

# CURRICULUM VITAE



**Prof. G. HEMANTHA KUMAR**

**M.Sc (Computer Science), Ph.D (Computer Science)**

Professor, Department of Studies in Computer Science.

Co-Ordinator, Chinese Programme, University of Mysore.

Chief, Co-Ordinator, (Administration), Vignyan Bhavan.

Co-Ordinator, e-Governance & High performance Computing (HPC).

Co-Ordinator, Information Communication Division (ICD).

**UNIVERSITY OF MYSORE,**

**MANASAGANGOTHRI**

**MYSORE**

**KARNATAKA-570006**

## CONTACT INFORMATION:

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PROFORMA		
Sl. No.	Particulars	Details
1	Name	Prof G Hemantha Kumar
2	Date of Birth	21 <sup>st</sup> May 1959
3	Address for Communication	# 77, SauhakarChenniah Road, T.K Layout Near Maruthi Temple Mysore – 570 009, India
4	E-mail & Mobile No.	ghk.2007@yahoo.com hemanthakumar@uni-mysore.ac.in +91-9845113623
5	Educational Qualification	<ul style="list-style-type: none"> <li>➤ <b>M.Sc-1986-1988 (Computer Science)</b>, University of Mysore, Mysore.</li> <li>➤ <b>Ph.D-1994- 1998</b>, Doctorate degree in <b>Computer Science under the faculty of Science &amp; Technology</b>, University of Mysore in the year 1998.</li> </ul>
6	Experience:- a)Teaching b)Research c)Administration	<ul style="list-style-type: none"> <li>➤ 26 Years of Teaching</li> <li>➤ 17 Years of Research</li> <li>➤ 13 Years of Administration</li> </ul>
7	Publications	Total Number of Research Papers as on August 2016 – <b>260 papers</b> [Citations – <b>740</b> , H-Index – <b>14</b> , i10-Index – <b>21</b> ] as on 22-08-2016.
8	Award & Recognition	<ul style="list-style-type: none"> <li>➤ <b>Upadhyaya Samman State Level Award</b> In the recognition of the services to the society and excellence in Education and Social Field from <b>Upadhyaya Moodubelle Art Foundation</b>.</li> <li>➤ <b>Teachers day Award</b> for the best teacher from <b>Lions Rotary Club</b>, Mysuru.</li> </ul>
9	Membership of Professional Body/Organization-National and International level	<ul style="list-style-type: none"> <li>➤ Indian Science Congress Association</li> <li>➤ Computer society of India-CSI</li> <li>➤ Member of ISTE</li> </ul>
10	Present Designation with Pay scale and grade pay, since...	<ul style="list-style-type: none"> <li>➤ <b>Professor</b>, Department of Studies in Computer Science.</li> <li>➤ <b>Chief Co-Ordinator</b>, VignyanBhavan. (A project of 100 and 50 Crores funded by MHRD and UGC).</li> <li>➤ Co-Ordinator (Administration), e-Governance &amp; High performance Computing (HPC).</li> <li>➤ System Co-Ordinator, Information Communication division (ICD).</li> <li>➤ <b>Pay Scale (Rs.43,000 - 67,000)</b></li> <li>➤ <b>Graded pay Rs.10,000/-</b></li> </ul>

11	<b>Present basic pay</b>	<b>Rs. 59,180/-</b>
12	<b>References</b>	<b>1) Prof S N Hegde</b> Former Vice Chancellor, University of Mysore, Mysore. Email id- prof_snh@yahoo.co.in Mobile-
		<b>2) Prof J Shashidhar Prasad</b> Former Vice Chancellor, University of Mysore, Mysore. Email id-jsp@gmail.com Mobile-9886046566
		<b>3) Prof V G Talwar</b> Vice Chancellor, Reva University Rukmini Knowledge park, Kattigenanahalli, Yelankha, Bangalore-560064 Email id-vgtalawar@gmail.com Mobile-9448458919

