NIKUNJ GOYAL

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Ph.D. (Thesis submitted) with three years of experience in the design and development of microwave absorbers employing innovative design approaches for stealth applications.

EDUCATION

2023

PH. D., INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN AND MANUFACTURING, JABALPUR

Dissertation: Investigation of Heterogeneous Composite Fused Perforated Microwave Absorber with Innovative Design Approaches.

2019

MASTER OF ENGINEERING, JABALPUR ENGINEERING COLLEGE, JABALPUR **Dissertation:** A Broadband Metamaterial Microwave Absorber.

2013

BACHELOR OF ENGINEERING, TAKSHSHILA INSTITUTE OF ENGINEERING AND TECHNOLOGY, JABALPUR

Discipline: Electronics and Communication Engineering.

SKILLS

- Handy with MS Powerpoint, MS Word, MS excel (basic), Origin
- Hands-on experience in Keysight VNA.
- Composite preparation using different materials
- Innovative design approach for fabricating microwave absorbers

PATENT AND PUBLICATIONS

PATENT

• Nikunj Goyal and Ravi Panwar, "A method for developing heterogeneous composite fused perforated microwave absorber", Application No. 202221075919, filed dated 27 December 2022.

JOURNAL PUBLICATIONS

 Nikunj Goyal and Ravi Panwar, "Dielectric characterization of electromagnetic mixing model assisted optimization derived heterogeneous composites for stealth technology", IEEE Transactions on Dielectric and Electrical Insulation, vol. 30, 2, April 2023.

- Nikunj Goyal and Ravi Panwar, "Minkowski inspired circular fractal metamaterial microwave absorber for multiband applications", **Applied Physics A**, 129, 293, 2023.
- Nikunj Goyal and Ravi Panwar, "Experimental validation of heterogeneous composite fused lightweight perforated microwave absorber", IEEE Transactions on Electromagnetic Compatibility, 2023 (Under review).
- Nikunj Goyal and Ravi Panwar, "Circular Minkowski loop inspired heterogeneous composite fused perforated microwave absorber", Journal of Electromagnetic Waves and Applications, 2023 (Under review).
- Nikunj Goyal and Ravi Panwar, "Development of MDL-based hybrid absorber with improved microwave absorption properties", Microwave and Optical Technology Letters, 2023 (Under review).

CONFERENCE PUBLICATIONS

• Nikunj Goyal and Ravi Panwar, "Graphene-based quad horn metamaterial absorber for THz applications", IEEE International Conference on Control, Automation, Power and Signal Processing (CAPS-2021), 2021.

ANALYTICAL AND SIMULATION TOOLS

- Analytical tool: MATLAB, ADS (BASIC)
- Simulation tool: CST, HFSS

PROFESSIONAL TRAINING AND WORKSHOPS

- NPTEL online certification "Outcome Based Pedagogic Principles for Effective Teaching",2022.
- NPTEL online certification "Effective Engineering Teaching in Practice",2022.
- 36th M. P. Young Scientist Congress March 2021 (Participated).
- Faculty Development Program on Electromagnetic Analysis, at IIITDM Jabalpur,2018.
- Workshop on Electromagnetic and Antenna Design" at IIT-BHU, 2018.
- 6th International Conference on Recent Challenges in Engineering and Technology, Nagpur, Maharashtra, 2018.
- Vocational training on "Train traffic control communication, Rail-Nets, Power Supply System and IPS", of 4 weeks at Jabalpur Division of West Central Railway, 2017.
- Hands-on practical training on "Mobile Communication" of 8 weeks on the weekend at BRBAITT, BSNL, Jabalpur (MP),2013.
- Advance level vocational training on "CCNA and Routing Techniques" of 4 weeks at Jetking, Jabalpur (MP),2012.
- Vocational training on "Basics of GSM and Broadband techniques" of 2 weeks at BRBAITT, BSNL, Jabalpur (MP),2011.
- Participated in various workshops on "VLSI, Embedded System, Robotics" during BE course, 2009-13.

ACHIEVEMENTS AND ACTIVITIES

- Fellowship for Training of Young Scientist (M.P. Council of Science and Technology).
- Research Fellowship: Ministry of Human Resource Development, Government of India, 2020.
- PG Scholarship: All India Council for Technical Education, Government of India, 2016.
- Qualified GATE 2016.
- Participated in a City Marathon "The Marble Rock Run",2018.

PROFESSIONAL AFFILIATION

- IEEE Graduate student membership 2020-present, Membership ID- 97518697
- IEEE Young Professionals

DECLARATION

I hereby declare that the above-mentioned details are correct and complete to the best of my belief and knowledge.

Nikunj Goyal