Dr. Dhruba Charan Panda

Associate Professor

- Present Address : Electronic Science Department
  Berhampur University, Bhanjabihar
  Berhampur, Dist:Ganjam
  Odisha, India-760 007

- Date of Birth : **28th June 1978**

Area of Research: Planar Antennas and AI assisted Computational Electromagnetics

Research Interest: Antenna Design for Cognitive Radio Environment, Quantum Computing, Application of Computational Electromagnetics to strategic and biomedical applications, RF-MEMS, Metasurface, High Performance Computing and Hardware-in-Loop.

Educational Qualifications:

S.No.	Degree	Specialization	Year of Award	University
1	Ph.D	Electronics	2007	Berhampur University
2	MSc	Electronics	2000	-do-
3	BSc	Physics	1998	-do-

Research Experience:

Name of the Employer with address	Post held	Period From-To	Nature of Duties
Thrust Area Project funded by MHRD(PI: Dr. Shyam S. Pattnaik, Asst. Professor, Dept. of ECE), at NERIST(North Eastern Regional Institute of Science and Technology), "A Novel Approach to efficient and Uninterrupted Mobile and Wireless Computer Communication in Different Cellular Zones"	Research Scholar	5th Nov. 2000-30th April 2002	Development of FDTD codes to design Patch Antenna
R&D Project funded by MHRD(PI: Dr. Shyam S. Pattnaik), at NERIST(North Eastern Regional Institute of Science and Technology), "Application of Artificial Intelligence to Microstrip Antenna in Specification to Cell phone Antennas"	Research Scholar	1st May 2002-31st May 2003	Development of Neural Network codes to design Patch Antenna

Senior Research Fellow, CSIR(Super visor: Dr. Shyam S. Pattnaik), NERIST, Itanagar and NITTTR, Chandigarh	Senior Research Fellow	Ist June 2003-30th Jan'06	Development of Neural Network codes, Development of Algorithms for antenna design

Teaching Experience:

Name of the Employer with address	Post held	Period From-To
Centurion University, Paralakhemundi	Assistant Professor	15-02-2006 to 05-10-2012
Electronic Science Department, Berhampur University	Reader	06-10-2012-till date

PhD Thesis supervised:

Sl. No.	**Name of the Candidate**	**Title of the thesis**	**Name of the Co-supervisor, if any**	**Year of Registration**	**Year of Completion/ In-progress**
1	E. Kusuma Kumari	Study and development of knowledge based softcomputing techniques for wireless applications	Dr. S. K. Dash	2007	20012
2	Nilambar Sethy	Study and development of complex fuzzy inference system and a systematic approach for its application to real world problems	Dr. S. K. Dash	2008	2013
3	T. V. S Divakar	Analysis of microstrip patch antenna using knowledge based neural networks	Dr. Satyasis Mishra	2011	2017
4	Nihar Kanta Sahoo	Studies on computer aided modeling for RCS	--	2015	Submitted, (2020)
5	Rajeev Kumar Parida	Some studies on antenna design for cognitive radio for rural services	--	2017	In-progress
6	Amit Kumar Sahu	CAD modeling of microwave components using soft computing techniques	--	2017	In-progress

7	Deepak Kumar Naik	Some studies on CAD optimization for planar antennas	--	2017	In-progress
8	Soubhagya Pani	Some studies on wavefront engineering using metasurface for planar antenna design	--	2017	In-progress
9	Radhanath Patra	Early diagnosis and prognosis of epidemic and endemic diseases-a meta analysis using soft computing approach	Dr. B. Khuntia	2017	In-progress

Journal Publications:

1. Panda, Siba Kumar; Sahoo, Ankita; Panda, Dhruba Charan; Design and Implementation of a Factorial Circuit for Binary Numbers: An AVM-Based VLSI Computing Approach, Advanced Computing and Intelligent Engineering: Proceedings of ICACIE 2018, Volume 2, 73, 2020. (Book Chapter)

2. Sahoo, Nihar K; Gouda, Akhila; Mishra, Rashmirekha K; Parida, Rajeev K; Panda, Dhruba C; Mishra, Rabindra K; Electromagnetic scattered field time series from finite difference time domain trained time delay neural network, International Journal of RF and Microwave Computer-Aided Engineering, 30, 11, e22410, 2020.