## Prof. G. HEMANTHA KUMAR

### Executive Summary

#### PRELIMINARY

Sl No.	Particulars	Details
1	Name	Prof G Hemantha Kumar
2	Date of Birth & Age	21 <sup>st</sup> may 1959, 57 Years
3	Present Work & Designation	Professor, Department of Studies in Computer Science Chief Co-Ordinator, Vignyan Bhavan Co-Ordinator, e-Governance, University of Mysore. Co-Ordinator, High performance Computing(HPC) Co-Ordinator, Information Communication division (ICD)
4	Caste	Category-1 (MOST Backward Category) (24 MANI TELUGU CHETTIAR)
5	Mobile	+91-9845113623
6	E-mail	<a href="mailto:ghk.2007@yahoo.com">ghk.2007@yahoo.com</a> , hemanthakumar@compsci.uni-mysore.ac.in

#### PROFESSIONAL EXPERIENCE

Sl No.	Designation	University/Institution	Location	From	To
1	Professor	Department of Studies in Computer Science, University of Mysore, Mysuru	Mysore	2007	Till date
2	Chairman	DoS in Computer Science , University of Mysore	Mysore	2004	2006
3	Chairman	DoS in Computer Science , University of Mysore	Mysore	2007	2009
4	Chairman	DoS in Computer Science , University of Mysore	Mysore	2010	2012
5	Chairman	DoS in Computer Science , University of Mysore	Mysore	2012	2014
6	Sectional secretary	103 <sup>rd</sup> Indian science Congress “Pride of India Exhibition”	Mysore	2015	Sectional secretary
7	Chief Co-ordinator (Administration)	Vignyan Bhavan, UoM Mysore	Mysore	March 2009	Till date
8	Co-Ordinator	e-Governance, UoM	Mysore	2011	Till date
9	Co-Ordinator	High performance Computing(HPC)	Mysore	2011	Till date
10	Co-Ordinator	Information Communication division (ICD)	Mysore	March 2008	Till date
11	The Director	International Centre, University of Mysore	Mysore	2015	2017

## Prof. G. HEMANTHA KUMAR

12	Co-Ordinator	Huanghuai University , twinning degree Programme	Mysore	2008	Till date
13	Co-Ordinator	Computer Awareness Programme	Mysore	2002	2005
14	Honorary Secretary	Computer Society of India(CSI)	Mysore	2000	2001
15	Member , Organizing Committee	NCDAR - 2001	Mandya	2001	2001
16	Co-Ordinator	Short Term Courses, ISTE	Mysore	2001	2001
17	Chairman	Computer Society of India(CSI)	Mysore	2003	2004
18	Placement In charge	DoS in Computer Science	Mysore	March 1999	March 2004

### EDUCATIONAL QUALIFICATION

Sl No.	Educational Qualification	University/Institution	Month & Year	Subject
1	<b>Ph.D</b>	UoM, Mysore	1997	Image processing, Pattern Recognition
2	<b>M.Sc.</b>	UoM, Mysore	1989	Computer Science
3	<b>B.Ed.</b>	UoM, Mysore	1984	Physics, Mathematics
4	<b>B.Sc</b>	UoM, Mysore	1980	Physics Computer science Mathematics

### KEY CONTRIBUTIONS: IN TEACHING

Sl No.	Area	Key contributions.
1	Teaching	27 years of Post Graduate teaching experience.
		17 years of Administration experience in various sectors of University.
		Working as an active member in curriculum design.
		Motivating and Inspiring the students to become Global citizens
		Adoption of ICT tools in teaching.
		Creating a safe and cooperative environment for students
		Data to track and promote collaborative inquiry and practices
		Lesson/Course Material Preparation for distance Learning

### KEY CONTRIBUTIONS: AT NATIONAL LEVEL

## Prof. G. HEMANTHA KUMAR

Sl No.	Area	Key Contributions
1	UGC Expert Member (University grants Commission)	Expert member for conducting National Eligibility Test (NET) and Junior Research fellowship
2	Visiting professor	To deliver lectures at various universities across India
3	SLET	Board of Member for State Level eligibility test (SLET) Maharashtra Government since 2002.
4	BOA	Board of Appointment Member to various Universities in Karnataka and other states.
5	Member	International advisory board NIRSA, Hyderabad.
6	Member	Expert member of AICTE and UGC commissions.

