Narayan Nayak, M.Tech.

Designation : ASSOCIATE PROFESSOR

Department : Department of ELECTRONICS ENGINEERING

(JOINED THE INSTITUTE IN YEAR 2010)

Contact : +91-9437471852,+91-8455918616

Email : narayan@silicon.ac.in

RESEARCH INTERESTS

- ✓ DesigningofControllerforUnder waterVehicle
- ✓ Softcomputinganditsapplication
- ✓ FBGsensorsenabledwithIOT
- ✓ Signalprocessing
- ✓ Optical communication
- ✓ Machine learning

Academic Qualifications

M.Tech in Electronics and Communication, BPUT, Rourkela, Odisha.
B.E in Instrumentation and Control, PUNE University, Maharastra.

Teaching Experience/Industrial Experience/Research Experience

- ✓ Teaching Experience : 23 years
- ✓ Research Experience : 8 years

PUBLICATIONS

JOURNALARTICLES

[1]. L.Shaw, S.Bagha, A.G. Mohapatra, **N.Nayak**, "Kernel approach on detection of ethanol concentration using Zn Ogassensor, International Journal of Machine Learning and computing vol.2,71(2012)

[2]. **N. Nayak**, S. R. Das, T. K. Panigrahi, H. Das, S. R. Nayak, K. K. Singh, S. S. Askar, et al., "Overshoot reduction using adaptive neuro-fuzzy inference system for an autonomous underwater vehicle," Mathematics, vol. 11, no. 8, p. 1868, 2023.

[3]. D. R. Nayak, N. N. Ghuge, A. G. Mohapatra, P. Sharma, **N. Nayak**, S. Satapathy, and A. Khanna, "Identification of faults in rotating machines using high precision FBG vibration sensor: A case study on PM schemes," Indonesian Journal of Electrical Engineering and Computer Science, vol. 36, no. 1, 2024.

[4]. **N. Nayak**, A. G. Mohapatra, and A. Khanna, "Comprehensive review of fiber Bragg grating sensors: Principles, technologies, and diverse applications across industries," Journal of Prop. Technology, Vol. 45 No. 03 ,pp. 74-85 ,2024

[5]. D. R. Nayak, N. N. Ghuge, A. G. Mohapatra, P. Sharma, and **N. Nayak**, "Enhancing industrial operations through integrated FBG vibration sensors in predictive maintenance decision support systems," *Journal of Prop. Technology*, vol. 45, no. 03, pp. 4304-4316, 2024.

CONFERENCES

[1]. B. Keswani, P. Vijay, **N. Nayak**, P. Keswani, S. Dash, L. Sahoo, T. C. Mishra, et al., "Adapting machine learning techniques for credit card fraud detection," in International Conference on Innovative Computing and Communications (ICICC), 2020.

[2]. **N. Nayak**, P. Das, and S. R. Das, "Heading plane control of an autonomous underwater vehicle: A novel fuzzy and model reference adaptive control approach," in 2020 Third International Conference on Advances in Electronics, Computers and Communications (ICAECC), 2020.

[3]. **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," in 2022 International Conference on Computing, Communication, and Intelligent Systems (ICCCIS), 2022.

[4]. **N. Nayak**, B. Ghosal, D. R. Nayak, and A. G. Mohapatra, "Tracking control of an inverted pendulum system: A novel radial basis function neural network supervisory control approach," in 2023 1st International Conference on Circuits, Power and Intelligent Systems (ICCPIS), 2023.

[5]. D. N. Choudhury, and **N. Nayak**, "An effective optimization of EMG based artificial prosthetic limbs," in International Conference on Innovations in Intelligent Computing and Applications (ICAI), 2022.

[6]. **N. Nayak**, B. Keswani, D. R. Nayak, P. Sharma, A. G. Mohapatra, and A. Khanna, "Performance evaluation of DP-QPSK modulation for underwater optical wireless communication using a green light propagation," in 2022 OITS International Conference on Information Technology (OCIT), pp. 428-432.

A N Y   O T H E R

BOOK CHAPTER

[1]. D. R. Nayak, P. Sharma, A. G. Mohapatra, **N. Nayak**, B. Keswani, and A. Khanna, "IoT-driven predictive maintenance approach in Industry 4.0: A fiber Bragg grating (FBG) sensor application," in Fog Computing for Intelligent Cloud IoT Systems, 2024, pp. 203-227.

CONFERENCES ATTENDED

[1]. International Conference on Information Technology (OCIT),**14-16 Dec. 2022**,KIIT University, Bhubaneswar.

[2]. International Conference on Computing, Communication, and Intelligent Systems (**ICCCIS 2022**) ; 4-5 November 2022, Greater Noida,

[3]. International Conference on Circuits, Power and Intelligent Systems (ICCPIS),1 to 3 September 2023, Silicon Institute of Technology,BBSR

[4]. IEEE Fifth International Conference on Advances in Electronics, Computers, and Communications (ICAECC), 7-8 November 2023, REVA University , Bengaluru