Dr. Vikas T. Humbe

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WORK EXPERIENCE

- **Assistant Professor**
  - Working as Assistant Professor in School of Technology, Swami Ramanand Teerth Marathwada University, Sub-Campus Latur from 24th December 2010 to till date.
  - Worked as Assistant Professor in MCA at Dr. Babasaheb Ambedkar Marathwada University, Aurangabad from 24 Sept. 2009 to 23rd December 2010. Also worked as MCA Course coordinator.
  - Worked as Assistant Professor in MCA at JSPM's Abacus Institute of Computer Applications, Pune (MCA) from 14 July 2008 to 31 August 2009.

- **Lecturer**
  Worked as a lecturer at Department of Computer Science and Information Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad for M. Sc. Computer Science and M. Sc. Information Technology from 1st September 2006 to 2nd June 2008.

- **Visiting Faculty**
  - Worked as Visiting Faculty at Dept. of Mathematics, University of Pune for M. Sc. Tech. From Dec. 2008 to June 2009.
  - Working as Visiting Faculty at Institute of Management Training and Research (IMTR), Aurangabad for M. Phil. Information Technology and MCA for academic years 2006 to till date.

- **Project fellow**
  Worked as a Project Fellow (Full Time) on Major Research Project entitled "Development of Intelligent biometric techniques in fingerprint recognition", at Dept. of Computer Science and Information Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad from 1st September 2003 to 31st August 2006 under the supervision of Dr. K. V. Kale (Professor), sanctioned by University Grant Commission, New Delhi

EDUCATIONAL QUALIFICATION

1. **Ph. D. (Computer Science)**
   Completed Ph. D. in Computer Science on topic "Development of Enhancement Techniques in Fingerprint Recognition System" from Dept. of Computer Science and Information Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad under the guidance of Prof. Dr. K. V. Kale, awarded on 2nd June 2008.

2. **M. Sc. (Computer Science)**
   Completed M.Sc. (Computer Sciences) from Dept. of Computer Science and Information Technology. Dr. B. A. M. University, Aurangabad in 2003 having scored 62.75 %.

3. **B. Sc. (Physics, Mathematics, Computer Science)**
   Completed at S.M.D.M.M College, Kalamb (Dr. B.A.M.University Aurangabad) in 2001 having scored 65.44 %.

COUNTRY VISITED

Malaysia: for paper presentation at Kuala Lumpur during 3-6 April 2009 sanctioned by Ministry of Science and Technology, Govt. of India under Young Scientist Scheme.

RESEARCH INTEREST

Image Analysis, Image enhancement, Image Segmentation, Video and Image Processing & Pattern Recognition, Biometrics etc.

COMPUTER SKILLS AND AWARENESS

O.S.	: Windows 98/2000/XP/7
Prog. Languages	: C, C++, MATLAB, JAVA
Markup/script Languages	: HTML, XML, JavaScript
Technologies	: Servlets, JSP, JDBC, RMI,
Web Server	: Weblogic 8.1, Tomcat
RDBMS	: Oracle 9i, MS Access, MySql

SUBJECT TAUGHT

Digital Image processing, Geographical Information System, Software Engineering, Java Programming, IPR and Internet Legislation, Web Technology, Computer Network.

RESEARCH PROJECT

"Development of Image Enhancement for Ultrasound Images" funded by Dr. BAM University, Aurangabad.

RESEARCH RECOGNITION

1. Research Guide in Computer Science, SRTM University, Nanded, Dr. BAM University, Aurangabad

2. Member, Syllabus framing Ph. D. Course Work (Computer Science) Solapur University.

3. Research Guide, M. Phil.(Computer Science and Information Technology) Programme of Yeshwantrao Chavan Maharashtra Open University, Nasik Maharashtra.

4. Member, BOS, Computer Science, Solapur University, Solapur

5. Resource Person for National/State/Regional workshops/FDPs/STTPs.

6. Editorial Board Member, Int. Journal of Computer Sci. and IT, Serial Pub., New Delhi.

7. Editorial Board Member, Int. Journal of Advances in Engineering & Technology (IJAET)

8. Technical Committee Member, ICICN 2011, IEEE ICIET 2011, ICKEM 2011, ICIFE 2011, ICIFE 2010, ICEIT 2010, ICCMS 2009, ICFME-2009

9. Programme Committee Member for National Conference on Recent Trends in Information Technology, organized by Govt. college, Mandya, Karnataka and UGC, New Delhi.