3. Parida, Rajeev Kumar; Swain, Rajanikanta; Panda, Dhruba Charan; Mishra, Rabindra Kishore; A Broadband High Gain Circularly Polarized Antenna System for Cognitive Radio, Radioengineering, 29, 3, 487, 2020.

4. Parida, Rajeev Kumar; Mishra, Rashmirekha Kalyani; Sahoo, Nihar Kanta; Muduli, Arjuna; Panda, Dhruba Charan; Mishra, Rabindra Kishore; A Hybrid Multi-Port Antenna System for Cognitive Radio, Progress In Electromagnetics Research C, 106, 1-16, 2020.

5. Patnaik, Prabhat K; Panda, Dhruba C; Krishna, M Vamshi; Design and Investigation of Hexagonal Shaped Wearable Antenna for Body Centric Wireless Communication, Solid State Technology, 63, 6, 16361-16364, 2020.

6. Sahoo, Nihar Kanta; Panda, Dhruba Charan; Misra, Rabindra Kishore; Sahu, Amit Kumar; RCS Calculation Using Hybrid FDTD-NARX Technique Progress In Electromagnetics Research M, 82, 73-84, 2019.

7. Sahu, Amit Kumar; Panda, Dhruba Charan; Sahoo, Nihar Kanta; Attenuation constant and characteristic impedance calculation of top metal-covered CPW transmission line using neural networks, Journal of Computational Electronics, 18, 4, 1342-1346, 2019.

8. Panda, Siba Kumar; Jena, Arpita; Panda, Dhruba Charan; N-bit Pipelined CSM Based Square Root Circuit for Binary Numbers, Progress in Advanced Computing and Intelligent Engineering, 519-532, 2018. (Book Chapter)

9. Panda, Siba Kumar; Panda, Dhruba Charan; Developing high-performance AVM based VLSI computing systems: a study, Progress in Computing, Analytics and Networking, 315-323, 2018. (Book Chapter)

10. Patnaik, Prabhat K; Panda, Dhruba C; Pantina, Santosh Kumar; Digital combinational circuit optimization using invasive weed optimization technique Lat. Am. J. Phys. Educ. Vol 8, 3, 548, 2014.

11. Divakar, T; Panda, D; Finding optimal feed location of a microstrip patch antenna using hfss, International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, 2, 10, 2014.

12. Sethi, Nilambar; Das, SK; Panda, DC; Probabilistic interpretation of complex fuzzy set, Int. J. Comput. Sci. Eng. Inf. Technol, 2, 31-44, 2012.

13. Das, SK; Panda, DC; Sethi, Nilambar; Gantayat, SS; Inductive learning of complex fuzzy relation, Int J Comput Sci Eng Inf Technol, 1, 29-38, 2011.

14. Panda, Dhruba C; Pattnaik, Shyam S; Devi, Swapna; Mishra, Rabindra K; Application of FIR-neural network on finite difference time domain technique to calculate input impedance of microstrip patch antenna, International Journal of RF and Microwave Computer-Aided Engineering, 20, 2, 158-162, 2010.

15. Neog, Dipak K; Pattnaik, Shyam S; Panda, Dhruba C; Devi, Swapna; Dutta, Malaya; Bajpai, OP; New expression for the resonance frequency of an E-shaped microstrip patch antenna, Microwave and Optical Technology Letters, 48, 8, 1561-1563, 2006.

16. Neog, Dipak K; Pattnaik, Shyam S; Panda, Dhruba C; Devi, Swapna; Khuntia, Bonomali; Dutta, Malaya; Design of a wideband microstrip antenna and the use of artificial neural networks in parameter calculation, IEEE Antennas and Propagation Magazine, 47, 3, 60-65, 2005.

17. Khuntia, Bonomali; Pattnaik, Shyam S; Panda, Dhruba C; Neog, Dipak K; Devi, S; Dutta, Malay; Genetic algorithm with artificial neural networks as its fitness function to design rectangular microstrip antenna on thick substrate, Microwave and Optical Technology Letters, 44, 2, 144-146, 2005.

18. Neog, DK; Pattnaik, SS; Dutta, M; Devi, S; Khuntia, B; Panda, DC; Inverted L-shaped and parasitically coupled inverted L-shaped microstrip patch antennas for wide bandwidth, Microwave and Optical Technology Letters, 42, 3, 190-192, 2004.

