

## Dr. KOUSHLENDRA KUMAR SINGH

Assistant Professor

Department of Computer Science and Engineering

National Institute of Technology Jamshedpur, Jharkhand

Email: [koushlendra.cse@nitjsr.ac.in](mailto:koushlendra.cse@nitjsr.ac.in)

Mobile: +91-9102197734, +91-9479845831

---

*My broad area of research includes **Computer Vision, Deep Learning, and Image Processing, Computer Tomography.***

Education	2008 B.Tech TMBU Bhagalpur University Bhagalpur, Bihar
	2012 M.Tech PDPM IIITDM Jabalpur India
	2016 PhD PDPM IIITDM Jabalpur India
Employment	Since 2016 Assistant Professor, NIT Jmashedpur
Projects	1. Design and development of centralized database on scholarship/fellowships awarded in S & T Sector (2019-2021) Sponsoring Agency: DST, Amount: 24.8 Laks.
	2. Design and Implementation of END TO END Object Detector using DETR AND XNOR DETR, Funding Agency: ARTPARK Total Amount: Rs. 5.4 Laks,
	3. Creation of Employment opportunities for local rural community living in vicinity areas of NIT Jamshedpur through development of smart E-Rickshaw based public transport system. Sponsoring Agency- NID, Amount: 10.17 Laks
	4. Mammogram Classification using Deep Learning Algorithm, Sponsoring Agency: NPIU, Amount: 2.69 Laks
International Awards	1. Erasmus+ International Program awarded by European Union with <b>Professor Michalis Zervakis</b> , University of Crete, Greece for academic year 2020-23. (Total of 11.710 euros)
	2. 2017 Best Paper Award at world congress on engineering and computer science, London
Journal Publication	1. KK Singh, S. Kumar, M. Antonakakis, K. Moirogiorgou, A. Deep, KL Kashyap, MK Bajpai & M. Zervakis (2022). Deep learning capabilities for the categorization of microcalcification. International Journal of Environmental Research and Public Health 19, no. 4: 2159. 2. Subhash Chandra, Koushlendra Kumar Singh,

Sanjay Kumar, KVKS Ganesh, Lavu Sravya, B Phani Kumar (2021) A novel approach to validate onli signature using machine learning based on dynamic features, Neural computing and Application, 33 (19), 12347-12366.

3. Koushlendra Kumar Singh, Suraj Kumar, P Dixit, M K Bajpai (2021) Klanan filter based short term prediction model for COVID-19 Spread, Applied Intelligence, <https://doi.org/10.1007/s10489-020-01948-1>
4. MS Kumar, KK Singh, R. Dixit & MK Bajpai (2021). Design of Fractional Calculus based differentiator for edge detection in color images. Multimedia Tools and Applications 80, no. 19: 29965-29983.
5. R.K.Pandey, S.Suman, Koushlendra K.Singh, O.P.Singh (2014) An Approximate Method for Abel Inversion using Chebyshev Polynomials” Applied Mathematics and Computation, Vol. 237, pp.120-132.
6. Koushlendra Kumar Singh, Manish Kumar Bajpai, Rajesh K Pandey, Prabhat Munshi (2017) A novel non-invasive method for extraction the geometrical and texture features of wood” Research in Nondestructive Evaluation, Vol. 28 (3), pp-150-167
7. Koushlendra Kumar Singh, Manish Kumar Bajpai, Rajesh K. Pandey, (2018) A Novel Approach for Enhancement of Geometric and Contrast Resolution Properties of Low Contrast Images, Vol.5 (3) pp-1-11, IEEE Journal of Automatica sinica.
8. T. Saikia, R. Kumar, D. Kumar & KK Singh (2022). An Automatic Lung Nodule Classification System Based on Hybrid Transfer Learning Approach. SN Computer Science. 3, 272.
9. U. Bhaumik, KK Singh, AS Akbari & MK Bajpai (2022). A Deep Learning-Based Approach to Detect Correct Suryanamaskara Pose. SN Computer Science 3(5).
10. Koushlendra Kumar Singh, A. K. Srivastava, H Sneha, Diksha, B.K.Singh, “Pose Invariant Face Recognition using Principal Component Analysis” Soft Computing: Theories and Applications, 1029-1043, 2020.