10. Organizing Committee Member, NCCCS-2004, E-education 2004, ACVIT 2007, ACVIT 2009.

11. Coordinator, for three day workshop on ".Net Technology" organized at JSPM's Abacus Institute of Computer Application, Pune during 12-14th January 2009.

12. Organizing Secretary, of National Conference on "Recent Trends in Computer Application" during 17-18 February 2010.

13. Convener, of State Level Workshop on "Digital Signal and Image Processing" on 15th Oct 2013.

14. Coordinator, for National Conference on "Empowering India: Youth Driven Economy", during 17-18 February 2011.

15. Accommodation Secretary, of International Conference on Knowledge Engineering, during 29-31 January 2011.

16. Reviewer for Journal of Machine Vision and Applications, Springer-Verlag, Elsevier's Pattern Recognition Letter, International Journal of Computer Theory and Engineering, International Journal of Computer Engineering Research (Academic Journals) IEEE, Signal Processing Letters

17. Reviewer for National/International Conferences eIT, 2006, 2007 Baramati, ACVIT07, ACVIT09, IEEE IJCNN 2007, IEEE IJCNN 2009

MEMBERSHIP

➢ IEEE Member, IEEE Bombay Section (80535811) [2006-2015]
➢ Life Member, Indian Science Congress Association(ISCA) [No. L22543]
➢ Professional Member, ACM, Member No. 8369654 (2013-2015)
➢ Member, International Association of Computer Science and Information Technology, Singapore. (80331390)

- ➢ Member, Computer Science Teachers Association (8369654)
- ➢ Member International Association of Engineers, Hong Kong. (IAENG- 61907)
- ➢ Member, Computer Society of India, N1053926 (2010-2011)

EXTRA CURRICULAM

1. Best Student during Academic year 2001 to 2003 at Dept. of Compute Science and Information Technology, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

2. Participated in Interuniversity Research Festival (Avishkar 2007) organized by Rashtrasant Tukadoji Maharaj Nagpur University Nagpur.

3. Affiliation Committee Member, (Dr. Babasaheb Ambedkar Marathwada University, Aurangabad)

4. Subject Expert, Selection Committee at Swami Ramanand Treeth Marathwada University, Nanded and Dr. Babasaheb Ambedkar Marathwada University, Aurangabad nominated by Vice-Chancellor for the post of Assistant Professor/Teaching Associate.

5. Resource Person for Refresher course at Academic Staff College, University of Pune & SGB Amaravati University, Amaravati.

6. Worked as Resource Person/Judge / session chair / session coordinator for various National/ International Conferences/ seminars.

7. Working as Referee/Examiner for SGB Amaravati University, Amaraviti, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad., University of Pune, Pune. North-Maharashtra University, Jalgaon, SRTM University, Nanded, Solapur University, Solapur, RSTM Nagpur University, Nagpur, Don bosco University, Guwahati

International/ National Conferences/workshop/Training Programs participated

1. National conference on Recent Trends on Computer Science and Computational Mathematics organized by Indira college of Commerce and Science, Pune 21-22 December 2012.

2. National Conference on Manegeralization on 18th Feb 2012, organized by Dr. BAM University, Sub-centre Osmanabad

3. IEEE International conference on Knowledge Engineering, organized by IEEE Bombay Section and Dr. BAM University, during 29th -31st January 2011

4. International Conference on "Advances in Computer Vision and Information Technology (ACVIT-09)" organized by Dept. of CSIT, Dr. BAMU, during 16-19 December 2009.

5. International Conference on "Future Computer Communication", organized by IACSIT and University Putra Malaysia, 3rd – 5th April 2009, Kuala Lumpur, Malaysia.

6. International Conference on "Managing Next Generation Software Application" organized by Karunya University, Coimbatore, 05-06 December 2008.

7. International Conference on "Advances in Computer Vision and Information Technology (ACVIT-07)", 28th – 30th November 2007.

8. International Conference on "Information and Communication Technology" organized by Dehradun Institute of Technology (DIT), Dehradun, India. July 26-28, 2007.

9. International Conference on "Systemics, Cybernetics and Informatics", Pentagrm Research Center, Hyderabad, Jan, 3-7, 2007,

10. 14th International Conference On Advanced Computing & Communications, ADCOM, Dec. 20-23, 2006 organized by ACS, Bangalore and NITK, Suratkal.

