



## DR. PRITEE KHANNA

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 Computer Science & Engineering Discipline,  
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### Areas of Interest

*Biomedical image processing, Biometrics, Computer Aided Product Design*

### Education

- **Ph.D.**, Department of Computer Science & Applications, Kurukshetra University, Kurukshetra, India, 2004.
- **MCA**, Department of Computer Science and Applications, Kurukshetra University, Kurukshetra, India, 1998, (82.4%).
- **MSc (Physics) Specialization in Electronics & Hardware**, Christ Church College, Kanpur University, Kanpur, India, 1990, (69%).

### Working Experience

Total Work Experience: 24 years (approx.)

- Working as Professor, Computer Science & Engineering at PDPM Indian Institute of Information Technology, Design & Manufacturing (IIITDM) Jabalpur since July 2021.
- Worked as Associate Professor at IIITDM Jabalpur, June 2009 – July 2021.
- Worked as Assistant Professor at IIITDM Jabalpur, January 2006 - May 2009.
- Worked as Lecturer, Department of Computer Science & Applications, Kurukshetra University, Kurukshetra, August 2004 - December 2005.
- Worked as Lecturer, Computer Science, University College, Kurukshetra, July 2003 - August 2004.
- Worked as Senior Research Fellow (UGC) in the Department of Computer Science & Applications, Kurukshetra University, November 2002 - June 2003.
- Worked as Junior Research Fellow (UGC) in the Department of Computer Science & Applications, Kurukshetra University, November 2000 - October 2002.
- Worked as Lecturer, Computer Science at University College, Kurukshetra, 1998-2000.
- Worked as Lecturer of Computer Applications at Dr. Virender Swaroop Institute of Computer Science, Kanpur from July 1998 - October 1998.
- Worked as Engineer Trainee at the IT Department of LML Ltd., Kanpur (January-June 1998).

## Scholastic and Professional Achievements

- Senior Member, IEEE.
- **Associate Editor**, Engineering Applications of Artificial Intelligence, Elsevier, November 2022 onwards.
- **Associate Editor**, SN Computer Science, Springer, March 2022 onwards.
- **Member, Board of Studies**, Artificial Intelligence and Data Science Department, Jabalpur Engineering College, RGPV Bhopal since November 2021.
- **Member, Board of Studies**, Computer Science Department, Jabalpur Engineering College, RGPV Bhopal since July 2018.
- **General Co-Chair**, 8<sup>th</sup> International Conference on Computer Vision and Image Processing (CVIP 2023), IIT Jammu, India, November 3-5, 2021.
- Secured 2<sup>nd</sup> rank in the school in High School (U.P. Board).
- Bagged UP Government Scholarship for attaining merit position in High School.
- Secured 1<sup>st</sup> rank in the college in 10+2 (U.P. Board).
- Ranked among the top 5% in the college and university.
- Qualified **National Eligibility Test (NET)** with **Junior Research Fellowship (JRF)** (June 1999) conducted by University Grants Commission (UGC), Government of India.
- Selection as Lecturer, Govt. Colleges (HES-II) through HPSC, Haryana.
- Awarded **Long Term JSPS Invitation Fellowship** for Research with Prof. Haruo Yokota at Tokyo Institute of Technology Japan, May 2011-January 2012.
- Awarded **Certificate of Merit** for the paper “*Recognition of Single Handed Sign Language Gestures using Contour Tracing Descriptor*” at International Conference of Computational Intelligence and Intelligent Systems (ICCIIS 2013) in the World Congress on Engineering (WCE 2013), July 3 - 5, 2013, London, U.K.
- **Best Paper Award** to the paper “*A framework to plot and recognize hand motion trajectories towards development of non-tactile interfaces*” at 7<sup>th</sup> IEEE International Conference on Intelligent Human Computer Interaction (IHCI 2015), December 14-16, 2015.
- Chosen for 'Marquis Who's who in the World 2015.
- **Guest Editor**, Virtual Special Issue on “Pattern Recognition Techniques for Non-Verbal Human Behavior”, Pattern Recognition Letters, Elsevier, 2017.
- Awarded **Certificate of Merit** for the paper “*Fractional Order Filter based Enhancement of Digital Mammograms*” at International Conference on Signal Processing and Imaging Engineering (ICSPIE 2017) under 25<sup>th</sup> World Congress on Engineering and Computer Science 2017 (WCECS 2017), Oct 25-27, 2017, San Francisco, USA.
- **Guest Editor**, Special Issue on "Computational Intelligence for Biomedical Data and Imaging" in ACM Transactions on Multimedia Computing, Communications, and Applications (ACM TOMM), Dec 2018.
- **Guest Editor**, Special Issue on “Computational Intelligence Methods for Brain-Machine Interfacing or Brain-Computer Interfacing”, Computational and Mathematical Methods in Medicine, Hindawi, September 2019.
- **Guest Editor**, “Proceedings of 3<sup>rd</sup> International Conference on Computer Vision and Image Processing”, Vol I and Vol II in Advances in Intelligent Systems and Computing Series Vol 1022 (November 2019) and Vol 1024 (September 2019), Springer.

- **Co-chair**, special session on “Soft Computing: Current Trend of Machine Learning in Computer Net” in 2019 IEEE International Conference on Systems, Man, and Cybernetics (SMC) from October 6- 9, 2019, Bari, Italy.
- **Best Paper Award** to the paper “Glaucoma Detection using Fuzzy C-means Optic Cup Segmentation and Feature Classification” in Signal, Image, and Video Processing track at IEEE Conference on Information and Communication Technology (CICT 2019), Dec 06-08, 2019, IIIT Allahabad, India
- **Track Chair**, Signal, Image, and Video Processing at 2019 IEEE Conference on *Information and Communication Technology* (CICT 2019), at IIIT Allahabad, Prayagraj, India, December 6-8, 2019.
- **Guest Editor**, Special Issue on “Artificial Intelligence and Deep Learning for Biomedical Applications”, Multimedia Tools and Processing, Springer, January 2020.
- **Track Chair**, “Image processing and Computer Vision” at International Conference on *Machine Vision and Augmented Intelligence* (MAI 2021), at IIITDM Jabalpur, India, February 11-14, 2021.
- **Guest Editor**, Special Issue on “Human-Centered Computational Intelligence Information Systems”, Mobile Information Systems, Hindawi, February 2022.
- **Chair**, Special session on “Challenging Deepfake through Explainable AI” in the 29th International Conference on Neural Information Processing (ICONIP 2022) organized in India during Nov 22-26, 2022.
- Part of organizing team of many institute/university level academic, cultural & sports events.
- Coach of students’ teams for ACM Programming Contest – Asia Region during 2006-2012.

## Publications

Published more than 100 papers in International Journals and Conferences of repute.

## Book and Book Chapters Published

- *Khanna Pritee*, “Geometric Modelling of Statically and Dynamically Symmetric Patterns, Theory, Generation, and Applications”, VDM Publishing House Ltd., VDM Verlag Germany, 2009, ISBN: 978-3-639-21108-5.
- *Mishra Shiwangi and Khanna Pritee*, “Impact of Region atrophy on Alzheimer’s disease and its identification using 3D-texture analysis” In *Modelling and Analysis of Active Biopotential Signals in Healthcare*-Volume 1, IOP Publishing UK, August 2020, ISBN: 978-0-7503-3279-8ch15.
- *Kaur Harkeerat and Khanna Pritee*, “Cancelable Biometric Systems from Research to Reality: The Road Less Travelled” In *AI and Deep Learning in Biometric Security: Trends, Potential and Challenges*, CRC Press-Taylor and Francis, USA, 2021, ISBN: 978-0-367-42244-8.

## Projects

- Co-Principal investigator, **Additive Manufacturing and Internet of Things based Flexible Healthcare and Effective Pandemic Management**, 2023-26, Under DST-NSTMIS, Rs. 26.5 Lacs (PI: Prof. P. Tandon and Co-PI: Prof. V.K. Gupta).
- Co-Principal investigator, **Empowering Girls to Reduce the Gender Gap in IT and ITES Sectors in South Asia Region: Training and E-Content Development Programme** awarded via 5th Call for proposal process of Asi@Connect Project, 2022-23, Under

TEIN\* Cooperation Center, Republic of Korea, Euro 124,513 (PI: Prof. A. Ojha).

