Dr. Gyanendra Kumar Verma



Associate Professor
Department of Information Technology
National Institute of Technology Raipur,
Raipur-492 010, INDIA
Email: gkverma.it@nitrr.ac.in, gyanendra@ [ieee.org] / [acm.org]
Ph: +91-7404210632 (M)
http://nitrr.ac.in/viewdetails.php?q=it.gkverma
www.gkverma.in

Brief Bio

Dr. Gyanendra Kumar Verma is an Associate Professor in the Department of Information Technology at the National Institute of Technology (NIT) Raipur, India. He holds a Ph.D. and M. Tech. in Information Technology from the Indian Institute of Information Technology, Allahabad (IIITA), and a B.Tech. in Information Technology from Harcourt Butler Technical University, Kanpur. With over twelve years of experience in teaching and research, Dr. Verma specializes in Affective Computing, Digital Image Processing, Medical Imaging, Natural Language Processing, and Human-Computer Interaction. His research contributions include applications of Wavelet Transform in Medical Imaging and Computer Vision, with numerous publications in high-impact journals and conferences. He has served on several international conference committees and has organized workshops and academic events, including the MIND conference series. He is actively engaged in mentoring research scholars and has collaborated on interdisciplinary projects. Dr. Verma has been recognized among the World's Top 2% Scientists by Stanford University (2023) and holds senior memberships in IEEE and ACM. He has delivered expert talks on Affective Computing, Deep Learning, and Computational Intelligence. His editorial and reviewing engagements include contributions to journals published by IEEE, Springer, Elsevier, and other leading publishers. For more details on his work, visit www.gkverma.in.

Education

- **Ph.D. (Information Technology)** -2016, Department of Information Technology,
  Indian Institute of Information Technology Allahabad, India.

  Thesis Title: *Multimodal Fusion Framework Using Multiresolution Analysis for Emotion Recognition and Prediction*
  Supervisor: *Prof. (Dr.) Uma Shanker Tiwari*

- **M. Tech. (Information Technology)** - 2009, Department of Information Technology, Indian Institute of Information Technology Allahabad, Allahabad, India. (First Div.)

  Thesis Title: *Speaker Identification System using Wavelet Transform*

  Supervisor: *Prof. (Dr.) Uma Shanker Tiwari*

- **B. Tech. (Information Technology)** - 2006, Harcourt Butler Technical University (formerly H. B. T. I.) Kanpur, Uttar Pradesh, India (First Div.)

Present Position

- Associate Professor at the Department of Information Technology, National Institute of Technology Raipur, Chhattisgarh - 492 010 (29th May 2026- till now)

Professional Experience

- Assistant Professor (Grade-I) at Department of Information Technology, National Institute of Technology Raipur, Chhattisgarh - 492 010 (26th October 2021- 28th May 2026)
- Assistant Professor at Department of Computer Engineering, National Institute of Technology Kurukshetra, Haryana - 136119 (20th Feb. 2013- 25th October 2021)
- Assistant Professor at Department of Computer Science & Engineering, National Institute of Technology, Silchar, Assam (Aug. 2012 – Feb. 2013)

Experience in Research

- Research at Indian Institute of Information Technology, Allahabad: Worked as a Doctoral Research Fellow in the Department of Information Technology
- Research at the Indian Institute of Information Technology, Allahabad: Worked as a Post-graduate Scholar in the Department of Information Technology

Research Interests

- Affective Computing
- Digital Image Processing and Computer Vision
- Medical Imaging
- Natural Language Processing
- Biometrics
- Speech Processing
- Human-Computer Interaction

Honours, Awards and Professional Activities

- He is listed in the **World's Top 2% of Scientists** in studies carried out by Stanford University, USA, in 2026, 2025, 2023 and 2021.
- Elevated to senior grade member of IEEE, Dec. 2020
- Elevated to senior grade member of ACM, USA, 2021
- Awarded as ***Outstanding Mentor*** in National Level Project Competition (PROWAR-2016) on 30th April 2016 organized by the School of Computing Science and Engineering, Galgotias University, Greater Noida, India
- Achieved 3rd Rank in Uttar Pradesh State Engineering Admission Test (UPSEAT-2003)
- GATE-2007 qualified
- MHRD scholarship/fellowship holder during M. Tech. and PhD.
- Editorial advisory board member – Handbook of Research on Political Activism in the Information Age, IGI Global, 2014
- Editorial Advisory Board member – Political Campaigning in the Information Age, IGI Global, 2014
- Editorial advisory board member – Gamification for Human Factors Integration: Social, Education, and Psychological Issues, IGI Global, 2014
- Editorial advisory board member – Transforming Politics and Policy in the Digital Age, IGI Global, 2014

Professional Memberships

- IEEE Senior Membership (No.91237448)
- ACM Senior Membership (No.4311750)
- IEEE Young Professionals
- IEEE Computer Society Technical Committee on Multimedia Computing
- IEEE Computational Intelligence Society Membership
- Member of International Association of Computer Science and Information Technology – IACSIT (Singapore)
- Member of the International Association of Engineers (IAENG)

Expert Talk Delivered

- Served as an expert evaluator for project proposals submitted under AICTE Research & Innovation Development Schemes (Sept'25)

- Delivered an expert talk on Generative AI: Revolutionizing the future from Machine Learning to AI Agents at a One Week Faculty Development Program on Machine Learning for Computer Vision & Image Processing under the banner of the Electronics and ICT Academy at National Institute of Technology Patna during 12th – 18th May, 2025
- Delivered an expert talk, "Affective Computing in Health Informatics", on Hands-on Training on Computational Intelligence for Health Informatics and Wearable Device Data Analysis on 30th July 2023 at the Department of Computer Science and Engineering, NIT Silchar, Assam, India
- Chaired two technical sessions at CoCoNet 2019 (An International Conference sponsored by ACM) from 18 - 21 Dec. 2019 at the Indian Institute of Information Technology and Management, Trivandrum, Kerala.

