



# Dr Bonomali Khuntia

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## Expertise

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### Computer Science Theory and Methods

Artificial Intelligence, Machine Learning

## Work experience

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1. Berhampur University 2011 — Present

Assistant Professor

Ganjam

2. Berhampur University 2011 — 2023

Assistant Professor (Grade-III)

Ganjam

## Education

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1. PhD - 2010

Tezpur University

# Research Project

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## Study and Analysis of Hybrid Genetic Algorithm/Artificial Neural Networks and Finite Difference Time Domain Technique for Synthesis of Microstrip Antenna

Role: Principal Investigator  
Year 2008, Amount 1050000

## Publication

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- 1. Artificial intelligence (AI): a new window to revamp the vector-borne disease control**  
Nayak B.;Khuntia B.;Murmu L.K.;Sahu B.;Pandit R.S.;Barik T.K.  
Parasitology Research, Volume 122, Year 2023, Pages 369-379
- 2. A Novel Approach for Diabetic Retinopathy Screening Using Asymmetric Deep Learning Features**  
Jena P.K.;Khuntia B.;Palai C.;Nayak M.;Mishra T.K.;Mohanty S.N.  
Big Data and Cognitive Computing, Volume 7, Year 2023
- 3. Prediction of COVID-19 X-Ray Image Using DenseNet Transfer Learning**  
Radhanath Patra ., Bonomali Khuntia ., Dhruba Charan Panda .,  
Lecture Notes in Networks and Systems, Volume 395, Year 2022, Pages 69-76
- 4. Hybrid optimization-Based Structural design of deep Q Network with Feature Selection Algorithm for Medical data Classification**  
Patra, Radhanath and Khuntia, Bonomali and Panda, Dhruba Charan  
International Journal of Swarm Intelligence Research, Volume 13, Year 2022
- 5. Application of Information Gain Based Weighted LVQ for Heart Disease Diagnosis**  
Patra, Radhanath and Khuntia, Bonomali and Panda, Dhruba Charan  
International Journal of Intelligent Systems and Applications in Engineering, Volume 10, Year 2022,  
Pages 454-459
- 6. Content Based Image Retrieval using Weighted Feature Fusion**  
Jena, Pradeep Kumar and Khuntia, Bonomali and Palai, Charulata and Nayak, Manjushree and Mishra,  
Tapas Kumar  
Computer Integrated Manufacturing Systems, Volume 28, Year 2022, Pages 799--818
- 7. Fractional rider gradient descent applied U-Net based segmentation with optimal deep maxout network for lung cancer classification using histopathological images**  
Radhanath Patra ., Bonomali Khuntia ., Dhruba Charan Panda .,  
Research on Biomedical Engineering, Volume 38, Year 2022, Pages 599-615

8. **Analysis and Prediction Of Pima Indian Diabetes Dataset Using SDKNN Classifier Technique**

Radhanath Patra ., Bonomali khuntia .,

IOP Conference Series: Materials Science and Engineering, Volume 1070, Year 2021, Pages 012059

9. **Integrated Security Mechanism For Smart Applications using Feedback And Blowfish Cryptosystem**

Kumar, P.P. and Sharma, Sk. and Khuntia, Bonomali

International Journal of Grid and Distributed Computing, Volume 13, Year 2020, Pages 2178--2192

10. **Distributed authentication security for iot using dass and loki91**

Santosh Kumar Sharma ., Bonomali Khuntia .,

Lecture Notes in Electrical Engineering, Volume 612, Year 2020, Pages 181-196

11. **Service Layer Security Architecture for IOT Using Biometric Authentication and Cryptography Technique**

Santosh Kumar Sharma ., Bonomali Khuntia .,

Smart Innovation, Systems and Technologies, Volume 169, Year 2020, Pages 827-837

12. **Significance of texture feature in NIR face recognition**

Jena P.K.;Khuntia B.;Anand R.;Patnaik S.;Palai C.

2020 1st International Conference on Power, Control and Computing Technologies, ICPC2T 2020, Volume , Year 2020, Pages 21-26

13. **Integrated security for data transfer and access control using authentication and cryptography technique for Internet of things**

Sharma, Santosh Kumar and Khuntia, Bonomali

International Journal of Knowledge-based and Intelligent Engineering Systems, Volume 24, Year 2020, Pages 303--309

14. **Predictive Analysis of Rapid Spread of Heart Disease with Data Mining**

Radhanath Patra ., Bonomali Khuntia .,

Proceedings of 2019 3rd IEEE International Conference on Electrical, Computer and Communication Technologies, ICECCT 2019, Volume , Year 2019

15. **Content Based Image Retrieval using Adaptive Semantic Signature**

Jena P.K.;Khuntia B.;Palai C.;Pattanaik S.R.

2019 IEEE 5th International Conference for Convergence in Technology, I2CT 2019, Volume , Year 2019

16. **Encrusted security for internet of things using MAC-OMURA**

Namkyun Baik, Santosh Kumar Sharma, Bonomali Khuntia

International Journal of Control and Automation, Volume 11, Year 2018, Pages 45--54

17. **A survey on layered approach for internet of things security**

Sharma, Santosh Kumar and Khuntia, Bonomali

SERSC, ASTL, SMART DSC, Volume 147, Year 2017, Pages 26--33

18. **Quality Assessment of Web Services using Soft Computing Techniques**

19. **Design of a wideband microstrip antenna and the use of artificial neural networks in parameter calculation**  
Neog D.;Pattnaik S.;Panda D.;Devi S.;Khuntia B.;Dutta M.  
IEEE Antennas and Propagation Magazine, Volume 47, Year 2005, Pages 60-65
20. **Genetic algorithm with artificial neural networks as its fitness function to design rectangular microstrip antenna on thick substrate**  
Khuntia B.;Pattnaik S.;Panda D.;Neog D.;Devi S.;Dutta M.  
Microwave and Optical Technology Letters, Volume 44, Year 2005, Pages 144-146
21. **Application of a genetic algorithm in an artificial neural network to calculate the resonant frequency of a tunable single-shortening-post rectangular-patch antenna**  
Pattnaik S.;Khuntia B.;Panda D.;Neog D.;Devi S.;Dutta M.  
International Journal of RF and Microwave Computer-Aided Engineering, Volume 15, Year 2005, Pages 140-144
22. **Application OF NFDTD for the Calculation of Parameters of Microstrip Antenna**  
Panda, Dhruba C and Pattnaik, Shyam S and Mishra, Rabindra K and Khuntia, Bonomali and Devi, Swapna and Neog, Dipak K and Assam, Arunachal Pradesh  
, Year 2005, Pages 69
23. **A Novel Patch Antenna for Wide Band Generation**  
Neog, Dipak K and Pattnaik, Shyam S and Dutta, Malaya and Panda, Dhruba C and Devi, Swapna and Khuntia, Bonomali  
, Year 2005, Pages 344
24. **Design of Knowledge Based Continuous Genetic Algorithm to Train Artificial Neural Networks and Its Application on Rectangular Microstrip Antenna**  
Devi, S and Bonomali Khuntia, Shyam S Pattnaik and Panda, Dhruba C and Dutta, Malay and Neog, Dipak K  
, Year 2005, Pages 55
25. **Inverted L-shaped and parasitically coupled inverted L-shaped microstrip patch antennas for wide bandwidth**  
Neog D.;Pattnaik S.;Dutta M.;Devi S.;Khuntia B.;Panda D.  
Microwave and Optical Technology Letters, Volume 42, Year 2004, Pages 190-192
26. **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**  
Khuntia B.;Pattnaik S.;Panda D.;Neog D.;Devi S.;Dutta M.  
Microwave and Optical Technology Letters, Volume 41, Year 2004, Pages 313-315
27. **Calculation of optimized parameters of rectangular microstrip patch**

## antenna using genetic algorithm

Shyam S. Pattnaik ., Bonomali Khuntia ., Dhruva C. Panda ., Dipak K. Neog ., S. Devi .,  
Microwave and Optical Technology Letters, Volume 37, Year 2003, Pages 431-433

28. Coupling of annn with GA for effective optimization of dimensions of rectangular patch antenna on thick substrate microstrip patch antenna on thick substrate

D.C. Panda ., S.S. Pattnaik ., B. Khuntia ., D.K. Neog ., S. Devi .,  
ISAPE 2003 - 2003 6th International Symposium on Antennas, Propagation and EM Theory, Proceedings,  
Volume , Year 2003, Pages 720-725

29. Initializing artificial neural networks by genetic algorithm to calculate the resonant frequency of single shorting post rectangular patch antenna

Devi S.;Panda D.;Pattnaik S.;Khuntia B.;Neog D.  
IEEE Antennas and Propagation Society, AP-S International Symposium (Digest), Volume 3, Year 2003,  
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30. Calculation of optimized parameters of rectangular microstrip antenna using GA

Patnaik, SS and Khuntia, B and Panda, DC and Devi, S  
Microwave and optical technology letters USA, Volume 23, Year 2003, Pages 431--433

31. Tunnel based artificial neural networks to calculate the radiation pattern of commercially available cell phone antenna in presence of human head

S.S. Pattnaik ., D.C. Panda ., B. Khuntia ., S. Devi ., D.K. Neog .,  
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Pages 330-334

32. Tunnel based artificial neural networks to calculate the radiation pattern of commercially available cell phone antenna in presence of human head

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