- Co-Principal investigator, **Smart Biometrics AI driven Biometric Privacy**, 2020 – Under Indo-Japan (DST-Japan Society for the Promotion of Science) Cooperative Science Programme (IJCSP) 2020, Rs. 5.56 Lacs (PI: Dr. H. Kaur and Prof. Isao Echizen, NII, Japan).
- Co-Principal investigator, **3D-Mesh Model Steganography and Secure Communication in a Cloud Manufacturing Environment**, Under Indo-Japan (DST-Japan Society for the Promotion of Science) Cooperative Science Programme (IJCSP) 2020, Rs. 5.98 Lacs (PI: Prof. A. Ojha, Prof. Yasushi Yamaguchi, University of Tokyo, Japan).
- Investigator, **Similarity Detection and Process Information Retrieval from Large Part-Drawing Databases of Manufacturing Companies: A Mini Industry 4.0 Solution**, 2019-21, Awarded by alfaTKG India Pvt Ltd, Rs. 8.26 lacs (with Prof. A. Ojha).
- Co-Principal investigator, **Designing CAD System for Identifying Neurodegenerative Diseases using Prediction Model**, 2019-21, Awarded by National Project Implementation Unit, Govt. of India, Rs. 8.59 lacs.
- Principal Investigator, **Privacy Enhancing Revocable Biometric Identities (PERBI)**, 2016-19, Awarded by Board of Research in Nuclear Sciences (BRNS), Department of Atomic Energy, Govt of India, Funding Rs. 30.88 Lacs (Co-PIs: Dr. A. Seal and Dr. M. K. Bajpai).
- Consultant, “Vetting of RPF documents for MEGA TEXTILE PARK PROJECT” for “Jabalpur Smart City Limited”, August 17 - 29, 2017.
- Principal Investigator, Jabalpur District Collectorate Project - **District Collectorate Office – Information Integration**, 2007-08.
- Design and development of an autonomous system “**OATH (Online Academic Transaction Help)**” for “Academic Office” of IIITDM Jabalpur, 2009-10 (in-house project).
- Co-Investigator, Department of Science and Technology (Govt of India) Project - **Geometric Modeling, Analysis and Design for Generic Definitions of Custom-Engineered Cutting Tools**, 2008-11 (Rs. 25.26 lacs).

### Conferences/Workshops/Events Organized

1. General Co-Chair, **8<sup>th</sup> International Conference on Computer Vision and Image Processing (CVIP 2023)**, IIT Jammu, India, November 3-5, 2021
2. Conference Convener, **7<sup>th</sup> IAPR International Conference on Computer vision & image processing (CVIP 2022)**, at VNIT Nagpur, India, November 4-6, 2022.
3. Conference Convener, **6<sup>th</sup> IAPR International Conference on Computer vision & image processing (CVIP 2021)**, at IIT Ropar, India, December 3-5, 2021.
4. Organized a workshop on “**Healthcare Innovations during COVID Outbreak**” at IIITDM Jabalpur, May 25-26, 2021.
5. Organized an Interactive session on “**How to handle Violence against Women**” by Ms. Jahnavi, Lawyer, MP High Court, IIITDM Jabalpur, India, March 13, 2021.
6. Organized an Interactive session on “**Entrepreneurship and a Birdseye view of the Startup Ecosystem**” from a Woman Entrepreneur Ms. Preeti Chaudhary, Founder of LinkedIn Local India, IIITDM Jabalpur, India, March 10, 2021.
7. Organized Workshop on “**Self-Defense**” by Mr. Amit Das, IIITDM Jabalpur, India, March 06, 2021.
8. Organized Workshop on “**Handling Common Woman Gynecological Problems**” by Dr.

- Neena Shrivastava, IIITDM Jabalpur, India, March 06, 2021.
9. Member, Local Organizing Committee, ***Machine Vision and Augmented Intelligence (MAI 2021)***, IIITDM Jabalpur, India, February 11-14, 2021.
  10. Member, Organizing Committee, ***7<sup>th</sup> International Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2021)***, IIT Ropar, India, February 11-13, 2021.
  11. Conference Convener, ***5<sup>th</sup> IAPR international conference on Computer vision & image processing (CVIP 2020)***, at IIIT Allahabad, India, December 4-6, 2020.
  12. Member, Organizing Committee, ***6<sup>th</sup> International Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2020)***, IIT Hyderabad, India, February 13-15, 2020.
  13. Organized “***Design Workshop 2019 (DeW 2019)***” at IIITDM Jabalpur in collaboration with the Ministry of Foreign Affairs, Japan, March 8 - 10, 2019.
  14. Organized “***Third International Conference on Computer Vision & Image Processing (CVIP 2018)***” at IIITDM Jabalpur, September 29-October 1, 2018. The conference was endorsed by IAPR and proceedings are to be published by Springer.
  15. Organized an Interactive Session with Dr. Rooplekha Chauhan, Leading Gynecologist, Jabalpur Medical College, IIITDM Jabalpur, India, March 08, 2018.
  16. Organized a GIAN course on “***Data Mining Algorithms for Graph, Text, and Streaming Data***” at IIITDM Jabalpur, December 19-27, 2017.
  17. Organized “***Design Workshop 2017 (DeW 2017)***” at IIITDM Jabalpur in collaboration with Ministry of Foreign Affairs, Japan, December 9-11, 2017.
  18. Organized a Faculty Development Programme on “***Fundamentals of Databases***” at IIITDM Jabalpur, June 23-July 3, 2017.
  19. Organized a workshop on “***Self Defense***” at IIITDM Jabalpur, March 08, 2017.
  20. Organized a Faculty Development Programme on “***Advanced data Mining Algorithms and their Scalability for Big Data***” from January 2-7, 2017.
  21. Organized a Faculty Development Programme on “***Basic data Mining Algorithms and their Scalability for Big Data***” from August 16- 21, 2016.
  22. Organized “***National Conference on Smart Cities (NCSC 2016)***”, November 25-26, 2016.
  23. Organized an Interactive session on “***Entering Adulthood***” with Dr. Shirish Jamdar (gynecologist, educationist and social worker) and Ms. Kiran Kalway (Director Jabalpur Branch, Family Planning Association of India), IIITDM Jabalpur, India, March 10, 2016.
  24. Organized a Workshop on “***Fights against Sexual Crimes and Gender Discrimination***”, IIITDM Jabalpur, India, January 15, 2016.
  25. Organized a Workshop on “***Menstrual Hygiene Drive***”, IIITDM Jabalpur, India, October 10, 2015.
  26. Organized a Pre-placement workshop on “***Programming, Technical & Personal Skills for Campus Interviews***” from October 18-20, 2013.
  27. Organized a workshop on “***Emerging Trends in Information Technology in University Management***” at IIITDM Jabalpur, September 09-13, 2013.
  28. Organized **six** workshops, each of four days duration on “***Computer Training for Jabalpur Collectorate Officers and their Assistants***” at IIITDM Jabalpur, during September 19, 2012-February 23, 2013.
  29. Organized a workshop on “***Programming***”, at IIITDM Jabalpur, January 27-29, 2013.



30. Organized a three-day workshop on “*Wavelets and its Applications (WOW 2012)*”, at IIITDM Jabalpur, July 13-15, 2012.
31. Organized a three-day workshop on “*Sharpen Your Programming Skills*”, at IIITDM Jabalpur, November 5-7, 2011.
32. Organized *inaugural Raman Distinguished Lecture Series by Dr. Anil Kakodkar*, Former Chairman, DAE, at IIITDM Jabalpur, March 17, 2010.
33. Organized a two-day workshop on “*e-Governance - with specific reference to Policing*” at IIITDM Jabalpur, August 9-10, 2007.
34. Organized a two-day workshop on “*DBMS and Java Application Software package*”, at IIITDM Jabalpur, August 6-7, 2007.