11. IEEE International Conference On Signal And Image Processing, ICSIP, Dec-2006 organized by IEEE Bangalore Section and BVB College of Engg. Hubli Karnataka.

12. International Conference on "Systemics, Cybernetics and Informatics", Pentagrm Research Center, Hyderabad, Jan, 4-8, 2006,

13. International Conference on "Cognition and Recognition" International Conference on Cognition and Recognition, B N Bahadur Management Institute, University of Mysore, Mysore, Karnataka, INDIA, 22 and 23 Dec. 2005.

14. National Conference on Emerging Trends in Information Technology, Baramati, Pune, September 2006 organized by VIIT, Baramati

15. National Conference on "Advances in Information Communication Technology (AICT)" organized by Dept. of Computer Science, Chalisgaon 11-12 Feb 2005.

16. National Conference on "Computer Communication Security" organized by IETE Aurangabad and Dept. of CSIT, Dr. B. A. Marathwada University Aurangabad on 4-5 Jan. 2004.

Workshop/Training Programs participated

17. Workshop on "MATLAB 6.5 and Applications" organized by Dept. of Electronics and telecommunication, Govt. Engineering College Aurangabad Feb 21-22, 2004.

18. One-day workshop on "E-education" organized by University Library, Dept. of CSIT and Dept. of Information, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Sept. 16, 2004.

19. Workshop on "Remote sensing and Satellite Data processing" organized by Dept. of Physics, JES College, Jalana, March 12-13 2005.

20. Short Term Training Program on "Open Source – MySQL and PHP" Organized by Dept. of Computer Engineering, Govt. Engg. College, Aurangabad, April 21-22 2005.

21. Training Program on "Net Café Administration" Organized by Dept. of Computer Engineering, Govt. Engineering College, Aurangabad, during January 16-20 2006.

22. Training Program on "Wavelet and Advanced Wavelet" Organized by Dept. of Computer Engineering, Govt. Engineering College, Aurangabad, during January 31- Jan to 2 Feb, 2006.

23. Workshop on "Embedded System & Its Applications" Organized by IETE and Dr. B. A. M. University, Aurangabad on March 7, 2006.

24. National Workshop on "Fourier Analysis on Finite Groups and Its Applications", organized by Dept. of Mathematics, University of Pune, Pune, 5th-9th March 2007.

25. AICTE Sponsored National Workshop on "DSP and It's applications in Speech and Image Processing", 9th – 14th July 2007 organized by Fr. Rodrigues Institute of Technology, Navi Mumbai.

26. Workshop on Machine Learning organized by C-DAC, Navi Mumbai, 19-20 December 2008.

27. International Workshop on Rough Sets, Fuzzy Sets and Soft Computing, organized by Department of Computer Science, University of Pune, 7-8 July 2009.

28. National Workshop on Data Mining and Data warehousing organized by Dept. of CSIT, Dr. BAM University, 25-27 February 2010.

29. One-day seminar on Software 2.0 organized by Computer Society of India, Aurangabad Chapter, 9 October 2010.

30. One-day Workshop on "Quantum GIS Open Source Software" Organized by IETE and Dept of CSIT, Dr. BAM University, 3rd September 2011.

31. Workshop on "Disaster Management" organized by UGC-ASC JNTU, Hyderabad during 27-feb to 3 March 2012

32. National Workshop on "Mathematical Modeling of Uncertainty", organized by School of Mathematical Sciences, SRTMU, Nanded on 27th November 2012.

33. Participated in 85th Orientation Programme, organized by Academic Staff College, Goa University, Panjim Goa during 14 Jan 2013 to 12 Feb 2013.

PUBLICATION

- Research Papers: Publication in Nat./Intl. Conf. and Journals – 47 articles (Annexure I).
- Books:
  o "Understanding of Matlab" by SPD, Mumbai, ISBN 9789350237199, 2013
  o "Proceeding of National Conference on Recent Trends in Information Technology" I. K. International Publication, New Delhi, (Editor) ISBN: 978-93-80026-82-4
  o Recent Trends in Computer Applications, Educational Publisher, Aurangabad (Editor) ISBN:978-81-906858-4-9

LANGUAGES KNOWN

English, Hindi, Marathi.

