

## Dr. Gyanendra Kumar Verma

Assistant Professor

Department of Computer Engineering  
National Institute of Technology, Kurukshetra  
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## Brief Bio

Dr. Gyanendra Kr. Verma is currently Assistant Professor at National Institute of Technology (NIT) Kurukshetra, India. He has completed his B. Tech. from Harcourt Batlar Technological Institute Kanpur, India and M.Tech. & Ph.D. from Indian Institute of Information Technology (IIITA) Allahabad, India. His all degrees are in Information Technology. He has teaching and research experience of more than 5 years in the area of Computer Science and Information Technology with special interest in Image Processing, Speech and Language Processing, Human Computer Interaction. His research work on the application of Wavelet Transform in Medical Imaging and Computer Vision problems has been cited extensively. He is the member of various professional bodies like IEEE, ACM, IAENG & IACSIT.

## 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.)

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## Present Position

- Assistant Professor at Department of Computer Engineering, National Institute of Technology, Kurukshetra Haryana - 136119 (20<sup>th</sup> Feb. 2013- till now)

## Professional Experience

- Assistant Professor at Department of Computer Science & Engineering, National Institute of Technology, Silchar, Assam (Aug. 2012 – Feb. 2013)

## Experience in Research

- Research in Indian Institute of Information Technology, Allahabad : Worked as a Doctoral Research fellow in the Department of Information Technology
- Research in 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

## Honors, Awards and Professional Activities

- Received **Outstanding Scientist Award-2016** by Venus International Foundation, Chennai
- Awarded as **Outstanding Mentor** in National Level Project Competition (PROWAR-2016) on 30<sup>th</sup> April 2016 organized by School of Computing Science and Engineering, Galgotias University, Greater Noida, India
- Achieved 3<sup>rd</sup> Rank in Uttar Pradesh State Engineering Admission Test (UPSEAT- 2003)
- GATE-2007 qualified
- MHRD scholarship/fellowship holder during M. Tech. and Ph.D.

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

## Expert Talk Delivered

- "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

- Warden, Hostel -8, NIT Kurukshetra (from 22 July 2014 to 28 July 2016)
- Deputy Center Superintendent (End Semester Examination, 2013-2014) NIT Kurukshetra, India

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## Academic Responsibilities

- Reviewer of various international journals IEEE, Springer, Elsevier, World Scientific etc.
- Member, Accreditation committee for accreditation of UG/PG course 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

- 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

## Program Committee Member

- 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)
- 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 (On-going)

Name: <b>ANAMIKA DHILLON</b> Email: dhillon.anamika2390@gmail.com Year: 2016 - 2017 Thesis Area: Digital Image Processing	
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### M. Tech. Students (On-going: 2 nos.)

Name: <b>Geeta</b> Email: gitasingh480@gmail.com Year: 2017 - 2018 Thesis Area: Cyber Security	Name: <b>Ankur Kaushal (Biomedical Engg.)</b> Email: ankur.vicky999@gmail.com Year: 2017 - 2018 Thesis Area: Medical Imaging
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### M. Tech. Students (Completed: 10 Nos.)

Name: <b>Pragya Gupta</b> Email: pragyagupta10@gmail.com Year: 2016 - 2017 Thesis Area: Wild Animal Surveillance	Name: <b>Piyush Kawde</b> Email: piyushkawde123@gmail.com Year: 2016 - 2017 Thesis Area: Affective Computing
Name: <b>Vaibhav Khanna (Biomedical Engg.)</b> Email: vaibhavkhanna9331@gmail.com Year: 2016 - 2017 Thesis Area: Medical Imaging	Name: <b>Shipra Roy (Biomedical Engg.)</b> Email: shipraroy1710@gmail.com Year: 2016 - 2017 Thesis Area: Medical Imaging
Name: <b>Rishav Garg</b> Email: rishav0127@gmail.com Year: 2015 - 2016 Thesis Title: Human detection using Visual and Infrared Imagery	Name: <b>Dolly Kharbanda</b> Email: dolly.kharbanda@gmail.com Year: 2015 - 2016 Thesis Title: Brain tumor detection from Histopathological Images using Multiresolution Analysis and Dictionary Learning

<p>Name: <b>Rohit Kumar Tiwari (Topper 2013)</b>  Email: to_rohittiwari@yahoo.in Year: 2014 - 2015  Thesis Title: A Computer Vision based Framework for Visual Gun Detection</p>	<p>Name: <b>Ram Pratap Sharma</b>  Email: rmprtp_shrm@yahoo.co.in  Year: 2014 - 2015  Thesis Title: Multimedia Interaction using Hand Gesture</p>
<p>Name: <b>Mayank Kumar Aditiya</b>  Email: mayankaditia@gmail.com  Year: 2013 - 2014  Thesis Title: Spontaneous Affect Recognition from Audio-Visual Signals using Multi-resolution Analysis</p>	<p>Name: <b>Himanshu Buckchash</b>  Email: himanshu7buckchash@gmail.com  Year: 2013 - 2014  Thesis Title: A Parallel Three Stage Framework for Visual Knife Detection.</p>