### Expert Lectures and Session Chairing

1. Delivered an expert lecture as Chief Guest on “Importance of Machine Learning” at One Week National Level Online Faculty Development Program on the topic “Societal Applications of Machine Learning”, Shri Vishnu Engineering College for Women (A), Bhimavaram, India, December 26-30, 2022.
2. Delivered an expert lecture on “Biometrics – Past, Present, and Future” at the Research Meeting, Delhi University, Delhi, India, December 21, 2022.
3. Delivered an expert lecture on “AI in Biometrics” at AICTE ATAL FDP/CPDP on the topic “Advances in Artificial Intelligence”, Indian Institute of Information Technology, Allahabad, India, October 31-November 11, 2022.
4. Delivered an expert lecture on “Autoencoders” at Faculty Development Program on Research Avenues in Machine Learning and AI for Societal Issues, NIT Silchar, Assam, India, March 14-18, 2022.
5. Delivered an expert lecture on “AI for Biomedical Image Analysis” at Faculty Development Program on Research Trends in Artificial Intelligence, Banasthali Vidyapith, Rajasthan, India, February 21-26, 2022.
6. Delivered an expert lecture on “Biometric Template Protection” at IEEE Signal Processing Society Winter School on Advances in Biometrics, Indian Institute of Information Technology, Allahabad, India, October 23-28, 2021.
7. Delivered an expert lecture on “CNN Architectures for Computer Vision” at e-Workshop on Recent Advancements in Artificial Intelligence and Internet of Things (RAAI-2021), Department of Mathematics & Scientific Computing, National Institute of Technology, Hamirpur, India, September 25-29, 2021.
8. Delivered an expert lecture on “Application of machine Learning for Computer Vision” at National Level Online FDP on “Applications of Machine Learning in Computer Vision”, Shri Vishnu Engineering College for Women, AP, India, June 15-19, 2021.
9. Delivered a keynote address on “Computer Vision in Healthcare: Medical Image Processing” at National Conference on “Unprecedented and Advanced Concepts of Computer Vision”, Global Group of Institutions, Jabalpur, India, May 11-12, 2021.
10. Delivered an expert lecture on “Biometric Systems: Applications and Challenges” at National Seminar on New Trends in Signal Processing (NeTSiP-2021), DA-IICT, Gandhinagar, India, March 19-21, 2021.
11. Chaired a session at International Conference on machine vision and augmented intelligence (MAI - 2021), at IIITDM Jabalpur, India, February 11-14, 2021.

12. Delivered a webinar on “Career Counselling” at IGE College, Sagar, India, Jan 15, 2021.
13. Delivered an expert lecture on “Deep Learning in Medical Image Processing” at Short Term Training Program on "Research Aspects on Deep Learning in Image and Video Processing", Velammal Institute of Technology, Chennai, India, Jan 4-9, 2021.
14. Chaired a session at 5th IAPR international conference on Computer vision & image processing (CVIP 2020), at IIIT Allahabad, Prayagraj, India, December 4-6, 2020.
15. Delivered an expert lecture on “AI in Medical Image Processing” at e-Workshop on Mathematical and Statistical Methods for Machine Learning (MSML-2020), Department of Mathematics & Scientific Computing, National Institute of Technology, Hamirpur, India, November 7-11, 2020.
16. Delivered an expert lecture on “Medical Image Analysis” at Faculty Development Program on "Data Analytics: Present and Future", Department of Information Technology & Computer Application, Madan Mohan Malaviya University of Technology Gorakhpur, India, October 12-16, 2020.
17. Delivered an expert lecture on “Biometrics – A Double-Edged Sword” at IEEE Day Webinar Series, IEEE Bangalore Section on the invitation of GSSS Institute of Engineering & Technology for Women, Mysuru, India, October 5-9, 2020.
18. Delivered an invited talk on “Computer Vision – Applications and Challenges”, at National Webinar organized by MGMM, Jabalpur, India, May 30, 2020.
19. Delivered an invited talk on “CAD Systems for Ophthalmological Disease Identification” at International Conference on Engineering, Mathematical and Computational Intelligence (ICEMCI 2019), Jabalpur Engineering College, Jabalpur, India, December 21-23, 2019.
20. Chaired a session at 2019 IEEE Conference on Information and Communication Technology (CICT 2019), at IIIT Allahabad, Prayagraj, India, December 6-8, 2019.
21. Chaired a session at 4th International Conference on Computer Vision and Image Processing (CVIP 2019), MNIT Jaipur, India, September 27-29, 2020.
22. Delivered an invited talk on “Image and Vision Engineering Research @ IIITDM Jabalpur” at Nosov Magnitogorsk State Technical University, Magnitogorsk, Russia, June 5, 2019.
23. Delivered a keynote address on “Biometric Security” at National Seminar on Recent Trends in Artificial Intelligence Computing, HCET, Jabalpur, India, March 30, 2019.
24. Delivered expert lecture on “Security of Biometrics” at AICTE - QIP STC on Trends and Techniques on Image Processing, Multimedia and Security Issues, MITS, Gwalior, India, March 15-19, 2019.
25. Delivered a keynote address on “Intelligent Computing in Computer Vision” at National Conference on Recent Trends in Intelligent Computing, Department of Computer, Information Technology and Communication of Shri Ram Group, Jabalpur, India, February 7-8, 2019.
26. Chaired a session at the 2018 Conference on Information and Communication Technology (CICT 2018), at IIITDM Jabalpur, India, October 26-28, 2018.
27. Delivered a keynote address on “Advances in Biometric Security” at International Conference on Recent Advances in Computer Science, Mathematics, Physics and Electronics, MGMM, Jabalpur, India, October 3-4, 2018.
28. Delivered a keynote address on “Internet of Things, Big Data, and Security Challenges” at the National Workshop on the Internet of Things, Department of Computer Engineering, Institute of Engineering, MET Bhujbal Knowledge City, Nasik, India, January 12, 2018.

29. Chaired a session at International Conference on Electrical Engineering and Applications (ICEEA III) 2017 organized under World Congress on Engineering and Computer Science 2017 (WCECS 2017) San Francisco, USA, October 25-27, 2017.
30. Chaired a session at International Conference on Circuits and Systems (ICCS-I) 2017 organized under World Congress on Engineering and Computer Science 2017 (WCECS 2017) San Francisco, USA, October 25-27, 2017.
31. Chaired a session at 2nd International Conference on Computer Vision and Image Processing & Workshop on Multimedia (CVIP 2017), Greater Noida Extension Center, IIT Roorkee, India, September 9-12, 2017.
32. Delivered a keynote address on “Innovations in Vision-Based Technologies & Applications” at National Conference on Smart and Innovative Technologies in Engineering and Sciences (SITES 2016), Jabalpur, India, November 11-12, 2016.
33. Chaired a session at the IEEE 7th International Conference on Computational Intelligence and Communication Networks (CICN 2015), Jabalpur, India, December 12-14, 2015.
34. Delivered an expert lecture on “Advances in Medical Imaging and Image Analysis” for a symposium on “Trends in Computer Vision” and chaired a session at 102nd Indian Science Congress at the University of Mumbai, January 3-7, 2015.
35. Chaired a session at IEEE 9th International Conference on Industrial and Information Systems (ICIIS 2014), at AVV IIITM Gwalior, India, December 15-17, 2014.
36. Delivered an expert lecture on “Image Processing with MATLAB” during the 4th National Workshop on Application of MATLAB for Engineering Computations (AMEC 2014) at IIITDM Jabalpur, December 1-5, 2014.
37. Delivered an expert lecture on “Content-Based Image Retrieval” during the “National Conference of Engineering and Applied Sciences” at Jabalpur Engineering College, Jabalpur, March 22-23, 2013.
38. Delivered an expert lecture on “Wavelets” during National Workshop on Wavelets and its Applications (WoW 2012) at IIITDM Jabalpur, July 13-15, 2012.
39. Delivered an expert lecture on “Content-Based Image Retrieval” at Sugiyama Lab, Tokyo Institute of Technology, Japan, June 2011.
40. Delivered a keynote address on “Technical Performance testing of Biometric Systems” at National Workshop on Recent Trends in Software Engineering (RTSE 2009), Jabalpur Engineering College, Jabalpur, March 06-07, 2009.
41. Delivered a keynote address on “Biometric Technologies for Security” and chaired a session at the National Conference on Futuristic Trends in Engineering and Technology, JNCDELM College of Engineering, Sirsa, India, January 28-29, 2008.
42. Delivered a keynote address on “Biometrics: An overview of Challenges ahead” and chaired a session at National Conference on IT: Present Practices and Challenges at New Delhi, India, August 31-September 01, 2007.

