Ambarish G. Mohapatra, Ph.D.

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RESEARCH INTERESTS
- ✓ Fiber Bragg Grating Sensors
- ✓ Precision Agriculture and Decision Support System
- ✓ IoT/M2M/WSN device
- ✓ Design of Pressure Transducers
- ✓ Load transducers and smart transmitters (Live Zero)

Academic Qualifications

- ✓ Ph. D. (Engineering): Suresh Gyan Vihar University, Jaipur, India.
- ✓ M. Tech.: Sensor System Technology, VIT University, Vellore, India.
- ✓ B.Tech: National Institute of Science and Technology, Berhampur, Orissa, India. Specialization: Electronics Engineering.

Teaching Experience/Industrial Experience/Research Experience
- ✓ Dec-2010 to Present
  Silicon University, Bhubaneswar, Orissa, India.
- ✓ Jan-2009 to Nov-2010,
  Senior Lecturer in Applied Electronics and Instrumentation Department, Krupajal Engineering College, Bhubaneswar, Orissa, India.

P U B L I C A T I O N S

JOURNAL ARTICLES & CONFERENCE PAPERS
CONFERENCE PAPERS:

[1]. A. Mohanty, **A. G. Mohapatra** and S. K. Mohanty, "Exploring the Factors Influencing Customer Satisfaction in the Hotel Industry and Facilitating Decision-Making through an Analytical Hierarchy Process (AHP) Based Model," 2023 1st International Conference on Circuits, Power and Intelligent Systems (CCPIS), Bhubaneswar, India, 2023, pp. 1-5, doi: 10.1109/CCPIS59145.2023.10291347.

[2]. N. Nayak, B. Keswani, D. R. Nayak, P. Sharma, **A. G. Mohapatra** and A. Khanna, "Fiber Bragg grating temperature sensor and calibration scheme in high magnetic field environment : An application for aluminium electrolysis cell in potline," 2022 International Conference on Computing, Communication, and Intelligent Systems (ICCCIS), Greater Noida, India, 2022, pp. 86-90, doi: 10.1109/ICCCIS56430.2022.10037719.

[3]. D. R. Nayak, **A. G. Mohapatra**, B. Keswani, A. Mohanty, P. K. Tripathy and A. K. Samantaray, "IoT enabled predictive maintenance of diesel generator in the context to Industry 4.0," 2021 IEEE 19th OITS International Conference on Information Technology (OCIT), 2021, pp. 364-368, doi: 10.1109/OCIT53463.2021.00078.

[4]. **Ambarish G. Mohapatra**, Pradyumna Kumar Tripathy, Maitri Mohanty, Ashish Khanna, "Fiber Bragg Grating (FBG) sensor for the monitoring of Cardiac Parameters in healthcare facilities", in Proceedings of 2nd Doctoral Symposium on Computational Intelligence (DoSCI-2021), Springer, Lucknow, India, 2021.

[5]. **Ambarish G. Mohapatra**, Pradyumna Kumar Tripathy, Maitri Mohanty, Ashish Khanna, "IoT enabled distributed cardiac monitoring using Fiber Bragg Grating (FBG) sensing technology", in Proceedings of 2nd Doctoral Symposium on Computational Intelligence (DoSCI-2021), Springer, Lucknow, India, 2021.

[6]. Bright Keswani, Prity Vijay, Narayan Nayak, Poonam Keswani, Saumyaranjan Dash, Laxman Sahoo, Tarini Ch. Mishra, **Ambarish G. Mohapatra**, "Imbalanced Dataset Performance Hindrance Challenge for Machine Learning Classification Algorithms", Proceedings of the International Conference on Innovative Computing and Communication (ICICC-2019), Springer Series: Advances in Intelligent Systems and Computing, Pages In-Press, First Online: 29 February 2020.
DOI: https://doi.org/10.1007/978-981-15-1286-5.38. Scopus

[7]. Saroj Kumar Lenka, **Ambarish G. Mohapatra**," Gradient Descent with Momentum based neural network pattern classification for the prediction of soil moisture content in Precision Agriculture", Proceedings of the IEEE International Symposium on Nanoelectronic and Information Systems (iNIS), Pages 63-66, 21-23 December 2015. Scopus

[8]. **Ambarish G. Mohapatra**, Saroj Kumar Lenka, "Hybrid Decision Model for Weather Dependent Farm Irrigation Using Resilient Backpropagation based Neural Network Pattern Classification and Fuzzy Logic", Proceedings of the Springer Smart Innovation, Systems and Technologies (SIST) Book series, Chapter 30, Pages 1-12, 2016. Scopus

[9]. **Ambarish G. Mohapatra**, Saroj Kumar Lenka, "Neural Network Pattern Classification and Weather Dependent Fuzzy Logic Model for Irrigation Control in WSN Based Precision Agriculture", ICISP-2015, Proceedings of the Elsevier Procedia Engineering, Volume 78, Pages 499-506, 2016.