19. Khuntia, Bonomali; Pattnaik, Shyam S; Panda, Dhruba C; Neog, Dipak K; Devi, S; Dutta, Malay; A simple and efficient approach to train artificial neural networks using a genetic algorithm to calculate the resonant frequency of an RMA on thick substrate, Microwave and Optical Technology Letters, 41, 4, 313-315, 2004.

20. Pattnaik, Shyam S; Khuntia, Bonomali; Panda, Dhruba C; Neog, Dipak K; Devi, S; Calculation of optimized parameters of rectangular microstrip patch antenna using genetic algorithm, Microwave and Optical Technology Letters, 37, 6, 431-433, 2003.

21. Patnaik, SS; Khuntia, B; Panda, DC; Devi, S; Calculation of optimized parameters of rectangular microstrip antenna using GA, Microwave and optical technology letters, 23, 4, 431-433, 2003.

22. Pattnaik, Shyam S; Panda, Dhruba C; Devi, S; Input impedance of rectangular microstrip patch antenna using artificial neural networks, Microwave and Optical Technology Letters, 32, 5, 381-383, 2002.

23. Pattnaik, Shyam S; Panda, Dhruba C; Devi, S; Radiation resistance of coax-fed rectangular microstrip patch antenna with the use of artificial neural networks, Microwave and Optical Technology Letters, 34, 1, 51-53, 2002.

24. Pattnaik, Shyam S; Panda, Dhruba C; Devi, S; Input impedance of circular microstrip antenna using artificial neural networks, IETE Technical Review, 19, 3, 125-127, 2002.

25. Pattnaik, Shyam S; Panda, Dhruba C; Devi, S; Tunnel-based artificial neural network technique to calculate the resonant frequency of a thick-substrate microstrip antenna, Microwave and Optical Technology Letters, 34, 6, 460-462, 2002.

26. Pattnaik, Shyam S; Panda, Dhruba C; Devi, S; A novel method of using ANN for calculation of input impedance of rectangular microstrip antenna, Microwave Opt Technol Lett, 32, 381-383, 2002.

27. Devi, S; Pattnaik, Shyam S; Panda, Dhruba C; Input impedance of rectangular microstrip patch antenna using artificial neural networks, Microwave and Optical Technology Letters, 32, 5, 381-383, 2002.

Funded Projects:

Development of High Speed RCS Computation Scheme	DRDO, Govt. of India	Rs. 27,67, 283/-	2016-18

University Administration Positions Held:

HOD (twice), Superintendent Boys' Hostel (twice), Secretary to sports council, and NSS Programme co-ordinator.

Fellowships:

Senior Research Fellow (CSIR), 2003-6.
DST Young Scientist, 2010.

Sponsored Quality Improvement Programmes Conducted:

1. AICTE Sponsored SDP on Soft Computing Techniques for Engineering Applications, 1-12-2008-13-12-2008
2. AICTE Sponsored SDP on Teaching Electromagnetic Theory with Modern Visualization Techniqes, 16-11-09—28-11-09
3. AICTE Sponsored SDP on Evolutionary Optimization and Softcomputing Techniques, 31-05-2010-05-06-2010

Seminar/Technical Events Conducted/Organised:

1. Convener, NSFOSS, 2010,11
2.Two Robotic Workshops, 13-03-2010-14-03-2010
3. Half Day Workshop on NIELVIS and Labview, 18-04-2017

Lab Developed:

1.MODROB(8023/RID/BOR/MOD/292/7/8, Dt. 20/06/2008), AICTE

Membership of Professional Bodies:

Member ISTE, IETE, IEEE

Extra curricular Activities:

1.Badminton, Lawn-Tennis, Table-Tennis and western music theory
2.Popularization of Free and Open Source Software

Flagship Conference Attended:

1. IEEE-InCAP, Ahmedabad, 2019.

2. Indian Antenna Week, 5-9 June, DIAT Pune, 2017

3. IEEE-Applied Electromagnetics Conference, 2007 (Kolkata), 2009 (Kolkata), 2013 (Bhubaneswar), 2017 (Aurangabad).

4.International Conference on Antenna Technologies, ICAT, ISRO, Ahmedabad, Feb. 21-22, 2005.

5. National Symposium on Antenna and Propagation (APSYM), Kochi, India, 2004, 2008.