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### **Reviewer to International Journals and Conferences**

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1. *IEEE Transactions on Cybernetics.*
2. *IEEE Transactions on Medical Imaging.*
3. *IEEE Transaction on Mobile Computing.*
4. *IEEE Transaction on Multimedia.*
5. *IEEE Transactions on Systems, Man and Cybernetics: Systems.*



6. *ACM Transactions on Management Information Systems*.
7. *ACM Transactions on Multimedia Computing Communications and Applications*.
8. *Artificial Intelligence in Medicine*, Elsevier.
9. *Biomedical Signal Processing and Control*, Elsevier.
10. *Computer Methods and Programs in Biomedicine*, Elsevier.
11. *Future Generation Systems*, Elsevier.
12. *Journal of Visual Languages and Computing*, Elsevier.
13. *Journal of Visual Communication and Image Representation*, Elsevier.
14. *Pattern Recognition Letters*, Elsevier.
15. *Signal Processing: Image Communication*, Elsevier.
16. *Circuits, Systems & Signal Processing*, Springer.
17. *Multimedia Tools and Applications*, Springer.
18. *Neural Computing and Applications*, Springer.
19. *Connection Science*, Taylor & Francis.
20. *IET Biometrics*.
21. *IET Computer Vision*.
22. *Journal of the Optical Society of America*.
23. *Brain and Behavior*, Wiley.
24. *Journal of Electronic Imaging*, SPIE.
25. 7<sup>th</sup> IAPR International Conference on Computer vision & image processing (CVIP 2022), at VNIT Nagpur, India, November 4-6, 2022.
26. 6<sup>th</sup> IAPR International Conference on Computer vision & image processing (CVIP 2021), at IIT Ropar, India, December 3-5, 2021.
27. 5<sup>th</sup> International Conference on *Advances in Computing and Data Sciences* (ICACDS-2021), MVP's KBTCOE, Nashik, Maharashtra, India, April 23-24, 2021.
28. 7<sup>th</sup> International Conference on Algorithms and Discrete Applied Mathematics (CALDAM 2021), IIT Ropar, Punjab, India, February 11-13, 2021.
29. 26<sup>th</sup> Annual International Conference on Advanced Computing and Communications (ADCOM 2020), NIT Silchar, India, December 16-18, 2020.
30. 5<sup>th</sup> International Conference on Computer Vision and Image Processing (CVIP 2020), IIIT Allahabad, India, October 16-18, 2020.
31. 2019 Conference on Information and Communication Technology (CICT 2019), IIIT Allahabad, India, December 6-8, 2019.
32. 4<sup>th</sup> International Conference on Computer Vision and Image Processing (CVIP 2019), MNIT Jaipur, India, September 27-29, 2020.
33. 6<sup>th</sup> International Symposium on *Computer Vision and the Internet* (VisionNet'2019), Kerala, India, December 18 -21, 2019.
34. 3<sup>rd</sup> International Conference on *Computing and Network Communications* (CoCoNet'19), Trivandrum, Kerala, India, December 18-21, 2019.
35. 14<sup>th</sup> *Women in Machine Learning Workshop* (WiML 2019), co-located with NeurIPS in Vancouver, British Columbia, December 9, 2019.
36. 14<sup>th</sup> IEEE International Conference on Automatic Face and Gesture Recognition (FG 2019),

- Lille, France, May 14-18, 2019.
37. 4<sup>th</sup> IEEE International Conference on *Recent Advances in Computational Systems* (RAICS 2018), at Trivandrum, Kerala, India, December 6-8, 2018.
  38. 2018 Conference on *Information and Communication Technology* (CICT 2018), at IIITDM Jabalpur, India, October 26-28, 2018.
  39. 2017 Conference on *Information and Communication Technology* (CICT 2017), at AVV IIITM Gwalior, Gwalior, India, November 3-5, 2017.
  40. 3<sup>rd</sup> International Symposium on *Computer Vision and the Internet* (VisionNet'2016), Jaipur, India, September 21 -24, 2016.
  41. 4<sup>th</sup> International Symposium on *Women in Computing and Informatics* (WCI-2016), Jaipur, India, September 21 -24, 2016.
  42. International Conference on *Computer Vision and Image Processing* (CVIP 2016), at Indian Institute of Technology Roorkee, India, February 26 – 28, 2016.
  43. 3<sup>rd</sup> IEEE International Conference on *Image Information Processing* (ICIIP 2015), at Jaypee University of Information Technology Shimla, India, December 21-24, 2015.
  44. IEEE *UP Section Conference on Electrical, Computer, and Electronics* (UPCON 2015), at Indian Institute of Information Technology Allahabad, India December 4-6, 2015.
  45. 2<sup>nd</sup> International Symposium on *Computer Vision and the Internet* (VisionNet'2015), Kerala, India, August 10 -13, 2015.
  46. 2<sup>nd</sup> International Conference on *Signal Processing and Integrated Networks* (SPIN 2015), at Amity School of Engineering and Technology, Amity University, Noida- Delhi NCR, India, February 19-20, 2015.
  47. 9<sup>th</sup> IEEE International Conference on *Industrial and Information Systems* (ICIIS 2014), at AVV IIITM Gwalior, Gwalior, India, December 15-17, 2014.
  48. International Symposium on *Computer Vision and the Internet* (VisionNet'2014), GCET, at Greater Noida- Delhi NCR, India, September 24-27, 2014.
  49. IEEE Students' Technology Symposium, at IIT Kharagpur, India, Feb 28-March 2, 2014.
  50. International Conference on *Signal Processing and Integrated Networks* (SPIN 2014), at Amity School of Engineering and Technology, Amity University, Noida- Delhi NCR, India, February 20-21, 2014.
  51. IEEE International Conference on *Control, Automation, Robotics & Embedded Systems* (CARE 2013), at PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, India, December 16-18, 2013.
  52. 2<sup>nd</sup> IEEE International Conference on *Image Information Processing* (ICIIP 2013), at Jaypee University of Information Technology Shimla, India, December 9-11, 2013.
  53. 2<sup>nd</sup> International Conference on *Intelligent Interactive Technologies and Multimedia* (IITM 2013), at IIIT Allahabad, India, March 9-11, 2013.
  54. 4<sup>th</sup> International Conference on *Intelligent Human-Computer Interaction* (IHCI 2012), at IIT Kharagpur, India, December 27-29, 2012.
  55. International Conference on *Innovations in Design and Manufacturing* (InnDeM 2012), at PDPM IIITDM Jabalpur, India December 5-7, 2012.

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### **Membership of Committees of Professional Societies/Program Committees**