[10]. S.G. Mohapatra, **A.G. Mohapatra**, Dept. Electronics & Telecommunication Engineering, Silicon Institute of Technology, Bhubaneswar, India, S.K. Lenka, "Cyclostationarity based windowing method for spectrum sensing in cognitive radio networks", IEEE International Conference on Information Communication and Embedded Systems (ICICES), Pages 603-608, 2013.

[11]. Subhashri G. Mohapatra, **Ambarish G. Mohapatra**, Dr. S. K. Lenka, "Performance Evaluation Of Cyclostationary Based Spectrum Sensing In Cognitive Radio Network", Pages 90-97, IEEE IMAQ4S 2013.

[12]. Saroj Kumar Lenka, **Ambarish G. Mohapatra**, "A Study on MOEMS based MicroSpectrometer for Real-Time Precision Agriculture Application", International Conference on Technical and Executive Innovation in Computing and Communication (TEICC 2012), Pages 490-493, 2012.

[13]. Nalini Singh, **Ambarish G. Mohapatra**, Biranchi Narayan Rath and Gurukalyan Kanungo, "Breast cancer mass detection in Mammograms using K-means and fuzzy C-means clustering", 4th IEEE ICCSIT, Chengdu, China, Volume 6, Number 3, Pages 122-126, 2011.

[14]. Dr. Saroj Ku. Lenka, **Ambarish G. Mohapatra**, Sasmita Nayak, "Wireless Sensor Network used for monitoring the quality of drinking water", National Seminar on "24th National Convention of IPHE (I) (Institute of Public Health Engineers, Govt. Of India) in Bhubaneswar", Pages 105-113, February-2011.

[15]. Neeta Kiran, **Ambarish G. Mohapatra**, "Towards A Distributed Data Mining System for Tourism Industry", National Conference on "Future Trends on Data Mining" at Gandhi Engineering College, Bhubaneswar, May-2010.

[16]. Dr. Saroj Ku. Lenka, **Ambarish G. Mohapatra**, Sidharth Das and Sonali Pradhan, "Wireless sensor network based cattle health monitoring system for early detection of disease", IEEE ICINC 2010, Malaysia, Volume 2, Pages 337-341, May 2010.

JOURNAL ARTICLES:

[17]. **A. G. Mohapatra**, A. Mohanty, A. Khanna, D. Gupta, A. K. Dutta and A. Alkhayyat, "Enhancing Consumer Electronics in Healthcare 4.0: Integrating Passive FBG Sensor and IoMT Technology for Remote HRV Monitoring," in IEEE Transactions on Consumer Electronics, doi: 10.1109/TCE.2024.3424975.

[18]. Mohanty, Maitri; Rath, Premansu Sekhara; Mohapatra, **Ambarish G.**, IoMT-based Heart Rate Variability Analysis with Passive FBG Sensors for Improved Health Monitoring, Volume 15, Issue 01, 2024, http://dx.doi.org/10.12785/ijcds/150180

[19]. **Mohapatra, A.G.**, Mohanty, A. & Tripathy, P.K. IoT-Enabled Predictive Maintenance and Analytic Hierarchy Process Based Prioritization of Real-Time Parameters in a Diesel Generator: An Industry 4.0 Case Study. SN COMPUT. SCI. 5, 145 (2024). https://doi.org/10.1007/s42979-023-02508-3

[20]. **Ambarish Gajendra Mohapatra**, Anita Mohanty, Nihar Ranjan Pradhan, Sachi Nandan Mohanty, Deepak Gupta, Meshal Alharbi, Ahmed Alkhayyat, Ashish Khanna, An Industry 4.0 implementation of a condition monitoring system and IoT-enabled predictive maintenance scheme for diesel generators, Alexandria Engineering Journal, Volume 76, 2023, Pages 525-541. ISSN 1110-0168, https://doi.org/10.1016/j.aej.2023.06.026.

[21]. **Ambarish G. Mohapatra**, Jaideep Talukdar, Tarini Ch. Mishra, Sameer Anand, Ajay Jaiswal, Ashish Khanna and Deepak Gupta, "Fiber Bragg Grating sensors driven structural Health Monitoring by using Multimedia-enabled IoT and Big Data Technology", Multimedia Tools and Applications, Springer, 2021.

[22]. **Ambarish G. Mohapatra**, Ashish Khanna, Deepak Gupta, Maitri Mohanty, Victor Hugo C. de Albuquerque, An Experimental Approach to Evaluate Machine Learning Models for the Estimation of Load Distribution on Suspension Bridge using FBG Sensors and IoT, Computational Intelligence, Willy, In-Press, July 2020. Indexed and Abstracted: Sci-E, Scopus.

[23]. Ajaya K. Tripathy, Pradyumna K. Tripathy, **Ambarish G. Mohapatra**, Niranjan K Ray, Saraju P Mohanty, WeDoShare: A Ridesharing Framework in Transportation Cyber-Physical System for Sustainable Mobility in Smart Cities, IEEE Consumer Electronics Magazine, Volume: 9, Issue: 4, 1st July 2020. Indexed and Abstracted: Sci-E, Scopus.
(DOI: 10.1109/MCE.2020.2978373)

[24]. Ajaya K. Tripathy, **Ambarish G Mohapatra**, Saraju P. Mohanty, Elias Kougianos, Amit M. Joshi, Gautam Das, EasyBand: A Wearable for Safety-Aware Mobility during Pandemic Outbreak, IEEE Consumer Electronics Magazine, 13 May 2020. Indexed and Abstracted: Sci-E, Scopus. (DOI: 10.1109/MCE.2020.2992034)

[25]. Bright Keswani, **Ambarish G. Mohapatra**, Poonam Keswani, Ashish Khanna, Deepak Gupta, Joel J P C Rodrigues, Improving Weather Dependent Zone Specific Irrigation Control Scheme in IoT and BigData Enabled Self Driven Precision Agriculture Mechanism, Enterprise Information Systems, Print ISSN: 1751-7575, Online ISSN: 1751-7583, Taylor & Francis, Pages 1-23, 2020. Indexed and Abstracted: Sci-E, Scopus.
(DOI: https://doi.org/10.1080/17517575.2020.1713406)

[26]. **Ambarish G. Mohapatra**, Bright Keswani, Shivani Nanda, Abhishek Ray, Ashish Khanna, Deepak Gupta, Poonam Keswani, Precision local positioning mechanism in underground mining using IoT-enabled WiFi platform, International Journal of Computers and Applications, ISSN: 1206-212X (Print) 1925-7074 (Online), Taylor & Francis, Pages 1-12, 2018.

[27]. Bright Keswani, **Ambarish G. Mohapatra**, Amarjeet Mohanty, Ashish Khanna, Joel J. P. C. Rodrigues, Deepak Gupta, Victor Hugo C. de

Albuquerque, Adapting Weather Conditions Based IoT Enabled Smart Irrigation Technique in Precision Agriculture Mechanisms, Neural Computing and Applications, Springer, Pages 1–16, 2018.

[28].   **Ambarish G. Mohapatra**, Dr. Bright Keswani, Dr. Saroj Kumar Lenka, "Neural Network and Fuzzy Logic Based Smart DSS Model for Irrigation Notification and Control in Precision Agriculture", Proceedings of the National Academy of Sciences, India Section A: Physical Sciences, Springer, Volume 6, Issue 24, Pages 1-10, 2018.

[29].   **Ambarish G. Mohapatra**, Saroj Kumar Lenka, "Hybrid Decision Support System using PLSR¬Fuzzy Logic for GSM based Site Specific Irrigation Notification and Control in Precision Agriculture", International Journal of Intelligent Systems Technologies and Applications, Inderscience, Volume 15, Issue 1, Pages 4-18, 2016.

[30].   **Ambarish G. Mohapatra**, Saroj Kumar Lenka, "Neuro-Fuzzy-Based Smart DSS for Crop Specific Irrigation Controland SMS Notification Generation for Precision Agriculture", International Journal of Convergence Computing, Inderscience, Volume 2, Issue 1, Pages 3- 22, 2016.

[31].   Laxmi Shaw, Sangeeta Bagha, **Ambarish G. Mohapatra**, and Narayan Nayak Member, "Kernel Approach on Detection of Ethanol Concentration Using ZnO Gas Sensor", International Journal of Machine Learning and Computing, Volume 2, Issue 1, Pages 71-75, February 2012.

[32].   Nalini Singh, **Ambarish G Mohapatra**, Biranchi Narayan Rath, and Guru Kalyan Kanungo, "GUI Based Automatic Breast Cancer Mass and Calcification Detection in Mammogram Images using K-means and Fuzzy C-means Methods", International Journal of Machine Learning and Computing, Volume 2, Issue 1, Pages 7-12, February 2012.

[33].   **Ambarish G. Mohapatra**, Saroj kumar lenka, "Motion artifact cancellation in ambulatory ECG measurement System for the detection of cardiac diseases", Advances in computational research, Volume 3, Issue 1, Pages 42-49, December 2011.

ANY OTHER

AWARDS

[1]. 2013–2016 Career Award For Young Teachers (CAYT) for the project on "Wireless Sensor Network in Precision Agriculture" sponsored by All India Council Technical Education (AICTE), New Delhi, India.

[2]. 2020-2021 University Foundation Day Award-2020 by Biju Patnaik University of Technology, Odisha, India in the discipline of engineering and technology for research publications. Received on: 21st November 2020.

[3]. 2023-2024 University Foundation Day Award-2023 by Biju Patnaik University of Technology, Odisha, India in the discipline of engineering and technology for research publications. Received on: 21st November 2023.