### KEY CONTRIBUTIONS: AT UNIVERSITY LEVEL

Sl No.	Area	Key Contributions
1	Chief, Co-Ordinator, (Administration), Vignyan Bhavan University of Mysore, MYSURU.	Establishing first of the State-of-the art laboratory of worth <b>Rs 30 Crores.</b>
		Conducted various Training programmes/ Workshop/ Seminars since 2011.
		Have played major role in successfully executing the 100 Crores project.
		As overall administrator from past five years I have carried out various activities
2	Co-Ordinator, Information Communication division (ICD)	Was responsible in setting up campus wide wireless networking
		Setting up of centralized data centre connectivity
3	Co-Ordinator, Chinese programme, DoS in Computer Science, UoM.	First of its kind to start & initiate Twinning degree concept for B.Tech programme.
		<b>Designed and successfully implemented the following programs at University of Mysore</b> <ul style="list-style-type: none"> <li>➤ B.Tech (Information Technology) &amp; (Software engineering)</li> <li>➤ MS (Information Technology) &amp; (Software engineering)</li> </ul>
		<b>Annually a revenue of One crore</b> is being generated from this <b>twinning degree program</b>
		Successfully implemented program with Hunaghuai University & Wuhan University, CHINA

## Prof. G. HEMANTHA KUMAR

4	<b>Co-Ordinator, e-Governance University of Mysore , MYSURU</b>	Responsible in transforming the University administrative procedures from paper based to paperless office by <b>4 Crores</b>
		Automation of admission process first of its kind in Karnataka state
		Automation and Integration of all administrative process,
		<b>Co-ordinator of Information Technology by University of Mysore to Govt. of Karnataka to initiate and Mobilize all IT issues with Govt. of Karnataka till date.</b>
5	Co-Ordinator (Implementation), High Performance Computing (HPC), UoM, Mysuru.	Responsible for setting up High Performance Computing Lab at University of Mysore first of its kind in Karnataka – <b>5 Crores</b>
		Utilizing this facility we were able to publish around 20 papers.

### KEY CONTRIBUTIONS: RESEARCH AND PUBLICATIONS

SI No.	Area	Particulars	Remarks
<b>17 years of Research experience</b>			
1	Ph.D Supervision	16 Students awarded Ph.D	7 under supervision
2	M.Sc Tech (by Research )	04 students have been awarded degree	
3	Research collaborations	<ul style="list-style-type: none"> <li>➤ Prof. Xiaopeng Zhang, Chinese Academy of Science, Beijing, China.</li> <li>➤ Prof. Bhattacharya, Indian Institute of Technology, Bombay</li> <li>➤ Dr. Palaiahnakote Shivkumar, University of Malaya, Malayasia.</li> <li>➤ Prof. Nagesh B K, Oman State University, Oman.</li> <li>➤ Dr. Tian Jipeng, Zhengzhouian Technical University, China</li> <li>➤ MILES Project with University of Barcelona, Spain.</li> </ul>	
4	Research Projects as Principal Investigator	Major funded Projects from AICTE, UGC & DIETY to tune of more than Rs. 1 crores.	Timely Completion
5	Research publications	Articles have been published in repute Journals/ conference	Have published more than <b>282 Papers.</b>
6	Referee/reviewer	For several International Journals, conferences, symposiums and workshops	Till date

## Prof. G. HEMANTHA KUMAR

7	Editorial Board	For several national and International Journals	Till date
8	International Exposure	<ul style="list-style-type: none"> <li>• Geneva-Italy, To deliver Technical Talk on Pattern Recognition and Image Processing.</li> <li>• Had been to Naples to present Technical paper.</li> <li>• Visited Naples University to discuss collaboration under cutting edge research.</li> <li>• KHARTOUM – SUDAN Had been to the University of Medical Science and Technology.</li> <li>• MOSCOW – RUSSIA, as a team member of Bilateral Indo-Russia Workshop.</li> <li>• Oman-UAE, Had been to Oman state University, Sultanate of Oman for assessing the programs to grant Research centre.</li> <li>• Indo- Europe MILES Project with University of Barcelona, Spain.</li> </ul>	2003 -2016
9	Participation in Seminars/Conferences	Actively participated and presented papers in seminars/conferences	Till date
10	<b>Research Contributions</b>	<ol style="list-style-type: none"> <li><b>1. Machine Learning</b></li> <li><b>2. Image Processing</b></li> <li><b>3. Research Advances in Biometrics</b></li> <li><b>4. High Performance Computing</b></li> </ol>	
11	Research citation Index	<b>Citations –740, H-Index –14, I10-Index –21.</b>	18-07-2017



