

## ‘Curriculum Vitae’

1. **Name** **Dr. Karbhari Vishwanath Kale,**  
**M.Sc., MCA (Engg & Tech), Ph.D., FIETE, IEEE Senior Member**  
**Professor and Head**  
 Dept. of Computer Science and Information Technology,  
 Dr. Babasaheb Ambedkar Marathwada, University,  
 Aurangabad - 431004 (MS) INDIA.  
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 Hot-mail: [kvkale91@hotmail.com](mailto:kvkale91@hotmail.com)  
 Web:[www.kvkresearchgroup.esmartweb.com](http://www.kvkresearchgroup.esmartweb.com)
2. **Present Status** **Professor and Head**  
 Department Of Computer Science and Information Technology,  
 Dr. B. A. M. University, Aurangabad.
3. **Address (Residence)** **‘Atharva’, Plot.no. 22, Shri Moreshwar Society,**  
 Soot Girni road, Garkheda Parisar, Aurangabad (MS) - 431005. INDIA,  
 Tel.: (0240)-2442118
4. **Date and place of Birth** **August 02, 1962,**  
 At: Salukheda, Ta: Khultabad, Dist.: Aurangabad (MS)-431101.
5. **Category** Open
6. **Nationality** Indian
7. **Marital Status** Married
8. **Academic Qualifications** **M.Sc Physics (Electronics)(1987), B.Ed (1989),**  
**MCA (Engg. And Tech)(1995) and Ph.D (Superionics-1997)**
9. **Teaching and Research Experience** **24 Years**
10. **Position held (in chronological order)**

Position Held	Organization	Period	Nature of Work
<b>Lecturer</b>	Deogiri college, Aurangabad	August 1987 to December 1997	Teaching and Research
<b>Reader of Computer Science.</b>	Dept. of Computer Science and Information Technology Dr. BAMU, A' bad.	December 1997 To December 2005	Teaching and Research
<b>Professor of Computer Science.</b>	Dept. of Computer Science and Information Technology Dr. BAMU, A' bad.	December 2005 To Till Date.	Teaching and Research
<b>Head of Department</b>	Dept. of Computer Science and Information Technology Dr. BAMU, A'bad.	June 2000 to August 2002 & August 2004 to August 2006	Teaching, Research and Academic Administration
<b>Coordinator UGC, Computer Centre</b>	Dr. B. A. M., University, Aurangabad	June 2001 to August 2002	To develop the Computational & research facility for University people.

<b>Course Coordinator of UGC 44th Orientation Course</b>	UGC Academic Staff College, Dr. B. A. M University A'bad	April-May 2001	For University and College Lecturer.
<b>Course Coordinator of UGC 50th Orientation course</b>	UGC Academic Staff College, Dr. B. A. M. University A'bad	May 3, 2002 to May 28, 2002	For University and College Lecturer.
<b>In-charge and Contact Person of UGC Infonet</b>	Dr. B. A. M. University, Dept. CSIT, A'bad	April 2003 to till Date.	To establish the Internet Connectivity under the University and colleges.
<b>Course Coordinator of UGC 1<sup>st</sup> Refresher Course</b>	UGC Academic Staff College, Dr. B. A. M University A'bad	5-24 Dec. 2005	1 <sup>st</sup> Refresher Course in Computer Science and Information Technologies for University and College teachers.
<b>Course Coordinator of UGC 77th Orientation course</b>	UGC Academic Staff College, Dr. B. A. M University A'bad	3 <sup>rd</sup> to 30 <sup>th</sup> March, 2009	For University and College Lecturer.
<b>Programme Coordinator, UGC-SAP(II) DRS Phase-I</b>	UGC, New Delhi F.F. 3-42/2009 SAP(II)	April 2009 to till date	Research and Development
<b>Course Coordinator of UGC Refresher Course</b>	UGC Academic Staff College, Dr. B. A. M University A'bad	8-28 March. 2011	Refresher Course in Computer Science and Information Technologies for University and College teachers.
<b>Professor &amp; Head</b>	Dept. of Computer Science and Information Technology Dr. BAMU, A'bad.	August 2009 – till date	Teaching, Research and Academic Administration
<b>Coordinator</b>	School of Computational and Physical Sciences, Dr. B. A. M. University, A'bad	April 2011 – till Date	School system for credit based and cafeteria approach.
<b>Coordinator</b>	<b>Department of Science and Technology, Ministry of Science and Technology, Govt. of India, New Delhi PAMC (HSRS) Meeting 2011</b>	<b>16<sup>th</sup> – 17<sup>th</sup> December 2011</b>	<b>Research Project Evaluation and Report</b>

**11. Recognition by an Academic Organization**

Sr. No	As a Life Member / Fellow	Name of the body / Organization	Year
1.	Life member of IPA (AUR / LM / 11144)	Indian Physics Association.	1997-98
2.	Life member of CSI (LM / 70009)	Computer Society of India, Mumbai Chapter.	2001
3.	Fellow of I.E.T.E. ( F / IETE / 141717 )	I.E.T.E., New Delhi	2001
4.	Life Member of IUPRAI(L/10)	Indian Unit of International Association for Pattern Recognition.	2003
5.	Member IEEE- (Membership No: 80362082)	The Institute of Electrical and Electronics Engineers Inc.	Dec-2005
6.	Members IEEE – CSI, Signal Processing, , Communication	The Institute of Electrical and Electronics Engineers Inc.	Dec-2005
7.	Member	Special Interest Group in Artificial Intelligence (SIGAI), C-DAC Mumbai	2005
8.	IEEE- GEO Science and Remote Sensing Society	The Institute of Electrical and Electronics Engineers Inc.	Jan-2010
9.	Life Member of ISCA (Membership No:L16200)	The Indian Science Congress Association, Kolkata.	Aug-2010

**12. Other Additional Information of relevance**

- ❖ **Member, Committee, Project Genesis and Industry Academia Partnership 2012-13**
- ❖ **Member, Committee on 12<sup>th</sup> Five year plan of University.**
- ❖ **Attended EMC<sup>2</sup> “Cloud Meets Big Data” Exhibition at Mumbai.**
- ❖ **Hon’ble Vice-Chancellor nominated to attend Maharashtra-Alberta (Canada) Roundtable on 17<sup>th</sup> Nov. 2011 at Mumbai.**
- ❖ **Working As A President Of The Committee For Computerization System For Result Declaration And Mark Memo Generation For All Departments Of University And of Sub-Centre.**
- ❖ **Nomination As A Senate Member Of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad Under Section 25 (2) (U) Of The Maharashtra University Act 1994 By The Hon’ble Vice- Chancellor Of This University.**
- ❖ **Nomination as a Member of Purchase Committee of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad under section 75 (3) (U) (ii) of the Maharashtra University Act 1994 by the Hon’ble Vice- Chancellor of this University.**
- ❖ **Nominated as Vice President of the Maharashtra Chapter of International Accreditation Organization (IAO) in India.**
- ❖ **Elevation to Senior Member of Institute of Electrical and Electronics Engineers (IEEE) NJ USA.**
- ❖ **Member of Board of Studies in the Universities**
  - ❖ **Dr. BAM, University, Aurangabad, (Computer Science and IT)**
  - ❖ **SRT, University, Nanded. (Computer Science)**
  - ❖ **Amravati University, Amravati. (Computer Science)**
  - ❖ **YCM Open University, Nashik (Computer Science)**
  - ❖ **Gulbarga University, Gulbarga (Computer Science)**

- ❖ **Faculty Member of Science in the University**
  - ❖ Amravati University, Amravati
- ❖ **Research guide Recognition in Computer Science**
  - ❖ Dr. B.A.M., University, Aurangabad
  - ❖ Pune University, Pune
  - ❖ Amravati University, Amravati
- ❖ **Chairman, IETE Centre Aurangabad.**
- ❖ **Chairman, Ad-hoc Board in B.Sc. Networking & Multimedia.**
- ❖ **Member, Technical Committee Forensic and Computer Science, Higher & Technical Education Govt. of Maharashtra.**
- ❖ **Programme Coordinator, UGC-SAP (II) DRS Phase-I.**
- ❖ **Chairman, M.Sc. Examination Paper Setting Committee.**
- ❖ **University Representative Member, Local Governing Body, Savitribai Fule Women's Engineering College, Aurangabad.**
- ❖ **Member, Self Support Courses Committee under University Fund.**
- ❖ **Broadcasted Lecture on "Mobile Evolution and Communication" 5/5/2011 on Akashwani Radio Center, Aurangabad.**
- ❖ **Vice-Chancellor Nominee Expert for the selection of Director of Marathwada Shikshan Prasarak Mandal, Aurangabad**
- ❖ **Visit to Tuljapur for affiliation of Late Manikrao (Dada) Patil Computer Science College, Tuljapur.**
- ❖ **Vice-Chancellor Nominee Subject Expert for the post of Professor at G. S. Mandal's MIT College, Aurangabad.**
- ❖ **Vice-Chancellor Nominee Subject Expert for the post of Programmers at Dr. B. A. M. University, Aurangabad.**
- ❖ **Achievements**
  - ❖ Developed the department, academically and well-equipped Infrastructure established in the new Building of the Department.
  - ❖ Taken key role to frame and start the M.Sc. in Information Technology course in the University.
  - ❖ Taken painful efforts to established U.G.C. Internet Access Center in the University.
  - ❖ UGC-SAP DRS Phase-I.
  - ❖ Financial funding achievements to the department and University from UGC.
- ❖ **Teaching experience**
  - Class to which taught**
    - ❖ Postgraduate (M. Sc Computer Sci. And Information Tech, M. Phil Comp. Sci., M. Tech by Research).
  - Subject Taught**
    - ❖ Discrete Mathematics, Logical Organization of Computer, Digital Electronics, Microprocessor and Interfacing, System Analysis and Design, Numerical Methods, Computer Graphics, Software Engineering, Artificial Intelligence and DSS, Image Processing, Computer vision, Programming Language, Object Oriented Techniques & systems, Embedded System, Pattern Recognition, Advance DBMS, Theory of Computation and Research Methodology.
  - Developments**
    - ❖ Newly started and framed the structure of P.G. course in Information Technology in the University. Science June 2000.
    - ❖ Newly framed and Structured the B.C.S., B.C.A. (Science), and B.Sc. IT, at degree level AND M.Sc. IT and revised M.Sc. Courses at P.G. University level June 2001.
    - ❖ University's Computerization and Web Site Development.

- ❖ Establish Internet Access Center and V-SAT (512 Kbps) Under UGC Infonet project in Dr. B. A. Marathwada University, Aurangabad.

### 13. Research Projects Completed

- A Minor Research Project entitled “Studies on various aspects of Image processing through object oriented Technology.” August 2001. (Total Grants Rs 20,000/- funded by UGC).
- A Major Research Project entitled “Development of Intelligent Biometrics Techniques in Finger Print Recognition”, funded by UGC. [Rs. 6.34 Lacks] with one project fellow.
- A Major Research Project entitled “Development of Multimodal Fingerprint System through Multiple Impression and Matching Techniques” funded by UGC [Rs. 8.96 Lacks] with one project fellow.
- **Research Project Under Development:**
  - A Special Assistance Programme (SAP) entitled “Biometric: Multimodal System Development” funded by UGC [62.05/- lacks (Rs 52.25 lacks + 4.80 lacks + 5 lacks+ 20/- lacks )] with one project fellow.
  - A Grant of 20 Lacks has been received under BSR scheme of SAP project.
- **UGC Infonet Project Implementation**

### 14. Particulars of research Guidance

- **Eighteen students** awarded Ph. D. in Computer Science.
- **Seven students** have been working for Ph.D. under the guidance.
- **One student** awarded and **two** are working for M. Phil. under the guidance

### 15. List of Ph.D. Students Successfully Guided

Sr. No.	Name of Candidate	Research Topic	Status
1.	<b>Dr. Manza Ramesh R</b>	Studies on various aspects of Image Data Compression in Image Processing	<b>Awarded (Dec2006)</b>
2.	<b>Dr. Chitra Atole</b>	Software Reliability for Enhancing the reliability of software product: in Object Oriented Approach.	<b>Awarded (Dec2006)</b>
3.	<b>Dr. Prapti Deshmukh</b>	Image enhancement in Digital Image Processing and its Application.	<b>Awarded (Dec2006)</b>
4.	<b>Dr. Gaikwad Ashok</b>	Studies on various aspects of Segmentation in Image Processing	<b>Awarded (January 2007)</b>
5.	<b>Dr. V. M. Thakare</b>	Artificial Intelligence Techniques related to Trajectory of Robot arms	<b>Awarded (May 2007)</b>
6.	<b>Dr. Seema Kawthekar</b>	Study of Different aspects in Image analysis and understanding in Image processing.	<b>Awarded (Sept.2007)</b>
7.	<b>Dr. C. Namrata</b>	Word recognition under Document Image Processing	<b>Awarded (May 2008)</b>
8.	<b>Dr. Vikas Humbe</b>	Feature Extraction of Fingerprint Image Using Enhancement Techniques	<b>Awarded (May 2008)</b>
9.	<b>Dr. Sagar Jambhorkar</b>	Development of Fingerprint Image Segmentation Technique	<b>Awarded (Sept. 2008)</b>
10.	<b>Dr. Mukta Dhopeswarker</b>	Reliability: Analysis and Testing for quality software products.	<b>Awarded (March 2009)</b>
11.	<b>Dr. Viren Gomase</b>	Proteomics system architecture of plant virus and Bioinformatics based drug designing	<b>Awarded (March 2009)</b>
12.	<b>Dr. S. S. Gornale</b>	Development of Noisy Image compression technique using Multiwavelet Approach	<b>Awarded (July 2009)</b>

13.	<b>Dr. Mahendra P. Dhore</b>	Document Analysis: Text based Approach	<b>Awarded (Feb 2011)</b>
14.	<b>Dr. Ganesh Magar</b>	Synthetic Aperture Radar (SAR) Image Compression: Multiwavelet Approach	<b>Awarded (Dec 2010)</b>
15.	<b>Ms. Sonali Kulkarni</b>	Word Feature extraction in English to Marathi Translation Process	Working
16.	<b>Dr. Avinash Kadam</b>	Development of Microarray Image Analysis Technique: An Image Processing Segmentation Approach	<b>Awarded (Nov 2010)</b>
17.	<b>Dr. Arjun Mane</b>	Development of human face recognition technique for digital rights management based on Principal Component Analysis (PCA)	<b>Awarded (Nov 2010)</b>
18.	<b>Dr. Punam Thakare</b>	A Standard Approach To Form A Framework For Image Segmentation	<b>Awarded (July 2011)</b>
19.	<b>Ms. Mamta Baheti</b>	Development of Gujarati Handwritten Character Recognition	Thesis Submitted
20.	<b>Dr. Premal B. Nirpal</b>	Development of Software testing techniques for software reliability enhancement through genetic approach.	<b>Awarded (Feb 2012)</b>
21.	<b>Ms. Kavita A. Khobragade</b>	Iris Image Features Extraction: A Multi-wavelet Approach	Working
22.	<b>Ms. Mukti E. Jadhav</b>	Sputum Image Analysis for Diagnosis of Pulmonary Tuberculosis	Working
23.	<b>Ms. Vijaya B. Musande</b>	Development of Feature Extraction Technique for Remote Sensing Images: A Multi-wavelet Approach	Thesis Submitted
24.	<b>Ms. Vidya V. Shengule</b>	Study and Development of Restoration Technique for Remote Sensing Images	Working
25.	<b>Mr. Najran N H Al_Dawla</b>	Steganography Enhancement for Combining Text and Image through Image Processing Techniques	Working

#### 16. List of M. Phil Student Successfully Guided

Sr. No.	Name of Candidate	Topic	Status
1	<b>Mr. Yogesh S. Rode</b>	Fingerprint recognition using Gabor filter: A multi impression approach	<b>Awarded (Sept 2010)</b>

#### 17. Area of Interest

Image Processing, Pattern Recognition, Computer Vision, Software Engineering, Artificial Intelligence, Neural Network, Robotics, Decision Support System and Intelligence system, Biometrics, Bio-informatics, and Embedded Systems etc.

#### 18. Relevance Academic Activities performed

- Act as a coordinator to conduct various Refresher and Orientation courses in the field of computer science.
- Act as Session Chair, in the National and International Conferences.
- Delivered Lectures in Orientation and Refresher Course in the various Universities as a Resource person.
- In the Capacity of Chairman, worked on the various LIC Committees for Affiliation of the College level Courses time to time.
- Act as a Member, on BOS (Board of Studies) in the subject of Computer Science at SRT Marathwada University, Nanded, YCMOU Nashik, Gulbarga University, Gulbarga and Amravati University on Ad-hoc BOS of, Dr.B.A.M University, A 'bad

- Worked and working as a Chairman of Board of Examiners for various graduate and postgraduate level courses in the university.
- Act as Vice-chancellor Subject Expert Nominee for the selection of lectures/readers in subject domain time to time.
- Act as a key note speaker and chair of technical session in national level conferences and workshops
- Give the talk on various burning issues of computer science on AIR Akashwani Aurangabad
- Acts as Technical Member at various Government committees like Setu-Suvidha Aurangabad, Land and water management in Aurangabad Collector Jurisdiction.
- Completed the Pilote refresher course in IT at Goa in Sept-2003
- Completed the Advance Networking and V-SAT training Program at New Delhi organized by UGC and ERNET New Delhi.
- Act as an Observer for SET Examination.
- Former Hon. Secretary IETE Aurangabad Sub-Center.
- Working as a Chairman, IETE Aurangabad Center.
- Act as a jury member of State Level Inter University Research Festival AVISHKAR-2009.
- Appointed as a Chairman, Ad-hoc Board in B.Sc. Networking & Multimedia.
- Member, SET Meeting-2010, University of Pune.
- Attended First IEEE GRSS India Meet at Jodhpur, Rajasthan. December 2010
- Appointed as a University Representative on the Governing Body of MGM's Jawaharlal Nehru Engineering College, Aurangabad.
- Appointed as a University Representative on the Governing Body of BGPS's Rajashri Shahu Institute of Management, Aurangabad.
- Working as a coordinator of School of Computational and Physical Sciences in Dr. B. A. M. University, Aurangabad for development of Model College with innovative vocational job oriented courses and credit based school system.
- Act as external examiner for RRC at SNTD Women's University, Mumbai.
- Delivered an Expert talk at Sri Padmavathi Mahila University (Women's University) School of Engineering & Technology (SET), Tirupati, Andhar Pradesh.
- Inaugurated IETE Student Forum (ISF) at MIT College of Engineering, Aurangabad.

**19. Particulars of Seminars/Conferences/symposia/workshop participated/Attended**

<b>Name of the Seminar/ Conference /Symposia Workshop, etc.</b>	<b>Name of the Sponsoring Agency</b>	<b>Place and Date</b>
<b>A: International Conference:</b>		
SAARC Conference on " Extending the use of Multilingual and Multimedia Information Technology"	C-DAC, Pune.	1st to 4th September, 1998, Pune, India.
"International Conference on Visual Computing,"	IFIP, CSI, NCST, Mumbai	23rd to 26th, February, 1999, GOA India.
GSPx 2005 The Pervasive Signal Processing Conference	<b>Global Technologies Inc. MA, USA</b>	Oct 24-27, 2005, <b>Santa Clara Conventional Center, CA, USA</b>
International Conference on Sytemics, Cybernetics and Informatics (ICSCI-2006)	Pentagrm Research Center, Hyderabad	Jan, 4-8, 2006, Hyderabad India
International Symposium on Signal Processing and Information Technology,	<b>IEEE, University of British Columbia, and University of Victoria, Canada</b>	27-30 August 2006,

<b>(Chaired one Technical Session)</b>		Vancouver, Canada
International Conference On Microwaves Antenna, Propagation & Remote Sensing I C M A R S – 2 0 1 0 <b>delivered an Invitee Talk</b>	<b>INTERNATIONAL CENTRE FOR RADIO SCIENCE (ICRS), IEEE- GRSS, (URSI) IEEE MTTs, India, IEEE AES/COM/LEO, India IEEE ED-India, ATMS-India, CEERI Pilani, IEEE GRSS, USA.</b>	14th – 17th December 2010
International Conference on Current Trends and Challenges in Management, Engineering, Computer Application and Technology	<b>Choice Institute of Management Studies &amp; Research, Pune</b>	23 <sup>rd</sup> – 25 <sup>th</sup> March, 2012
<b>B: National Conference:</b>		
Intel Developers' conference'98	Intel Technology Centre, Bengalor	May 22, 1998, Pune
XX Annual Conference of Indian Society for comparative animal Philosophy and symposium on Environment and Human Health	Dept. of Environmental Sce, Dr. BAMU, & IRDERH, Ahmednager	28 <sup>th</sup> – 30 <sup>th</sup> January, 1999
Microwave Measurements and Techniques	CSIR, DST, ISRO and Dr. BAMU, A' bad.	2nd and 3rd March, 2001 A, bad
The Role of E-commerce in Industries and Trade	UGC Sponsored and Devgiri College Aurangabad conducted	10 <sup>th</sup> – 11 <sup>th</sup> March, 2002
National Conference On Recent Trends In Information Communication Technology And Applications <b>(Chaired Two session)</b>	U.G.C. AND Loksevak Madukarrao Chaudhari Amrut Mahotsav Committee Jalgaon	10th And 11th Oct. 2002 NM, University, JALGAON
National Conf. And workshop on Virtual Instruments, Embedded Systems and Robotics	Sensor Technology Pvt. Limited and Embedded University, Gwalior India	March 1-5, 2004, Gwalior India
National Seminar on Recent Trends in Image Processing & Pattern Recognition	Karnataka Arts, Science and Commerce College, Bidar	February 15 <sup>th</sup> - 16 <sup>th</sup> 2010
National Conference on Recent Trends in Computer Application (NCRCA-2010)	Deptt. Of Management Science, Dr. B. A. M. University, Aurangabad.	February 17 <sup>th</sup> – 18 <sup>th</sup> , 2010
National Conference on Emerging Trends and Applications in Computer Science (NCETACS - 2010)	Department of Computer Science, St. Anthony's College, Shillong, Meghalaya - 793001	April 09 <sup>th</sup> , 10 <sup>th</sup> 2010
Invited Talk in 98 <sup>th</sup> Indian Science Congress Association (ISCA-2011), Chennai, India <b>(Chaired One session)</b>	Indian Science Congress, ISRO, DRDO, UGC, etc	January 3 <sup>rd</sup> to 7 <sup>th</sup> 2011
Invited Talk in 99 <sup>th</sup> Indian Science Congress Association (ISCA-2012), Chennai, India <b>(Chaired One session)</b>	Indian Science Congress, ISRO, DRDO, UGC, etc	January 3 <sup>rd</sup> to 7 <sup>th</sup> 2012

<b>C: International Workshop:</b>		
International Workshop on “ Document Analysis, Speech and Natural Language Processing”	Indian Statistical Institutes, Kolkatta	23rd to 24th December,1999,Calcutta, India
“International Workshop on Technological Development in Indian Languages	ISI, CVPR Unit Kolkata	22nd to 24th Jan. 2003.
<b>D: National Workshop/Seminar/ symposia:</b>		
National Workshop on High Temp. Superconductivity.	Dr. BAMU, A' bad	21st -23rd February, 1991, A'bad
The National Academy of Sciences, India, Sixty-Sixth Annual Session	National Academy of Science, India Allahabad	31st Oct. to 2nd Nov., 1996, Aurangabad
XI Convocation of Indian Association Physics Teachers	IAPT and Dr. BAMU, A' bad	12th -14th December,1996,A,bad
IT Literacy: Challenges before Education system	NMU, Jalgaon & Govt. of Maharashtra	11th march,1999, NMU, Jalgaon
Workshop on Intellectual property rights-Patents Awareness	TIFAC, New Delhi	June23,2000, Aurangabad
Higher Education in New Millennium Prospects and Problems	Dr. Babasaheb Ambedkar Marathwada University, Teachers' Association (BAMUTA Aurangabad)	27 May 2000, Aurangabad
e-commerce	IETE, CSI (Aurangabad)	1st -3rd Feb.2001,A,bad
Workshop on Advanced Web-Based Computing	UGC, Delhi, and N M University, Jalgaon	9th -10th , 2002, Aurangabad
Workshop on Parallel Computing: Optimizing performance of Parallel program (PCOPP-2002)	C-DAC, Pune	June 3 to 6, 2002
Workshop on Ph. D. program	University of Pune, Pune, IBMR, and Hiduja College Mumbai	January 14-15, 2005, Pune University, Pune
National Workshop on Data Ware housing & Data Mining(NWDWDM-2010)	Deptt. Of CS & IT, Dr. B. A. M. University, Aurangabad.	February 25 <sup>th</sup> -27 <sup>th</sup> ,2010
Chief Guest of Pinnacle'10 a State level IT event at Jalgaon.	G H Raison Institute of Information Technology, Jalgaon.	September 29 <sup>th</sup> , 2010
Chief Guest of inauguration Ceremony of Student Council	Savitribai Phule Women's Engineering College, Aurangabad	October 15 <sup>th</sup> ,2010
Workshop on All India Survey of Higher Education (AISHE)	Library, Dr. B. A. M. University, AUrangbad.	November 13 <sup>th</sup> -14 <sup>th</sup> , 2011
Workshop on The Maharashtra Public University Act 2011 Draft	S. B. E. S. College of Science, Aurangabad	February 14 <sup>th</sup> 2012
Workshop on National Vocational Education Qualification framework	AICTE and Government of India.	March 5 <sup>th</sup> 2012

## 20. Visit Abroad

- Visit to California USA for GSPx 2005 The Pervasive Signal Processing Conference organized by Global Technologies Inc. MA, USA during Oct 24-27, 2005.
- Visit to Vancouver, Canada for International Symposium on Signal Processing and

Information Technology organized by IEEE, University of British Columbia, and University of Victoria, Canada during 27-30 August 2006

- 21. Particulars of Seminars/Conferences/workshop Organized as a Convenor/Chairman**
- International Conference on Advanced in Computer Vision and Information Technology, (ACVIT-09) on 16<sup>th</sup> – 19<sup>th</sup> December 2009. ([www.acvit.org](http://www.acvit.org))
  - International Conference on Advanced in Computer Vision and Information Technology, (ACVIT-07) on 28<sup>th</sup> – 30<sup>th</sup> November 2007. ([www.acvit.org](http://www.acvit.org))
  - National Level Conference on “Computer Communication and Security” on 4<sup>th</sup> and 5<sup>th</sup> January 2004.
  - Two-Day Workshop on “Parallel Computing and Grid Computing” delivered by Dr. Dheeraj Bharadwaj Young Scientist from CDAC-PUNE in Department of Computer Science And Information Technology, Dr. B.A.M University A' bad on 21 and 22 June 2002.
  - One-day workshop on “E-Education” on 16<sup>th</sup> September 2004.
  - One Day workshop on "Embedded Systems and Its Applications" on 7<sup>th</sup> March 2006
  - One Day Workshop on “Open Source Quantum GIS” on 3<sup>rd</sup> September 2011
- 22. Awards/ Rewards**
- Awarded "VIJAY SHREE" Award with certificate of excellence for meritorious services, outstanding performance and remarkable role by India International friendship society, New Delhi, India.
  - Nominated for the Who's who in the world, 2007.
  - **Elevation to the grade of IEEE Senior Member.**
- 23. Publications**
- a. Research Papers: National/International Conference and Journals – More than 187 Research papers (list Enclosed)
  - b. Books:
    - "Computer Communication and Security", Renuka Prakashan, Aurangabad
    - “Advances in Computer vision and Information Technology”, IK International New Delhi-2007. ISBN: 9788189866747 [**3 Citations**]
    - “Advances in Computer vision and Information Technology and Applications”, IK International New Delhi-2009. ISBN: 9789380026954
- 24. Editor in Chief**
- “International Journal on Computer Science and Information Technology”  
ISSN: 098474-8385
- 25. Member of Editorial Board**
- 1) “Veer Narmad South Gujarat University (VNSGU) Journal of Science and Technology”  
ISSN: 0975-5446.
  - 2) “ICT Academy of Tamil Nadu (ICTACT) Journal on Soft Computing” An International Publication of ICT Academy of Tamil Nadu ISSN: 0976-6561.

**Date:**

**Signature**

**Place: Aurangabad**

**(Dr. K. V. Kale)**

## List of Publications

### A. Journals, International and National Conferences

#### International Journal

1. K. V. Kale, Chitra S. Atole, "Software Reliability Model Review: In light of Software development process", Software engineering Institute (SEI) CMM  
<http://seir.sei.cmu.edu/2005>
2. K. V. Kale, Vikas Humbe, S. S. Gornale, Ramesh Manza "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 [2 Citations]
3. K.V.Kale ,S.S.Gornale, R.R.Manza, Vikas Humbe "Performance analyses of biorthogonal wavelet filter for lossy fingerprint image compression" International Journal on Signal Processing (IJISE) vol\_001 January 2007 [6 Citations]
4. K.V.Kale , S. S. Gornale, Vikas T Humbe, R. R. Manza, "Fingerprint Image Compression using Retain Energy and Number of Zeros through Wavelet Packet (WP)" International Journal on Computer Science and Security (IJCSS), Vol. 1, Issue 2, PP. 35-42, 2007[ 3 Citations]
5. Gomase V.S., Aga A.S., Kale K.V. and Chikhale N.J "Prediction of MHC Class binding peptide of coat protein from Sugarcane mosaic virus",International Journal of Pharmacology and Biological Sciences, 2007, 1(3), 51-58. 132
6. V.S.Gomase and K.V.Kale "In silico prediction of epitopes: a new approach for fragment based viral peptide vaccines" Int. J. of Applied Computing, 1(1), 39-46, 2008
7. V.S.Gomase and K.V.Kale, "Approach of proteomics system architecture in plant virus's database" Int. J. of Applied Computing, 1(1), 33-38, 2008
8. V.S.Gomase and K.V.Kale "Phylogenetic study of DNA-binding motifs of cytochrome-c Vigna radiate". Int. J. of Information Retrieval, 2008, 1(2), 21-25
9. V.S.Gomase and K.V.Kale "SVM based prediction of MHC class nonamers from t1 particle of Brome mosaic virus". Int. J. of Applied Computing, 2008, 1(2), 29-33
10. V.S.Gomase and K.V.Kale "Application of computational algorithms for prediction of TAP and MHC binders of neurotoxin (Alpha-toxin BeM10) from Mesobuthus eupeus". Int. J. of Applied Computing, 2008, 1(2), 35-43
11. V.S.Gomase and K.V.Kale "Structural and Functional Analysis of Catalytically Active Tobacco Etch Virus Protease". Int. J. of Biotechnology Research, 2008, 1(2), 97-114
12. V.S.Gomase and K.V.Kale "Phylogenetic analysis of coat proteins from potyviridae family" Int. J. of Biotechnology Research, 2008, 1(2), 121-125
13. V.S.Gomase and K.V.Kale "Prediction of MHC, TAP Peptide binders for fragment based peptide vaccines from Foot and mouth disease virus-O-strain." Int. J. of Bioinformatics, 2008, 1(2), 95-113
14. V.S.Gomase, J.P.Tandale, S.A.Patil, K.V.Kale, "Automatic modeling of protein 3d structure RNA-directed RNA polymerase" Int. J. of Biotechnology Research, 2008, 1(1), 17-35
15. V.S.Gomase and K.V.Kale Bioinformatics based sequence analysis of Nucleoplasmin like viral coat protein. Int. J. of Information Retrieval, 2008, 1(1), 11-15
16. Kadam A. B., Manza R. R. and Kale K. V. "Microarray Spot Detection Using Flat Structuring Periodic Line And Specific Distance Shaped Morphology", Bioinfo. Publications, International Journal of Machine Intelligence, Issue 2, 2009
17. S. Tagore, V. S. Gomase and K. V.Kale "Biological pathways and their modeling." International Journal of Computer Research, Volume 17 Issue 3, Article 1 2009
18. S. Tagore, V. S.Gomase and K. V. Kale Kale "Supervised learning approaches in pathway modeling". International Journal of Computer Research, Volume 17 Issue 3, Article 2, 2009

19. S. Tagore, V. S. Gomase and K. V. Kale. "Shortest path algorithms in pathway analysis." International Journal of Computer Research, Volume 17 Issue 3, Article 3, 2009
20. S. Tagore, V. S.Gomase and K. V. Kale "Clustering algorithms in pathway modeling." International Journal of Computer Research, Volume 17 Issue 3, Article 4, 2009
21. S. Tagore, V. S.Gomase and K. V. Kale "Pathway Modeling: New Face of Graphical Probabilistic Analysis" International Journal of Computer Research, Volume 17 Issue 3, Article 5, 2009
22. S. Tagore, V. S.Gomase and K. V. Kale. "Inductive logic programming in pathway analysis." International Journal of Computer Research, Volume 17 Issue 3, Article 6, 2009
23. Kadam A.B., Manza R.R. and Kale K.V. "Microarray Spot Detection Using Four-Shaped Morphology", ACEEE, International Journal of Machine Intelligence, ISSN: 0975-2927, Volume 1, Issue 2, 2009, pp-5-9
24. S. S. Gornale, Vikas Humbe, Ganesh Magar, Ramesh Manza, K.V. Kale "Application of Multi-Resolution Techniques for Medical Image Compression" International Journal of Imaging Science and Engineering Volume 3 No.4 Oct-2009 ISSN 1934-9955, TIFR Signal Processing Society
25. M.P. Dhore, Dr. V.M. Thakare, Dr. K.V. Kale. "Text Document Page Segmentation Algorithms: A Review", International Journal of Computer Applications in Engineering, Technology and Sciences (IJ-CA-ETS) ISSN: 0974-3596 | Volume 2 Issue 1 | OCT '09 - MARCH '10 pp.27-33
26. Kale K.V Gornale S.S, Humbe V., Manza R. ."Fingerprint image de-noising using multi-resolution analysis (MRA) through stationary wavelet transform (SWT) method" International Journal on Knowledge Engineering, ISSN: 0976-5816, Vol. 1, Issue 1, 2010, PP-05-14 [2 Citations]
27. Arjun V. Mane, R. R. Manza And K. V. Kale, "The Role of Similarity Measures in Face Recognition", International Journal of Computer Science and Application IJCSA-2010, Vol. 1
28. Arjun V. MANE Student Member, IEEE, Ramesh R. MANZA and Karbhari V KALE, Member, IEEE "Human Face Recognition Using Superior Principal Component Analysis (SPCA)", IJCTE IACSIT Vol 2, No 5, October, 2010
29. A. B. Kadam, R. R. Manza And K. V. Kale, "Novel Approach For Microarray Segmentation Using Two Shaped Flat Structuring Periodic Line And Specific Distance Shaped Morphology", International Journal of Computers, Information Technology and Engineering, Volume 4 • Number 2 • December 2010 • pp. 87-96
30. G. M. Magar, S. S. Gornale, V. T. Humbe, R. R. Manza, Dr. K. V. Kale, "Exploiting Multiwavelets for Lossy Compression in SAR Imaging", International Journal of Computer Applications and Business Intelligence (IJCABI), ISSN 0975-0945X, Volume: 01, Issue: 04, October - December 2010 issue, pp: 31-40
31. M.P. Dhore, Dr. V.M. Thakare, Dr. K.V. Kale. "Evaluation Of Geometric Layout Analysis Techniques For Document Image Analysis", International Journal of Computer Applications. (IJCA) ISSN: 0975-8887 | Volume 1 No. 25 | 2010 pp.110-114
32. M.M. Kazi, A. V. Mane, R. R. Manza, K. V. Kale, "Comparison of fingerprint enhancement techniques through Mean Square Error and Peak-Signal to Noise Ratio" (IJCSE), Vol. 3 No. 1 PP 266-270 Jan 2011, ISSN : 0975-3397
33. Premal B. Nirpal, K. V. Kale "A Brief Overview Of Software Testing Metrics" International Journal of Computer Science & Engineering (IJCSE), Vol. 3 No. 1 PP 204-211, Jan 2011, ISSN : 0975-3397 [3 Citations]
34. Premal B. Nirpal, K. V. Kale, "Comparison of Software Test Data for Automatic Path Coverage Using Genetic Algorithm" International Journal of Computer Science & Engineering Technology (IJCSET), Vol. 1 No.1 PP 12-16, Feb 2011, ISSN:2229-3345 [1 Citation]

35. Mukti Jadhav, K. V. Kale, "Analysis of ZN-Stained Sputum Smear Enhanced Images for Identification of Mycobacterium Tuberculosis Bacilli Cells", IJCA, Vol. 23 No. 5, pp. 10-16, June 2011, ISSN: 075-8887
  36. Premal B. Nirpal, K. V. Kale, "Using Genetic Algorithm for Automated Efficient Software Test Case Generation for Path Testing", International Journal of Advanced Networking and Applications (IJANA), Vol 2 Issue 6, pp. 911-915, 2011.
  37. Mamta Maloo, K. V. Kale, "Support Vector Machine Based Gujarati Numeral Recognition", International Journal of Computer Science & Engineering (IJCSE), Vol. 3 No. 7, pp.2595-2600, July 2011, ISSN: 0975-3397.
  38. Mamta Maloo, K. V. Kale, "Gujarati Script Recognition: A Review", International Journal of Computer Science Issues (IJCSI), Vol. 8 Issue 4 No. 1, pp.480-489, July 2011, ISSN: 1694-0814.
  39. M. J. Baheti, A. V. Mane, M. S. Hannan, K. V. Kale, "Comparison of PCA and SVM for a west Indian Script- Gujarati", CIIT Journal of Digital Image Processing, Vol. 3. No. 11, July 2011, pp. 709-715.
  40. Arjun V Mane, Yogesh S Rode and K V Kale. Novel Multiple Impression based Multimodal Fingerprint Recognition System. *International Journal of Computer Applications* 27(8):26-31, August 2011. Published by Foundation of Computer Science, New York, USA. [**1 Citation**]
  41. Jadhav M. E., Kale K. V., Baheti M. J., "Mycobacterium Tuberculosis Bacilli Cells Identification Using Moment Invariant", International Journal of Machine Intelligence (IJMI), Volume 3, Issue 3, 2011, pp-146-149.
  42. Kavita Khobragade, K. V. Kale, "An Iris Localization Algorithm: A Review", International Journal of Advances in Management, Technology & Engineering Sciences, Volume 1, Issue 6 (IX), March 2012, pp. 194-197 ISSN: 2249-7455.
  43. C Namrata Mahender, KV Kale, "Structured based Feature Extraction of Handwritten Marathi word", 2011, International Journal of Computer Applications, Volume 16, Issue 6, pp. 42-47 [**1Citation**]
  44. M. M. Kazi, Y. S. Rode, S. B. Dabhade, K. V. Kale, R. R. Manza, A. V. Mane, "Multimodal Biometric System Using Face And Signature: A Score Level Fusion Approach", 2012, Advances in Computational Research, Volume 4, Issue 1, pp. 99-103
  45. Dhore M. P, Thakare V. M, Kale K. V., "A Novel Morphological Technique For Segmentation Of Document Images In NIST Database", International Journal of Machine Intelligence, 2011, Volume 3, Issue 5, pp. 172-180.
  46. Baheti M.J., Kale K.V., Jadhav M.E., "Comparison of Classifiers for Gujarati Numeral Recognition", International Journal Of Machine Intelligence, 2011, Volume 3, Issue 3, pp. 160-163
  47. Vijaya Musande, Anil Kumar, Karbhari Kale Cotton Crop Discrimination Using Fuzzy Classification Approach Journal of the Indian Society of Remote Sensing (26 January 2012), pp. 1-9 (Springer: [doi:10.1007/s12524-012-0201-z](https://doi.org/10.1007/s12524-012-0201-z))
- Journal**
48. K. V. Kale "Investigation on a High-Conductivity solid electrolyte system (Bi<sub>2</sub> O<sub>3</sub>)<sub>1-X</sub> (Y<sub>2</sub>O<sub>3</sub>)<sub>X</sub>", J. Material Science Letters, 18, 1999, 9-11 [**5 Citations**]
  49. K. V. Kale "Efficient Use of storage and Communication bandwidth using Image Data Compression", Dr. B.A.M. University Science Journal, Dr. B.A.M. University Aurangabad, PP118-126. 2002
  50. Chitra S. Atole, K V. Kale "An empirical Investigation of Relation Between WMC, RFC and Cbo Metrics From CK Metric Suite" Journal of Science, Dr. Babasaheb Ambedkar Marathwada University, Vol. XXXIII(C), 2005, PP.129-132

51. K V Kale, Vikas Humbe, Ramesh Manza, "Fingerprint Image Enhancement Strategies and Analysis" Journal of Science, Dr. Babasaheb Ambedkar Marathwada University, Vol. XXXIII(C), 2005, PP. 133-142
52. S S Gornale, Vikas Humbe, Ramesh Manza, K V Kale "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 Citations**]
53. K.V.Kale, Ramesh Manza, S.S.Gornale, and 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
54. K. V. Kale, V.M. Thakre "CPU Architecture Considerations for Robotic Systems Applications" The Chanakya Journal by RIMS Vol. V, Issue-2, PP. 80-96 Jul-Dec 2005
55. Patil, S. A.; Gomase, V. S.; Kale, K. V "DNA Electronics: A Nanotechnology Approach" journal Current Nanoscience, Volume 3, Issue 2, May, 2007 pp. 161-165(5)
56. S. S. Gornale, R. R. Manza, Vikas Humbe and K. V. Kale, "The role of ICT in realizing the goal of e-governance: The Indian Perspective", Journal of SIOM, Pune, Vol 1, PP. 15-21, Jun 2007
57. Gomase V.S., Kale K.V "Prediction of MHC class nonamers: a new approach for fragment based viral peptide vaccines". Journal of Cell and Tissue research, 2006, 6(3), 7-8
58. Gomase V.S., Kale K.V "Binding affinity prediction of Beet curly top virus capsid protein for TAP transporter". Journal of Cell and Tissue research, 2006, 6(3), 8
59. Gomase V.S., Kale K.V "In Silico structural analysis of cowpea mosaic virus top component." Journal of Cell and Tissue research, 2006, 6(3), 8-9
60. Gomase V.S., Kale K.V., Chikhale N.J., Changbhale S.S "Prediction of MHC Binding Peptides and Epitopes from Alfalfa mosaic virus" Curr. Drug Discov. Technol. 2007 Jun; 4(2):117-1215. [PMID: 17691913] [**25 Citations**]
61. Gomase V. S., Kale K.V., Gnanasagar M. and Satyanarayana P. "Prediction of antigenic epitopes of putative coat protein from spinach latent virus", CTDDR-2007, Medicinal Chemistry Research, 2007, 15(1/6), 145-146. [Impact Factor: 0.731]
62. Gomase V. S., Kale K.V., Jyotiraj A. and Vasanthi R "Identification of mhc ligands from alfalfa mosaic virus", CTDDR-2007, Medicinal Chemistry Research, 2007, 15(1/6), 160-161. [Impact Factor: 0.731][**7 Citations**]
63. Gomase V. S., Kale K.V. and Mudgale S. V "Automatic modeling of protein 3d structure polg\_prsvw protein", CTDDR-2007, Medicinal Chemistry Research, 2007, 15(1/6), 213. [Impact Factor: 0.731] [**8 Citations**]
64. Prapti D. Deshmukh, R.R.Manza, Vikas Humbe, K.V.Kale "Medical Image Enhancement using Heterogeneous Approach", Journal of Science, Science Journal, Dr. BAM University, Aurangabad. Volume V, Pg. No. 23-28, July, 2006
65. Gomase VS, Kale KV "Prediction of MHC Binding Peptides and Epitopes from Groundnut Bud Necrosis Virus (GBNV)". Journal of Proteomics & Bioinformatics, 1 (4), 188- 205, 2008 [**16 Citations**]
66. Gomase VS, Kale KV "Prediction of MHC Binding Peptides and Epitopes from Groundnut Bud Necrosis Virus (GBNV)". Journal of Proteomics & Bioinformatics, 2008, 1 (4), 188- 205
67. Gomase VS, Kale KV "Development of MHC class nonamers from Cowpea mosaic viral protein" Gene Therapy and Molecular Biology, 12, 87-94, 2008. [Impact Factor- 2.720] [**1 Citation**]
68. Gomase VS, Kale KV "Prediction of MHC binder for fragment based viral peptide vaccines from cabbage leaf curl virus". Gene Therapy and Molecular Biology, 12, 83-86, 2008. [Impact Factor- 2.720] [**1 Citation**]
69. Gomase VS, Kale KV "Antigenic epitopes of viral polyprotein: an approach for fragment based peptide vaccines from Papaya Ringspot virus". Gene Therapy and Molecular Biology, 12, 31-38, 2008. [Impact Factor- 2.720]

