conducting Screens, Waveguides and Cavities*; Co-supervisor: Prof. SN Sinha (IITR)
 1. K. Solomon Raju (ECE/2008): *System Level Architectures and Optimal Mapping for Reconfigurable Computing*; Co-supervisors: Prof. RC Joshi (IITR) and Dr. Chandra Sekhar (CSIR-CEERI)
- ⇒ Ph.D. (s) in progress:
13. K. Sambasiva Rao (EE): *Specific Microstrip Antennas with Metamaterials*; Co-supervisors: Dr. Srujana Kagita, Dr. D. Jahagirdar
 12. Mita Jena (EE): *AIML for High-power Microwave Sources*; Co-supervisors: Dr. SK Datta, Dr. AK Jha
 11. K. Srinath (EE): *Design and Optimization of High-power Gyrotrons*; Co-supervisors: Dr. AK Jha, Dr. S. Yuvaraj.
 10. Sautabh Mittal (EE): *Metamaterial inspired Proximity Coupled MSAs*; Co-supervisor: Dr. K. Srujana.
 9. Nani Medicherla (EE): *Metamaterial Inspired Interaction Structures for HPM and Terahertz Sources*; Co-supervisors: Dr. AK Jha, Dr. R. Seshadri.
 8. Santosh Kumar Jha (ME): *Design and Characterization of Interaction Structures for High Power Microwaves*; Co-supervisors: Dr. N. Venkaiah, Dr. SK Datta
 7. Ravinder Beemagani (EE): *High Power Sub-terahertz Sources for Thermonuclear Fusion Reactors*; Co-supervisor: Dr. AK Jha, Dr. S. Yuvaraj.
 6. Shailendra Singh (EE): *Metasurface inspired Multifunctional Microstrip Antennas*; Co-supervisor: Dr. Chandana Viswanadham, BEL.
 5. Surbhi Adya (ECE): *Design of second harmonic gyrotrons for ISM applications*; Co-supervisor: Dr. Meenakshi Rawat.
 4. Debasish Mondal (ECE): *High Power Sub-THz Wave Coaxial Gyrotrons*; Co-supervisor: Dr. Meenakshi Rawat.
 3. Aditya Singh Thakur (ECE): *Metamaterial Inspired Interaction Structures for Millimeter/THz Wave Sources*; Co-supervisor: Dr. Meenakshi Rawat.
 2. Ms. Suryarajitha Inapurapu (ECE): *Design and Optimization of Smart Antennas for Communications*; Co-supervisor: Dr. RK Panigrahi.
 1. Mr. Avinash Singh (ECE): *Millimeter Wave Circuits for Transceiver Modules*; Co-supervisor: Dr. Karun Rawat.
- ⇒ M.Tech. (s) Completed: 47 (details given below)
49. B. Kashyap (ECE/2021): *Investigations on dual-band/dual-polarized antennas for 4G/5G applications* (Co-supervisor: Dr/ R.K. Panograhi).
 48. Saurabh Mittal (ECE/2021): *Investigations on specific filtering antennas for sub 6 GHz band* (Co-supervisor: Dr/ R.K. Panograhi).
 47. Pavail Jain (ECE/2020): *Design of UWB antenna 2-20 GHz range*
 46. M.T. Fasil (ECE/2020): *Design of Bandpass Filter using SIW Technology for 5G Communications*

45. K. Venkateswara Rao (ECE/2019): *Investigation on Specific Interaction/ Propagating Structures for Sub-THz Wave Propagation.*
44. Priya S. Nair (ECE/2019): *Metamaterial Inspired Multifunctional Antennas for 5G Applications* (Co-supervisor: Prof. Amalendu Patnaik).
43. Anmol Jain (ECE/2019): *Dual Band Substrate Integrated Waveguide Filter.*
42. Delphine Alphonsa Jose (ECE/2018): *Design studies on multi-frequency operation of triangular corrugated coaxial cavity gyrotrons and insert misalignment.*
41. Vibha Tripathi (ECE/2018): *Modular metamaterial microstrip patch antenna for multifunctional applications.*
40. Mayank Parashar (ECE/2018): *Helical antenna array for high power beaming.*
39. Anupam Mullick (ECE/2017): *Shared aperture antennas.*
38. Pranayan Manna (ECE/2017): *Design of UWB monopole antenna with multiple band notches.*
37. Neha Singh (ECE/2017): *High impedance surfaces for antenna design.*
36. Nupur Sood (ECE/2017): *Metamaterial and metasurfaces for antenna design.*
35. Tejas Laheri (ECE/2016): *The multi-band filter design.*
34. Priyanka Bansal (ECE/2016): *Design of MIG and RF behavior of megawatt class coaxial cavity gyrotron.*
33. Diksha Nagpal (ECE/2016): *Design and analysis of ultra-wideband vivaldi antenna.*
32. Marampally Saikiran (ECE/2015): *Improving the performance of LC VCO using threshold voltage control techniques.*
31. M. Srinivasulu (ECE/2015): *Circularly polarized fractal antennas.*
30. Aditi Purwar (ECE/2015): *Design Studies on MIMO antenna for LTE applications.*
29. Alka (ECE/2014): *Investigations on a 95 GHz, 100 kW second harmonic gyrotron.*
28. Ravi Kumar Dhakad (ECE/2014): *Studies on a 170 GHz megawatt class CW gyrotron operating in the $TE_{28,12}$ mode.*
27. Veenu Kamra (ECE/2014): *Study and analysis of parasitic oscillations in gyrotrons* (Co-supervisor: Prof. John Jelonnek, KIT, Germany).
26. GGK Murthy (ECE/2014): *Study and design of circularly polarized antenna for wireless applications.*
25. Vishal Vasishta (EE/2014): *Design, analysis and fabrication of dielectric resonator.*
24. Aswini Sawant (ECE/2013): *Design study of a 42/84 GHz, 500 kW CW dual frequency regime gyrotron.*
23. Prerit Jain (ECE/2013): *Design studies of a 30 GHz, 30 kW, CW decond harmonic gyrotron.*
22. Divya Agarwal (ECE/2013): *Design and evaluation of compact planar anantennas utilizing pattern diversity for MIMO wireless applications.*
21. Ramesh Patel (Physics/2013): *PIFA antenna for wireless applications* (Co-supervisor: Prof. R. Nath, IITR).
20. Anish Goel (ECE/2013): *Design and optimization studies of bandstop filters unsing specific DGS structures for WLAN applications.*
19. V. Paritosh Kumar (ECE/2013): *Design of ultra wide band antenna with tunable notch.*

18. Parth Kalaria (ECE/2012): *Design studies of a 170 GHz, 1.0-1.5 MW CW gyrotron for plasma heating.*
17. Nischey Grover (ECE/2012): *Studies on planar antennas utilizing pattern diversity for MIMO wireless applications.*
16. P. Vamshi Krishna (ECE/2011): *Conceptualization of a 95 GHz, 100 kW CW gyrotron.*
15. Jagannath Malik (ECE/2011): *Design studies of microstrip patch antennas with specific metamaterial structures for WLAN applications.*
14. Harshvardhan Tiwari (ECE/2010): *Studies on specific stacked microstrip patch antennas for dual-band applications.*
13. Ankur Aggarwal (ECE/2010): *Study of fractal patch antennas for wireless application.*
12. Divya Goel (ECE/2010): *Multi-objective optimization using evolutionary algorithms for computation intensive applications.*
11. Ragini Jain (ECE/2010): *Design of a 60 GHz, 100 kW CW gyrotron for plasma diagnostics.*
10. Arun Kumar Sowpati (ECE/2009): *Performance of printable antennas with different conductor thickness.*
9. Satya Priya Singh (ECE/2009): *Studies on microstrip patch antenna using defected ground structures for wireless applications.*
8. Pankhuri (ECE/2009): *Studies on full- ψ and half- ψ microstrip patch antennas for specific dual band WLAN application.*
7. Vivek Gupta (ECE/2008): *Studies on microstrip patch antennas with defected ground structure.*
6. Sangam Pal Gautam (ECE/2008): *Studies on specific microstrip antenna for WLAN applications.*
5. Prakhya Avinash (ECE/2008): *Study and design of UWB M-shaped monopole and Vivaldi antennas for wireless applications.*
4. K. Swathi (ECE/2007): *Design of aperture coupled microstrip antenna with L-shaped coupling slot for wideband circular polarization.*
3. Kshitiz Agarwal (ECE/2006): *Design of a dual feed stacked patch circularly polarized microstrip antenna using a feed system on opposite side of ground plane (Co-supervisor: Prof. NK Agarwala, IITR).*
2. Purnachandrarao Gugulotu (ECE/2006): *Design of multiple beam forming network with E-shaped microstrip patch antenna for switched beam antenna systems (Co-supervisor: Prof. NK Agarwala, IITR).*
1. Arun Kumar (ECE/2005): *Studies on stacked patch aperture coupled circularly polarized microstrip antenna with slits.*

Academic, R&D, and Industrial Links

- Institute for Plasma Research (IPR), Gandhinagar, India.
- Central Electronics Engineering Research Institute (CEERI), Pilani, India.
- Microwave Tubes Research and Development Center (DRDO), Bangalore, India.
- Bharat Electronics, Bangalore, India.

- IHE, KIT, Karlsruhe, Germany.
- Microelectronics and Material Physics Laboratory, Uni. of Oulu, Finland.
- Inst. of Pulsed Power & Microwave Technology, KIT, Karlsruhe, Germany.
- Dept. of Engineering, Fukui University, Japan.

International Research Awards for Professional Recognition

- # Recipient of the *Hildegard–Maier Research Fellowship for Electrical Sciences by the Alexander von Humboldt Foundation* (from December 1998 to January 2000).
- # Recipient of the *Alexander von Humboldt Fellowship* (from July 2001 to June 2003).
- # Recipient of the *Alexander von Humboldt Fellowship* under re-invitation programme (June/July 2011 and June/July 2012).

Fellowship in Academies & Membership of Professional Bodies

- Fellow, INAE (Indian National Academy of Engineering)
- Fellow, IEEE (USA) # 41584566
- Fellow, IET (Inst. of Engineering and Technology, UK) # 1100390265
- Fellow Life, IETE (Inst. Electronics and Telecom. Engineers, India) # F138559
- Fellow Life, IE (Inst. of Engineers, India) # F109688-1
- Fellow Life, VEDAS (Vac. Elec. Devices & Applications Society, India) # F050L
- Member, European Microwave Association (EuMA) # AM2797
- Member Life, PSSI (Plasma Science Society, India) # LM-648
- Chartered Engineer (CEng), Engineering Council, UK # 678716

Other Significant Services/Contributions

- Corresponding Member, Vacuum Electronics Technical Committee (VETC), IEEE Electron Devices Society, USA
- Member, Editorial Board, International Journal of Microwave and Optical Technology (IJMOT)
- Reviewer, IEEE Transactions (IEEE - TED, MTT, PS)
- Reviewer, International Journal of RF and Microwave Computer Aided Engineering & Microwave Optical Technology Letters (Wiley)
- Reviewer, J. Infrared, Millimeter & Terahertz Waves (Springer)
- Reviewer, EuMA Journal on Microwave and Wireless Technologies (Cambridge)
- Progress in Electromagnetics Research (PIER, Academy of Electromagnetics)
- Indian J. IETE (Tylor & Francis Journal)

Outlook

- To excel in the field of High Frequency Engineering for clean energy, communications and for specific ISM applications.

List of Publications

Books

5. Leeladhar Malvya, Rajib K. Panograhi, **M.V. Kartikeyan**, “*MIMO Antennas For Wireless Communication: Theory And Design*,” CRC Press (ISBN 9780367530471), December 2020.
4. Jagannath Malik, Amalendu Patnaik, **M.V. Kartikeyan**, “*Compact antennas for high data rate communications: Ultra-wideband (UWB) and Multiple-input-multiple-output (MIMO) technology*,” Series: Springer Topics in Signal Processing, Vol. 14, 2018 (ISBN 978-3-319-63174-5).
3. Basudeb Ghosh, Sachendra N. Sinha, **M.V. Kartikeyan**, “*Fractal Apertures in Conducting Screens, Waveguides, and Antennas: Analysis and Design*,” Springer Series in Optical Sciences, Vol. 187, Springer-Verlag, Berlin-Heidelberg, Germany, 2014 (ISBN 978-3-319-06534-2).
2. N.C. Chauhan, **M.V. Kartikeyan**, A. Mittal, “*Soft Computing Methods for Microwave and Millimeter Wave Design Problems*,” Studies in Computational Intelligence Series, Springer-Verlag, Berlin-Heidelberg, Germany, 2012 (ISBN 978-3-642-25562-5).
1. **M.V. Kartikeyan**, E. Borie, and M. Thumm, “*Gyrotrons – High Power Microwave and Millimeter Wave Technology*,” Springer-Verlag, Berlin-Heidelberg, Germany, 2004 (ISBN 3-540-40200-4).

Patents

2. Surbhi Adya, Debasish Mondal, S. Yuvaraj, Santanu Karmakar, **M. V. Kartikeyan**, “*An Output System for a W-band Second Harmonic Gyrotron*,” Indian Patent Application No. 202111042485, September 2021.
1. Ravinder Beemagani, S. Yuvaraj, Debasish Mondal, P.C. Kalaria, A.K. Jha, **M.V. Kartikeyan**, “*A Radiofrequency Window for a Multifrequency Gyrotron and a Method for Designing Thereof*,” Indian patent Application No. 202341018145, March 2023.

Journals

120. M. V. Rao, Y. B. Modugu, D. Mondal, S. Yuvaraj, **M.V. Kartikeyan**, “*Generation of Dual Band OAM Beam using Planar Uniform Circular Array for Vehicular Communications*,” Microwave and Optical Technology Letters (accepted for publication, 2023).
119. D. Mondal, S. Yuvaraj, S. Singh, M. Rawat, **M.V. Kartikeyan**, “*Insert Misalignment Studies of a Coaxial-Cavity Gyrotron—Full-Wave Approach*,” **IEEE Transactions on Electron Devices** (accepted for publication, 2023).
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 86. Ashwini K. Arya, **M.V. Kartikeyan**, A. Patnaik, “*Neural network model for analysis of DGS structure*,” National Symposium on Vacuum Elect. Devices & Applications (VEDA–2009), IT–BHU, Varanasi, January 8–10, 2009.
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