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1. Senior member IEEE

2. Member, ACM since 2009.
3. A life member IAENG since 2013.
4. A life member IUPRAI since 2019.
5. Member, *International Conference of Computational Intelligence and Intelligent Systems (ICCIIS)* of World Congress on Engineering (WCE) since WCE 2014, IAENG.
6. Member, Main Track - Program Committee, EAI International Conference on Block chain cloud computing and Big Data with education (BCBE 2022).
7. Member, Technical Program Committee, *IEEE Bombay Section Signature Conference (IBSSC-2021)*, IIITM Gwalior, India, November 18-20, 2021.
8. Member, Advisory Committee, *International Conference on Artificial Intelligence: Theory & Applications (AITA 2021)*, National Institute of Technology, Patna, India, December 23-24, 2021.
9. Member, Advisory Committee, *IEEE Mysore Sub Section Flagship International Conference (MysuruCon 2021)*, Novkis College of Engineering, Hassan, Karnataka, India, October 24-25, 2021.
10. Member, Technical Program Committee, *International Conference on "Computer Vision, High-Performance Computing, Smart Devices and Networks (CHSN 2021)*, JNTU Kakinada, India, August 20-21, 2021.
11. Member, Technical Program Committee, *International Conference on Intelligent Cyber-Physical Systems (ICPS 2021)*, IIIT Kota, India, June 24-26, 2021.
12. Member, Technical Program Committee, *5<sup>th</sup> International Conference on Advances in Computing and Data Sciences (ICACDS-2021)*, MVP's KBTCOE, Nashik, Maharashtra, India, April 23-24, 2021.
13. Member, Technical Program Committee, *26<sup>th</sup> Annual International Conference on Advanced Computing and Communications (ADCOM 2020)*, NIT Silchar, India, December 16-18, 2020.
14. Member, Advisory Committee, *International Conference on Intelligent Computing and Applications (ICICA-2020)*, Poornima College of Engineering, Jaipur, India, December 22–24, 2020.
15. Member, Advisory Committee, *4<sup>th</sup> Conference on Information and Communication Technology (CICT 2020)*, IIITDM Kancheepuram, Chennai, India, December 3-5, 2020.
16. Member, Technical Program Committee, *Fifth International Conference on Computer Vision and Image Processing (CVIP 2020)*, IIIT Allahabad, India, October 16-18, 2020.
17. Member, Technical Program Committee, Advisory Committee, international conference on "Computer Vision, High-Performance Computing, Smart Devices and Networks (CHSN 2020)", JNTU Kakinada, India, May 9-10, 2020.
18. Member, Advisory Committee, *Fifth International Conference on Science Technology Engineering and Mathematics (ICONSTEM 2020)*, Jeppiaar Engineering College, India, March 20-21, 2020.
19. Member, Advisory Committee, *International Conference on Engineering, Mathematical and Computational Intelligence (ICEMCI 2019)*, Jabalpur Engineering College, Jabalpur, India, December 21-23, 2019.
20. Member, Technical Program Committee, *Seventh International Symposium on Women in Computing and Informatics (WCI-2019)*, IIITM Kerala, India, December 18-21, 2019.
21. Member, Technical Program Committee, *International Conference on Computing and*

- Network Communications (CoCoNet 19), Indian Institute of Information Technology and Management-Kerala (IIITM-K), Trivandrum, Kerala, India, December 18-21, 2019.
22. Member, Technical program committee, *6<sup>th</sup> International Symposium on Computer Vision and the Internet* (VisionNet 2019), Kerala, India, December 18-21, 2019.
  23. Member, Advisory Committee, *2019 Conference on Information and Communication Technology* (CICT 2019), IIIT Allahabad, India, December 6-8, 2019.
  24. Member, Advisory Committee, *Fifth International Conference on Science Technology Engineering and Mathematics* (ICONSTEM 2019), Jeppiaar Engineering College, India, March 14-15, 2019.
  25. Member, Steering Committee, *2018 Conference on Information and Communication Technology* (CICT 2018), IIITM Jabalpur, India, October 26-28, 2018.
  26. Conference Chair, Third International Conference on Computer Vision and Image Processing (CVIP 2018), IITDM Jabalpur, India, September 29-October 1, 2018.
  27. Member, Technical Program Committee, International Conference on Computing: Communication, Networks, and Security (IC3NS 2018), Mody University of Science and Technology Lakshmangarh, Sikar, Rajasthan, India, February 23-24, 2018.
  28. Member, Technical Program Committee, *Fifth International Conference on Signal Processing and Integrated Networks* (SPIN 2018), Noida, India, February 22-23, 2018.
  29. Member, Technical Program Committee, International Conference on Advances in computing and Data Sciences (ICACDS 2018), Uttaranchal University, Dehradun, Uttarakhand, India, April 20-21, 2018.
  30. Member, Technical Program Committee, International Conference on Communication Systems and Network Technologies (CSNT 2017), Indian Institute of Information Technology (IIIT), Nagpur, India, November 11-13, 2017.
  31. Member, Steering Committee, *Conference on Information and Communication Technology* (CICT 2017), ABV-IIITM Gwalior, India, November 3-5, 2017.
  32. Area Chair, Second International Conference on Computer Vision and Image Processing (CVIP 2017), IIT Roorkee, India, September 09-12, 2017.
  33. Member, Technical Program Committee, *Fourth International Conference on Signal Processing and Integrated Networks* (SPIN 2017), Noida, India, Feb 2-3, 2017.
  34. Member, Technical program committee, *3<sup>rd</sup> International Symposium on Computer Vision and the Internet* (VisionNet'2016), Jaipur, India, September 21-24, 2016.
  35. Member, Technical Program Committee, *4<sup>th</sup> International Symposium on Women in Computing and Informatics* (WCI-2016), Jaipur, India, September 21 -24, 2016.
  36. Member, Technical program committee, *International Conference on Advances in Computing and Data Sciences* (ICACDS-2016), Ghaziabad, India, November 11-12, 2016.
  37. Member, Technical program committee, *3<sup>rd</sup> IEEE International Conference on Image Information Processing* (ICIIP-2015), at Jaypee University of Information Technology Shimla, India, December 21-24, 2015.
  38. Member, Technical program committee, *IEEE UP Section Conference on Electrical, Computer, and Electronics* (UPCON-2015), at Indian Institute of Information Technology, Allahabad, India, December 4-6, 2015.
  39. Member, Technical program committee, *International Conference on Computer Graphics, Vision and Information Security* (IEEE CGVIS), KIIT University, India, November 2-3, 2015.

40. Member, Technical program committee, 2<sup>nd</sup> *International Symposium on Computer Vision and the Internet* (VisionNet'2015), Kerala, India, August 10 -13, 2015.
41. Member, Technical Program Committee, Special Session on *Biometric-based Security* in Conjunction with *International Conference on Signal Processing and Integrated Networks* (SPIN 2015), Noida, India, Feb 19-20, 2015.
42. Member, Technical program committee, 9th IEEE International Conference on Industrial and Information Systems (ICIIS – 2014), at AVV IIITM Gwalior, Gwalior, India, December 15-17, 2014.
43. Member, Technical program committee for the *International Symposium on Computer Vision and the Internet* (VisionNet'2014), GCET, Greater Noida- Delhi NCR, India, September 24-27, 2014.
44. Member, Technical program committee for Second *International Symposium on Women in Computing and Informatics* (WCI-2014), GCET, Greater Noida- Delhi NCR, India, September 24-27, 2014.
45. Member, Technical Program Committee, Special Session on *Biometric-based Security* in Conjunction with *International Conference on Signal Processing and Integrated Networks* (SPIN 2014), Noida, India, Feb 20-21, 2014.
46. Member, Technical Program Committee, IEEE International Conference on Control, Automation, Robotics & Embedded Systems (CARE 2013), at PDPM Indian Institute of Information Technology, Design and Manufacturing Jabalpur, India, December 16-18, 2013.
47. Member, Technical Program Committee, Second *International Conference on Image Information Processing* (ICIIP-2013), at Jaypee University of Information Technology Shimla, India, December 9-11, 2013.
48. Member, Technical Program Committee, Second *International Conference on Intelligent Interactive Technologies and Multimedia* (IITM-2013), at Indian Institute of Information Technology, Allahabad, India, March 9-11, 2013.

### **Indo-Japan Forum**

- Visit Japan on Long Term JSPS (Japan Society for the Promotion of Science) Invitation Fellowship for Research with Professor Haruo Yokota, Department of Computer Science, and Graduate School of Information Science & Engineering, Tokyo Institute of Technology, Japan during May 2011-January 2012.
- Exposure visit to University of Tokyo, Tokyo Institute of Technology, National Institute of Informatics, National Institute of Advanced Industrial Science and Technology, and Digital Human Research Center, Tokyo, Japan under India-Japan Joint Project IIITDM Jabalpur during the period December 2007. Sponsored by MOFA Japan and MHRD India.

### **Research Guidance (as on September 12, 2022)**

- Ph.D. Thesis Supervised – Eleven
- Ph.D. Thesis Submitted – Nil
- Ph.D. Supervision under progress – Four
- M.Tech. Thesis Supervised – Fifteen
- M.Tech. Thesis Submitted – Nil
- M.Tech. Supervision under progress – One
- Guided various MCA and MS Projects. Supervised 8 MCA projects and 3 MS projects.

- Developed and established laboratories. Taught & developed several courses.
- Guided various B.Tech. Projects in the areas of Computer Graphics, Data Structures, Database Management Systems, and Image Processing.