PERSONAL

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Gender	:	Male
Nationality	:	Indian (place Osmanabad)
Marital Status	:	Married
Date of Birth	:	10th April 1981

Place:
Date: [Dr. Vikas T. Humbe]

Annexure I

Journal

1. K. V. Kale and Vikas Humbe "Fingerprint Image Enhancement Strategies and Analysis" Journal of Science, Dr. Babasaheb Ambedkar Marathwada University, Vol. XXXIII(C), 2005, PP. 133-147

2. **K. V. Kale, R R Manza, S S Gornale, Vikas Humbe** "Noisy and Noiseless Fingerprint Image Compression using Wavelet" IT Review, Journal of Information Technology and Computer Science, Vol. 1 No. 1, PP. 46-50, March 2005.

3. **K. V. Kale, R R Manza, S S Gornale, Vikas Humbe** "The Role of Information Technology in Rural areas: To Strengthen the nation" IT Review, Journal of Information Technology and Computer Science, Vol. 1 No. 1, PP. 31-34, March 2005.

4. Y. Jayanta, Vikas Humbe, S. C. Mehrotra "A New Commit Processing under Real Time Database System", Skyline Business Journal, Vol. 1. No. 2. , Spring 2005. ISSN-1998-3425

5. R. R. Manza, S. S. Gornale, V. T. Humbe, Y. Jayanta, K. V. Kale "Frequency Domain Techniques and Image Data Compression" Skyline Business Journal, vol. 2, issue 3, pp. 37-40 Spring 2006. ISSN-1998-3425

6. S.S.Gornale1, R.R.Manza, Vikas Humbe and K.V.Kale "Performance analysis of biorthogonal wavelet filter for lossy fingerprint image compression" International Journal on Imaging Science and Engineering (IJISE), Vol.1 Jan. 2007. ISSN: 1934-9955

7. Vikas Humbe. S. S. Goranle, R. R. Manza and K. V. Kale "Mathematical Morphology Approach For Genuine Fingerprint Feature Extraction" in International Journal on Computer Science and Security (IJCSS), Vol. 1, Issue 2, PP. 53-59, 2007. ISSN: 1985-1553

8. Vikas Humbe. S. S. Goranle, R. R. Manza and K. V. Kale "Fingerprint Image Compression using Retain Energy (RE) and Number of Zeros (NZ) through Wavelet Packet (WP)" International Journal on Computer Science and Security (IJCSS), Vol. 1, Issue 2, PP. 35-42, 2007. ISSN: 1985-1553

9. Gornale S.S., Humbe V., GM Magar, Manza R. and Kale K.V "Application of Multi-Resolution Techniques for Medical Image Compression" International Journal of Imaging Science and Engineering Volume 3 No.4 Oct-2009 TIFR Signal Processing Society, ISSN 1934-9955

10. Gornale S.S., Humbe V., Manza R. and Kale K.V "Fingerprint image de-noising using multi-resolution analysis (MRA) through stationary wavelet transform (SWT) method" International Journal on Knowledge Engineering, Volume 1, Issue 1, 2010 Page: 05-09, ISSN: 0976–5816

11. G.M.Magar, S. S. Gornale, V.T. Humbe, K.V. Kale "Wavelet and multiwavelet based SAR image compression", Journal of science and Technology, Veer Narmad South Gujrat University, Surat, Vol-2,Issue-1, Jan-Jun 2010. PP-39-51, ISSN: 0975-5446.

12. G.M.Magar, S. S. Gornale, V.T. Humbe, R.R. Manza, K.V. Kale "Exploiting multiwavelet for lossy compression in SAR imaging", International Journal of computer application and Business intelligence, Vol-1,No.-4, Oct-2010,PP-23-30, ISSN:0975-945X

13. Humbe V. T., Patil Y S, Patil Y B, "Study of image restoration techniques for Remote Sensing Images in Agriculture Field", International Journal of Machine Intelligence, Volume 3, Issue 3, pp 138-141, 2011 ISSN 0975-2927 & E-ISSN 0975-9166.

14. Humbe V. T., Patil Y S, Patil Y B, "Extraction of infected area from leaf image using image segmentation", International Journal of Computer Information System, PP. 27-30, Vol. 3, No. 6 December 2011 ISSN: 229-5208.