International Conferences  
Publications

1. KK Singh, MK Bajpai, RK Pandey, Reconstruction of original signal from contaminated signal using fractional order differentiator, 2015 IEEE International Symposium on Signal Processing and Information Technology (ISSPIT), 274-278.
2. KL Kashyap, KK Singh, MK Bajpai, P Khanna, Fractional order filter based enhancement of digital mammograms, Proceedings of the world congress on engineering and computer science,1, 2017
3. KK Singh, RK Pandey, S Suman, Contrast enhancement using lifting wavelet transform, International Conference on Control, Instrumentation, Communication and Computational Technologies (ICCICCT), 447-451, 2014
4. S Suman, KK Singh, RK Pandey, Approximate Solution of Integral Equation Using Bernstein Polynomial Multiwavelets, Proceedings of the Third International Conference on Soft Computing for Problem Solving, 489-496, 2014.
5. KK Singh, RK Pandey, S Suman, Fractional order differentiator using legendre polynomials, International Conference-Confluence The Next Generation Information Technology Summit (Confluence), Pages-246-250, 2014
6. KK Singh, RK Pandey, BN Mandal, N Dubey, An analytical method for solving singular integral equations of Abel type, Procedia engineering, 38, 2726-2738, 2012
7. KK Singh, M.K. Bajpai, Fractional Order Savitzky-Golay Differentiator based Approach for Mammogram Enhancement, IEEE International Conference on Imaging Systems and Techniques (IST), Pages 1-5, 2019
8. KK Singh, A Dang, V Kumari, BK Singh, MK Bajpai, Fractional order differentiator-based edge detection in remote sensing images, TENCON 2017-2017 IEEE Region 10 Conference, 2885-2889, 2017
9. KK Singh, D Kumar, S Chauhan, MK Bajpai, Parallel architecture based fast algorithm for image enhancement, IEEE Bombay Section Symposium (IBSS), pp1-6, 2015
10. KK Singh, U Bhaumik, A Sai, K Arun, AS Akbari, An Approach for Denoising of Contaminated Signal Using Fractional Order Differentiator, Machine Vision and Augmented Intelligence—Theory and Applications: Select Proceedings of MAI 2021, Volume

	<p>796, Pages 129, 2021</p> <ol style="list-style-type: none"> <li>11. A Rastogi, U Bhoumik, C Choudhary, AS Akbari, K Kumar Singh, Ear Localization and Validation Using Ear Candidate Set, Machine Vision and Augmented Intelligence—Theory and Applications, Pages109-120, 2021</li> <li>12. S Kumar, S Shukla, KK Sharma, K Kumar Singh, AS Akbari, Classification of Land Cover and Land Use Using Deep Learning, Machine Vision and Augmented Intelligence—Theory and Applications, pp-321-327, 2021</li> <li>13. A Verma, VB Semwal, K Kumar Singh, Development of Universal Polynomial Equation for All the Sub-phases of Human Gait, Machine Vision and Augmented Intelligence—Theory and Applications, pp-45-55, 2021</li> <li>14. U Bhaumik, S Chatterjee, K Kumar Singh, Suryanamaskar Pose Identification and Estimation Using No Code Computer Vision, Machine Vision and Augmented Intelligence—Theory and Applications,pp-85-90, 2021.</li> <li>15. AK Srivastava, H Sneha, KK Singh, Pose Invariant Face Recognition Using Principal Component Analysis, Soft Computing: Theories and Applications, Pages1029-1043, 2020</li> <li>16. KK Singh, A Mishra, A Deep, A Kumar, B Kumar, Hand Vein Biometric Recognition Using Local Binary Pattern, International Conference on Computational Intelligence, Security and Internet of Things, pp-398-406, 2019</li> </ol>
<p style="text-align: center;">Book</p>	<ol style="list-style-type: none"> <li>1. Machine Vision and Augmented Intelligence-Theory and Applications,Lecture notes in Electrical Enginerring, Springer Editors: M. K. Bajpai, Koushlendra K Singh, George Giakos, e ISBN: 978-981-16-5078-9</li> </ol>
<p style="text-align: center;">Special Issue in Journal</p>	<ol style="list-style-type: none"> <li>1. Advances in Machine Vision and Augmented Intelligence, Guest Editors: M K Bajpai, Ranjeet Kumar, KK Singh, George Giakos, SN Computer Science, Springer</li> </ol>