Curriculum Vitae

Dr. Chandan Kumar Jha

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Research Interests

Biomedical Signal & Image Processing, Digital Signal & Image processing, Machine Learning, Deep learning.

Work Experience

- Working as an Assistant Professor in Indian Institute of Information Technology (IIIT) Bhagalpur from 29th September 2020 to till date.
- Worked as Assistant Professor-II in Kalinga Institute of Industrial Technology (KIIT), Bhubaneswar from 17th June 2019 to 24th September 2020.

Education

	Institute/ University	Subject/ Specialization	Year	CGPA
Ph.D.	IIT Patna	• **Broad Area:** ECG Signal Analysis • **Thesis Title:** Electrocardiogram Data Compression Schemes with Validation by Using Cardiac Arrhythmia Patterns • **Supervisor:** Dr. M.H. Kolekar, Associate Professor, Dept. of Electrical Engg. IIT Patna	2015-2019	
M. Tech.	BIT Mesra	ECE	2010-2012	8.65
B.Tech.	WBUT, Kolkata	ECE	2006-2010	8.14

Publications

Peer reviewed journals

1. **C. K. Jha**, and M. H. Kolekar. "Tunable Q-wavelet based ECG data compression with validation using cardiac arrhythmia patterns." *Biomedical Signal Processing and Control (Elsevier)*, vol. 66, p. 102464, 2021.
2. **C. K Jha**, and M. H. Kolekar. "Electrocardiogram Data Compression Techniques for Cardiac Healthcare Systems: A Methodological Review." *Innovation and Research in BioMedical Engineering (IRBM) (Elsevier)*, 2021.
3. **C. K. Jha**, and M. H. Kolekar, "Cardiac arrhythmia classification using tunable Q-wavelet transform based features and support vector machine classifier", *Biomedical Signal Processing and Control (Elsevier)*, vol. 59, pp. 1-9, 2020.
4. **C.K. Jha**, and M. H. Kolekar, "Wavelet transform and empirical mode decomposition-based ECG data compression scheme", *Innovation and Research in BioMedical Engineering (Elsevier)*, vol. 42, no.1, pp. 65-72, 2020.

5. **C. K. Jha**, and M. H. Kolekar, "Diagnostic quality assured ECG signal compression with selection of appropriate mother wavelet for minimal distortion", *IET Science, Measurement and Technology (IET)*, vol. 13, no. 4, pp. 500-508, 2019.
6. **C. K. Jha**, and M. H. Kolekar, "Electrocardiogram data compression using DCT based discrete orthogonal Stockwell transform", *Biomedical Signal Processing and Control (Elsevier)*, vol. 46, pp. 174-181, 2018.
7. M. H. Kolekar, **C. K. Jha**, and P. Kumar. "ECG Data Compression using Modified Run Length Encoding of Wavelet Coefficients for Holter Monitoring." *Innovation and Research in BioMedical Engineering (IRBM) (Elsevier)*, 2021.
8. **C. K. Jha**, and M. H. Kolekar "ECG data compression algorithm for tele-monitoring of cardiac patients", *International Journal of Telemedicine and Clinical Practices*, vol. *2*, no. 1, pp. 31-41, 2017.

Conferences:

9. **C.K. Jha** and M. H. Kolekar. "Efficient ECG data compression and transmission algorithm for telemedicine." *IEEE International Conference Communication Systems and Networks (COMSNETS)*, pp. 1-6, *2016.*
10. V. A. Motinath, **C. K. Jha**, and M. H. Kolekar. "A novel ECG data compression algorithm using best mother wavelet selection." *IEEE International Conference on Advances in Computing, Communications and Informatics (ICACCI), pp.* 682-686, 2016.
11. **C. K. Jha** and M. H. Kolekar. "Performance analysis of ECG data compression using wavelet based hybrid transform method." *IEEE International Conference on Microwave, Optical and Communication Engineering (ICMOCE), pp.* 138-141, 2015.
12. **C. K. Jha** and N. Gupta. "Design of a front end low noise amplifier for wireless devices." *IEEE Student's Conference on Engineering and Systems (SCES)*, pp. 1-4, 2012.
13. S. S. Mahapatra, and **C.K. Jha**, "Demonstration of Integration of Blockchain in IoT" *4th IEEE International Conference on Recent Trends in Computer Scienceand Technology*, Jamshedpur, Jharkhand (Accepted & presented).

Book chapters:

14. **C. K. Jha**. and M. H. Kolekar. "Classification and Compression of ECG Signal for Holter Device." *Biomedical Signal and Image Processing in Patient Care*, IGI Global Publisher, pp. 46-63., 2018.
15. **C.K. Jha**, and M.H. Kolekar "Arrhythmia ECG Beats Classification Using Wavelet-Based Features and Support Vector Machine Classifier." In *Advanced Classification Techniques for Healthcare Analysis*, IGI Global Publisher, pp. 74-88, 2019.
16. D. K. Choubey, **C. K. Jha**, N. Kumar, N. Kumari, and V. Soni, "Detecting Heart Arrhythmia using Deep Learning Methods", Convergence of Cloud with AI for Big Data Analytics: Foundations and Innovation (CRC Press), 2022 (Accepted).

Seminar/ STC/ FDP conducted

- Conducted webinar as a coordinator on "***State Estimation for Target Tracking Applications & Artificial Intelligence"*** on 17th October 2020.
- Organized an online short-term course (STC) as a coordinator on "***Artificial Intelligence & IoT Applications in Biomedical Engineering***" during 15th to 19th November 2021.
- Active contribution towards the organization of the IEEE sponsored International Conference on Devices and Communications held during 24-25 Feb. 2011 at BIT Mesra.

Professional services

- Reviewer of following Journals:
  1. Biomedical Signal Processing and Control, Elsevier
  2. Computers in Biology and Medicine, Elsevier
  3. IEEE Journal of Biomedical Health and Informatics
  4. IEEE Access
  5. IETE Journal of Research

References

1. Dr. Maheshkumar H. Kolekar
   Associate Professor, Dept. of Electrical Engineering,
   Indian Institute of Technology Patna
   Email: mahesh@iitp.ac.in, Phone: 8986184240

2. Dr. Nisha Gupta
   Professor , Dept. of Electronics & communication Engineering
   Birla Institute of Technology Mesra
   Email : ngupta@bitmesra.ac.in, Phone: 9431104583.

Declaration:

I hereby declare that the above written particulars are true to the best of my knowledge.

Date **: 5/5/2022**

Place **:** Bhagalpur (Chandan Kumar Jha)