### Corporate Accomplishments

- Chairperson, Placement Cell, IIITDM Jabalpur
- Chairperson, Women Cell, IIITDM Jabalpur
- Head, Computer Science & Engineering, IIITDM Jabalpur
- QIP Coordinator, IIITDM Jabalpur
- Convener, Computer Center, IIITDM Jabalpur
- Coordinator, Academic Affairs, IIITDM Jabalpur
- Convener and Member, Undergraduate Committee of Senate (UGCS), IIITDM Jabalpur
- Convener and Member, Postgraduate Committee of Senate (PGCS), IIITDM Jabalpur
- Coordinator, activities for CSE discipline, IIITDM Jabalpur under India-Japan collaboration
- Member, Academic Senate, IIITDM Jabalpur
- Member, Counseling Cell, IIITDM Jabalpur
- Member, Institute Advisory Group – General Administration, IIITDM Jabalpur
- Member, Institute Advisory Group – Academic Vision, IIITDM Jabalpur
- Member, Board of Studies – Post Graduate Studies, Kurukshetra University
- Member, Curriculum Development Committee, UG & PG (both), Kurukshetra University

### Publications (Since 2010)

#### 2022

1. *Bhati Amit, Gour Neha, Khanna Pritee, and Ojha A.*, “Discriminative Kernel Convolution Network for Multi-label Ophthalmic Disease Detection on Imbalanced Fundus Image Dataset”, *Computers in Biology and Medicine*, 153 (2023), 106519, doi: <https://doi.org/10.1016/j.combiomed.2022.106519>.
2. *Kaur Harkeerat, Shukla Rishabh, Echizen Isao, and Khanna Pritee*, “Secure and Privacy Preserving Proxy Biometrics Identities”, *The 37th International Conference on Advanced Information Networking and Applications (AINA-2023)*, Federal University of Juiz de Fora, Brazil, March 29-31, 2023 (accepted).

#### 2022

3. *Thakur P.S., Khanna Pritee, Sheorey T., and Ojha A.*, “Trends in Vision-based Machine Learning Techniques for Plant Disease Identification: A Systematic Review”, *Expert Systems with Applications* (2022), doi: <https://doi.org/10.1016/j.eswa.2022.118117>.
4. *Bamoriya P., Siddhad G., Kaur H., Khanna Pritee, and Ojha A.*, “DSB-GAN: Generation of Deep Learning based Synthetic Biometric Data”, *Displays*, 74, 102267, 2022, doi: <https://doi.org/10.1016/j.displa.2022.102267>.
5. *Siddhad Gourav and Khanna Pritee*, "Max-Min Threshold based Cancelable Biometric Templates for Low-End Devices," *J. Electron. Imaging* 31(3), 033025 (2022), doi:



10.1117/1.JEI.31.3.033025.

6. Chaturvedi Shubhangi, Khanna Pritee, and Ojha Aparajita, "A Survey on Vision-based Outdoor Smoke Detection Techniques for Environmental Safety", *ISPRS Journal of Photogrammetry and Remote Sensing*, 185, pp. 158-187, February 2022, doi: <https://doi.org/10.1016/j.isprsjprs.2022.01.013>.
7. Mishra S., Beheshti I., Tanveer M., and Khanna Pritee, "3D Supervoxel based features for early detection of AD: A microscopic view to the brain MRI", *Multimedia Tools and Applications*, 81, January 2022, pp. 22481–22496, <https://doi.org/10.1007/s11042-021-11871-3>
8. Gour Neha, M. Tanveer and Khanna Pritee, "Challenges for Ocular Disease Identification in the Era of Artificial Intelligence", *Neural Computing and Application*, (2022), DOI: [10.1007/s00521-021-06770-5](https://doi.org/10.1007/s00521-021-06770-5).
9. Chaturvedi Shubhangi, Khanna Pritee, Ojha Aparajita, "An Efficient Residual Convolutional Neural Network with Attention Mechanism for Smoke Detection in Outdoor Environment", 7th International Conference on Computer Vision and Image Processing (CVIP 2022), November 4-6, 2022 (presented).
10. Thakur P.S., Khanna Pritee, Sheorey T., and Ojha A., "Attention Based Twin Convolutional Neural Network with Inception Blocks for Plant Disease Detection using Wavelet Transform", 29th International Conference on Neural Information Processing (ICONIP 2022), November 22-26, 2022 (presented).

## **2021**

11. Gupta, A.K., Seal, A., Khanna, P., Krejcar, O. and Yazidi, A., ALMNet: Adjacent Layer driven Multiscale Features for Salient Object Detection, *IEEE Transactions on Instrumentation and Measurement*, 70, September 2021, pp. 1 - 14, DOI: [10.1109/TIM.2021.3108503](https://doi.org/10.1109/TIM.2021.3108503).
12. Mishra Shiwangi, Beheshti Iman, and Khanna Pritee, A Review of Neuroimaging-Driven Brain Age Estimation for Identification of Brain Disorders and Health Conditions, *IEEE Reviews in Biomedical Engineering*, August 2021 (accepted), DOI: [10.1109/RBME.2021.3107372](https://doi.org/10.1109/RBME.2021.3107372).
13. Gupta, A.K., Seal, A., Khanna, P., Krejcar, O. and Yazidi, A., Gated Contextual Features for Salient Object Detection, *IEEE Transactions on Instrumentation and Measurement*, 70, March 2021, pp.1 - 13, DOI: <https://doi.org/10.1109/TIM.2021.3064423>.
14. Gour Neha and Khanna Pritee, "Multi-class multi-label ophthalmological disease detection using transfer learning based convolutional neural network", *Biomedical Signal Processing and Control*, 66, pp. 102329, Jan 2021, DOI: <https://doi.org/10.1016/j.bspc.2020.102329>.
15. Chaturvedi Shubhangi, Khanna Pritee, Ojha Aparajita, "Comparative Analysis of Traditional and Deep Learning Techniques for Industrial and Wildfire Smoke Segmentation", 6th International Conference on Image Information Processing (ICIIP-2021), Shimla, India, 2021, pp. 326-331, doi: 10.1109/ICIIP53038.2021.9702600.
16. Khare Nishant, Thakur P.S., Ojha A. and Khanna Pritee, "Analysis of Loss Functions for Image Reconstruction using Convolutional Autoencoder", *Proceedings of 6<sup>th</sup>*

International Conference on Computer Vision and Image Processing (CVIP 2021), Communications in Computer and Information Science, vol 1568, pp. 338-349, 2022. Springer, DOI: [https://doi.org/10.1007/978-3-031-11349-9\\_30](https://doi.org/10.1007/978-3-031-11349-9_30).

17. *Bamoriya Pankaj, Siddhad Gourav, Khanna Pritee and Ojha A.*, “Cancelable Template Generation using Convolutional Autoencoder and RandNet”, Proceedings of 6<sup>th</sup> International Conference on Computer Vision and Image Processing (CVIP 2021), Communications in Computer and Information Science, vol 1567, pp. 363-374, 2022. Springer, DOI: [https://doi.org/10.1007/978-3-031-11346-8\\_32](https://doi.org/10.1007/978-3-031-11346-8_32).
18. *Thakur P.S., Sheorey T., Khanna Pritee and Ojha A.*, “Vision Transformer for Plant Disease Detection: PlantViT”, Proceedings of 6<sup>th</sup> International Conference on Computer Vision and Image Processing (CVIP 2021), Communications in Computer and Information Science, vol 1567, pp. 501-511, 2022. Springer, DOI: [https://doi.org/10.1007/978-3-031-11346-8\\_43](https://doi.org/10.1007/978-3-031-11346-8_43).

## 2020

19. Gupta, A.K., Seal, A., Khanna, P., Krejcar, O. and Yazidi, A., AWkS: adaptive, weighted k-means-based superpixels for improved saliency detection, Pattern Analysis and Applications, November 2020, pp.1-15, DOI: <https://www.x-mol.com/paperRedirect/1326950584231829504>.
20. Gupta, A.K., Seal, A., Prasad, M. and Khanna, P., 2020. Salient Object Detection Techniques in Computer Vision - A Survey. Entropy, 22(10), pp.1174, October 2020, DOI: <https://doi.org/10.3390/e22101174>.
21. *Gour Neha and Khanna Pritee*, “Automated Glaucoma Detection using GIST and Pyramid Histogram of Oriented Gradients (PHOG) Descriptors”, Pattern Recognition Letters, 137, September 2020, pp. 3-11, <https://doi.org/10.1016/j.patrec.2019.04.004>.
22. *Kaur Harkeerat and Khanna Pritee*, “PolyCodes: Generating cancelable biometric features using polynomial transformation”, Multimedia Tools and Applications, 79, April 2020, pp. 20729 – 20752, DOI: <https://doi.org/10.1007/s11042-020-08734-8>.
23. *Tanveer M., Richhariya B., Khan R.U., Rashid A.H., Khanna Pritee, Prasad M. and Lin C. T.*, “Machine Learning Techniques for the Diagnosis of Alzheimer’s Disease: A Review”, ACM Transactions on Multimedia Computing Communications and Applications, 16(1s), April 2020, DOI: <https://doi.org/10.1145/3344998>, pp. 30(1-35).
24. *Tanveer M., Khanna Pritee., Prasad M., Lin C.T.*, “Introduction to the Special Issue on Computational Intelligence for Biomedical Data and Imaging”, ACM Transactions on Multimedia Computing, Communications, and Applications, 16 (1s), April 2020, pp: 1-4, DOI: <https://doi.org/10.1145/3381919>.
25. *Cheng E.J., Prasad M., Yang J., Khanna Pritee, Chen B., Tao X., Young K. and Lin C.*, “A Fast Fused Part-based Model with New Deep Feature for Pedestrian Detection and Security Monitoring”, Measurement, 151, February 2020, DOI: <https://doi.org/10.1016/j.measurement.2019.107081>.
26. *Kaur Harkeerat and Khanna Pritee*, “Privacy Preserving Remote Multi-Server Biometric Authentication using Cancelable Biometrics and Secret Sharing”, Future Generation Computing Systems, 102, Jan 2020, pp. 30-41, DOI: <https://doi.org/10.1016/j.future.2019.07.023>.
27. *Jain Shreya, Thakur P.S., Bharti K.K., Ojha A. and Khanna Pritee*, “A Lightweight Multi-Label Image Classification Model Based on Inception Module” Proceedings of 5<sup>th</sup>

International Conference on Computer Vision and Image Processing (CVIP 2020), Communications in Computer and Information Science, vol 1378, pp. 225-236, March 2021. Springer, DOI: [https://doi.org/10.1007/978-981-16-1103-2\\_20](https://doi.org/10.1007/978-981-16-1103-2_20).

28. Siddhad G., Khanna P., Ojha A. (2021) Cancelable Biometric Template Generation Using Convolutional Autoencoder, Proceedings of 5<sup>th</sup> International Conference on Computer Vision and Image Processing (CVIP 2020), Communications in Computer and Information Science, Springer, vol 1376, pp. 303-314, March 2021. DOI: [https://doi.org/10.1007/978-981-16-1086-8\\_27](https://doi.org/10.1007/978-981-16-1086-8_27).
29. Mishra Shiwangi and Khanna Pritee, "Brain Age Estimation using PCA and PLS components for Healthy controls", 2020 IEEE 4<sup>th</sup> Conference on Information and Communication Technology (CICT 2020), Dec 03-05, 2020, Kancheepuram, India, pp. 1-6, DOI: <https://doi.org/10.1109/CICT51604.2020.9312057>.

## **2019**

30. Gupta Ashish, Seal Ayan and Khanna Pritee, "Divergence based SLIC", Electronics Letters, 55(14), July 2019, pp. 783-785, DOI: <https://doi.org/10.1049/el.2019.1092>.
31. Beheshti Iman, Mishra Shiwangi, Sone Daichi, Khanna Pritee and Matsuda Hiroshi, "T1-weighted MRI-driven Brain age estimation in Alzheimer's disease and Parkinson's disease, Aging and Disease, 11(3), July 2019, pp. 618-628, DOI: <http://dx.doi.org/10.14336/AD.2019.0617>.
32. Gour Neha and Khanna Pritee, "Speckle Denoising in Optical Coherence Tomography Images Using Residual Deep Convolutional Neural Network", Multimedia Tools and Applications, April 2019, DOI: <https://doi.org/10.1007/s11042-019-07999-y>.
33. Kane Lalit and Khanna Pritee, "Depth Matrix and Adaptive Bayes Classifier based Dynamic Hand Gesture Recognition", Pattern Recognition Letters, 120, April 2019, pp. 24-30, DOI: <https://doi.org/10.1016/j.patrec.2019.01.003>.
34. Gupta Nidhi, Bhatele Puspraj, and Khanna Pritee, "Glioma Detection on Brain MRIs using Texture and Morphological Features with Ensemble Learning", Biomedical Signal Processing and Control, 47, January 2019, pp. 115-125, DOI: <https://doi.org/10.1016/j.bspc.2018.06.003>.
35. Karmawat Rakshita, Gour Neha, and Khanna Pritee, "Glaucoma Detection using Fuzzy C-means Optic Cup Segmentation and Feature Classification", 3<sup>rd</sup> IEEE Conference on Information and Communication Technology (CICT 2019), December 6-8, 2019, Allahabad, India, pp. 1-5, DOI: <https://doi.org/10.1109/CICT48419.2019.9066165>.
36. Siddiqui Mohammed Arshad, Jain Arpit, Gaur Neha, and Khanna Pritee, "Unsupervised Single-View Depth Estimation for Real-Time Inference", Proceedings of 4<sup>th</sup> International Conference on Computer Vision & Image Processing (CVIP-2019), Communications in Computer and Information Science, Springer, vol 1147, pp. 94-105, March 2020, DOI: [https://doi.org/10.1007/978-981-15-4015-8\\_9](https://doi.org/10.1007/978-981-15-4015-8_9).
37. Kashyap Kanchan Lata, Bajpai M. K., and Khanna Pritee, "Classification of Breast Tissue Density", Proceedings of 4<sup>th</sup> International Conference on Computer Vision & Image Processing (CVIP-2019), Communications in Computer and Information Science, Springer, vol 1148, pp. 254-265, March 2020, DOI: [https://doi.org/10.1007/978-981-15-4018-9\\_24](https://doi.org/10.1007/978-981-15-4018-9_24).
38. Gupta Nidhi, Bhatele Puspraj, and Khanna Pritee, "Customized use of Expectation-Maximization for Glioma Identification from Brain MRIs", 15<sup>th</sup> International Conference

on Machine Learning and Data Mining (MLDM 2019), July 20-25, 2019, New York, USA, Vol 1, pp. 63- 77, ibai-publishing.

## **2018**

39. *Mishra Shiwangi, Beheshti Iman, and Khanna Pritee*, for the Alzheimer's Disease Neuroimaging Initiative, A Statistical Region Selection and Randomized Volumetric Features Selection Framework for Early Detection of Alzheimer's Disease. *Int J of Imaging Systems and Technology*, September 2018, pp. 1–13, DOI: <https://doi.org/10.1002/ima.22290>.
40. *Saxena Shruti, Pandey Shreelekha, and Khanna Pritee*, “A Semi-supervised Domain Adaptation Assembling Approach for Image Classification”, *Pattern Analysis and Applications*, 21(3), August 2018, pp. 813-827, DOI: <https://doi.org/10.1007/s10044-017-0664-1>.
41. *Kaur Harkeerat and Khanna Pritee*, “Random Distance Method for Generating Unimodal and Multimodal Cancelable Biometric Features”, *IEEE Transactions on Information Forensics & Security*, 14(3), June 2018, pp. 709-719, DOI: <https://doi.org/10.1109/TIFS.2018.2855669>.
42. *Soni S., Khanna Pritee, and Tandon P.*, “Knowledge System for Early Phase Aesthetic Concept Generation in Industrial Design”, *International Journal of Intelligent Systems Design and Computing*, 2(1), June 2018, DOI: <https://dx.doi.org/10.1504/IJISDC.2018.092552>.
43. *Kashyap Kanchan Lata, Bajpai M. K., and Khanna Pritee*, “An Efficient Algorithm for Mass Detection and Shape Analysis of Different Masses Present in Digital Mammograms”, *Multimedia Tools and Applications*, 77(8), April 2018, pp. 9249–9269, DOI: <https://doi.org/10.1007/s11042-017-4751-5>.
44. *Kaur Harkeerat and Khanna Pritee*, “Random Slope Method for Generation of Cancelable Biometric Features”, *Pattern Recognition Letters*, 126, pp. 31-40, March 2018, DOI: <https://doi.org/10.1016/j.patrec.2018.02.016>, 2018.
45. *Kashyap Kanchan Lata, Bajpai M. K., Khanna Pritee and George Giakos*, “Mesh Free Approach for Enhancement of Mammograms”, *IET Image Processing*, 12(3), March 2018, pp. 299 – 306, DOI: <https://doi.org/10.1049/iet-ipr.2017.0326>.
46. *Nausheen Nazma, Seal Ayan, Khanna Pritee, and Halder Santanu*, “An FPGA based Implementation of Sobel Edge Detection”, *Microprocessors and Microsystems*, 56, February 2018, pp. 84 – 91, DOI: <https://doi.org/10.1016/j.micpro.2017.10.011>.
47. *Kashyap Kanchan Lata, Bajpai M. K., Khanna Pritee and George Giakos*, “Mesh Free based Variational Level Set Evolution for Breast Region Segmentation and Abnormality Detection using Mammograms”, *International Journal for Numerical Methods in Biomedical Engineering*, 34(1), January 2018, DOI: <https://doi.org/10.1002/cnm.2907>.
48. *Gupta Nidhi, Mishra Shiwangi and Khanna Pritee*, “Glioma Identification from Brain MRI using Superpixels and Fuzzy c-means Clustering”, *Proceedings of IEEE International Conference on Information and Communication Technology (CICT 2018)*, pp. 1-6, 2018, DOI: <https://doi.org/10.1109/INFOCOMTECH.2018.8722405>.
49. *Gour Neha and Khanna Pritee*, “Optic Disc Segmentation using Vessel In-painting and Random Walk Algorithm”, *Proceedings of IEEE International Conference on Information and Communication Technology (CICT 2018)*, pp. 1-6, 2018, DOI: <https://doi.org/10.1109/infocomtech.2018.8722374>.

50. *Kaur Harkeerat and Khanna Pritee*, “Remote Multimodal Biometric Authentication using Visual Cryptography”, Proceedings of 3<sup>rd</sup> International Conference on Computer Vision and Image Processing (CVIP 2018), Advances in Intelligent Systems and Computing, vol 1024, pp. 13-25, 2020, DOI: [https://doi.org/10.1007/978-981-32-9291-8\\_2](https://doi.org/10.1007/978-981-32-9291-8_2).
51. *Sanasam Inunganbi, Seal Ayan, and Khanna Pritee*, “Classification of Food Images through Interactive Image Segmentation” Proceedings of Asian Conference on Intelligent Information and Database Systems (ACIIDS 2018), Intelligent Information and Database Systems, Springer, vol 10752, pp. 519-528, 2018, DOI: [https://doi.org/10.1007/978-3-319-75420-8\\_49](https://doi.org/10.1007/978-3-319-75420-8_49).
52. *Mishra Shiwangi and Khanna Pritee*, “Early Detection of Alzheimer’s disease using white matter and grey matter alterations in wavelet domain”, Tools and Methods of Competitive Engineering, 2018, Las Palmas de Gran Canaria, Gran Canaria, Spain, May 7-11, 2018 (Presented).

## **2017**

53. *Gupta Nidhi and Khanna Pritee*, “A non-invasive and adaptive CAD system to detect brain tumor from T2-weighted MRIs using customized Otsu’s thresholding with prominent features and supervised learning”, Signal Processing: Image Communication, June 20, 2017, pp. 18-26, DOI: <https://doi.org/10.1016/j.image.2017.05.013>.
54. *Kashyap Kanchan Lata, Bajpai M. K., and Khanna Pritee*, “Globally Supported Radial Basis Function based Collocation Method for Evolution of Level Set in Mass Segmentation using Mammograms”, Computers in Biology and Medicine, 87, August 2017, pp. 22-37, DOI: <https://doi.org/10.1016/j.compbimed.2017.05.015>.
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## **2011**

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## **2010**

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## **Conferences/Workshops/Courses Attended (In Person)**

- 2019 15<sup>th</sup> International Conference on Machine Learning and Data Mining, MLDM 2019, New York, USA, July 20-25, 2019, and presented a paper entitled “Customized use of Expectation Maximization for Glioma Identification from Brain MRIs”.
- 2019 International Scientific Conference Magnitogorsk Rolling Practice – 2019,

Magnitogorsk, Russia, June 4-7, 2019.

- 2018 Tools and Methods of Competitive Engineering, TMCE 2018, Las Palmas de Gran Canaria, Gran Canaria, Spain, May 7-11, 2018, and presented a paper entitled “Early Detection of Alzheimer’s Disease using White Matter and Grey Matter Alterations in Wavelet Domain”.
- 2017 International Conference on Signal Processing and Imaging Engineering, ICSPIE 2017, 25th World Congress on Engineering and Computer Science 2017, organized by IAENG, San Francisco, USA, Oct 25-27, 2017 and presented papers entitled “Fractional Order Filter based Enhancement of Digital Mammograms” and “Non-invertible Biometric Encryption to Generate Cancelable Biometric Templates”.
- 2013 International Conference on Computational Intelligence & Intelligent Systems, ICCIIS’13, World Congress on Engineering 2013, organized by International Association of Engineers (IAENG), London, UK, July 3-5, 2013, and presented a paper entitled “Recognition of Single Handed Sign Language Gestures using Contour Tracing Descriptor”.
- 2013 National Conference of Engineering and Applied Sciences organized by Jabalpur Engineering College, Jabalpur, India, March 22-23, 2013, and presented an expert lecture on “Content-Based Image Retrieval”.
- 2012 International CAD Conference & Exhibition, CAD’12, Niagara Falls, Canada, June 11-14, 2012, and presented a paper entitled “Extended Axiomatic Design and Computational Support to Design for Aesthetics”.
- Fourth International Workshop on Biometrics and its Applications in Forensic Science (IWBFS’11) organized by Biometric Research lab, IIT Kanpur, India, Jan 13-15, 2011.
- 2010 International CAD Conference & Exhibition, CAD’10, Dubai, UAE, June 21-25, 2010, and presented a paper entitled “Multi-Agent Feature based Shape Grammar Implementation for Concept Generation of Industrial Product Design”.
- National Workshop on Recent Trends in Software Engineering (RTSE-2009), Jabalpur Engineering College, Jabalpur, India, March 06-07, 2009, and presented a key-note address on “Technical Performance testing of Biometric Systems”.
- Finishing School Program for Engineering Graduates at IIT Roorkee, India, April 24-25, 2008.
- National Conference on Futuristic Trends in Engineering and Technology, JNCDELM College of Engineering, Sirsa, India, January 28-29, 2008, and presented a key-note address on “Biometric Technologies for Security”.
- National Conference on Information Technology, Present Practices and Challenges held at Asia-Pacific Institute of Management, New Delhi, India, Aug 31-Sept 1, 2007, and presented a key-note address on “Biometrics: An Overview of Challenges Ahead”.
- Second International Conference on Computer Graphics Theory and Applications, GRAPP 2007, Barcelona, Spain, March 08-11, 2007, and presented a paper entitled “Hierarchic Modeling of Symmetric Geometries”.
- Third International Workshop on Biometrics at IIT Kanpur, India, December 1– 2, 2006.
- MCASE 2003, Thapar Institute of Engineering & Technology, Patiala, January 27-28, 2003.
- International Conference on Systematics, Cybernetics, and Informatics, ICSCI-2004, Pentagon Research Center, Hyderabad, India, February 12-15, 2004.
- Patent Awareness Workshop, organized by KUK and PSCST, India, November 25, 2002.
- Orientation Course, Academic Staff College, Kurukshetra University, India, June 07-July



03, 2004.

### Personal Details

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