  1. CoCoNet-S2: Sixth Symposium on Computer Vision and the Internet (VisionNet'19)

  2. CoCoNet-S10: Main Track - Computer Vision, Image Processing, Machine Learning and Pattern Recognition (Regular Papers)

- NBA visit to Government Engineering College Bikaner under TEQIP-III tuning program during 6-8 Sept. 2019
- TEQIP-III sponsored a workshop on "Outcome-based accreditation for Undergraduate Engineering programs" on 16-17th March 2018 at Government Engineering College Bikaner, India
- "Deep Convolutional Neural Network" TEQIP-III Sponsored STTP on "Computational Intelligence & Cloud Computing (CICC-2017)" 26th - 30th December 2017 in Department of Information Technology, National Institute of Technology Raipur, India
- "Deep Learning: Theory and Applications" One Week STTP on "Soft Computing Techniques & Robotics" 4th - 8th September 2017 in Department of Information Technology, National Institute of Technology Raipur, India
- "Multi-resolution Analysis of Signals" Summer School on Image Processing, 8-12 June 2015, Department of Computer Engg. NIT Kurukshetra
- "Affective Computing: HCI Perspective" Winter School on Computational Intelligence in Pattern Recognition, 12 -17th Dec. 2016, Department of Computer Engg. NIT Kurukshetra

Administrative Responsibilities

- Chairperson, Website Content Monitoring Committee, NIT Raipur (17th Nov. 2021 to till now)
- Warden Hostel-9, NIT Kurukshetra (From 1 July 2019 to July 2021)

- Centre Superintendent (End Semester Examination, Apr/May 2018)
- Warden, Hostel -8, NIT Kurukshetra (from 22 July 2014 to 28 July 2016)
- Deputy Centre Superintendent (End Semester Examination, 2013-2014) NIT Kurukshetra, India

Academic Responsibilities

- Reviewer for various international journals: IEEE, Springer, Elsevier, World Scientific, etc.
- Member, Accreditation committee for accreditation of UG/PG courses of the department
- Coordinator, B. Tech (CO) Dissertation/Project
- Member, Departmental Purchase Committee (DPC)
- Member, M. Tech Dissertation/Project
- Member, Committee for processing PhD applications
- Member, Input to the DAC for reviewing B. Tech CO and IT (curriculum, syllabus and scheme) committee
- Member, Input to the DAC for reviewing M. Tech (curriculum, syllabi and scheme) committee
- Member, Committee for proposing new M. Tech program in Network / Cyber Security

Editorial Advisory Board Member/ Program Committee Member

- IHCI2022, Uzbekistan, MISP2022, NIT Raipur India, icSoftComp2022, Churasat Gujarat
- CLNLP2020, Seoul, South Koria, SCES-2020 MANIT Allahabad, India
- International Conference on Computing Analytics and Networking (ICCAN - 2017), 15-16 Dec. 2017, School of Computer Engineering, KIIT University, Bhubaneswar, Odisha
- First International Conference on Latest Advances in Machine Learning and Data Science [LAMDA - 2017], NIT Goa
- IEEE Second International Conference on Computer Graphics, Vision and Information Security (IEEE CGVIS - 2017)
- International Conference on Electronic Design, Computer Networks & Automated Verification (EDCAV 2015)
- Handbook of Research on Political Activism in the Information Age, IGI Global, 2014
- Political Campaigning in the Information Age, IGI Global, 2014
- Gamification for Human Factors Integration: Social, Education, and Psychological Issues, IGI Global, 2014
- Transforming Politics and Policy in the Digital Age, IGI Global, 2014
- International Conference on Computing and Communication Technologies (ICCCT-2014)

- Second International Conference on Advances in Computing, Communications and Informatics (ICACCI-2013)
- Second Student Research Symposium (SRS-2013)

Ph.D. Students

ONGOING	
Name: **SHREYA CHANDRAKAR** Email: kaverikar03@gmail.com Roll No.: 23318509 Year: 2023 - 2024 Thesis Area: Affective Computing	Name: **Anjali Sagar Jangde** Email: asjangde.phd2024.it@nitrr.ac.in Roll No.: 24318001 Year: 2023 - 2024 Thesis Area: Medical Signal Processing
Name: **KAVERI KAR** Email: schandrakar.phd2024.it@nitrr.ac.in Roll No.: 231555 Year: 2023 - 2024 Thesis Area: Affective Computing	Name: **ARTI KORI** Email: artikori1711@gmail.com Roll No.: 25318003 Year: 2025 - 2026 Thesis Area: Image Processing
COMPLETED	
Name: **ANAMIKA DHILLON** Email: dhillon.anamika2390@gmail.com Roll No.: 2K17/NITK/PhD/6170020 Year: 2016 - 2017 Thesis Title: A Multi-Model Deep Learning Framework for Multi-class Object Recognition	Name: **DIVYA GARG** Email: divya29garg@gmail.com Roll No.: 2K18/NITK/Ph.D./6180091 Year: 2018 - 2019 Thesis Title: Modelling and Analysis of Spontaneous Emotions in 3D Space Using Deep Learning

M. Tech. Students (completed 18 nos.)

Name: **Abhishek Ahirwar** (24265001) NIT Raipur **[Ongoing]** Email: abhiahirwar2001@gmail.com Batch: 2025 - 2026	Name: **Rajaswi Suryakant Borkar** (23265016) NIT Raipur Email: borkar.rajaswi15@gmail.com Batch: 2024 - 2025

Thesis Title: TBD	Thesis Title: Wavelet-Enhanced CNNs for Accurate Brain Tumour Detection and Classification
Name: **Roopa Golchha** (21265018) NIT Raipur Email: swizling.27@gmail.com Batch: 2021 - 2023 Thesis Title: Deepfake Image Generation and Detection using GAN and CNN in Quantum Computing Domain	**Name: Shashank Kaushik (22265012)** Email: k.shashank.1212@gmail.com Batch: 2023 - 2024 Thesis Title: Affect Analysis using the integration of Physiological signals in a Deep Learning Framework
Name: **Biken Singh** (31903110) Email: bikensingh62@gmail.com Batch: 2019 - 2021 Thesis Title: Affect Analysis from EEG Signal Using Convolutional LSTM Network	Name: **Nency Bansal** (31903202) Email: nencybansal42@gmail.com Batch: 2019 - 2021 Thesis Title: Detection of Deepfake Videos using Convolutional Neural Network
Name: **Anant Kumar** Roll No.:31803107 Email: anantchaudhary1995@gmail.com Batch: 2018 - 2020 Thesis Title: Image compression using Deep Learning-based multi-structure feature map and K-means clustering	Name: **Shaijal Tripathi** (31903220) Email: shaijal_31903220@nitkkr.ac.in Batch: 2019 - 2021 Thesis Title: Pose-Based Action Recognition using Wavelet Analysis
Name: **Gita** Roll No.:31603218 Email: gitasingh480@gmail.com Batch: 2016 - 2018 Thesis Title: A Multimodal Fusion-based Framework to Reinforce IDS for Security Big Data Environment Using Spark	Name: **Ankur Kaushal** [Biomedical Engg.] Roll No.:31608108 Email: ankur.vicky999@gmail.com Batch: 2016 - 2018 Thesis Title: Deep Convolutional Neural Network-Based Cervical MR Image Classification
Name: **Pragya Gupta** Roll No.:31503110 Email: pragyagupta10@gmail.com Batch: 2015 - 2017 Thesis Title: Wild Animal Detection from Highly Cluttered Natural Scenes	Name: **Piyush Kawde** Roll No.:31503110 Email: piyushkawde123@gmail.com Batch: 2015 - 2017 Thesis Title: Random Deep Belief Networks for Affect Recognition from Physiological Signals
Name: **Vaibhav Khanna (Biomedical Engg.)** Email: vaibhavkhanna9331@gmail.com Year: 2016 - 2017 Thesis Area: Detection of prostate cancer using wavelet transform	Name: **Shipra Roy (Biomedical Engg.)** Email: shipraroy1710@gmail.com Year: 2016 - 2017 Thesis Area: Cervical Cancer Detection from MR Images using Wavelet Transform

Name: **Rishav Garg** Email: rishav0127@gmail.com Year: 2015 - 2016 Thesis Title: Human Detection Using Visual and Infrared Imagery	Name: **Dolly Kharbanda** Email: dolly.kharbanda@gmail.com Year: 2015 - 2016 Thesis Title: Brain tumour detection from Histopathological Images using Multiresolution Analysis and Dictionary Learning
Name: **Rohit Kumar Tiwari (Topper 2013)** Email: to_rohittiwari@yahoo.in Year: 2014 - 2015 Thesis Title: A Computer Vision-based Framework for Visual Gun Detection	Name: **Ram Pratap Sharma** Email: rmprtp_shrm@yahoo.co.in Year: 2014 - 2015 Thesis Title: Multimedia Interaction Using Hand Gesture
Name: **Mayank Kumar Aditiya** Email: mayankaditia@gmail.com Year: 2013 - 2014 Thesis Title: Spontaneous Affect Recognition from Audio-Visual Signals Using Multi-resolution Analysis	Name: **Himanshu Buckchash** Email: himanshu7buckchash@gmail.com Year: 2013 - 2014 Thesis Title: A Parallel Three-Stage Framework for Visual Knife Detection.

Conferences/Workshops/ Seminar organized

- Chairman, MIND-2025, International Conference on Machine Learning, Image Processing, Network Security and Data Sciences (MIND2025) organized on 12-14 December 2025 at Dept. of Computer Science & Engineering, MNIT Jaipur, India
- Chairman, AICTA-2025, International Conference on Artificial Intelligence, Computing Technologies, Internet of Things (IoT), and Data Analytics organized on 30-01 November 2025 at Lendi Institute of Engineering & Technology, Visakhapatnam, India
- General Co-Chair, MIND-2024, International Conference on Machine Learning, Image Processing, Network Security and Data Sciences (MIND2024) organized on 20-21 Dec. 2024 at Dept. of Computer Science & Engg., NIT Goa, India
- General Co-Chair, MIND-2023, International Conference on Machine Learning, Image Processing, Network Security and Data Sciences (MIND2023) organized on 21-22 Dec. 2023 at Dept. of Computer Science & Engg., NIT Hamirpur, India
- Secretary, MIND-2021 International Conference on Machine Learning, Image Processing, Network Security and Data Sciences organized on 11-12 Dec. 2021 at Dept. of Information Technology, NIT Raipur, Chhattisgarh, India
- Program Chair, MIND-2020 International Conference on Machine Learning, Image Processing, Network Security and Data Sciences organised on 30-31 July 2020 at Dept. of Computer Science & Engineering, NIT Silchar, Assam, India
- Organizing Chair, MIND-2019 International Conference on Machine Learning, Image Processing, Network Security and Data Sciences organised on 3-4 March 2019 at Dept. of Computer Engineering, NIT Kurukshetra, India

- Coordinator, One-week training programme on the professional development of teachers on (15-20 March), 2017, Office of Dean, Faculty Welfare, NIT Kurukshetra, India
- Coordinator, Winter School on Computational Intelligence in Pattern Recognition (CIPR-2016), 12-17th Dec. 2016 at Dept. of Computer Engineering, NIT Kurukshetra, India
- Coordinator, Summer School on Image Processing (SSIP-2015), 8-12th June 2015, Dept. of Computer Engineering, NIT Kurukshetra, India
- Member of organising team in the First International Conference on Intelligent Interactive Technologies and Multimedia (IITM-2010), Dec. 28-30, 2010, organised by IIIT Allahabad, India.
- Member of organizing team in the Second International Conference on Intelligent Human Computer Interaction (IHCI-2010) organised by IIIT Allahabad, India.
- Member of the organising team in the First International Conference on Intelligent Human Computer Interaction (IHCI-2009) organised by IIIT Allahabad, India.
- Member of the organising team in the IEEE Workshop on Recent Trends in HCI organised by IIIT Allahabad, India.

Conferences/Workshops/Summer/Winter School Attended

- The Fifteenth International IEEE Conference on Computing, Communication and Networking Technologies, June 24 - 28, 2024, IIT Mandi, H.P., India
- One-week short-term training program on "Artificial Intelligence and Machine Learning for Engineering Applications (AIMLEA-2024)", August 10 – 14, 2024, Department of Electronics and Communication Engineering, National Institute of Technology Kurukshetra, Haryana
- One-week short-term training program on "Soft Computing Techniques & Robotics", 4-8 Sep. 2017, Department of Information Technology, National Institute of Technology Raipur, India
- One-week short-term training program on "Applications of Statistics in Engg, Management and Applied Sciences from 11th -15th Oct. 2012, National Institute of Technology Silchar, India
- Winter School on Speech and Audio Processing 2011, IIT Guwahati, from 8th Jan. 2011 to 11th Jan. 2011.
- The Second International Conference on Intelligent Human Computer Interaction (IHCI-2010) organized by IIIT Allahabad from 16th to 18th January 2010.
- IEEE Workshop on Recent Trends in HCI organized by IIIT Allahabad from 19th to 21st Jan. 2009
- First International Conference on Intelligent Human Computer Interaction (IHCI-2009) organized by IIIT Allahabad from 19th-23rd Jan. 2009.
- Third International Conference on Wireless Communication & Sensor Networks (WCSN-2007) organized by IIIT Allahabad from 13th to 15th Dec. 2007.
- Volunteer in the 3rd International Conference on Wireless Communication & Sensor Network (WCSN-2007) organized by IIIT, Allahabad, India.

- Volunteer at the 2nd Nobel Laureate Science Conclave 2009, organized by IIIT, Allahabad.

Personal Information

Name	GYANENDRA KUMAR VERMA
Father's Name	Late S. P. Verma
DOB	Feb. 06th, 1980
Gender	Male
Marital Status	Married
Address	Department of Information Technology National Institute of Technology Raipur Raipur – 492010, Chhattisgarh, India
Phone	+91-7404210632
Email	gkverma.it@nitrr.ac.in, vermagkv@gmail.com
Website	www.gkverma.in

References

1. Prof. Awadhesh Kumar Singh
   Professor and Head of the Department
   Department of Computer Engineering
   National Institute of Technology Kurukshetra- 136119, India
   Email: aksingh@nitkkr.ac.in
   Phone: +91-1744-233481

2. Prof. Dinesh K. Vishwakarma,
   Professor and Head of the Department
   Department of Information Technology,
   Delhi Technological University, Delhi
   Bawana Road, Delhi – 110042
   Email: dinesh@dtu.ac.in
   Phone:+91-9971339840,

3. Prof. Bhupesh Kumar Singh
   Associate Professor
   Department of Computer Engineering, College of Technology
   G. B. Pant University of Agriculture & Technology, Pantnagar – 263145, India
   Email: bhupeshkumarsingh@gmail.com
   Phone: 9411159650

Sponsored Projects

1. Title: Assessment of linkages between groundwater withdrawal, land subsidence and other contributing factors in Howrah
   PI: Chandan Kumar Singh
   Co-PI: Gyanendra Kumar Verma
   Project Cost: 42.57 Lakhs
   Funding Agency: Ministry of Jal Shakti, Govt. of India

International Journal articles

1. Title: Adaptive Modality-Specific Wavelet Learning Framework for Multimodal Pain Intensity Recognition
   Author: Shreya Chandrakar, Gyanendra Kumar Verma
   Source: Biomedical Signal Processing and Control, Volume 131, Part B, 30th March 2027 [SCIE IF:5.7]; DOI: https://doi.org/10.1016/j.bspc.2026.111694

2. Title: NeuroAI-EEG: A Systematic Review of AI Techniques for Schizophrenia Detection
   Authors: Anjali Sagar Jangde, Gyanendra Kumar Verma
   Source: BioNanoScience, Springer 16(11) 364, Oct.-2026 [SCI]
   DOI:https://doi.org/10.1007/s12668-026-02945-3

3. Title: Efficient EEG-based schizophrenia classification via a lightweight hybrid CNN–BiLSTM model
   Authors: Anjali Sagar Jangde, Gyanendra Kumar Verma
   Source: Psychiatry Research: Neuroimaging 364, Sept. 2026 [SCI];
   DOI:https://doi.org/10.1016/j.pscychresns.2026.112315

4. Title: A systematic mapping review of shared EEG signatures in stress and depression across six biomarker domains (2020–2025)
   Authors: Kaveri Kar, Gyanendra Kumar Verma
   Source: Biomedical Signal Processing and Control, 126, Oct. 2026 [SCIE IF:5.7];
   DOI:https://doi.org/10.1016/j.bspc.2026.110904

5. Title: EEG-Based Schizophrenia Classification Using Attention-Integrated Deep Convolutional Networks
   Authors: Anjali Sagar Jangde, Gyanendra K. Verma
   Source: Psychiatry Research: Neuroimaging, 112138, 2026 [SCI IF: 2.05]; DOI: https://doi.org/10.1016/j.pscychresns.2026.112138

6. Title: Hybrid DCGAN-CNN architecture for EEG-based emotion recognition in 3D Valence-Arousal-Dominance space
   Authors: Gyanendra K. Verma
   Source: SN Computer Science, Volume 6, article number 463, (2025), 2025 [Scopus];
   DOI:https://doi.org/10.1007/s42979-025-03998-z

7. Title: Leveraging Quantum Computing for Synthetic Image Generation and Recognition with Generative Adversarial Networks and Convolutional Neural Networks
   Author(s): Roopa Golchha and Gyanendra Kumar Verma
   Source: International Journal of Information Technology, Springer, 2024, 9th April [Scopus]
   DOI: https://doi.org/10.1007/s41870-024-01835-9

8. Title: EEG-based Emotion Recognition using MobileNet Recurrent Neural Network with Time-Frequency Features
   Author(s): Divya Garg, Gyanendra Kumar Verma, Awadhesh Kumar Singh
   Source: Applied Soft Computing, Elsevier, Vol. 154, March 2024, 111338 [SCI IF: 8.7]
   https://doi.org/10.1016/j.asoc.2024.111338

9. Title: EEG-Based Emotion Recognition Using Quantum Machine Learning
   Author(s): Divya Garg, Gyanendra Kumar Verma, Awadhesh Kumar Singh
   Source: SN Computer Science June-2023, 4, 480, 2023; DOI:
   https://doi.org/10.1007/s42979-023-01943-6

10. Title: Real-Time Advanced Computational Intelligence for Deep Fake Video Detection
    Author(s): Nancy Bansal, Turki Aljrees, Dhirendra Prasad Yadav, Gyanendra Kumar Verma et al.
    Source: Applied Sciences (MDPI) [IF: 2.838] 2023, 13(5), 3095;
    https://doi.org/10.3390/app13053095 (registering DOI)

11. Title: A review of deep learning-based methods for affect analysis using physiological signals.
    Author(s): D Garg, GK Verma
    Source: Multimedia Tools and Applications, Springer [IF: 2.577] (Jan. 2023)
    https://doi.org/10.1007/s11042-023-14354-9

12. Title: Modelling and statistical analysis of emotions in 3D space
    Author(s): D Garg, GK Verma, AK Singh
    Source: Engineering Research Express 4 (3), 035062 (Sep. 2022) [If: 1.205] IOP Publishing, DOI 10.1088/2631-8695/ac93e8

13. Title: Multi-modal feature fusion for object detection using neighbourhood component analysis and bounding box regression
    Author(s): Anamika Dhillon, Gyanendra K. Verma
    Source: International Journal of Business Intelligence and Data Mining 1(1):1 Inderscience
    DOI: 10.1504/IJBIDM.2022.10047465

14. Title: A Deep Learning Framework for Multi-Class Object Recognition Using Feature Fusion and Neighbourhood Component Analysis
    Author(s): Anamika Dhillon, Gyanendra K. Verma
    Source: SSRN Electronic Journal. (Jan. 2021) DOI: 10.2139/ssrn.3979332

15. Title: Convolutional Neural Network: A Review of Models, Methodologies and Applications to Object Detection
    Author(s): Anamika Dhillon, Gyanendra K. Verma

Source: Progress in Artificial Intelligence, Springer, 9 (2), 85-112 (2020). https://doi.org/10.1007/s13748-019-00203-0

16. Title: Emotion Recognition in Valence-Arousal Space from Multi-channel EEG Data and Wavelet-based Deep Learning Framework
Author(s): D Garg, GK Verma
Source: Procedia Computer Science 171, 857-867, 2020

17. Title: A multimodal fusion-based framework to reinforce IDS for securing Big Data environment using Spark
Author(s): Gita Donkal, Gyanendra K. Verma
Source: Journal of Information Security and Applications, Elsevier, [Scopus] Vol. 43, December 2018, Pages 1-11, DOI: https://doi.org/10.1016/j.jisa.2018.10.001

18. Title: Wild Animal Detection from Highly Cluttered Images Using a Deep Convolutional Neural Network
Author(s): Gyanendra K. Verma, Pragya Gupta
Source: International Journal of Computational Intelligence and Applications (IJCIA), World Scientific [Scopus] 17(1):1850021 DOI:10.1142/S1469026818500219

19. Title: Affect representation and recognition in 3D continuous valence–arousal–dominance space
Author(s): G K Verma, U S Tiwary
Source: Multimedia Tools and Applications, Springer [SCI, IF: 2.313] Volume: - Issue: - Pages: 1-25 Published Online: Jan 2016
DOI: 10.1007/s11042-015-3119-y

20. Title: Spontaneous Affect Recognition from Audio-visual cues using Multiresolution Analysis
Author(s): Gyanendra Verma, Uma Shankar Tiwary
Source: International Journal of Computational Vision and Robotics, Inderscience Volume: - Issue: - Pages: 1-22

21. Title: Texture vs. multiresolution analysis of facial expressions: application to emotion recognition
Author(s): Himanshu Buckchash; Gyanendra K. Verma
Source: International Journal of Applied Pattern Recognition, Inderscience Volume: 2 Issue: 1 Page: 46 Published: 2015
DOI: 10.1504/IJAPR.2015.068931

22. Title: Human-computer interaction Using Hand gesture
Author(s): RP Sharma, GK Verma
Source: Procedia Computer Science, Elsevier 54, 721-727, 2015

23. Title: A computer vision-based framework for visual gun detection using Harris interest point detector
Author(s): RK Tiwari, GK Verma
Source: Procedia Computer Science, Elsevier 54, 703-712, 2015

24. Title: Multimodal Fusion Framework: A Multiresolution approach for emotion Classification and recognition from Physiological signals
Author(s): Verma, G.K.; Tiwary, U.S.
Source: NeuroImage, Elsevier [SCI, IF: 5.902] Volume: 102 Issue: P1 Pages: 162-172 Published: 2014 DOI: 10.1016/j.neuroimage.2013.11.007 /

25. Title: Basic handwritten character recognition from a multi-lingual image dataset using multi-resolution and multi-directional transform
Author(s): Prasad, S.; Verma, G.K.; Singh, B.K.
Source: International Journal of Wavelets, Multiresolution and Information Processing, World Scientific [SCI, IF: 0.61] Volume: 10 Issue: 5 Published: 2012
DOI: 10.1142/S0219691312500464 /

26. Title: A Digital Security System with Door Lock System Using {RFID} Technology
Author(s): Gyanendra K Verma; Pawan Tripathi
Source: International Journal of Computer Applications Volume: 5 Issue: 11 Pages: 6--8 Published: 2010 DOI: 10.5120/957-1334

International Books

1. Multimodal Affective Computing: Affective Information Representation, Modelling, and Analysis
Bentham Science Singapore, 2023
Author: **Gyanendra K. Verma**
DOI: 10.2174/97898151244531230101
eISBN: 978-981-5124-45-3, 2023
ISBN: 978-981-5124-46-0
URL: https://www.eurekaselect.com/ebook_volume/3474

2. Deep Learning: Theory, Architectures and Applications in Speech, Image and Language Processing
Bentham Science 2022 (In Press)
Editors: ***Gyanendra K. Verma****, Rajesh Doriya*

3. Data Science: Theory, Algorithms, and Applications
Transactions on Computer Systems and Networks, Springer, 2021
Editors: ***Verma, G. K.,*** *Soni, B., Bourennane, S., Ramos, A.*

4. Machine Learning, Image Processing, Network Security and Data Sciences
Second International Conference, MIND 2020, Silchar, India, July 30 - 31, 2020, Proceedings, Part I
Editors: Bhattacharjee, A., Borgohain, S.K., Soni, B., ***Verma, G. K.****, Gao, X.-Z.*

5. Machine Learning, Image Processing, Network Security and Data Sciences
Second International Conference, MIND 2020, Silchar, India, July 30 - 31, 2020, Proceedings, Part II
Editors: Bhattacharjee, A., Borgohain, S.K., Soni, B., ***Verma, G.K.,*** *Gao, X.-Z.*

International Book Chapters

1. Title: Deep Learning: History and Evolution
Author: Jaykumar Suraj Lachure, Gyanendra Verma and Rajesh Doriya
Source: In the book: Deep Learning: Theory, Architectures and Applications in Speech, Image and Language Processing
Bentham Science Publishers, Singapore. Pages 1- 18 (18). Aug. 2023
DOI: https://doi.org/10.2174/97898150792101230100004
URL: https://www.eurekaselect.com/ebook_volume/3557

2. Title: Prediction of growth and review of factors influencing the transmission of COVID-19
Author: Gyanendra K. Verma

Source: In the book, Mathematical Modelling and Intelligent Control for Combating Pandemics. Springer Optimisation and Its Applications
213-231, May 2023, VOL. 203, Springer, Cham
Mathematical Modelling and Intelligent Control for Combating Pandemics, 213-231, May 2023, Springer, Cham
Book URL: https://link.springer.com/book/9783031331824
Chapter DOI: https://doi.org/10.1007/978-3-031-33183-1_12

3. Title: A Multiple Object Recognition Approach via DenseNet-161 Model
Author(s): Anamika Dhillon and Gyanendra Kumar Verma
Source: In the book: Smart Electrical and Mechanical Systems,
An Application of Artificial Intelligence and Machine Learning, 2022, Pages 39-64, Elsevier.
Published: Jan. 2022
DOI: https://doi.org/10.1016/B978-0-323-90789-7.00009-9

4. Title: Fusion of Deep Learning Features for Wild Animal Detection
Author(s): Anamika Dhillon, Verma, G.K.
Source: Advances in Deep Learning, Artificial Intelligence and Robotics, Lecture Notes in Networks and Systems book series (LNNS, volume 249) Jan. 2022
DOI: 10.1007/978-3-030-85365-5_2

5. Title: A Multiple Object Recognition Approach via DenseNet-161 Model
Author(s): Anamika Dhillon, Verma, G.K.
Source: Smart Electrical and Mechanical Systems, Elsevier, Pages 39-64, Jan. 2022
https://doi.org/10.1016/B978-0-323-90789-7.00009-9

6. Title: Feature Extraction and Fusion of Multiple Convolutional Neural Networks for Firearm Detection
Author(s): Anamika Dhillon, Verma, G.K.
Source: Advanced Machine Intelligence and Signal Processing. Lecture Notes in Electrical Engineering, vol. 858. Springer, Singapore. Published: June 2022
DOI: 10.1007/978-981-19-0840-8_34

7. Title: An Improved DCNN-Based Facial Micro-expression Recognition System
Author(s): Verma, G.K.; Divya Garg
Source: Data Science, Pages 349-363, Springer Nature, Singapore, Published: 2021
DOI: 10.1007/978-981-16-1681-5_22

8. Title: Facial emotion recognition in the curvelet domain
Author(s): Verma, G.K.; Singh, B.K.
Source: Communications in Computer and Information Science Volume: 157 CCIS Pages: 554-559
Published: 2011
DOI: 10.1007/978-3-642-22786-8_70

9. Title: Facial emotion recognition using different multi-resolution transforms. Author(s): Verma, G.K.; Tiwary, U.S.; Rai, M.K.
Source: Communications in Computer and Information Science Volume: 192 CCIS Issue: PART 3
Pages: 469-477 Published: 2011
DOI: 10.1007/978-3-642-22720-2_49 /

10. Title: Handwritten Hindi character recognition using curvelet transform. Author(s): Verma, G.K.; Prasad, S.; Kumar, P.
    Source: Communications in Computer and Information Science Volume: 139 CCIS Pages: 224-227 Published: 2011
    DOI: 10.1007/978-3-642-19403-0_37

11. Title: Multi-algorithm Fusion for Speech Emotion Recognition Author(s): Verma, G.K.; Tiwary, U.S.; Agrawal, S.
    Source: Communications in Computer and Information Science Volume: 192 CCIS Issue: PART 3 Pages: 452-459 Published: 2011
    DOI: 10.1007/978-3-642-22720-2_47

12. Title: Multi-feature fusion for closed-set text-independent speaker identification
    Author(s): Verma, G.K.
    Source: Communications in Computer and Information Science Volume: 141 CCIS Pages: 170-179 Published: 2011
    DOI: 10.1007/978-3-642-19423-8_18

International Conference papers

1. Title: Autoencoder-Enhanced EEG Signal Analysis
   Author: Anjali Sagar Jangde; Gyanendra K. Verma
   Conference: 7th International Conference on Information Systems and Management Science (ISMS 2025), 22- 23 February 2025, NIT Kurukshetra, India. DOI: https://doi.org/10.1007/978-3-031-95017-9_2
2. Title: Exploring Phase Recurrence in Decomposed EEG Signals for Major Depressive Disorder Detection
   Author: Kaveri Kar; Gyanendra K. Verma
   Conference: 7th IEEE International Conference on Signal Processing, Computing, and Control (ISPCC-2k25), 6-8 March 2025, Himachal Pradesh, India. DOI: 10.1109/ISPCC66872.2025.11039594
3. Title: Wavelet-Enhanced Hybrid CNN Models for Precise Brain Tumour Classification
   Author: Rajaswi Borkar, Gyanendra Kumar Verma
   Conference: 7th IEEE International Conference on Signal Processing, Computing, and Control (ISPCC-2k25), 6-8 March 2025, Himachal Pradesh, India. DOI: 10.1109/ISPCC66872.2025.11039357
4. Title: Affect Recognition and Analysis from Scalograms using DCGAN-based Inception-V3 [Accepted]
   Author: Gyanendra K. Verma
   Conference: 2nd Int. Conf. on Machine Intelligence for Research & Innovations (MAiTRI-2024) 21-23 June NIT Srinagar, J & K
5. Title: Improving EEG-based Emotion Recognition using DCGAN with MobileNet [Accepted]
   Author: Shashank Kaushik, Gyanendra K. Verma
   Conference: 15th Int. Conf. on Computing, Communication and Networking Technologies (ICCCNT 2024), June 24 - 28, 2024, IIT Mandi, Himachal Pradesh, India.
6. Title: Convolutional-LSTM Network for Emotion Recognition Using EEG Data in Valence-Arousal Dimension
   Authors: Divya Garg, Gyanendra Kumar Verma, Awadhesh Kumar Singh

Conference: Soft Computing: Theories and Applications (SoCTA 2023) at IIIT Una, India, July 2024, DOI: https://doi.org/10.1007/978-981-97-2031-6_23

7. Title: A Deep Learning Model for Multiclass Image Classification Using Quantum CNN
   Author: R. Golchha & Gyanendra K. Verma
   Conference: 4th Communication Technologies and Cloud Computing Conference (CTCCC 2023) to be held at Edinburgh Napier University, Edinburgh, UK, August 11-13, 2023
   DOI: 10.1109/ASIP58895.2023.00024
8. Title: A hybrid approach for spontaneous emotion recognition in 2D valence-arousal space
   Author: Gyanendra K. Verma
   Conference: International Conference on Advances in IoT, Security with AI (ICAISA-2023), University of Delhi and NIT Arunachal Pradesh, 24-25 March 2023, Delhi
   DOI: 10.1007/978-981-99-5085-0_37
9. Title: Quantum-Enhanced Support Vector Classifier for Image Classification
   Author(s): Roopa Golchha and Gyanendra K. Verma
   Conference: IEEE 8th International Conference for Convergence in Technology (I2CT), Pune, India
   DOI: 10.1109/I2CT57861.2023.10126421
10. Title: Image Compression Using Deep Learning-Based Multi-structure Feature Map and K-Means Clustering
    Author(s): G Verma, A Kumar
    Conference: International Conference on Machine Learning, Image Processing, Network Security and Data Sciences, 30-31 July 2020, NIT Silchar, India
11. Title: Deep Belief Network-Based Affect Recognition from Physiological Signals
    Author(s): Piyush Kawde, G.K. Verma
    Conference: IEEE UPCON-2017, 26-28 Oct. 2017, pp. 587-592, GLA University, India, Year: 2017
    DOI: 10.1109/UPCON.2017.8251115
12. Title: Animal Detection using Discriminative Feature-oriented Dictionary Learning
    Author(s): Pragya Gupta, G.K. Verma
    Conference: IEEE Int. Conf. on Computing, Communication and Automation, 5-6 May 2017, Galgotias University, Greater Noida, India. Year: 2017
    DOI: 10.1109/CCAA.2017.8229781
13. Title: Cervical Cancer Detection from MR Images based on multiresolution wavelet analysis
    Author(s): Shipra Roy, R.P. Chauhan, G.K. Verma
    Conference: 11th International Conference on Industrial and Information Systems (ICIIS 2016), 3-4 December 2016, Indian Institute of Technology, Roorkee, Uttarakhand, India
14. Title: Multi-level 3D Wavelet Analysis: Application to Brain Tumour Classification
    Author(s): Dolly Kharbanda, G. K. Verma
    Conference: International Conference on Micro-Electronics and Telecommunication Engineering, 22 - 23rd September, 2016. DOI:

15. Title: Multi-algorithm-based visual surveillance system for human detection
    Author(s): Garg, R.; Verma, G. K.
    Conference: IEEE Int. Conf. on Computing, Communication and Automation, 29-30 April, Galgotias University, Greater Noida, India. Year: 2016, Pages: 1155 - 1160, DOI: 10.1109/CCAA.2016.7813891
16. Title: A computer vision-based framework for visual gun detection using SURF
    Author(s): Rohit Kumar Tiwari; Gyanendra K. Verma
    Conference: 2015 International Conference on Electrical, Electronics, Signals, Communication and Optimization (EESCO-2015) Year: 2015 DOI: 10.1109/eesco.2015.7253863
17. Title: Emotion recognition based on texture analysis of facial expression. Author(s): Verma, G.K.; Singh, B.K.

Conference: ICIIP 2011 - Proceedings: 2011 International Conference on Image Information Processing Year: 2011
DOI: 10.1109/ICIIP.2011.6108902

18. Title: Relative amplitude-based features for emotion detection from speech. Author(s): Kudiri, K.M.; Verma, G.K.; Gohel, B.
Conference: Proceedings of the 2010 International Conference on Signal and Image Processing, ICSIP 2010 Pages: 301-304 Year: 2010
DOI: 10.1109/ICSIP.2010.5697487
19. Title: Text independent speaker identification using wavelet transform Author(s): Verma, G.K.; U S Tiwary,
Conference: 2010 International Conference on Computer and Communication Technology, ICCCT-2010 Pages: 130-134 Year: 2010
DOI: 10.1109/ICCCT.2010.5640426
20. Title: Histopathological Classification of Brain Tumour Images Using Feature-Oriented Dictionaries [In press]
Author(s): Dolly Kharbanda; Verma, G.K.
Conference: Int. Conf. on recent trends in engineering and material sciences (ICEMS-2016), March 17-19, Jaipur National University, Jaipur, India, Year: 2016
21. Title: A Computer Vision-based Framework for Visual Gun Detection Using Harris Interest Point Detector
Author(s): Tiwari, R.K.; Verma, G.K.
Conference: Procedia Computer Science Volume: 54 Pages: 703-712 Year: 2015
DOI: 10.1016/j.procs.2015.06.083
22. Title: Human-Computer Interaction Using Hand Gesture
Author(s): Sharma, R.P.; Verma, G.K.
Conference: Procedia Computer Science Volume: 54 Pages: 721-727 Year: 2015
DOI: 10.1016/j.procs.2015.06.085
23. Title: Robust face recognition using curvelet transform
Author(s): Verma, G.K.; Prasad, S.; Bakul, G.
Conference: ACM International Conference Proceedings Series Pages: 239-242 Year: 2011
DOI: 10.1145/1947940.1947991
24. Title: A vision-based approach for human detection at night-time
Author(s): Verma, G.K.; Garg, R.
Conference: International Conference on Communication & Computing Systems ICCCS-2016, Sep 9-11, 2016
DOI: 10.1201/9781315364094-194
15. Title: MatConvNet-based Fast Method for Cervical MR Image Classification
Author(s): G. K. Verma, J. S. Lather, Ankur Kaushal
Source: ICCI-2017, International Conference on Computational Intelligence: Theories, Applications and Future Directions, December 6th - 8th, 2017, Indian Institute of Technology Kanpur, India DOI:
16. Title: Wild Animal Detection using Deep Convolutional Neural Network Author(s): Verma, G.K.; Gupta, Pragya
Source: Second International Conference on Computer Vision & Image Processing (CVIP-2017, September 10-12, 2017), IIT Roorkee DOI:
17. Title: Prostate Cancer Detection using Multiresolution Wavelet Analysis Author(s): Vaibhav Khanna, R.P. Chauhan, G.K. Verma
Source: 1st Optical and Wireless Technology Conference (OWT-2017), 18-19 March 2017, Department Of Electronics and Communication Engineering, Malaviya National Institute of Technology, Jaipur, India. DOI:
18. Title: Histopathological Classification of Brain Tumour Images Using Feature-Oriented Dictionaries
Author(s): Dolly Kharbanda; Verma, G.K.

Conference: Int. Conf. on recent trends in engineering and material sciences (ICEMS-2016), March 17-19, Jaipur National University, Jaipur, India, Year: 2016

19. Title: Facial Micro-expression Recognition using Discrete Curvelet Transform
Author(s): G.K. Verma (sole author)
Conference: Int. Conference on Information and Communication Technology (CICT-2017) 3-5 November 2017, ABV IIITM Gwalior, India. DOI:
20. Title: Multimodal Affect Recognition in V-A-D Space Using Deep Learning
Author(s): Piyush Kawde and Gyanendra K. Verma
Conference: International Conference on Smart Technologies for Smart Nation (SmartTechCon2017), 17-19 August 2017, REVA University, Bengaluru, India. DOI:
21. Title: Random Forests and NSGA-II-based NIDS to Secure Big Data Environment Using Spark
Authors(s): Gita Donkal and Gyanendra K. Verma
Conference: International Conference on Recent Trends on Computational Engineering & Technologies (ICRTCET), IEEE, Accepted and Presented, May 17-18, 2018.
22. Title: Securing Big Data Ecosystem with NSGA-II and Gradient Boosted Trees-based NIDS using Spark
Authors(s): Gita Donkal and Gyanendra K. Verma
Conference: International Conference on Intelligent Computing and Control Systems (ICTIS), IEEE, Accepted and Presented, June 14-15, 2018.