Dhirendra Kumar Jha

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Personal Details

Name: Dhirendra Kumar Jha
Address: IIIT Ranchi ARTTC BSNL Campus, Ranchi-835217 (Jharkhand)
Language Known: English, Hindi, Maithili, Assamese, Sanskrit.
Date of Birth: March 07 1989

Education

- **Ph.D.** from Indian Institute of Information Technology Ranchi, India, with 9.50 cgpa coursework grade
    - ❖ Discipline: Electronics and Communication Engineering
    - ❖ Research Area: Optical Communication, Machine Learning, Deep Learning.
    - ❖ Thesis Submitted: 28.02.2025.
- **M.Tech** in Electronics and Communication Engineering, Communication Engineering (Specialization) with 7.74 cgpa in 2016.
- **M.Tech** second year internship on "Machine Learning Based Pedestrian Detection and Tracking" in CSIR-CSIO Chandigarh, India.
- **B.Tech** in Electronics and Communication Engineering, Shobhit University with 7.33 cgpa in 2012.
- **Secondary** from Kendriya Vidyalaya Nagaon, Assam with 71%.
- **Higher Secondary** from Kendriya Vidyalaya Nagaon, Assam with 64.8%.

Publications

Journals

- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Transfer learning approach toward joint monitoring of bit rate and modulation format," *Applied Optics,* vol. 61, no. 13, pp. 3695-3701, 2022. (sci)
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Low-complexity EVM estimation based on artificial neural networks for coherent optical systems," *Journal of Optics,* vol. 26, no. 7, 2024. (sci)
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Efficient Error-Rate Estimation for Optical Transmission Systems Using Artificial Neural Networks," *Fiber and Integrated Optics,* vol. 43, no. 4, pp. 147-161, 2024. (sci)
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Transfer learning-assisted modulation classification and OSNR estimation using constellation diagrams," *Journal of Optics,* vol. 26, no. 11, 2024. (sci)
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "XGBoost-Enabled Low-Complexity Approach for Signal Integrity Assessment in Coherent Communication Systems," *Physica Scripta,* vol. 100, no. 1, 2024. (sci)
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Unsupervised Learning Framework for Anomaly Identification in Coherent Communication Systems," *IEEE Communications Letters* (Under Review)
- Narendra Kumar Jha, Santosh Kumar, Amit Tyagi, **Dhirendra Kumar Jha**, Chandrashekhar Jha, "Micromechanical property and stress analysis of fiber reinforced composite using finite

element analysis (Simpsons Method)," *Materials Today: Proceedings,* vol. 50, pp. 1671-1678, 2022. (scopus)
- Narendra Kumar Jha, Santosh Kumar, Amit Tyagi, **Dhirendra Kumar Jha**, Chandrashekhar Jha, "Finite element and micromechanical analysis of glass/epoxy laminated composite with different orientations," *Materials Today: Proceedings,* vol. 28, pp. 1899-1903, 2020. (scopus)

Conferences
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Performance Evaluation of DWDM Optical Transmission System Using Deep Learning Technique," *IEEE Photonics Conference,* Vancouver, BC, Canada, pp. 1-2, 2021.
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Efficient Modulation Format Identification Using Transfer Learning," *IEEE Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI),* Gwalior, India, pp. 1-3, 2022.
- **Dhirendra Kumar Jha*,** Jitendra K. Mishra, "Transfer Learning-assisted Modulation Format Identification for Low OSNR," *IEEE IAS Global Conference on Emerging Technologies (GlobConET),* London, United Kingdom, pp. 1-4, 2023.

Technical Skills
- **Programming Languages:** Python.
- **Simulation Tools:** OptiSystem, MATLAB.
- **Languages:** Strong reading, writing and speaking competencies for English and Hindi.
- **Misc.:** Academic research, teaching, training, typesetting and publishing.

Core Areas of Interest
- Artificial Intelligence, Machine Learning, Deep Learning, Communication Systems, Network Theory, Electronic Devices and Circuits, Analog Electronics, Digital Electronics, Signals and Systems, Control Systems.

Achievements
- Gate qualified (3 times)

Extracurricular Activities
- Participated in Kabaddi, Cricket, Race, Yoga, Gym.

Reference
Name: Dr. Jitendra K. Mishra (Supervisor)
Assistant Professor, Department of Electronics and Communication Engineering,
Indian Institute of Information Technology Ranchi, Jharkhand, India.
Email: jkmishra@iiitranchi.ac.in

Declaration

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

Dhirendra Kumar Jha