15. PB Tamsekar, SD Kurandkar, VT Humbe, "New Approach: 2d-Code to Store Data & Information Secure" Journal of Current Engineering Research, Vol. 2 Issue 2, PP. 85-88, March-April 2012 ISSN No.: 2250 – 2637.

16. Raut S. D. and Humbe V. T. "Biometrics-Palm region extraction for palm print Recognition System", International Journal of Advances in management, Technology and Engineering Sciences, Vol. II, Issue 2 (III), PP 1-4 Nov. 2012, ISSN:2249-7455.

17. S. D. Raut and V. T. Humbe, "Biometric Palm Prints feature matching for person Identification", Int. Journal Modern Education and Computer Science, vol. 11, PP. 61-69, 2012 ISSN No. ISSN: 2075-0161 (Print), ISSN: 2075-017X (Online)

18. S. D. Raut and V. T. Humbe, "Analysis of Multispectral Palm vein Image Using Enhancement Operations", International Journal of Computer Science Engineering, pp.103-106, Vol. 02, no.04, ISSN: 2319-7323, July 2013.

19. S. D. Raut and V. T. Humbe "Palm Vein Image Elucidation using 2-D Wavelet Theory" **International Journal of Computer Applications, Recent Advances in Information Technology, 2014, PP 1-4 (0975 – 8887)**

20. Mahmoud E. Hodeish and Vikas Humbe, "State-of-the-Art Visual Cryptography Schemes" International Journal of Electronics Communication and Computer Engineering, Volume 5, Issue 2, PP 412-420 ISSN (Online): 2249–071X, ISSN (Print): 2278–4209

21. S. D. Raut and V. T. Humbe "An Approach to Boundary Extraction of Palm Lines and Vein Pattern" I.J. Image, Graphics and Signal Processing, 2014, 12, PP 47-52, 2014 ISSN: 2074-9074(Print), ISSN: 2074-9082 (Online)

International Conferences

1. S. D. Raut and V. T. Humbe, "Review of Biometrics: Palm vein Recognition System", International Conference on Interface of Information Technology, IBMRD, Ahmednagar, dated: 23-25 Sept, 2013. ISSN 2277-7860

2. Humbe V, Gornale S.S.,., GM Magar, Manza R. and Kale K.V "Fingerprint Image de-noising through decimated and un-decimated wavelet transform", proc. of International Conference on Future Computer Communication, University Putra Malaysia, Kuala Lumpur, Malaysia, 3-5 April 2009. ISBN: 978-1-4244-3754-2

3. S S Gornale, Vikas Humbe, Ramesh Manza, K V Kale "Lossless image data compression through LU decomposition", IEEE International Conference on Advances in Computer Vision and Information Technology page NO. 20-25, Dec 2009(ACVIT 2009), ISSN:978-93-80026-95-4

4. Ganesh Magar, S S Gornale, Vikas Humbe, Ramesh Manza, K V Kale "Comparative analysis of Multi-Resolution Analysis (MRA) techniques for multiplicative speckle noise reduction of synthetic aperture radar (SAR) Images" Proc. of International Conference on Managing Next Generation Software Applications, Karunya University, Coimbatore, 5-6 December 2008. PP: 1317-1322, ISBN 978-81-90787-0-0

5. Ganesh Magar, S S Gornale, Vikas Humbe, Ramesh Manza, K V Kale "Multi-Resolution Analysis (MRA) filtering approach for reduction of Multiplicative specle Noise of Synthetic Aperture Radar (SAR) Image" Proc. of International Conference on Advanced Computing and Communication Technologies, Cochin, Kerala, India, 4-26, September 2008.

6. S S Gornale, Ganesh Magar Sagar Jambhorkar, Vikas Humbe, Ramesh Manza, K V Kale "MRI Image Compression Through Homogenous Wavelet Filters Banks: A Multiwavelet Approach", In proceeding of International Conference on Advances in Computer Vision and Information Technology, (IEEE ACVIT-O7) Aurangabad, PP1165-1174, 2007. ISBN: 978-81-89866-74-7

7. G M Magar, S S Gornale, Vikas Humbe, P. Yannawar, Ramesh Manza, K V Kale "Speckle Noise Reduction Of Synthetic Aperture Radar (SAR) Image Using Multi-Resolution Technique, In proceeding of International Conference on Advances in Computer Vision and Information Technology, (IEEE ACVIT-O7) Aurangabad, PP.1400-1405 , 2007. ISBN: 978-81-89866-74-7