## Conferences/ Workshop/ Seminar organized

- Coordinator, One week training programme on 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), 8-12<sup>th</sup> June 2015, Dept. of Computer Engineering, NIT Kurukshetra, India
- Member of organizing team in First International Conference on Intelligent Interactive Technologies and Multimedia (IITM-2010) Dec 28-30<sup>th</sup>, 2010 organized by IIIT Allahabad, India.
- Member of organizing team in Second International Conference on Intelligent Human Computer Interaction (IHCI-2010) organized by IIIT Allahabad, India.
- Member of organizing team in First International Conference on Intelligent Human Computer Interaction (IHCI-2009) organized by IIIT Allahabad, India.
- Member of organizing team in IEEE Workshop on Recent trends in HCI organized by IIIT Allahabad, India.

## Conferences/Workshop/Summer/Winter school Attended

- 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 11<sup>th</sup>-15<sup>th</sup> 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.
- Second International Conference on Intelligent Human Computer Interaction (IHCI-2010) organized by IIIT Allahabad from 16<sup>th</sup>-18<sup>th</sup> Jan. 2010.
- IEEE Workshop on Recent trends in HCI organized by IIIT Allahabad from 19<sup>th</sup> - 21<sup>st</sup> Jan. 2009
- First International Conference on Intelligent Human Computer Interaction (IHCI-2009) organized by IIIT Allahabad from 19<sup>th</sup>-23<sup>rd</sup> Jan. 2009.
- Third International Conference on Wireless Communication & Sensor Networks (WCSN-2007) organized by IIIT Allahabad from 13<sup>th</sup>-15<sup>th</sup> Dec. 2007.
- Volunteer in 3rd International Conference on Wireless Communication & Sensor Network (WCSN-2007) organized by IIIT, Allahabad, India.
- Volunteer in 2nd Nobel Laureate Science Conclave 2009 organized by IIIT, Allahabad.

## Personal Information

Name	GYANENDRA KUMAR VERMA
Father's Name	Late Shivpal Verma
Mother's Name	Ramsakhi
DOB	Feb. 8 <sup>th</sup> , 1978
Gender	Male
Marital Status	Married
Spouse	Preeti Verma
Son	Pragyansh
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Website	<a href="http://www.gkverma.in">www.gkverma.in</a>

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## References

1. Prof. Awadhesh Kumar Singh  
Professor  
Department of Computer Engineering  
National Institute of Technology Kurukshetra- 136119, India  
Email: [aksingh@nitkr.ac.in](mailto:aksingh@nitkr.ac.in)  
Phone: +91-1744-233481
2. Prof. Uma Shankar Tiwary  
Dean & Professor  
Department of IT  
Indian Institute of Information Technology Allahabad-211012, India Email:  
[ust@iiita.ac.in](mailto:ust@iiita.ac.in)  
Phone: 9415235826
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](mailto:bhupeshkumarsingh@gmail.com)  
Phone: 9411159650

## International Journal articles

1. 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: 1.346] Volume: -  
Issue: - Pages: 1-25 Published Online: Jan, 2016  
DOI: 10.1007/s11042-015-3119-y
2. 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 [In-press]
3. 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 Pages: 46 Published: 2015  
DOI: 10.1504/IJAPR.2015.068931

4. 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: 7.289] Volume: 102 Issue: P1 Pages: 162-172  
Published: 2014  
DOI: 10.1016/j.neuroimage.2013.11.007 /
5. Title: Basic handwritten character recognition from 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: 0.420] Volume: 10 Issue: 5 Published: 2012  
DOI: 10.1142/S0219691312500464 /
6. 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 Book Chapters

1. Title: Facial emotion recognition in 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
2. 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 /
3. 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
4. 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

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5. 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: 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
2. 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
3. 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
4. Title: Multi-level 3D Wavelet Analysis: Application to Brain Tumor Classification  
Author(s): Dolly Kharbanda, G. K. Verma,  
Conference: International Conference on Micro-Electronics and Telecommunication Engineering, 22 - 23rd September, 2016. DOI:
5. Title: Multi-algorithms 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
6. 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
7. Title: Emotion recognition based on texture analysis of facial expression Author(s): Verma, G.K.; Singh, B.K.  
Conference: ICIIIP 2011 - Proceedings: 2011 International Conference on Image Information Processing Year: 2011  
DOI: 10.1109/ICIIIP.2011.6108902
8. 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
9. 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
  10. Title: Histopathological Classification of Brain Tumor 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
  11. 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
  12. 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
  13. Title: Robust face recognition using curvelet transform  
Author(s): Verma, G.K.; Prasad, S.; Bakul, G.  
Conference: ACM International Conference Proceeding Series Pages: 239-242 Year: 2011  
DOI: 10.1145/1947940.1947991
  14. 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

## Conference papers in press

15. Title: MatConvNet based Fast Method for Cervical MR Images 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 Tumor 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 IITM 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:

