Dr. Nabin Kumar Naik- Ph.D.

Name   : **Nabin Kumar Naik**

Designation   : Senior Assistant Professor

Department   : Electronics & Communication Engineering
(JOINED THE INSTITUTE IN 2012)

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RESEARCH INTERESTS

- Image processing, Machine Learning and Deep Learning
- Low Power VLSI, FPGA

Academic Qualifications

- Ph. D. (Electronics Engineering) at Sambalpur University, Burla, Odisha, India
- M. E (VLSI Design) Anna University, Chennai, Tamilnadu, India

Teaching Experience/Industrial Experience/Research Experience

Teaching Experience – 14 years+
Research Experience –5 years

PUBLICATIONS

JOURNALS

1. Naik, N. K., Sethy, P. K., Behera, S. K., & Amat, R. (2024). A methodical analysis of deep learning techniques for detecting Indian lentils. *Journal of Agriculture and Food Research*, *15*, 100943.https://doi.org/10.1016/j.jafr.2023.100943. (IF :3.8)

2. Naik, N. K., Sethy, P. K., Devi, A. G., & Behera, S. K. (2024). Few-shot learning convolutional neural network for primitive Indian paddy grain identification using 2D-DWT injection and grey wolf optimizer algorithm. *Journal of Agriculture and Food Research*, *15*, 100929. doi: https://doi.org/10.1016/j.jafr.2023.100929. (IF :3.8)

3. Naik, N. K., Subbarao, M. V., Sethy, P. K., Behera, S. K., & Panigrahi, G. R. (2024). Machine learning with analysis-of-variance-based method for identifying rice varieties. *Journal of Agriculture and Food Research*, *18*, 101397.(IF : 3.8)

4. Naik, N. K., Sethy, P. K., & Behera, S. K. (2024). Identification, Classification, and Grading of Crops Grain Using Computer Intelligence Techniques: A Review. *Advanced Computational Methods for Agri-Business Sustainability*, 225-242. (SCOPUS Indexed)

5. Naik, N. K., Sethy, P. K., Amat, Rajat., Behera, S. K., & Biswas, Preesat. (2023). Evaluation of optimization techniques with support vector machine for identification of dry beans, Indonesian Journal of Electrical Engineering and Computer Science,32(3).704~714. DOI: 10.11591/ijeecs.v32.i2.pp704-714.(SCOPUS Indexed).

6. Naik, N.K., Sethy, P.K., Devi, A.G., Behera, S.K. (2023). Hybrid enhanced featured AlexNet for milled rice grain identification. Ingénierie des

Systèmes d'Information, Vol. 28, No. 3, pp. 663-668. https://doi.org/10.18280/isi.280315 (SCOPUS Indexed)

CONFERENCE PAPERS PRESENTED

1. Naik, N. K., Sethy, P. K., Devi, A. G., Amat, R., Behera, S. K., & Biswas, P. (2024, January). Durum Wheat Classification Using Feature Selection, Bayesian Optimization and Support Vector. In *2024 Fourth International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT)* (pp. 1-6). IEEE.doi: 10.1109/ICAECT60202.2024.10468887.

2. Naik, N. K., Sethy, P. K., & Behera, S. K. (2023, April). Almond Quality Assessment using Image Processing Techniques. In 2023 IEEE 8th International Conference for Convergence in Technology (I2CT) (pp. 1-4). IEEE. doi: 10.1109/I2CT57861.2023.10126476.

3. Naik, N.K., Sethy, P.K., Panigrahi, M., Behera, S.K. (2023). Support Vector Machine Classifier for Wheat Grain Identification Based on Grid Search Optimization Technique. In: Tuba, M., Akashe, S., Joshi, A. (eds) ICT Systems and Sustainability. ICT4SD 2023. Lecture Notes in Networks and Systems, vol 765. Springer, Singapore. https://doi.org/10.1007/978-981-99-5652-4_22.(SCOPUS Indexed)

4. Naik, N. K., & Sethy, P. K. (2022, November). Roasted Coffee beans Classification based on Convolutional Neural Network. In *2022 International Conference on Futuristic Technologies (INCOFT)* (pp. 1-3). IEEE. doi: 10.1109/INCOFT55651.2022.10094378.

SEMINAR/WORKSHOP/FDP PARTICIPATED

1. National workshop on "Embedded computer Applications" organized by Sambalpur university Institute of information Technology, Sambalpur University on 4th August 2013 at. Silicon Institute of Technology, Sambalpur.

2. Workshop on "Eyebotics" on 31st March to 1st April 2013 at. Silicon Institute of Technology organized by KC Robotics& Embedded Pvt. Ltd.

3. Two-week ISTE workshop on "Analog Electronics" conducted by IIT, Kharagpur from 4th June to 14th June 2013 Under NMEICT at Silicon Institute of Technology, Sambalpur.

4. One Day workshop on "Information Security Awareness" organized by NIT Rourkela and C-DAC Hyderabad on 15th December, 2013 at Silicon Institute of Technology, Sambalpur.

5. One Day FDP on "Emerging Research in Applied Computer and Electronics" organized by Sambalpur University Institute of Technology, Burla on 19th April 2014.

6. Two-week ISTE workshop on "Control Systems" conducted by IIT, Kharagpur from 2nd December to 12th December, 2014 Under NMEICT at Silicon Institute of Technology, Sambalpur.

7. Two-week ISTE workshop on "Signal & Systems" conducted by IIT, Kharagpur from 2nd January to 12th January, 2014 Under NMEICT at Silicon Institute of Technology, Sambalpur.

8. FDP on "Soft computing Tools & its applications using MATLAB" from 8th December to 10th December at Silicon Institute of Technology, Sambalpur.

9. National Seminar on "Advancement in Electronics" organized by Silicon Institute of Technology in association with Youth Movement Federation of India (YMFI) on 10th January 2015.

10. Seminar on "Teaching Methodology" on 18th December 2015 organized by Silicon Institute of Technology, Sambalpur.

11. Two-week ISTE workshop on "Introduction to Design of Algorithms" conducted by IIT, Kharagpur from 25th May to 30th May 2015 Under NMEICT at Silicon Institute of Technology, Sambalpur.

12. FDP on "Technical Communication" from 8th January to 9th January 2016 organized by Silicon Institute of Technology, Sambalpur

13. Workshop Coordinator on "CMOS, Mixed Signal and Radio Frequency VLSI Design" Conducted by IIT, Kharagpur from 19th September to 23rd September, 2016.

14. Two-week ISTE workshop on "Electric Power System" conducted by IIT, Kharagpur from 10th July to 15th July 2017 Under NMEICT at Silicon Institute of Technology, Sambalpur.

15. FDP on "Train the Trainer workshop" from 21th June to 23th June 2018 by Commander Sulakshan Kumar Sharma Director March Ahead Academy Mumbai at. Silicon Institute of Technology, Sambalpur.

16. Nation Workshop on Nanotechnology and Embedded Systems conducted by Silicon Institute of Technology, Bhubaneswar from 27th December to 30th December 2019.

17. Two-Day Workshop on "Application of Signal Processing in Wireless Communication" conducted by Silicon Institute of Technology, Sambalpur from 22nd February to 23rd February 2020.

18. four-day eFDP on "Role of Artificial Intelligence in future microgrid control" organized by Department of Electrical Engineering, SIT, Sambalpur from 17 June to 20 June 2020.

19. four-day eFDP on "Recent Innovations & Trends in Antenna Design" organized by Department of Electronics & Communication Engineering, SIT, Sambalpur from 17th June to 20th June 2020.

20. TEQIP-III, BPUT, Odisha Sponsored Three-Day Short Term Training Program (STTP) on "Essential Tools and Techniques in Research Methodology" organized by Department of Electronics & Communication Engineering, SIT, Sambalpur from 11th February to 13th February 2021.

21. Two days workshops on "Digital Hardware Designs using HDL" organized by the Department of Electronics & Communication Engineering, SIT Sambalpur, on 20th -21th Aug 2021.

22. AICTE Sponsored one-week STTP on "Recent Advancements in Organic and Nanoelectronics-RAONE 21" organized by the Department of Electronics & Communication Engineering, SRM University KTR Campus, Chennai on 8th -13th Oct 2021.

23. FDP Programme "Machine Learning using Python through ICT" from 28th March - 1st April, 2022 conducted by NITTR Chandigarh.

24. FDP Programme on Cryptography for Information Security organized by the Department of Computer Science Engineering, SIT Sambalpur, on 9th -13th May 2022.

25. 2nd One Week International Workshop on Signal Processing using Machine Learning: Applications & Hands-on (Online)", organized by the School of Electronics Engineering (SENSE), VIT-AP University, Amaravati (AP), India, technically sponsored by MathWorks, IEEE Guntur Subsection, and IEEE VIT-AP Student Branch during 31st August to 6th September, 2022

26. Two Week ATAL FDP AICTE Sponsored on ""Architecture Design Strategy for Signal Processing Algorithms using Approximation Techniques" organized by the Department of Electronics & Communication Engineering, SUIIT, Sambalpur University from 5th- 16th December 2022.

27. FDP programme on "Faculty Interactive Session on Industry Expectation" organized by BPUT on 29th August 2023.

28. NPTEL Awareness Workshop conducted on January 6, 2024 by NPTEL, IIT Madras in association with Centre for UG & PG Studies Biju Patnaik University of Technology, Odisha

29. Two-week FDP on "Application of Artificiel Intelligence in computer science, Electronics and Electrical engineering" organized by SUIIT, Sambalpur University, from 24/02/2025 to 07/03/2025