8. S S Jambhorkar, S S Gornale, Vikas Humbe, Ramesh Manza, K V Kale "Improving Microarray Spots For Gene Determination Using Morphological Technique", In proceeding of International Conference

on Advances in Computer Vision and Information Technology, (IEEE ACVIT-O7) Aurangabad, PP 847-853, 2007. ISBN: 978-81-89866-74-7

9. S S Gornale, Sagar Jambhorkar, Vikas Humbe, RR Manza, PL Yannwar, K V Kale "Multi-Resolution System for MRI (Magnetic Resonance Imaging) Image Compression: A Heterogeneous Wavelet Filters Bank Approach" IEEE International Conference on Computer Graphics, Imaging and Visualisation (CGIV 2007) pp. 495-500, August 2007 (IEEE Explorer) ISBN: 978-0-7695-2928-8

10. A. T. Gaikwad, V. T. Humbe, S S Jambhorkar, K. V. Kale "Image analysis and edge detection using quadtree decomposition", International Conference on Information and communication Technology (IICT-2OO7), July 2007

11. Vikas Humbe, S. S. Gornale, Sagar Jamborkar, Ramesh Manza, K.V.Kale "Fingerprint Image Compression Using Retain Entergy (RE) And Number of Zeros (NZ): A Multi-Wavelet Approach", International Conference on Information and communication Technology IICT2OO7, July 2007

12. "Evaluation And Selection Of Wavelet Filters For De-Noising Medical Images Using Stationary Wavelet Transform (SWT)", International Conference on Systemics, cybernetics and informatics, Hyderabad, India. Jan-2007

13. Sagar Jamborkar, S. S. Gornale, Ramesh Manza, Vikas Humbe, K.V. Kale "Uneven Background Extraction And Segmentation Of Good, Normal And Bad Quality Fingerprint Images", IEEE 14th International Conference On Advanced Computing & Communications, ADCOM2OO6, PP. 222-225, Dec. 20-23, 2006. (IEEE Explorer) ISBN: 1-4244-0716-8

14. Sagar Jamborkar, S. S. Gornale, Ramesh Manza, Vikas Humbe, K.V. Kale "An Adaptive Algorithm For Segmentation Of Low Quality Fingerprint Image", IEEE ICSIP'O6, International Conference On Signal And Image Processing, Hubli (India), Vol. 2, PP. 826-831, Dec-2006) ISBN: 978-0230-63005-5

15. S. S. Gornale, Vikas Humbe, Ganesh Magar, Sagar Jamborkar, Ramesh Manza, K.V. Kale "Synthetic Aperature Radar (SAR) Image Compression Through Wavelet (W), Wavelet Packet (WP)" IEEE ICSIP'O6, International Conference On Signal And Image Processing, Hubli (India), Vol. 1, PP. 402-406, Dec-2006. ISBN: 978-0230-63005-5

16. S. S. Gornale, Vikas Humbe, Sagar Jamborkar, Ramesh Manza, K.V.Kale "Noise Removal Of Medical Images Through Decimated And Undecimated Wavelet Transforms", IEEE ICSIP'O6, International Conference on Signal And Image Processing, Hubli (India), Vol. 1, PP.103-106, Dec-2006. ISBN: 978-0230-63005-5

17. K. V. Kale, R. R. Manza, S. S. Gornale, P. D. Deshmukh and Vikas Humbe "SWT based Composite method Fingerprint Image Enhancement" IEEE ISSPIT2006, International Symposium on Signal Processing and Information Technology, PP. 162-168, Vancouver (Canada) 27-30 August, 2006. (IEEE Explorer) ISBN: 0-7803-9753-3

18. S. S. Gornale, Vikas Humbe, R. R. Manza and K. V. Kale "Quality Measures of Image Data Compression in Frequency Domain", ICSCIO6 International Conference on Systemics, cybernetics and informatics, PP. 830-835, Hyderabad, India. Jan-2006

19. **Vikas Humbe , Ramesh Mnza, S. S. Gornale and K. V. Kale,** "Noisy and Noiseless Fingerprint Image Compression using Wavelet Packet (WP)" ICCR International Conference on Cognition and Recognition, B N Bahadur Management Institute, University of Mysore, Mysore, Karnataka, INDIA, PP. 885-890, 22 and 23 Dec. 2005 ISBN 81-7764-952-3- PP No.885-889

20. K. V. Kale, R R Manza, V. T. Humbe, Prapti Deshmukh "Fingerprint Image Enhancement Using Composite Method" Proc. GSPx 2005 Pervasive, Signal Processing Conference, Santa Clara Conventional Center, Santa Clara, California USA 24-27 October 2005 ISBN: 0-9728718-2-9

21. K. V. Kale, R R Manza, V. T. Humbe, Prapti Deshmukh "Fingerprint Image Enhancement Using morphological Transform" Proc. of GSPx 2005 Pervasive Signal Processing Conference, Santa Clara Conventional Center, Santa Clara, California USA –24-27 October 2005, ISBN: 0-9728718-2-9

22. R.R.Manza, Vikas Humbe, S.S.Gornale, K.V. Kale "Role of Information Technology in enhancing socio-economic Developments" in proc. International conference on ICT through education and development, PP. 238-243, December 2004, Bhopal.

National Conferences

1. Raut S. D. and Vikas Humbe, "Canny Edge Based Composite Method for biometric palm prints Recognition System", **Proceeding of National conference on Recent Trends in CSA and CM, pp32-38, December 2013 ISBN 978-93-83414-29-1**

2. Raut S. D. and Vikas Humbe, "COMPARATIVE STUDY OF BIOMETRIC TRAIT FOR PERSON RECOGNITION SYSTEM" in the proceeding of National conference on Computing, organized by North Maharashtra University, algaon, 5-6 March 2013 ISBN No. : 978-81-910591-7-5

3. Raut S. D. and Vikas Humbe, "Feature Extraction; Palm print Principal line extraction and detection", National conference on Recent Trends in computer Science and Applications and Computational Mathematics (RTCSACM-12), Indira college of commerce and Science, Pune, Dec 2012, ISBN 978-93-5097-319-6

4. Vikas Humbe and Gayatri Kalal, "Contrast Enhancement of Computed Tomography Scan Images of Brain Tumor ", in proceeding of National Conference on Advances in Computing, organized by North Maharashtra University, Jalgaon 24-25 Feb 2011, PP-139-140, ISBN: 978-81-910591-2-0.

5. Ganesh Magar, S. S. Gornale, Vikas Humbe, Nirpal Premal, Ramesh Manza, K.V. Kale "Application of Multiwavelet techniques in SAR IMAGING: a case study for speckle noise reduction" in proc of National Conference on Recent Trends in Computer Application, Feb. 2010 ISBN 978-81-906858-4-9

6. Vijay B. Baladhye, Suresh P. Kamble, M. M. Fawade, Avinash B. Kadam and Vikas T. Humbe "Bioinformatics Strategies In Proteome Analyses", in Proc. of National Conference on Emerging Trends in Information Technology, Baramati, Pune, September 2006.

7. Arjun V. Mane*, A. B. Kadam, R. R. Manza, V. T. Humbe, and K. V. Kale "Human Face Recognition for Digital Right Management: An Overview", in Proc. of National Conference on Emerging Trends in Information Technology, Baramati, Pune, September 2006.

8. Avinash B. Kadam, Arjun V. Mane, Vikas T. Humbe, Ramesh R. Manza, K.V.Kale "Need of Microarray Image analysis Technique: An Overview", in Proc. of National Conference on Emerging Trends in Information Technology, Baramati, Pune, September 2006.

9. S. S. Jambhorkar Vikas Humbe, K V Kale "Need of segmentation for fingerprints", in proc of National Conference on Advances in information communication technology (AICT), PP, 3-4, 2005, Chalisgaon

10. S. S. Gornale, Vikas Humbe, R. R. Manza, K. V. Kale "Performance analysis of Wavelets to Multi-wavelet for Noisy image Compression" In proc. of National conference on Geometry Analysis, Fluid Mechanics and Computer Applications, PP. 183-189, December 2004, kuvempu, Karnataka, India

11. C.Namrata, Vikas Humbe and K.V.Kale "Feature Extraction for Handwriting Word Recognition" Proceeding in National Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 78-82

12. Sujata wathore, Sumedha Deshmukh, Geeta Chavan and Vikas Humbe "Region Growing Technique for Color Image Analysis", Proceeding in National Conference CCS-04, PP. 49-54, 4th and 5th January 2004