70. Gomase, V.S., Tagore S., Changbhale S.S. and Kale K.V "Clonetics". Current Drug Metabolism, 9(3), 190-192, 2008. [Impact Factor- 5.76]-[ PMID: 18336220]
71. Gomase, V.S., Tagore S., Kale K.V. and Bhiwgade D.A "Oncogenomics". Current Drug Metabolism, 9(3), 199-206, 2008. [Impact Factor- 5.76]-[ PMID: 18336222] [4 Citations]
72. Gomase, V.S., Tagore S., Changbhale S.S. and Kale K.V. "Pharmacogenomics". Current Drug Metabolism, 9(3), 207-212, 2008. [Impact Factor- 5.76]-[ PMID: 18336223]
73. Gomase, V.S., Kale K.V., Tagore S. and Hatture S.R "Proteomics: Technologies for Protein Analysis". Current Drug Metabolism, 9(3), 213-220, 2008. [Impact Factor- 5.76]-[ PMID: 18336224] [11 Citations]
74. Gomase, V.S., Tagore S. and Kale K.V "Microarray: An Approach for Current Drug Targets". Current Drug Metabolism, 9(3), 221-231, 2008. [Impact Factor- 5.76]-[ PMID: 18336225] [12 Citations]
75. Gomase, V.S., Kale K.V. "Metabolomics", Current Drug Metabolism, 9(1), 88-98, 2008. [Impact Factor- 5.76]-[ PMID: 18220576][19 Citations]
76. Gomase, V.S., Kale K.V."Prediction of MHC binder for fragment based viral peptide vaccines from cabbage leaf curl virus". Gene Therapy and Molecular Biology, 2008, 12, 83-86. [Impact Factor- 2.720]
77. A. B. Kadam, R.R. Manza, K.V. Kale "Microarray Spot Detection Using Flat Structuring Non-Negative Integer, Scalar And Specific Width Shaped Morphology", Global Research Publications, Journal of Advanced Research in Computer Engineering, Vol.3, No.2, 2009
78. K. V. Kale "Machine intelligent approach for mapping of mhc class binding nonamers". Software Technology and Engineering, World Scientific Publishing, USA, ISBN: 13-978-981-4289-97-9, 21-24, 2009
79. Gomase, V.S., Kale K.V."Functional analyses of the binding ability of neuropeptide f (NPF) form *Moniezia expansa*." Gene Therapy and Molecular Biology, 2009, 13, 64-70. [Impact Factor- 2.720]
80. Gomase, V.S., Kale K.V."Mapping of MHC class binding nonamers from lipid binding protein of *Ascaridia galli*". Gene Therapy and Molecular Biology, 2009, 13, 10-14. [Impact Factor- 2.720]
81. Gomase, V.S., Kale K.V."Mapping of MHC class binding nonamers: Approach for Computational-proteomics. IT in Academics", Himalaya Publication House, ISBN: 978-81-8488-232-2, 552-554, 2009
82. Gomase, V.S., Kale K.V."Mapping of MHC class binding nonamers for fragment based viral peptide vaccines from Tomato mosaic virus". Asian J. Exp. Sci., 23(2), 17, 2009
83. Gomase, V.S., Kale K.V."Prediction of MHC class binding nonamers from Mungbean yellow mosaic virus-Vign." Asian J. Exp. Sci., 23(2), 16, 2009
84. Jadhav Mukti, Baheti Mamta, Mane Arjun and K.V. Kale, "Mycobacterium Tuberculosis Bacilli Cells Recognition using SVM", CIIT Journal of Digital Image Processing, Vol. 3. No. 11, July 2011
85. Jadhav Mukti, Baheti Mamta, Mane Arjun and K.V. Kale, "Mycobacterium Tuberculosis Bacilli Cells Identification Using Moment Invariant", International Journal of Machine Intelligence ISSN: 0975-2927 & E-ISSN: 0975-9166, Volume 3, Issue 3, 2011, pp-146-149

#### **International Conference**

86. K. V. Kale "Impedance Measurements on (Bi<sub>2</sub>O<sub>3</sub>)<sub>1-x</sub>(La<sub>2</sub>O<sub>3</sub>)<sub>x</sub>, (0 < x < 0.5)", Pro., of the 5th IUMRS-ICA 98, International Conference in ASIA, October 13- 16, 1998, Bangalore, India
87. K. V. Kale, R R Manza, V. T. Humbe "Role of Information Technology in enhancing socio-economic Developments" in proc. International conf. on ICT through education and development, PP. 238-243, December 2004, Bhopal

88. K. V. Kale, Chitra Atole "Challenges in Networking: High Performance Computing in WLAN" International Conference, APIIT, Panipat 9-10 apr 2005
89. K. V. Kale, R R Manza, V. T. Humbe, Prapti Deshmukh "Fingerprint Image Enhancement Using Composite Method" in proceeding of GSPx 2005 Signal Processing Conference, Santa Clara Conventional Center, Santa Clara, California USA 24-27 October 2005 [**2 Citations**]
90. K. V. Kale, R R Manza, V. T. Humbe "Fingerprint Image Enhancement Using morphological Transform" in proceeding of GSPx 2005 Signal Processing Conference, Santa Clara Conventional Center, Santa Clara, California USA -24-27 October 2005
91. Gornale S. S, Manza R.R., Humbe Vikas, Kale K.V "Noisy and Noiseless Fingerprint Image Compression using Wavelet Packet (WP)" in proceeding of International Conference of Cognition and Recognition, B N Bahadur Management Institute, University of Mysore, Mysore, Karnataka, INDIA, PP. 885-890, 22 and 23 Dec. 2005
92. Gornale S. S, Manza R.R., Humbe Vikas, Kale K.V "Quality Measures of Image Data Compression in Frequency Domain", International Conference on Systemics, cybernetics and informatics, PP. 830-835, Hyderabad, India. Jan-2006
93. K. V. Kale, R R Manza, V. T. Humbe "Architecture of E-Election System on WLAN", International Conference, CAN, Kathmandu, Nepal 24-26 Mar 2006
94. K. V. Kale, R R Manza, V. T. Humbe "E-Robotic System: Architecture and Future Trends" International Conference, CAN, Kathmandu, Nepal 24-26 Mar 2006
95. K. V. Kale, R R Manza, V. T. Humbe "SWT based Composite Method for Fingerprint Image Enhancement", in Proc. IEEE ISSPIT06 Int. Sym. On Signal Processing and Information Technology, PP. 162-168, 2006, Vancouver Canada [**3 Citations**]
96. S. Jambhorkar, K. V. Kale "A Novel Approach For Segmentation of Good, Normal and Bad Quality Fingerprint Image" IEEE TENCON 2006, Hong Kong [**3 Citations**]
97. Atole, C.S, Kale, K.V. "Assessment of Package Cohesion and Cuppling Principles for Predicting the Quality of Object Oriented Design" International conference on Digital Information management, IEEE '06 On page(s): 1 - 5 ISBN: 1-4244-0682-X [**3 Citations**]
98. S. Jambhorkar, K. V. Kale "An Adaptive Algorithm For Segmentation Of Low Quality Fingerprint Image", IEEE ICSIP'06, International Conference On Signal And Image Processing, Hubli (India), Vol. 2, PP. 826-831, Dec-2006)
99. G.M. Magar, K.V. Kale "Synthetic Aperature Radar (SAR) Image Compression Through Wavelet (W), Wavelet Packet (WP)" IEEE ICSIP'06, International Conference On Signal And Image Processing, Hubli (India), Vol. 1, PP. 402-406, Dec-2006
100. S. Jambhorkar, K. V. Kale "Noise Removal Of Medical Images Through Decimated And Undecimated Wavelet Transforms", IEEE ICSIP'06, International Conference on Signal And Image Processing, Hubli (India), Vol. 1, PP.103-106, Dec-2006
101. S. Jambhorkar, K. V. Kale "Uneven Background Extraction And Segmentation Of Good, Normal And Bad Quality Fingerprint Images", IEEE 14th International Conference On Advanced Computing & Communications, ADCOM2006, PP. 222-225, Dec. 20-23, 2006 [**2 Citations**]
102. Gomase, V.S., Kale K.V "Automatic modeling of protein 3D structure Nucleoplasmin-like viral coat protein from Cucumber mosaic virus". 14th International Conference on Advance Computing & Communication, NIT, Surathkal, India Dec., 20-23
103. Gomase, V.S., Kale K.V "In silico sequence analysis of coat protein from garlic mosaic virus", International Symposium on Computational Biology & Bioinformatics, ISBB06, Bhubhanewar, Dec.15-17,2006 India
104. Gomase, V.S., Kale K.V "Bioinformatics based antigenic prediction of viral capsid protein, International Symposium on Computational Biology & Bioinformatics", ISBB06, Bhubhanewar, Dec.15-17,2006 India

