Dr. Manas Ranjan Jena

Name : **Dr. Manas Ranjan Jena**

Designation : Associate Professor

Department : **ECE**

(JOINED THE INSTITUTE IN 2017)

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RESEARCH INTERESTS

- Wireless Communication
- Antenna Design Technology
- Photonics

Academic Qualifications

- Ph. D. (Planar Antenna Design, ECE, VSSUT Burla, Odisha, India.
- M. Tech. (ECE) VSSUT Burla, Odisha, India.

Teaching Experience/Industrial Experience/Research Experience

Teaching Experience – 19 years+
Research Experience – 12 years

PUBLICATIONS

JOURNALS

1. Sarita Misra, Manas Ranjan Jena, Naveen Kumar G. N., Pankaj Prusty, Sourav Ghosh, Chandra Sekhar Mishra, Investigation of 1D Silicon Photonic Structure for Detection Biomolecular Concentration, Applied Research, Wiley, Vol.5, Issue.1, Page 1-9, Februay, 2026, https://doi.org/10.1002/appl.70073.
2. Manas Ranjan Jena ; Sarita Misra ; Bishnu Prasad Mishra ; Chandra Sekhar Mishra, Tech-Enhanced Forest Nursery Management: Harnessing Embedded Systems for Plant Health Monitoring and Growth Forecasting, IEEE Internet of Thigs Journal, IEEE, Vol.12, Issue.16, Page 34503-34512, August, 2025, 10.1109/JIOT.2025.3578203.
3. Koduri Sreelakshmi[1] Biswa Ranjan Swain[2], Amiya Bhusana Sahoo[3], Manas Ranjan Jena[4], Rajiv Pathak[5]"A Miniaturized Multiband Antenna with Frequency Reconfiguration for 5G and IoT Applications", Journal of Information Systems Engineering and Management, Vol. 10(7s),e-ISSN: 2468-4376, Feb 2025 (Scopus Indexed Journal). DOI:10.52783/jisem.v10i7s.924.

5. Manas Ranjan Jena, Sanjana Sahoo, Guru Prasad Mishra, and B. B. Mangaraj, "Miniaturized Band Notched Printed LPDA Design with Meander Fractal Dipole for UWB Communication", International Journal of Electronics, Taylor and Francis, April 2020. (SCI and Scopus Indexed Journal). Print ISSN: 0020-7217 Online ISSN: 1362-3060. 108(1), 21-24, 2021.

6. Manas Ranjan Jena, Guru Prasad Mishra, Amiya Bhusan Sahoo, and B. B. Mangaraj, "An Improved Sierpinski Fractal MIMO Array Antenna with Enhanced Isolation for Next Generation Wireless Applications", International Journal on Emerging Technologies, 11(3), 240-246, May 2020. (Scopus Indexed Journal). ISSN NO. (Print) : 0975-8364, (Online): 2249-3255.

7. Manas Ranjan Jena, Guru Prasad Mishra, Amiya Bhusan Sahoo, and B. B. Mangaraj, "Fractal Geometry and Its Application to Antenna Designs", International Journal of Engineering and Advanced Technology (IJEAT), Volume-9, Issue-1, 3726-3743, October 2019. (Scopus Indexed Journal). 2249-8958 (online).

8. Amiya B. Sahoo, Guru P. Mishra, Manas R. Jena, B. B. Mangaraj, "Optimal Design and Comparative Study of Circular Patch Antennas Using Different Feeds for WLAN and WiMAX Applications", International Journal on Communications Antenna and Propagation (I.Re.C.A.P.), Vol. 6, N. 3, ISSN 2039 – 5086, June 2016. (Scopus Indexed Journal).

9. Biswa Binayak Mangaraj, Manas Ranjan Jena andSaumendraKumarMohanty, "Bacteria Foraging Algorithm in Antenna Design", Hindawi Publishing Corporation Applied Computational Intelligence and Soft Computing, Volume 2016, Article ID 5983469, Jan 2016, http://dx.doi.org/10.1155/2016/5983469. (SCI and Scopus Indexed Journal). 1687-9724 (Print) 1687-9732 (Online).

10. Manas Ranjan Jena1, B.B.Mangaraj2, Debasis Mishra3, "Bandwidth & Gain Enhancement of Multiband Fractal Antenna Based On the Sierpinski Carpet Geometry", ICTACT Journal On Communication Technology, Vol: 04, Issue: 01, 669-674 March 2013., ISSN Number (Print)0976-0091 ISSN Number (Online) 2229-6948 (UGC Care). HTTP://DOI.ORG/10.21917/IJCT.2013.0095

11. Sanjana Sahoo, Guru Prasad Mishra, Manas Ranjan Jena, Biswa Binayak Mangaraj, "Sub-sectional Tapered Printed- LPDA Design with WLAN, WiMAX Notch Bands for UWB Communication System", Chapter 82, Springer Science and Business Media LLC, 2020. (Scopus Indexed) DOI:10.1007/978-981-13-8461-5_82, https://link.springer.com/chapter/10.1007/978-981-13-8461-5_82 (Scopus indexed book chapter).

12. Rajiv Pathak, Sushil Kumar, Manas Ranjan Jena, "Implementation of smart antenna by optimizing linear patch array antenna, International journal of

new innovations in engineering & technology, Volume-5, Issue-1, May-2016.(Peer Reviewed Journal).

