

DR. RAMESH KUMAR THAKUR

Bio Data

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I am an **Assistant Professor at Maulana Azad National Institute of Technology (MANIT), Bhopal, M.P., India**. My research interest lies in Convolutional Neural Network based Image Restoration Techniques. I am always inquisitive about new technologies in the field of Deep Learning. Currently, I am working on convolutional neural network based image restoration techniques for additive White Gaussian noise and multiplicative speckle noise removal. The title of my thesis is **CONVOLUTIONAL NEURAL NETWORK BASED IMAGE RESTORATION FOR ADDITIVE WHITE GAUSSIAN NOISE AND MULTIPLICATIVE SPECKLE NOISE**. I have done postdoc in the Department of Radiology from Northwestern University, USA.

Education

- June 2024 - July 2024 : **Postdoctoral Researcher at Northwestern University, Chicago, Illinois, USA.**
- 2017–2023 : **PhD, Computer Science & Engineering, Indian Institute of Technology, Patna, India, cgpa = 8.88/10.**
- 2014–2016 : **Master of Technology, High Performance Computing, National Institute of Technology, Durgapur, India, cgpa = 9.69/10.**
- 2010–2014 : **Bachelor of Technology, Information Technology, University of Kalyani (public state university), West Bengal, India, cgpa = 9.39/10.**

Publications

Journal Articles

- 2023 **Thakur, Ramesh Kumar** and Suman Kumar Maji. Multi scale pixel attention and feature extraction based neural network for image denoising. *Pattern Recognition*, volume 141, page 109603. Elsevier, 2023.
- 2022 **Ramesh Kumar Thakur** and Suman Kumar Maji. Gradient and multi scale feature inspired deep blind gaussian denoiser. *IEEE Access*, volume 10, pages 34170–34184, 2022.
- 2022 **Ramesh Kumar Thakur** and Suman Kumar Maji. Agsdnet: Attention and gradient-based sar denoising network. *IEEE Geoscience and Remote Sensing Letters*, volume 19, pages 1–5. IEEE, 2022.
- 2020 Suman Kumar Maji, **Ramesh Kumar Thakur**, and Hussein M Yahia. Structure-preserving denoising of sar images using multifractal feature analysis. *IEEE Geoscience and Remote Sensing Letters*, volume 17, pages 2100–2104. IEEE, 2020.
- 2020 Suman Kumar Maji, **Ramesh Kumar Thakur**, and Hussein M Yahia. Sar image denoising based on multifractal feature analysis and tv regularisation. *IET Image Processing*, volume 14, pages 4158–4167. IET, 2020.
- 2015 Chandran Saravanan and **R Kumar**. A novel steganography technique for securing user's digitized handwritten signature for public authentication systems. *Discovery*, volume 43, pages 193–197, 2015.

In Conference Proceedings

- 2025 Shashank Gupta, **Ramesh Kumar Thakur**, Mansi Gyanchandani, Enhancing Diffusion-Based Image Restoration with Per-Timestep Edge Guidance, In *4th International Conference on Machine Learning and Data Engineering, ICMLDE 2025*.
- 2025 Chanchal Suman and **Ramesh Kumar Thakur**. Examining the joint influence of sarcasm and emotion on gender prediction. In *2025 IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI)*, volume 3, pages 1–6, 2025.
- 2024 **Ramesh Kumar Thakur**, Jiten Agarwal, Hardik Chauhan, Saumyadeep Mahanta, Uzaif Ali, and Shreya Mondal. Benchmarking of machine learning algorithms for indian premier league matches. In *2024 6th International Conference on Computational Intelligence and Networks (CINE)*, pages 1–5, 2024.
- 2024 Nandini Mishra and **Ramesh Kumar Thakur**. A novel fitness tracker model using machine learning algorithms. In *2024 6th International Conference on Computational Intelligence and Networks (CINE)*, pages 1–5, 2024.
- 2022 **Ramesh Kumar Thakur** and Suman Kumar Maji. Sifsdnet: Sharp image feature based sar denoising network. In *2022 42nd International Geoscience and Remote Sensing Symposium (IGARSS)*. IEEE, 2022.
- 2022 **Ramesh Kumar Thakur** and Suman Kumar Maji. Image denoising based on multi domain feature inspired convolutional neural network. In *2022 IEEE Region 10 Conference (TENCON)*. IEEE, 2022.
- 2022 **Ramesh Kumar Thakur** and Suman Kumar Maji. Blind gaussian deep denoiser network using multi- scale pixel attention. In *2022 IEEE International Conference on Visual Communications and Image Processing (VCIP)*. IEEE, 2022.
- 2022 Suman Kumar Maji and **Ramesh Kumar Thakur**. A successive variational model for multiplicative noise and blur removal. In *2022 IEEE 19th India Council International Conference (INDICON)*. IEEE, 2022.
- 2020 **Ramesh Kumar Thakur** and Suman Kumar Maji. A variational approach to image despeckling under varied blur. In *2020 7th International Conference on Signal Processing and Integrated Networks (SPIN)*, pages 55–60. IEEE, 2020.
- 2020 Kshitij Susheel Jauhri, **Ramesh Kumar Thakur**, and Suman Kumar Maji. A blind metric based variational approach for ultrasound image denoising. In *2020 International Conference on Contemporary Computing and Applications (IC3A)*, pages 34–39. IEEE, 2020.
- 2017 Saurabh Shrivastava, **Ramesh Kumar Thakur**, and Pratibha Tokas. Classification of hazy and non-hazy images. In *2017 International Conference on Recent Innovations in Signal processing and Embedded Systems (RISE)*, pages 148–152. IEEE, 2017.
- 2016 **Ramesh Kumar Thakur** and Chandran Saravanan. Classification of color hazy images. In *2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)*, pages 2159–2163. IEEE, 2016.
- 2016 **Ramesh Kumar Thakur** and Chandran Saravanan. Analysis of steganography with various bits of lsb for color images. In *2016 International Conference on Electrical, Electronics, and Optimization Techniques (ICEEOT)*, pages 2154–2158. IEEE, 2016.

Patents

- Aug 2024 Published a **Design Patent** titled as **SMART BACK SUPPORT BELT** with **Design Number - 461694-001**.

Academic Achievements

- 2017 Cleared **GATE Examination in CS/IT** with Score 421/1000.
- 2016 Cleared **GATE Examination in CS/IT** with Score 548/1000.
- 2014 Cleared **GATE Examination in CS/IT** with Score 533/1000.
- 2014 Cleared **CSIR NET Examination in Engineering Science** with All India Rank 163.

Awards & Recognition

- 2016 Recipient of **"Institute Gold Medal"**, in M.Tech at NIT Durgapur.
- 2014 Recipient of **"First Class First"**, in B.Tech at University of Kalyani, West Bengal.

Working Experience

- Nov 2024 - Present Teaching experience of **1 year** as **Assistant Professor** at **Maulana Azad National Institute of Technology (MANIT), Bhopal, M.P.**
- Sep 2024 - Nov 2024 Teaching experience of **2 months** as **Assistant Professor** at **National Institute of Technology (NIT), Jalandhar, Punjab.**
- July 2023 - Sep 2024 Teaching experience of **1 year 2 months** as **Assistant Professor** at **Kalinga Institute of Industrial Technology, KIIT University, Bhubaneswar, Odisha.**
- June 2024 - July 2024 Research experience of **1.5 months** as **Postdoctoral Researcher (Clinical Research Associate)** at **Northwestern University, Chicago, Illinois, USA.**
- July 2022 - June 2023 Teaching experience of **1 year** as **Assistant Professor** at **Institute of Technical Education and Research (ITER), Siksha 'O' Anusandhan University, Bhubaneswar, Odisha.**
- June 2016 - April 2017 Teaching experience of **1 year** as **Assistant Professor** at **Smt. S. R. Patel Engg. College, Gujarat.**

Professional Contributions and Engagements

- Dec 2024 Served as the **session chair** in **4th International Conference on Machine Learning and Augmented Intelligence (MAI-2024)** at (MANIT), Bhopal, M.P..
- Jan 2025 Served as the **session chair** in **10th International IEEE Students' Conference, SCEECs'25** at (MANIT), Bhopal, M.P..
- Apr 2025 Delivered **special lectures** for three days at **SPA Delhi** between 10/04/2025 to 12/04/2025 to teach subject **"Urban Informatics in Planning"**.
- Apr 2025 Served as the **jury member** for the final round of the Ideathon at **MANIT Bhopal.**
- Apr 2025 Served as an **expert of project evaluation** in **"Waste Management"** category of **SRIJAN program under Innovate M.P. initiative** at **RGPV Bhopal.**
- Sep 2025 Served as the **jury member** for the **Internal Smart India Hackathon (SIH) 2025** at **IIIT Bhopal.**
- Sep 2025 Served as the **jury member** for the **Internal Smart India Hackathon (SIH) 2025** at **MANIT Bhopal.**
- Nov 2025 Served as the **technical committee member** of **International Conference on Artificial Intelligence in Advanced Energy, Environmental, and Sustainable Development (ICAIAEESD - 2025)** at **LPU Punjab.**