105. Gomase, V.S., Kale K.V “Insilico prediction of antigenic epitope and MHC, T-cell motifs regions of alpha latrocrustotoxin from latrodectus mactans”. Indo-Australian Symposium on Pharmacogenomics. 10 March 2006, Manipal, India
106. Gomase, V.S., Kale K.V “Antigenic epitopes of phospholipase A2: possibilities in drug development”. Indo-Australian Symposium on Pharmacogenomics. 10 March 2006, Manipal, India
107. Gomase V.S. and Kale K.V “Antigenicity prediction in Ferredoxin NADP reductase: possibilities in drug development.” Indo-Australian Symposium on Pharmacogenomics. 10 March 2006, Manipal, India
108. Gomase V.S. and Kale K.V “Genome polyprotein analysis from Papaya ringspot virus”. International Symposium on Emerging Trends in Genomics and Proteomics Sciences, 15-18 Oct. 2006, Mumbai, India
109. Gomase V.S. and Kale K.V “Prediction of MHC Class-I binding peptide of coat protein from Sugarcane mosaic virus”. International Symposium on Emerging Trends in Genomics and Proteomics Sciences, 15-18 Oct. 2006, Mumbai, India
110. Gomase V.S. and Kale K.V “In silico prediction of antigenic epitope of coat protein from Sweet potato latent virus”. International Symposium on Emerging Trends in Genomics and Proteomics Sciences, 15-18 Oct. 2006, Mumbai, India
111. Gomase V.S. and Kale K.V “In silico antigenicity prediction in coat protein: Possibilities of drug development from Sweet potato virus G”. International Conferences on Bioinformatics (InCoB), INCOB06- Delhi- Dec-18 –20, 2006, Page- 177
112. Gomase V.S. and Kale K.V “Bioinformatics based sequence analysis of Nucleoplasmin-like viral coat protein”. International Conferences on Bioinformatics (InCoB), INCOB06- Delhi- Dec-18 –20, 2006, Page 256
113. Gomase V. S., Kale K.V.\*, More M. A. and Balfewad U. S “Artificial neural network approach for predictions of MHC binding peptides”, 2nd International Conference on Nonlinear Systems: Modeling, simulation and applications, Dec., 19-22, 2006, Nanded, India, Page-13
114. Gomase V.S. and Kale K.V “Molecular modeling of salt stable cowpea chlorotic mottle virus”, 2nd International Conference on Nonlinear Systems: Modeling, simulation and applications, Dec., 19-22, 2006, Nanded, India, Page-12
115. Shivanand Gornale, Ramesh Manza, Y. Jayanta, M. P. Dhore, Dr. K. V. Kale, “Multi-Resolution system for Audio Data Compression : A wavelet Approach”, Proceedings of International Conference on Advances in Computer Vision and Information Technology (ACVIT-07), organized by Dr. BAMU Aurangabad, Nov. 28-30, 2007.( pp 1100-1108)
116. Ganesh Magar, S.S.Gornale, Vikas Humbe, Praveen 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, (ACVIT-07) Aurangabad, PP.1400-1405, 2007
117. A.B. Kadam, 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, (ACVIT-07) Aurangabad, PP 847-853, 2007
118. Gomase V.S., Kale K.V “SVM based prediction of TAP transporter binding affinity of Bhendi yellow vein mosaic viral coat protein”. Advances in Computer Vision and Information Technology, (ACVIT-07), IK International Publishing House, ISBN:978-81-89866-74-7, 465-471, 2007
119. M.P. Dhore, Dr. V.M. Thakare, Dr. K.V. Kale. “Morphological Approach For Document Image Segmentation”, Proceedings of International Conference on Emerging Trends in Computer Science, Communication and Information Technology ( CSCIT2010 ) organized by Department of Computer Science and Information Technology, Yeshwant Mahavidyalaya, Nanded. January 09-11, 2010

120. Vijaya Kale, Arjun Mane, R. R. Manza, K. V. Kale, "Segmentation of Remote Sensing Image for Identification of Vegetation", Map Asia 2010, 9th Annual Asian Conference and Exhibition on Geospatial Information, Technology and Application, International Conference, July 26th to July 28th 2010, at Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia
  121. Arjun V Mane, Ramesh R Manza, Karbhari V Kale "Analysis of Principal Component Analysis (PCA) based Face Recognition: Effects of Similarity Measure", First International Conference on VLSI, Communication, Computation And Security, Karunya University, Coimbatore, Tamil Nadu 2010
  122. Arjun V Mane, M M Kazi, Ramesh R Manza, Karbhari V Kale "Human Face Recognition Using Superior Principal Component Analysis (SPCA)", International Symposium on Computer Engineering & Technology (ISCET), RIMT - IET , Mandi Gobindgarh 2010 [**1 Citation**]
  123. M J Baheti, R J Ramteke, K V Kale "Gujrati Handwritten Numeral Recognition" International Conference on Cognition & Recognition Mandya Karnataka 2008 PP 51-56
  124. C Namrata Mahender, KV Kale, Ketan V Sakariya, Gunaranjan Reddy, Hybrid Replacement Model For Semantic Analysis: Using Google And Wordnet Databases, 2008, Advances in Computer Vision and Information Technology, pp. 106-109
  125. M. M. Kazi, Y. S. Rode, S. B. Dabhade, N. N. H. Al-Dawla, K. V. Kale, R. R. Manza, A. V. Mane, "Image Retrieval and Interested Image Detection for thought processing using EEG Signals", UACEE International Conference on Advances in Computer, Electronics and Electrical Engineering (ICACEEE-2012), CD-ROM, 2012.
- Conference & Workshop**
126. Karbhari V Kale, Ramesh R Manza "High Temperature dielectric studies on (Bi<sub>2</sub> O<sub>3</sub>)<sub>1-X</sub> (M<sub>2</sub>O<sub>3</sub>)<sub>X</sub> system", Pro. of National workshop on ferroelectric, Dielectric and laser Material., October 19-22, 1994. , Nagpur, India
  127. Karbhari V Kale, Ramesh R Manza "Use of Computer in solving the Physics Problem", Pro. Of National Convocation of Indian Association of Physics Teachers, December 12-14,1996, Aurangabad, India
  128. Karbhari V Kale, Ramesh R Manza "X-ray diffraction and magnetisation study on CoAl<sub>x</sub> Fe<sub>2-x</sub> O<sub>4</sub> prepared by wet chemical route", Pro., of the DAE, Solid State Physics Symposium, December 27-31,1997, Kochi
  129. Karbhari V Kale, Ramesh R Manza "Structural studies on a fast ion conducting solid electrolytes system. (Bi<sub>2</sub> O<sub>3</sub>)<sub>1-X</sub> (Y<sub>2</sub>O<sub>3</sub>)<sub>X</sub>, (0< X <0.5)", Pro. of the 85th session of the Indian Science Congress, 1998, Hyderabad
  130. Karbhari V Kale, Ramesh R Manza "The education and training in the Information Technology ( IT ): Present Status, Trends and Future Need", Pro of the Seminar on IT Literacy: Challenges before education System., March 11,1999, Jalgaon, India
  131. Karbhari V Kale, Ramesh R Manza "Electronic Education for E-Commerce " Pro of the State level conference on E- Commerce in Industrial & Trade, 10th & 11th March, 2002, held at Deogiri College, Aurangabad. (MS.) India
  132. C. Namrata Mahender and K.V.Kale "S/W Development Process Model For Web – engineering" at National Workshop on Advanced Web- based Computing, held at NM University ,Jalgaon 09th and 10th ,Feb., 2002
  133. Karbhari V Kale, Ramesh R Manza "Data Compression Techniques in Biometric Systems for Fingerprint Recognition" National conference on Recent Trends in Information communication Technology & Applications 10th & 11th Oct. 2002, Organized by Dept. of Computer Science, North Maharashtra University Jalgaon(M.H.) and Loksevak Madhukarrao Chaudhari Amrut Mohatsav (75th Birth Anniversary) Committee, Jalgaon(M.H.)

134. Chitra S. Atole, K V. Kale "Motivation for object oriented approach in distributed and parallel computing" National conference on Recent Trends in Information communication Technology & Applications 10th & 11th Oct. 2002, Organized by Dept. of Computer Science, North Maharashtra University Jalgaon(M.H.) and Loksevak Madhukarrao Chaudhari Amrut Mohatsav (75th Birth Anniversary) Committee, Jalgaon(M.H.)
135. Karbhari V Kale, Ramesh R Manza "E-tourism : Development in Economic and Trade" National conference on Recent Trends in Information communication Technology & Applications 10th & 11th Oct. 2002, Organized by Dept. of Computer Science, North Maharashtra University Jalgaon(M.H.) and Loksevak Madhukarrao Chaudhari Amrut Mohatsav (75th Birth Anniversary) Committee, Jalgaon(M.H.)
136. Karbhari V Kale, Ramesh R Manza "E-commerce: Transaction and Strategies for a reliable E-commerce environment" National conference on Recent Trends in Information communication Technology & Applications 10th & 11th Oct. 2002, Organized by Dept. of Computer Science, North Maharashtra University Jalgaon(M.H.) and Loksevak Madhukarrao Chaudhari Amrut Mohatsav (75th Birth Anniversary) Committee, Jalgaon(M.H.)
137. Karbhari V Kale, Ramesh R Manza "Internet Robotics" National conference on Recent Trends in Information communication Technology & Applications 10th & 11th Oct. 2002, Organized by Dept. of Computer Science, North Maharashtra University Jalgaon(M.H.) and Loksevak Madhukarrao Chaudhari Amrut Mohatsav (75th Birth Anniversary) Committee, Jalgaon(M.H.)
138. Vikas Humbe, Ramesh Manza & K. V. Kale "General Purpose Parallel Architecture for Rule based Systems" processing in IEEE Pune Chapter, Conference 5-6 January 2003
139. K. V. Kale, Vikas Humbe, Ramesh Manza "Edge Detection in Cluster Computing" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 55
140. P.D. Deshmukh, R.R.Manza, K.V.Kale "Decomposition for Fingerprint images" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 56-64
141. K. V. Kale, Vikas Humbe, Ramesh Manza "Clustering fingerprint Image Classification of Biometric System Using Pyramid Decomposition" " Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 65
142. S. Jambhorkar, R. R. Manza, K. V. Kale "A Critical view of image enhancement in image processing" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 73-77
143. C.Namrata Mahender and K.V.Kale "Feature Extraction for Handwriting Word Recognition" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 78-82
144. K. V. Kale, Vikas Humbe, Ramesh Manza "Image Processing in Ultrasound Diagnostic" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 100-105
145. K. V. Kale, Vikas Humbe, Ramesh Manza "Wi-Fi Home" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 166-172
146. K. V. Kale, Vikas Humbe, Ramesh Manza "Handling Information Security Issues in Risk Management" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 240-248
147. Chitra S. Atole, K V. Kale "Network Security : Role of Software Engineering" Proceeding in National Level Conference CCS-04 Aurangabad India 4th and 5th January 2004 PP. 249
148. Chitra S. Atole, K V. Kale "Software reuse: Techniques for successful Implementation" Proceeding in National Level Conference SEPP-04 CSED, TIET, Patiala. 5-6 march 2004 pp, 160-164

149. Chitra S. Atole, K V. Kale "A connote on Quality for the claimed benefits of object oriented paradigm" Proceeding in National Level Conference SEPP-04 CSED, TIET, Patiala. 5-6 march 2004 pp, 194-198
150. Chitra S. Atole, K V. Kale "An analysis of software reliability estimation for model ranking" Proceeding in National Level Conference SEPP-04 CSED, TIET, Patiala. 5-6 march 2004 pp, 199-205
151. K. V. Kale, V. M. Thakare "Characterization and Synthesis of Computer Architectures for Robotic Systems". National Conference and Workshop NCVET, at Jivaji University Gwalior by Sensors Technology Pvt Ltd 1-5 mar 2004
152. K. V. Kale, V. M. Thakare "Performance Evaluation Considerations for Industrial Robot Arm" National Conference and Workshop NCVET, at Jivaji University Gwalior by Sensors Technology Pvt Ltd 1-5 mar 2004
153. Chitra S. Atole, B W Gawali, K V. Kale and S C Mehrotra "Effective approach for developing object oriented design for remote designer using UML, XML and data compression" in Proc. National conf. on Issues and Trends of wireless networks, Dec. 2004, Patiala, PP. 100-105
154. Gornale S. S, Manza R.R., Humbe Vikas, Kale K.V "Performance analysis of Wavelets to Multiwavelets for Noisy image Compression" In proc. Of National conf. on GEOMETRY, ANALYSIS, FLUID MECHANICS & COMPUTER APPLICATIONS, PP. 183-189, December 2004, kuvempu, Karanataka, India
155. Chitra S. Atole, K V. Kale, "Software Reliability Models Review: In Light of Software Development Process" <http://seir.sci.cmu.edu,sci> Bank measurements, measurements metrics.SEI.copyright@2005 by CNU 18/12/2004
156. K. V. Kale, V. M. Thakare "Securities in WLAN Applications" National Conference at GVISH Amravati 28-30 Nov 2005
157. K. V. Kale, V. M. Thakare "Media Convergence: Future Trends" National Conference at GVISH Amravati 28-30 Nov 2005
158. S. Jambhorkar, K. V. Kale, "Need of segmentation for fingerprints", in proc of National Conf. on Advances in information communication technology (AICT), 2005, Chalisgaon
159. K. V. Kale, Ramesh Manza "Image de-noising by using gradient operators before compression to increase compression ratio" in proc of National Conf. on Advances in information communication technology (AICT), 2005, Chalisgaon
160. Chitra S. Atole, B W Gawali, K V. Kale "Status of IT in Business Management", in proc of National Conf. on Advances in information communication technology (AICT), 2005, Chalisgaon
161. K. V. Kale, "Ovarian follicle Detection Using Ultrasound Image Processing" Technical Symposium Govt. Engineering College, Aurangabad 23-24 January 2006 PP. 131-135
162. K. V. Kale, "Simulation as a computer technology for physical education and sports", National level Seminar on Sport, UGC Sponsored, Aurangabad, 3-4 March 2006
163. Chitra S. Atole, K V. Kale "Fault Prediction Method for object oriented software in early Design Phase" Proc. Of National Conference on Communication and Computational Techniques: Current and Future Trends, PP. 13-19, Dehradun, India, Feb-2006
164. S. Jambhorkar, K. V. Kale "Fingerprint Image Segmentation: SE Approach" Proc. Of National Conference on Communication and Computational Techniques: Current and Future Trends, PP. 235-237, Dehradun, India Feb-2006
165. M.P. Dhore, Dr. K.V. Kale, "Document Analysis: A perspective of text document" Proc. Of National Conference on Communication and Computational Techniques: Current and Future Trends, PP. 27-29, Dehradun, India Feb-2006

