Centre/School/Special Centre: Engineering & Technology

Department: Computer Science and Engineering

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Qualification:

Ph.D. in Computer Science and Engineering
Course CGPA- 9.5 out of 10 From
IIT (BHU), Varanasi, India

Area of Interest/Specialization:

- Image Processing, Computer Vision, Pattern Classification, Video Surveillance.
- Artificial Intelligence, Machine Learning, Deep Learning, and Related fields.
- Medical Image Processing and Pattern Recognition, Algorithms.

Experience: 12 Years

Awards and Honors:

Received the honor of being named as guest editor for two renowned SCI journals:
i) Multimedia Tools and Application, Springer (SCI Impact Factor: 2.77)
ii) Computer Material and Continua (SCI Impact Factor: 3.96)

Research Projects:

Successfully completed one year UGC Sponsored Project “Development of an Intelligent Video Surveillance System for Human Behaviour Analysis” under Grant No. F.No.36-246/2008 (SR) From Central University of Allahabad.

International Collaboration/Consultancy: Nil

Best Peer Reviewed Publication (up-to 10):

- **Alok Kumar Singh Kushwaha**, Rajeev Srivastava, "**Framework for Dynamic Background Modeling and Shadow Suppression for Moving Object Segmentation in Complex Wavelet Domain**" , Journal of Electronic Imaging, SPIE, Volume 24(5) pp. 051005, 2015 doi: 10.1117/1.JEI.24.5.051005 (Published) **[SCI Impact Factor - 0.84].**

- **Alok Kumar Singh Kushwaha**, Rajeev Srivastava, "**Multi-View Human Activity Recognition System Based on Spatio-Temporal Template for Video Surveillance System**", Journal of Electronic Imaging, SPIE, Volume 24(5), pp. 051004, 2015. doi: 10.1117/1.JEI.24.5.051004. (Published) **[SCI Impact Factor - 0.84].**

- **Alok Kumar Singh Kushwaha**, Chandra Mani Sharma, Manish Khare, Om Prakash and Ashish Khare, "**Adaptive Real-Time Motion Segmentation Technique Based on Statistical Background Model**", The Imaging Science Journal (ISSN: 1743-131X), Vol. 62, No. 5, pp. 285-302, 2014. (Published) **[SCI Impact Factor - 0.506].**

- **Alok Kumar Singh Kushwaha**, Rajeev Srivastava, "**A Framework for Moving Object Segmentation using Dynamic Background Modeling and Shadow Suppression in Complex Wavelet Domain**", Imaging Science Journal, Volume 64, pp. 267-278, 2017 (ISSN: 1743-131X), http://dx.doi.org/10.1080/13682199.2016.1176725. (Published). **[SCI Impact Factor – 0.506].**

- **Alok Kumar Singh Kushwaha**, Rajeev Srivastava, "**A Framework of Moving Object Segmentation in Maritime Surveillance inside a Dynamic Background**", Transactions on Computational Science XXV Springer, LNCS 9030, pp. 35–54, 2015. (Published) **[SCI Impact Factor – 0.15]**

- **Alok Kumar Singh Kushwaha**, Jagwinder, Roshan Singh, Rajeev Srivastava **"Depth based Enlarged Temporal Dimension of 3D deep Convolutional Network for Activity Recognition"**, Multimedia Tools and Applications, Springer, pp. 30599–30614, 2019. https://link.springer.com/article/10.1007%2Fs11042-018- 6425-3 (Published) **[SCI Impact Factor – 1.53]**

- **Alok Kumar Singh Kushwaha**, Roshan Singh, and Rajeev Srivastava, "**Multi-View Human Activity Recognition System Based on Multiple Features for Video Surveillance System**", Multimedia Tools and Applications, Springer, pp. 17165–17196, 2019. https://link.springer.com/article/10.1007%2Fs11042-018- 7108-9 (Published) **[SCI Impact Factor – 1.53]**

- **Alok Kumar Singh Kushwaha**, Roshan Singh, and Rajeev Srivastava, **"Combining CNN Streams of Dynamic Image and Depth Data for Action Recognition in Real Time"**, Multimedia System, Springer, pp. 313–322, 2020 https://link.springer.com/article/10.1007/s00530-019-00645-5?shared-article-renderer (Published)

[SCI Impact Factor – 2.01]

- **Alok Kumar Singh Kushwaha**, Roshan Singh, and Rajeev Srivastava, "**A Dual Stream Model for Activity Recognition: Exploiting Residual- CNN with Transfer Learning**", Computer Methods in Biomechanics and Biomedical Engineering: Imaging, Vol 9, 20 https://doi.org/10.1080/21681163.2020.1805798_ (Published) **[SCI Impact Factor – 1.08]**

- **Alok Kumar Singh Kushwaha,** Neeraj Varshney, Brijesh Bakariya, , Manish Khare**,** "Rule-based Multi-view human activity recognition system in Real time using skeleton data from RGB-D Sensor"**,** Soft Computing, 2021 https://doi.org/10.1007/s00500-021-05649-w (Published)**[SCI Impact Factor – 3.050]**

Recent Books/Book Chapters/Monographs etc.:

- Sanjay Kumar, Rohit Raja**, Alok Kumar Singh Kushwaha**, Saurabh Kumar, Raj Kumar Patra, "Green Computing and its Applications", is to be published by Nova Science Publication **(Scopus Index) DOI**: https://doi.org/10.52305/ENYH6923

- **Alok Kumar Singh Kushwaha**, and Rajeev Srivastava, "Recognition of Humans and Their Activities for video Surveillance," in Research Developments in Computer Vision and Image Processing: Methodologies and Applications, R. Srivastava, S. K. Singh, K. K. Shukla (Indian Institute of Technology, (BHU), India)

Research Supervision:

PhD Completed: 01 PhD Ongoing: 05

Administrative Responsibilities:

- Head of Department in the Department of CSE, GGV Bilaspur
- NAAC Committee Member in GGV Bilaspur
- Chairman, BOS in the Department of CSE, GGV Bilaspur.
- Placement Co-ordinator, SoS(E&T), GGV Bilaspur.
- Library Committee Member in GGV Bilaspur

Additional Information:

International /National Patent Published and Granted: -

Indian Patent Published:- Theft Vehicle detection using digital signature based ECU and Image Processing, Patent Number: 202021025200.

Indian Patent Published:- An Unmanned Aerial Vehicle For Surveillance, Patent Number 202021045472.

Australian Patent Granted:- SBDA- Secured Bra for women safety, smart and secured bra for women safety based on Deep Learning Algorithms, Patent Number 2020102636.

Australian Patent Granted:- A System And A Method For Automated Irrigation Using Internet Of Things, Patent Number 2020104385

Australian Patent Granted:- Holonomic Drive Conveyor System And Its Method Using IoT, Patent Number 2020104116

Australian Patent Granted:- SELF-CLEANING AND GERM-KILLING REVOLVING PUBLIC TOILET FOR COVID 19, Patent Number 2021100059

Australian Patent Granted:- SMART BATHROOM SYSTEM AND METHOD, Patent Number 2021100780

Australian Patent Granted:- DELICATE VIBRATORY INSTRUMENT FOR NEONATES ORAL MOTOR SIMULATION, Patent Number 2021101385

Australian Patent Granted:- A SYSTEM AND METHOD FOR PREVENTING CORONA VIRUS TRANSMISSION, Patent Number 2021102958