## **CURRICULUM VITAE**



### **DR.G HEMANTHA KUMAR**

**M.Sc (Computer Science), Ph.D (Computer Science).  
(Professor of Computer Science)**

**Professor, Department of Studies in Computer Science  
Director, International Center, University of Mysore  
Chief Co-Ordinator, (Administration), Vignyan Bhavan  
Co-Ordinator, e-Governance & High performance Computing (HPC)  
Co-Ordinator, Information Communication division (ICD)**

**UNIVERSITY OF MYSORE,  
MANASAGANGOTTHRI  
MYSORE  
KARNATAKA-570006**

#### **Contact Information:**

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[hemanthakumar@uni-mysore.ac.in](mailto:hemanthakumar@uni-mysore.ac.in)

## **Current positions at University of Mysore (Administration/Academics/Research)**

### **Chief Co-Ordinator, (Administration), Vignyan Bhavan from the Year 2009.**

#### **(A multidisciplinary project of Rs 100 Crores from MHRD and 50 Crores from UGC for supporting advanced research)**

- The project was awarded by **Ministry of Human Resource Development (MHRD), Government of India** to the University of Mysore elevating it to the status of **Institution of Excellence** in the theme area of Bio-diversity, Bio-prospecting and Sustainable Development has been instrumental in identifying the knowledge resources and in creating knowledge bank.
- The project was a multidisciplinary project involving expertise from various branches of science and has been established and executed from the year 2009. As overall administrator for past five years I have carried out various activities and have played major role in successfully executing the **100 Crores** project.
- Was responsible for establishing first of the State-of-the art laboratory and national facility lab suitable for conducting diverse research on flora and fauna in Western Ghats.
- Have successfully involved in executing **NMRE lab, GENOMIC LAB** and other labs at Vignyana Bhavan which are helping young researchers and Scientists from and around the country to conduct latest research.
- Conducted various Training programmes/ Workshop/ Seminars since 2011.
- Around **40 Research scholars** have been awarded **Ph.D** and have published more than **150 reputed journals/conference papers**.

### **Co-Ordinator, Information Communication division (ICD)**

**The department acts as central processing system for all Information technology related activities like maintaining campus wired and wireless network, Web server and Mail server.**

- Was responsible in setting up campus wide wireless networking (It makes me proud and happy that University of Mysore is the first university which has connected the entire **5km** University campus using **100ft Triangular tower** with carrier class wave, through MIMO Technology).

- Setting up of centralized data center connectivity to manage wired network within the campus with 10GBE Connectivity.
- **This network is the largest network amongst all other universities network.**

#### **Co-Ordinator, Chinese Programme from 2008 till date**

- **Designed and implemented the following programs at University of Mysore in collaboration with Wuhan University & Huanghuai University, China.**
  - **B.Tech (Information Technology) & (Software engineering)**
  - **MS (Information Technology) & (Software engineering)**
- First of its kind to start & initiate **Twinning degree concept** for B.Tech programme.
- Has played vital role in getting approved the statutes to run the programme from the Ministry of Education, Government of Karnataka and Ministry of Education, China.
- **Anually a revenue of One crore** is being genertared from this **twinning degree program** and till now around **1000 stsudents** have been awarded Bachelor and Masters Degree.

#### **Director, International Center from 2015 to 2017**

- Responsible for coordinating all the International affairs of the University.
- Responsible for setting up good relation with international community to attract more than 1300 stduentd from 50 diffrent countries.
- Coordinating with foreign universities and embassy for smooth running of the programs at the University.

#### **Co-Ordinator, e- Governance for a (5 CRORE PROJECT)**

**The project has been implemented as part of the grants received from University of Grants Commission towards the University of potential Excellence tag (UPE).**

- Responsible in transforming the University administrative procedures from paper based to paperless office.
- Responsible for creating a Requirement Analysis Document and preparing blue print of the project which turned into reality.
- Automation and Integration of all administrative process, financial statements, asset management and Human resource management.
- Development of LMS (Learning Management System) and online materials.
- Automation of admission process first of its kind in Karnataka state.

- **Also Co-ordinator of Information Technology by University of Mysore to Govt. of Karnataka to initiate and Mobilize all IT issues with Govt. of Karnataka.**

**Co-Ordinator (Implementation), High Performance Computing (HPC) for a (5 CRORE PROJECT)**

**The project has been implemented as part of the grants received from University of Grants Commission towards the University of potential Excellence tag.**

- **Responsible for setting up High Performance Computing Lab at University of Mysore first of its kind in Karnataka.**
- **The lab facilitates research for scholars and faculty members to carry out cutting edge research in the field of computer science and other multidisciplinary branches.**
- **Utilizing this facility we were able to publish around 20 papers.**

## ACCOMPLISHMENTS IN BRIEF

**PROF. G. HEMANTHA KUMAR**

**M.Sc.(Computer Science), Ph.D (Computer Science).**

- Over three decades of Research and Teaching experience at various capacities from, Lecturer, Reader, Professor and Chairman at **Department of Studies in Computer Science, University of Mysore, Mysore, India.**
- Research funding from different funding agencies such as University Grants Commission (UGC), Ministry for Human Resource Development (MHRD), Department of Electronics and Information Technology (DIET), All India Council for Technical Education (AICTE) to the tune of more than crores. He has also participated in **Indo-China, Indo-France, Indo-Russia and Indo- UAE** collaborative research works.
- Member of Computer Society of India (CSI) & IAPR.
- Member of Indian Science Congress Association (ISCA) & also served as sectional secretary for organizing and conducting “Pride of India” Exhibition at University of Mysore with a great success.
- Has been the key person in designing the B.Tech and MS (Information Technology) **Twinning degree programs for Chinese Universities.** Every year around 75 Chinese students gets admitted to this course.
- **Professor Hemantha Kumar** has involved in foreign research assignments like, **Visiting Professor/Invited Expert/ visiting scientist** to deliver lectures and research collaboration at various prestigious institutes in India and Abroad.
- He has delivered many key note and inaugural addresses in many seminars and conferences. He has also delivered invited/ plenary/ technical lectures at different Universities of the country as well as Research Institutes and also in many Foreign Universities and Institutes.

- **Professor Hemantha Kumar** has made original contributions in the area of Image Processing and Pattern Recognition. His papers are published in reputed journals such as International Journal of Pattern Recognition Letters (**IJPRL**), Journal of Pattern Recognition (**JPR**), Journal of Document Analysis and Recognition, Journal of Image and Vision Computing, IEEE Transactions on Neural Networks and International conference on Document Analysis and Recognition (**ICDAR**).
- **Professor Hemantha Kumar** has published more than **250** research papers in national and international peer reviewed journals and presented more than **100** research papers in national and international conferences.
- **Professor Hemantha Kumar** has guided 13 Ph.D., 4 M.Sc Tech (by research) candidates and currently **8 Ph.D** candidates are working under his guidance.
- He has organized and chaired many **National/ International level workshops/ Conferences/ Interaction meetings**.
- He has served as Coordinator for two important Departmental Major Projects such as DST and AICTE programmes.
- **Hemantha Kumar** has served/ serving as Member of many National Committees.
- At the University level also **Hemantha Kumar** has served/ serving in many important committees related to **Administration, Academic, Financial, Planning Etc.**
- **Countries Visited**  
Sweden, Italy, France, Sudan, Singapore, Hong Kong, UAE, Dubai, China, etc.

## Personal Details

Name : **Dr. G. Hemantha Kumar**

Official Address : **PROFESSOR**  
Dept. of Studies in Computer Science,  
University of Mysore,  
Manasagangothri, Mysore-570006, India.  
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Mysore – 570 009, India  
Phone No: 91-0821-2419300  
Mobile: 98451-13623

Date of Birth : 21<sup>st</sup> May 1959

Category : **Category-1 (MOST Backward Category)**  
**(24 MANI TELUGU CHETTIAR)**

## 1. EDUCATION DETAILS

- **B.Sc.; 1977-1980** (Computer Science), University of Mysore, Mysore.
- **B.Ed.; 1983-1984** (Physics & Mathematics), University of Mysore, Mysore
- **M.Sc.; 1986-1988** (Computer Science)), University of Mysore, Mysore.
- **Ph.D.; 1994- 1998**, Doctorate degree in Computer Science from University of Mysore in the year 1998.

**Title: “On Automation of Text Production from Pitman Shorthand Notes”**

(Pattern Recognition Algorithms for the Recognition of Simple Phonetic words)

Research problem involves the development of Pattern Recognition, Image Processing, Graph Theory; Automata based algorithms to recognise simple Shorthand Patterns. This work also involves the use of Database and creation of Knowledge base.

## 2. ACADEMIC/ RESEARCH POSITIONS

- **Lecturer** (1984-1999) at DOS in Computer Science, University of Mysore, Mysore.
- **Reader** (1999-2007) at DOS in Computer Science, University of Mysore, Mysore.
- **Professor** of Computer Science since June 2007 to present at DOS in Computer Science, University of Mysore, Mysore till date.
- **Chairman**, DOS in Computer Science, University of Mysore, **January 2004 to December 2006, January 2007 to April 2014.**
- **System Co-Ordinator, Information Communication Division**, University of Mysore, since March 2008 till date.
- **Chief Co-Ordinator (Administration), Vignyan Bhavan** , University of Mysore, Mysore, since March 2009 till date
- **Director** International Center, University of Mysore from January 2016.
- Supporting the Dept. of studies in Computer Science, University of Mysore as **Placement In charge** since March 1999 till June 2004.
- Worked as **Honorary Secretary of Computer Society of India (C.S.I)** Mysore chapter during 2000-2001.
- Worked / Working as a member of **Board of Examiners for P.G and U.G Computer Science examinations**, University of Mysore and many other Universities in India.
- Participated in Curriculum Revision activities of **B.Sc and M.Sc Computer Science.**
- Worked as **Co-Ordinator for the Computer awareness course**, for the Lecturers conducted by Academic Staff College, University of Mysore during 2002-2005.
- Worked as a **member of organizing committee** of NCDAR – 2001, Mandya.
- Worked as a **Co-Ordinator for short term course** organized by DOS in Computer Science, and Sponsored by ISTE in 2001.



- Worked as the **Chairman of Computer Society of India (CSI)** Mysore Chapter, Karnataka in 2003.
- Working as **Expert Board member of NET – National Eligibility Test of University Grants Commission (UGC)**, New Delhi since 2001.
- Working as a **Board of Member for State Level eligibility test (SLET) Maharashtra** Government since 2002.
- Worked as Governing Council member for UGC Academic Staff College, University of Mysore, Mysore.
- Worked as **Governing council** member for centre of Information Science and Technology, University of Mysore, Mysore.
- Member of International advisory board NIRSA, Hyderabad.
- Appointed as the **Board of Studies Chairman/Member** for Rani Chennamma, Karnataka State Open University, Mysore, University of Mysore, Gulbarga University, Mangalore University and other Universities.
- Evaluated more than **100 Ph.D Candidate's theses** from various Universities in India.
- An expert member of **AICTE** commissions and **UGC** commissions.
- Assisted Karnataka State Open University in various academic and research activities.

### 3. RESEARCH INTERESTS

Object recognition, Feature extraction, Cluster analysis, Spatial knowledge representation, Image retrieval, Image segmentation, Character recognition, Document image analysis, Sign language recognition, Shape analysis, Text classification, Image/Video processing, Biometrics.

### 4. RESEARCH ACTIVITIES

**Post Doctoral Research Activities**

Supervised a project entitled “**Automation of Pitman Shorthand at Sentence Level**”. This work involves the recognition of Grammalogues and Phraseograms, which was not considered in my Ph. D Work.