13. Sovana Biswal1, Santwana Mohapatra2, Subhalaxmi Jena3,Manas Ranjan Jena4,"Design & Analysis of Rectangular Microstrip Patch Array Antenna for Ism Band Applications",International Journal of Microwave Engineering & Technology, Vol 2, Issue 1, May 2016.(Peer Reviewed Journal).

14. Nishant Kumar, Ashutosh Kumar Pandey, Aditya Prakash, Shiv Mani Kumar, Rupali Bihari, and Manas Ranjan Jena, "Design & Analysis of a Novel Rectangular Microstrip Patch Antenna with Improved Performance Using MATLAB for Pervasive Wireless Applications."Wireless and Mobile Technologies, vol. 2, no. 1 (2014): 7-11. doi: 10.12691/wmt-2-1-2. (Peer Reviewed Journal).

15. Manas Ranjan Jena, B.B. Mangaraj, and Rajiv Pathak, "Design of a Novel Sierpinski Fractal Antenna Arrays Based on Circular Shapes with Low Side Lobes for 3G Applications."American Journal of Electrical and Electronic Engineering, vol. 2, no. 4 (2014): 137-140. doi: 10.12691/ajeee-2-4-3. (Peer Reviewed Journal).

16. Rajiv Pathak1, Manas Ranjan Jena2, B.B.Mangaraj3,"Performance Analysis of Patch Array as a Smart Antenna",International Journal of Computer Science and Network, May 2014, Conference Proceeding – RDFCORDGE – 2014.(Peer Reviewed Journal).

17. Manas Ranjan Jena1, B.B.Mangaraj2, Rajiv Pathak3, "An Improved Compact & Multiband Fractal Antenna Using the Koch Curve Geometry", Wireless and Mobile Technologies, Vol. 2, No. 1, 1-6, June 2014.(Peer Reviewed Journal).

18. Manas Ranjan Jena1, B.B.Mangaraj2, Rajiv Pathak3, "A Novel Sierpinski Carpet Fractal Antenna with Improved Performances", American Journal of Electrical and Electronic Engineering, Vol. 2, No. 3, 62-66,March 2014.(Peer Reviewed Journal).

19. Manas Ranjan Jena1, B.B.Mangaraj2, Debasis Mishra3, "Bandwidth & Gain Enhancement of Multiband Fractal Antenna Based On the Sierpinski Carpet Geometry", ICTACT Journal On Communication Technology, Vol: 04, Issue: 01, March 2013.(UGC Care).

CONFERENCE PAPERS PRESENTED

1. Manas Ranjan Jena, Guru Prasad Mishra, and B. B. Mangaraj, "Microstrip Patch Antenna Design using Fractal Slot Geometries for Multiband and Wideband Applications," IEEE International Conference on Recent Innovations in Electrical, Electronics & Communication Engineering (ICRIEECE), 27-28 July 2018, pp. 485-488, KIIT, Bhubaneswar, Odisha, India. DOI: 10.1109/ICRIEECE44171.2018

2. Manas Ranjan Jena, Guru Prasad Mishra, and B. B. Mangaraj, "An Improved Microstrip Patch Antenna Using Fractal Slot Geometries on Both Patch & Ground Plane for Multiband & Wideband Applications", IEEE International Conference on Applied Electromagnetics, Signal Processing and Communication (AESPC), 22-24 October 2018, KIIT, Bhubaneswar, Odisha, India. DOI: 10.1109/AESPC44649.2018

3. Guru P. Mishra, Manas R. Jena, B. B. Mangaraj, "Investigations on design and performance of Linear Cantor Array using strip dipole and V-dipole for UHF band application", https://doi.org/10.1109/WiSPNET.2016.7566452 23-25, IEEE Conference International conference on Wireless communications, Signal processing & networks, March 2016. **DOI:** 10.1109/WiSPNET.2016.7566452

4. Jogesh Chandra Dash, Manas Ranjan Jena, and B. B. Mangaraj, "Analysis of Dipole Antenna and Its Array Using Finite Element Method", International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-Informatics (AEEICB16), IEEE, Feb, 2016. **DOI:** 10.1109/AEEICB.2016.7538326

5. Amiya B. Sahoo1, Suraj Ku. Jha2, Manas Ranjan Jena3 and Saumendra Ku. Mohanty4 "Optimization of circular patch antenna at 5GHz using Firefly Algorithm" 2015 Fifth International Conference on Communication Systems and Network Technologies, 2015 IEEE Computer Society, DOI 10.1109/CSNT.2015.79, April 2015.

Book chapter-

1. Sanjana Sahoo, Guru Prasad Mishra, Manas Ranjan Jena,Biswa Binayak Mangaraj, "Sub-sectional Tapered Printed- LPDA Design with WLAN, WiMAX Notch Bands for UWB Communication System", *Chapter 82, Springer Science and Business Media LLC*, 2020.(Scopus Indexed).

Patents Published:

1. Published a patent titled "A DUAL-FEED TRI-BAND MICROSTRIP PATCH ANTENNA DEVICE FOR 5G COMMUNICATION APPLICATIONS." Address for service, Wolmarans and Susan Inc. 337 Surrey Avenue, Randburg, Gauteng, 2194, SOUTH AFRICA, Official application No. 2024/03011.