166. Gomase V.S., Kale K. V., "In Silico Antigenicity Study of Capsid Protein from Tomato Aspermy Virus", National Conference on Recent Trends in Electronics and information Technology (RTEIT-2006), PP. 277-281, 2006
167. Kale K. V., "A Novel Approach for factoring", National workshop on cryptology, sept. 8-10, 2006, Pune
168. Gomase V.S., Mophare A.V. and Kale K. V., "Neural-Network Based Comparative Protein Modelling of Capsid Protein from Cucumber Mosaic Virus" National Conference on Recent Trends in Electronics and information Technology (RTEIT-2006), PP. 106-110, 2006
169. Gomase V.S., Kale K. V., "Genome polyprotein m analysis of cowpea mosaic virus." Proceeding of National Level Conference on emerging trends in Information Technology (eIT 2006) on 29-30th September 2006 at VIIT Baramati, India
170. Gomase V. S., Changbhale S.S., Saratale G.D. and Kale K.V "Bioinformatics based antigenicity prediction of delta-latroinsectotoxin." Proceeding of National Level Conference on emerging trends in Information Technology (eIT 2006) on 29-30th September 2006 at VIIT Baramati, India
171. Gomase V. S., Kale K. V., "Insilico analysis of nucleocapsid protein from groundnut ringspot virus." Proceeding of National Level Conference on emerging trends in Information Technology (eIT 2006) on 29-30th September 2006 at VIIT Baramati, India
172. A. V. Mane, K. V. Kale "Human Face Recognition for Digital Rights Management: An Overview", Proceeding of National conference on Emerging Trends in Information Technology, VIIT Baramati 2006
173. A. V. Mane, 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
174. A. B. Kadam, 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
175. K. V. Kale, "Role of Computer Science and IT in Bioinformatics", n Proc. of National Conference on Emerging Trends in Information Technology, Baramati, Pune, September 2006
176. S. Jambhorkar, K. V. Kale, "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
177. S. S. Gornale, Ganesh Magar, Vikas Humbe, Sagar Jamborkar, 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, (ACVIT-07) Aurangabad, PP1165-1174, 2007
178. Gomase V.S., Kale K. V., "Approach of proteomics system architecture in plant virus's database". International Conference on Information & Communication Technology, Dehradun, India, IICT-2007, 2007, 285-290 [**10 Citations**]
179. Gomase V. S., Kale K. V. "ANN based prediction of MHC alleles in vaccine design", International Conference on Intelligent Systems & Networks, Jagadhri, India, IISN-2007, 2007, 223-227
180. Gomase V. S., Kale K. V., "Application of genetic algorithms for prediction of linear epitopes from viral polyprotein." International Conference on Information & Communication Technology, Dehradun, India, IICT-2007, 2007, 79-83
181. Gomase V. S., Kale K. V., "In silico prediction of epitopes: a new approach for fragment based viral peptide vaccines." ICSCI-2007, Pentagonam Research, Hyderabad, 2007, 803-808 [**13 Citations**]

182. S. Jambhorkar, 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 Visualization (CGIV 2007) pp. 495-500, August 2007 (IEEE xplorer)
183. M. P. Dhore, Dr. V. M. Thakare, Dr. K. V. Kale. "Segmenting Text And Graphics in Document Image Analysis", Proceedings of National Conference on Emerging Trends in Communication & Information Technology (ETCIT-2008) organized by H.V.P.M.'s College of Engineering & Technology And P.G. Department of Computer Science & Technology, Hanuman Vyayam Nagar, Amravati. Sept. 19th & 20th 2008
184. Gomase V. S., Kale K. V., "Computer Aided Multi Parameter Antigen Design: Impact of Synthetic Peptide Vaccines from Soybean Mosaic Virus". ICETET 2008, IEEE Computer Society in IEEE Xplore, Los Alamitos, California, 629-634, 2008 [10 Citations]
185. 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) Image", Proceeding of international conference on "Managing Next Generation Software Applications - 2008", Karunya University , Karunya Nagar, Coimbatore – 641 114, 5th -6th December 2008, Volume-1, pp-1317-1322.[ ISBN-978-81-907870-0-0]
186. Ganesh Magar, S S Gornale Vikas Humbe, Ramesh Manza, K V Kale "Multi-resolution Analysis (MRA) filtering approach for reduction of Multiplicative speckle noise of Synthetic Aperture Radar (SAR) Image", Proceeding of IEEE Sponsored international conference on "Advance computing & communication Technologies for High Performance Applications" organized by Federal Institute of Science and Technology [FISAT] Anagamaly,cochin,kerla, India., 24th -26th September 2008, Volume-1,pp-234-238
187. Gomase V. S., Kale K. V "Insilico analysis of nucleocapsid protein from groundnut ringspot virus". Advancements in Information Technology and Internet Security, 370-378, 2008
188. Gomase V. S., Kale K. V "Hydrophobic characteristics study of delta-latroitoxin epitopes from latroectus tredecimguttatus". Advancements in Information Technology and Internet Security, 379-388, 2008
189. M. P. Dhore, Dr. V. M. Thakare, Dr. K. V. Kale. "Text Document Page Segmentation Using X-Y Cut, Docstrum And The Voronoi-Diagram-Based Algorithms", Proceedings of National Conference On Computing, Communication, Electronica & Management ( NCCCEM 09) organized by K. C. E. S's. College of Engineering and Information Technology, Jalgaon. March 20th & 21st 2009.(Best paper award)
190. M. P. Dhore, Dr. V. M. Thakare, Dr. K. V. Kale. "Some Open Problems In Text Document Image Analysis", Proceedings of National Seminar On Information Technology Enabled Services (ITeS – 2009)organized by Department of Computer Science and Information Technology, Shri Shivaji College of Arts, Commerce and Science, Akola. 11th April 2009
191. M. P. Dhore, Dr. V. M. Thakare, Dr. K. V. Kale. "Geometric Layout Analysis Techniques For Document Image Analysis", Proceedings of National Seminar On Information Technology Enabled Services ( ITeS – 2009)organized by Department of Computer Science and Information Technology, Shri Shivaji College of Arts, Commerce and Science, Akola. 11th April 2009
192. M. P. Dhore, Dr. V. M. Thakare, Dr. K. V. Kale. "Digital Libraries : Challenges In Document Image Analysis", Proceedings of National Conference on Advanced Tehnologies in Computing & Networking (ATCON – 2009) organized by P. G. Department of Computer Science & Technology, ( MCA Deptt. ) D.C.P.E., Hanuman Vyayam Prasarak Mandal, Hanuman Vyayam Nagar, Amravati. November 13th & 14th 2009

193. M. P. Dhore, Dr. V. M. Thakare, Dr. K. V. Kale. "Morphological approach for document image analysis", Proceedings of National Conference on Advanced Tehnologies in Computing & Networking (ATCON – 2009) organized by P. G. Department of Computer Science & Technology, ( MCA Deptt. ) D.C.P.E., Hanuman Vyayam Prasarak Mandal, Hanuman Vyayam Nagar, Amravati. November 13th & 14th 2009
194. Ganesh Magar, S S Gornale Vikas Humbe, Ramesh Manza, K V Kale "Application of Multi-resolution Technique for SAR Image Compression", Proceeding of UGC Sponsored National Conference on Recent Trends in Information Technology (RTIT-2009)", PP. 107-117, 4-5 Sept, 2009, Mandya, Karanataka. [ISBN: 978-93-80026-82-4]
195. Ganesh Magar, S S Gornale Vikas Humbe, Ramesh Manza, K V Kale "Comparative study of Multi-resolution Analysis (MRA) techniques for Multiplicative speckle noise reduction of Synthetic Aperture Radar (SAR) Image", Proceeding of IEEE international conference on "Emerging Trends in Computing - 2009", Kamaraj College of Engineering & Technology, Virudhunagar, Tamil Nadu, INDIA, 8th -10th January 2009, Volume-1, pp-219-224
196. Ganesh Magar, S S Gornale Vikas Humbe, Ramesh Manza, K V Kale "Multi-resolution Analysis (MRA) SYSTEM FOR De-noising of Synthetic Aperture Radar (SAR) Image", Proceeding of international conference on "Computer, Communication, Control and Information Technology (C3IT-2009)", Academy Of Technology Adisaptagram, Hooghly 712121 West Bengal, India, 06-07 February 2009, Volume-1, pp-357-363. [ISBN – 023-063-759-0]
197. Vikas Humbe, S. S. Gornale, Ramesh Manza & K. V. Kale "Fingerprint Image De-noising through Decimated and Un-Decimated Wavelet Transforms (WT)", Proceeding of international conference on "Future Computer and Communication (ICFCC 2009)", Kuala Lumpur, Malaysia, 3-5 April, 2009, pp-500-504, [ISBN: 978-0-7695-3591-3]
198. Gomase V. S., Kale K.V "SVM based prediction of MHC class binding nonamers from Sunflower chlorotic mottle virus (SuCMoV)". IACC'09, IEEE Computer Society in IEEE Xplore, 220-222, 2009
199. Gomase V. S., Kale K. V., "Application of bioinformatics algorithms for antigen design: Development of synthetic peptide vaccine". IACC'09, IEEE Computer Society in IEEE Xplore, 214-219, 2009
200. Gomase V. S., Kale K. V., "Mapping of MHC class binding nonamers: Approach for Computational-proteomics." IT in Academics, Himalaya Publication House, ISBN: 978-81-8488-232-2, 552-554, 2009
201. M. M. Kazi, K. V. Kale, "Embedded System Education: A Need to be Integrated into High School", in 4th Annual Symposium on VLSI and Embedded System, 2009 GOA University
202. A. V Mane, K. V. Kale, "Rank Normalization for Principal Component Analysis Based Face Recognition", NCETACS, 2010 Shillong.
203. Y. S. Rode, M. M. Kazi, A. V. Mane, K. V. Kale, "Palmprint Recognition: A multi-feature based approach", Govt. Of India's National Conference on Forensic Science (NCFC- 2012)
204. M. M. Kazi, Y. S. Rode, S. B. Dabhade, N. N. H. Al-Dawla, K. V. Kale, R. R. Manza, A. V. Mane, "Face And Signature based Multimodal Biometric System: A Score Level Fusion Approach", Govt. Of India's National Conference on Forensic Science (NCFC- 2012)

## Contribution: Dr. K V Kale

### ***Academic Contribution***

#### ***Contribution for the University and other Institutions***

- Nomination as a Senate Member of Dr. Babasaheb Ambedkar Marathwada University, Aurangabad under section 25(2) (U) of the Maharashtra University Act 1994 by the Hon'ble Vice- Chancellor of this University.
- Develop the course curriculum for PG and UG course in Information Technology and Computer Science (2002-01) in the Capacity of the Chairman of the Committee
- Act as a team manager and jury member of State Level Inter University Research Festival AVISHKAR-(2007-08 and 2009 respectively).
- Perform the role to provide the academic services to the SRT University Nanded (MS), YCMO University Nasik (MS), and Dr. B. A. M. University Aurangabad (MS) as a BOS Member and Faculty to SGB Amravati University Amravati (MS)
- Act as a technical member and expert on committees of various universities like Selection Committee, Affiliation Committee, Technical Committee
- Help to develop the University Computerization
- Given the keynote address, invited talks, seminars and technical lectures in various National-International Conferences, Refresher Course and Orientation Course
- In the capacity of Chief Guest inaugurated various technical symposium (Jalgaon , Aurangabad, Amravati)
- Work as an EC member, Hony. Secretary and Sub Centre Chairman of IETE Aurangabad and taken the sincere efforts to upgrade this sub Centre into the full fledge centre and presently working as a Chairman of the IETE Aurangabad Centre to provide the voluntary services for the society and Nation
- Presently working as a Chairman, for Ad-hoc Board in B.Sc. Networking & Multimedia, Chairman of Paper Setting Committee of M.Sc. Computer Science and act as an Observer and Member of SET Setting and evaluation Committee

#### ***Research Contribution***

The research work performed during the last 14 years in the department in the field of Image Processing, Biometrics, Bio-Informatics, & Software Engineering found to be new and challenging. It has started with studying and analyzing the different aspects and prospective to solve the real world problems and gives appropriate findings.

- ***Medical Imaging:***

The basic objective of the medical imaging research work was to provide the optimum solution in terms of quality medical images, for perfect diagnosis. The research work carried out by collecting the medical image databases from the local medical institutes and processed these images using the Image Processing techniques with optimum H/W & S/W cost in comparison to existing medical imaging system available in market.

While handling medical image enhancement short comings found in the process of early detection of the breast cancer, in screening mammogram can be

reduced by newly developed image enhancement algorithm using heterogeneous approach (i.e. Morphology, FFT etc.) which found helpful in computerized analysis and detection of cancers missed by radiologists. Similar approach has been studied to analyze ultrasonic images. About 10 articles in International conferences/Journal have been published. This work may extend to generate the critical databases of the various types of medical images for various types of disease diagnosis.

- ***Biometrics:***

In an increasingly digital technology world, among the main innovation prospects and framework of future communication systems, design of database access integral services, e-commerce, remote control of terminals and devices being the result of global services derived from last generation. Some features stand out from such future services like authentication in human machine interacting to deal with security and identification problems, that's why the use of biometric based technology get developed. This is new and emerging technology due to its high degree of maturity and reliability.

**Fingerprint** The performance of fingerprint recognition system is depends on the quality of input fingerprint image, so huge efforts are required to improving the quality of fingerprint image. In this work the composite algorithm, a novel SWT based Composite methods has been proposed for the Fingerprint Image enhancement. Also compared the performance of before and after of applying these algorithm by extracting features in terms of sensitivity and specificity. This result also reflects the average sensitivity that was 89% and 95% before and after post processing respectively. Similarly, for specificity, we got high specificity after pre-processing i.e. 89% as compare to before i.e. 78%.

Recently moved towards the Face Recognition and the hybrid biometrics (like Face & fingerprint, multiple fingerprints of different fingers etc)

- ***Handwritten Recognition:***

Free style handwriting recognition is a difficult problem, not only because of the great amount of variants in handwriting, but also because of the overlapping and the interconnection of the neighboring character. In this work the development of an investigation of segmentation technique, structural based character classification. The box fitting method has been proposed and it gives 80% of recognition.

- ***Bio Informatics:***

Computational simulation of experimental biology is another application for bioinformatics which is apply to refer to as 'in silico' testing. This perhaps an area, which will expand in prolific way, given a need to obtained a greater degree of predictability in animal and human clinical trials. Added to this, is interesting

scope that in silico' testing provides to deal with the brewing hostility towards animal testing.

The sequence based searching and explorations of the biological databases (Plant viruses) are often saves a lot of time in the lab. Identifying homologous sequences provides bases for phylogenetic analysis and sequence pattern recognition. Software for prediction for ORF, genes, exon splice sites, promoter binding sites, repeat sequences, and tRNA gene helps molecular biologist make sense out of unmapped DNAs. Inadequate sequences and data are available on plant viruses, which need further expansion and revision. These sequence need to be characterized for their use in agribiotech and pharmaceuticals. Thus, data Intensive techniques such as high throughput screening and gene expression experiments demand methods to correlate large and diverse datasets. Genomic research requires analysis of large sequences and is heavily dependent upon bioinformatics computation where strict standards, requiring careful data selection for protein model building, followed by adequate testing and validation through bioinformatics tools required.

Bioinformatics research is very large database with complex queries and essential requirements for reliability, availability, and scalability of sequence analysis. Under this study around 1837 Plant virus databases has been studied as per the above mentioned aspect and published 7 articles in world class journals. The work may continue further for gene prediction and drug designing under this scenario.

- ***Software Engineering:***

In this work we had studied the various aspects of traditional and Object Oriented Software Engineering in view of S/W Reliability, various S/W Reliability model has been studied in view of trend analysis, Defect Density, exponential and Logarithmic Model Parameters. It is found that the existing S/W Reliability Models are used late in the implementation phase or operational phase which seems too late to be utilized for enhancing the reliability of the S/W. Since changes made to the S/W design after the product is almost complete requires around 20% to 80% of additional cost. With this motivation we had studied the existing OO Quality models, frameworks and metrics in the early design phase and predicted the reliability focus quality model for OO design through various case studies. The practical exploration to this model using various test cases shows that the R-square and adjusted R-square close to one & zero value of P shows the model validity. The reliability estimation shows that as the CMM level goes on increasing the reliability go on increasing also the team level increases the reliability increases. About 5 articles in International conferences/Journal have been published.

## ***Sponsored Major Research Projects***

### **1. Development of Intelligent Biometric Technique in Fingerprint Recognition (Sponsored by University Grants Commission, Budget Rs.- 6.47 Lakh )**

This project provides a comprehensive evaluation of fingerprint compression techniques using wavelet and wavelet packet, fingerprint image enhancement techniques, fingerprint image enhancement techniques using SWT, Fourier and spatial domain techniques and finally the feature extraction using mathematical morphology in terms of specificity and sensitivity to increase the robustness of the Automatic Fingerprint Recognition System (AFRS).

**The main has been given to how compression ratio can increases by selecting appropriate threshold value. The compression ratio of noisy and noiseless fingerprint images are determining by considering number of zeros (NZ) and retain energy (RE) occurs after compression.**

**In this work in first phase we have applied Daubechies, Symlet and Coiflet transforms with different orders to fingerprint images of FVC2002 database. We determined NZ and RE at different orders from 1<sup>st</sup> to 5<sup>th</sup> level. If NZs are more, then compression ratio is also more. We found that to get highest compression ratio, the order and level must be high. We have compared these three transforms and their order as well as levels, and found that Coiflet is most suitable for fingerprint image compression, because it gives more NZs at 4<sup>th</sup> order with 5<sup>th</sup> level. Hence for fingerprint image compression Coiflet transform is most suitable.**

In Second phase a novel SWT based Composite method has been used to deal with fingerprint image enhancement. The new approach adopts the de-noising by SWT.

**The SWT based composite method provided better results on low contrast and noisy fingerprint images**

**Finally, we have introduced a method for removing superfluous information for genuine fingerprint feature extraction using mathematical morphological operation. This algorithm removes the spikes, spurs and dots very effectively and extracts a clear and reliable ridge map structure from input fingerprint image. We have also compared the performance of before and after of this morphological algorithm by extracting features in terms of sensitivity and specificity. This result also reflects the average sensitivity that was 89% and 95% before and after post processing respectively. Similarly, for specificity, we got high specificity after preprocessing i.e. 89% as compare to before i.e. 78%. About 28 articles in International conferences/Journal have been published.**

### **2. Development of Multimodal Fingerprint Recognition System through Multiple Impressions and Matching Techniques (Sponsored by University Grants Commission, Budget Rs.- 8.96 Lakh)**

Automatic pattern recognition system is essential to makes a personal identification by determining the authenticity of specific psychological characteristic (fingerprint) posses by the user to improve the system performance by considering performance evolution. At present so many work has done in biometric (Unimodal) recognition system, but these system have limitations in terms of noise in sensed data, intra-class variations, distinctiveness, non-

universality (Failure to accept), spoof attack etc. cause poor performance. To overcome these problems the use of multimodal is substitute and influential solution. In this proposed work our object is to develop intelligent biometric techniques by taking multiple impressions (snapshot) and multiple matching algorithms (pattern recognition techniques i.e. advanced matching techniques).

Fingerprint matching is basically divides in two categories i.e. Minutiae pattern matching and Structural matching. Recently, observed that taking minutiae types into consideration while matching can increase system's accuracy. Therefore, minutiae types should be considered when high-quality images are being used and minutiae extraction algorithm is reliable. As per our study and reported work, it is observed that, due to high distortion of fingerprint image the biometric automatic recognition does not show higher performance of recognition even though in the well matured recognition system. So, probable solution for this problem is to take multiple fingerprint images as an input of an individual (multiple fingerprints of different fingers) or can also possible for heterogeneous matching algorithms. For fingerprints point pattern matching, graph based matching, fuzzy graph model generally used. Further we can extend this study by using advanced pattern recognition techniques, Neural Network, and fuzzy logic.

**3. UGC-SAP(II) DRS Phase I Programme Multimodal Biometrics (Sponsored by University Grants Commission, Budget Rs.- 62.05 Lakh+ Rs. 20.0 Lakh under BSR)**

Objective: Development of Multimodal biometric system (using Face, Fingerprint, Palm print, Iris, and Signature) by considering the appropriate fusion level for the person's authentication or identification wherever it required also construction of the multimodal database.