**Principal Investigator for the following below Projects**

- Automation of Accurate Prediction of the Era of Epigraphical Scripts Sponsored by **University Grants Commission (UGC)** ,Government of India (**Total fund sanctioned 15 lakhs**)
- Automatic Mosaicing from Split Images of an Object Sponsored by **AICTE , Government of India** ((**Total fund sanctioned 15 lakhs**)
- Efficient and Robust Face Recognition System Based on Subspace Analysis Methods sponsored by **University Grants Commission (UGC)**, Government of India. (**Total fund sanctioned 15 lakhs**)
- **Major Consortium Research Project** – entitled “**Development of Dravidian WordNet: An Integrated WordNet for Telugu, Tamil, Kannada and Malayalam [EXCLUSIVE for Kannada - University of Mysore]**” funded by **Department of Electronics and Information Technology (DEITY)**, Electronics Nikethan, CGO Complex, New Delhi., is an interdisciplinary research project of five teams from five different universities and consortium head office located in Department of Computer Science and Engineering, **IIT-Bombay**. This project has been undertaken by me in the capacity of Principal Investigator above with **Prof Bhattacharya IIT-Bombay**. (**Total fund sanctioned 30 lakhs**)

**5. AWARDS AND RECOGNITION**

- **Upadhyaya Samman State Level Award** In the recognition of the services to the society and excellence in Education and Social Field from **Upadhyaya Moodubelle Art Foundation**.
- **Teachers day Award** for the best teacher from **Lions Rotary Club, Mysuru**.

## **6. ABROAD VISITS / ASSIGNMENTS**

### **2003-Geneva-Italy**

Had been to Geneva University to Deliver Technical Talk on Pattern Recognition and Image Processing.

### **2003-Naples -Italy**

Had been to Naples to present Technical paper at International Conference on Fuzzy Logic and Applications, held at Naples, Italy.

### **2003-Naples -Italy**

Visited Naples University to discuss collaboration under cutting edge research in the field of machine learning and pattern recognition.

### **2007- Wuhan – China**

- Visiting Faculty, Wuhan University, China

### **2008-Zhumadian – China**

- Visiting Faculty Huanghuai University, China.
- Had been to the Huanghuai University for assessing the Programs and designing the curriculum to establish Twinning degree program in Computer Science and Technology.

### **2008 – KHARTOUM – SUDAN**

Had been to the University of Medical Science and Technology for assessing the Programs in Computer Science and Technology.

### **2011- MOSCOW – RUSSIA**

Had been to the University of Moscow, Moscow, Russia as a team member of Bilateral Indo-Russia Workshop.

### **2013-Zhengzhou – China**

Had been to Zhengzhou to attend the International conference on co-operation exchange forum.

### **2014- Zhengzhou – China**

Had been to Zhengzhouian Technological University (ZTU) to discuss about setting up joint programs for bachelor and Master Degree programs.

### **2015-Oman-UAE**

Had been to Oman state University, Sultanate of Oman for assessing the programs to grant Research center.

### **2017-Swot-Sweden**

Had been to University of Barcelona, prepare the agenda for the Nicosia seminar.

### **COUNTRIES VISITED**

Germany, UK, France, Singapore, Hong Kong, Jordan, Malaysia, Thailand, UAE, Sweden, Dubai, China etc.

## **7. RESEARCH COLLABORATIONS**

- **Prof. Xiaopeng Zhang**, Chinese Academy of Science, Beijing, China
- **Prof. Bhattacharya**, Indian Institute of Technology, Bombay
- **Dr. Pallinkote Shivkumar**, University of Malaya, Malaysia.
- **Prof. Nagesh B K**, Oman State University, Oman.
- **Dr. Tian Jipeng**, Zhengzhouian Technical University, China.
- **MILES Project with University of Barcelona.**

## **8. PROFESSIONAL POSITIONS HELD**

- **Co-Ordinator (Administration)** for Institute of Excellence (100 Crores grant by Ministry of Human Resource and Development (MHRD), Government of India).
- **SECTIONAL SECRETARY-** for 103<sup>rd</sup> Indian Science Congress to be held at the University of Mysore in January 2016.
- **DIRECTOR**, International Center, University of Mysore.
- **Chairman**, Department of Studies in Computer Science, University of Mysore,
- **Co-Ordinator for e- governance and High performance Computing.**
- **Co-Ordinator for Chinese twinning degree programs from the year 2007.**
- Member – Academic Council, University of mysore
- **Member-** Faculty of Science & Technology and **Academic Council** University of Mysore.
- **Chairman-** Board of Examiners and Board of Studies in Computer Science.
- **Member in BOS and BOE** of University of Mysore and other Universities.
- