CURRICULUM VITAE

Dushayant Kumar Sharma, PhD

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https://scholar.google.co.in/citations?user=TShBZSoAAAAJ&hl=en

Subject and Field of Specialization

Power Amplifier (PA) Design, Doherty PA Design, Antenna Design, MIMO, Metamaterial Design

Educational Degrees

DGFS*-PhD Institute for Plasma Research (IPR), Gandhinagar (Guj.)
Homi Bhabha National Institute, Bhabha Atomic Research Center (BARC), Mumbai (India), Aug, 2012-July, 2016 (3.11) Year
Branch/Specialization: Electronics Engineering
Thesis title: Slow wave characteristics of Metamaterial loaded helical guide

M. Tech. Dhirubhai Ambani Institute of Information and Communication Technology Gandhinagar (Gujarat), 2010-2012, CPI- 7.38
Branch/Specialization: VLSI and Embedded Systems
Thesis title: Low power digital design

B. E. Mandsaur Institute of Technology, Mandsaur, 2003-2007, 71.91 %
Branch/Specialization: Electronics and Communication Engineering

Key Skills

Keysight ADS, CST Microwave studio, HFSS, COMSOL, MATLAB, MATHEMATICA.

List of Publications

Tutorial Papers:

1. D. K. Sharma, "Doherty Power Amplifier Design for 5G Cellular Infrastructure", ***IEEE 5G World Forum-2020 Bengaluru, India.***

Journal Papers

1. D. K. Sharma and P. V. Parimi, Talbot Effect at the Dirac-Like Cone in Kagome Lattice Microwave Photonic Crystal***, IEEE Microwave and Wireless Components Letter***, Feb, 2020.

* Department of Atomic Energy Graduate Fellowship Scheme (DGFS)

2. D. K. Sharma, A Novel Cross Polarizer Converter formed by Twisted F-Shaped Chiral Metamaterial, ***Electromagnetics-Taylor & Francis***, 2019.
3. R. Hirani, S. K. Pathak, S. N. Shah, D. K. Sharma, Dispersion Characteristics of Dielectric Tube Waveguide Loaded with Plasma for Leaky Wave Antenna Application, AEU ***International Journal of Electronics and Communications***, 2017.
4. D. K. Sharma and S. K. Pathak, "Propagation characteristics of Extremely Anisotropic Metamaterial Loaded helical Guide" ***Optics Express***, (Optical Society of America), Vol. 24, 29521-29536, Dec, 2016. (***Second most cited Journal in the field of Optical Communication as per Google Scholar ranking***).
5. D. K. Sharma and S. K. Pathak, "Slowing and Stopping of Wave in Dispersive Metamaterial Loaded Helical Guide" ***Optics Express*** (Optical Society of America), Vol. 24, 2687-2700, Feb, 2016. (***Second most cited Journal in the field of Optical Communication as per Google Scholar ranking***).
6. D. K. Sharma and S. K. Pathak, "ENG Cladded Metamaterial Loaded Helical Guide for Optoelectronics Applications," ***Journal of Electromagnetic wave and Application*** (Taylor & Francis), Vol. 29, 2501-2511, 2015.
7. D. K. Sharma and S. K. Pathak, "Ultra Slow EM Wave Propagation Characteristics of Left-Handed Material Loaded Helical Guide," ***Progress In Electromagnetics Research M*** (EMW Publishing USA), Vol. 35, 11-19, 2014.
8. D. K. Sharma, "Effects of different clock gating techniques on design", ***International Journal of Scientific & Engineering Research***, Vol. 3, 2012.

International/National Conferences

1. D. K. Sharma and Patanjali V. Parimi, "Ultra-wideband Compact Circularly Polarized Antenna using Coupled Dipoles," **IEEE International Symposium on Antenna and Propagation 2018 Boston, USA** .
2. D. K. Sharma and S. K. Pathak, "Broadband Cross Polarization Converter Formed by Twisted F-Shaped Chiral Metamaterial," ***Progress in Electromagnetic Research Symposium 2015 at Prague (European Union)*** (*Published in PIERS proceedings*).
3. D. K. Sharma and S. K. Pathak, "Enhanced Group Velocity Characteristics of an ENG Cladded Metamaterial Loaded Helical Guide," ***Progress in Electromagnetic Research Symposium 2015 at Prague (European Union)*** (*Published in PIERS proceedings*).
4. D. K. Sharma and S. K. Pathak, "Enhance Slow Wave through Dispersive Metamaterial Loaded Helical Guide," ***International Conference on Fibre Optics and Photonics (Photonics) 2014 at IIT, Kharagpur (India)*** (*Published in OSA library*).

5. D. K. Sharma and S. K. Pathak, "Dispersion Characteristics of Metamaterial Loaded Helical Guide," ***IEEE International Conference on Microwave and Photonics (ICMAP) 2013 at ISM Dhanbad (India)*** (*Published in IEEE Xplore*).
6. D. K. Sharma, "Ultrathin-Body SOI MOSFET," ***International Conference on Advances in Communications, Embedded Systems and Computing (ICACEC)*** at Sagar Institute of Research and Technology, Bhopal,2009.
7. D. K. Sharma, "Wide-band Orthogonal Frequency Multiplexing," ***International Conference on Communication*** at Sir Padampat Singhani University, Udaipur, 2010.

Experience:

Architect
Wipro Limited, Bengaluru, India **Oct, 2019 – till now**

- Involved in the design of Doherty power amplifier for 5G base station.
- Involved in the research and development work for broadband PA design.
- RF frontend design as per the specification.
- RF/microwave passive components design.
- Involved in patent/research paper writing.

Post Doctoral Research Associate
State University of New York, USA **July, 2017 – Oct, 2019**

- Design of Electrically small efficient antennas and antenna arrays
- Design of Transmit and receive module and system level RF circuit design.
- Design of Metamaterials (negative index, EBG, FSS, engineered) and related electromagnetic applications for compact antennas.
- Experience in measurement of antenna radiation pattern.
- Experience in testing of commercial antennas (4G/LTE/Wi-Fi/GPS band) in anechoic chamber.
- Experience in working with VNA and its integration with MATLAB.

Post Doctoral Fellow **Aug, 2016 – July, 2017**
Institute for Plasma Research, Gandhinagar, India

- Involved in development and characterization of Fusion Reactor microwave diagnostics. Such as Reflectometry, Radiometry and Interferometry.
- Simulation and development of wave transport system of Reflectometery Diagnostics.

- Characterization of Refelctometry Diagnostics
- Calibration of Radiometry Diagnostics.

Teaching Assistant **2010-2012**
Dhirubhai Ambani Institute of Information and Communcation Technology (DA-IICT), Gandhinagar, India

- Demonstrated lab experiments to student.
- Attended meetings for assigned projects and programs
- Co-taught experiment in the lab

Lecturer **2008-2010**
Mandsaur Institute of Technology, Mandsaur, India

- Taught graduate engineering subjects
- Guided graduate students in projects.
- Conducted and demonstrated experiments in lab.

Awards & Achievements:

- Awarded the Prestigious **Department of Atomic Energy Graduate Fellowship Scheme (DGFS)** for Doctoral studies at Homi Bhabha National Institute (HBNI) for the 3 year.
- **MHRD Scholarship** from Ministry of Human Resource development (MHRD), Government of India during Master of Technology (2010-2012).
- **GATE-2010** Qualified with 97.19 percentile.

Personal

Date of birth: May 16, 1985
Place of birth: Mandsaur, Madhya Pradesh, India
Spouse: Dipika Sharma

References

Dr. Surya K. Pathak
Head, Microwave & ECE
Diagnostic Division
Institute for Plasma Research
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Email: bhu.surya@gmail.com

Dr. V. Subramanian
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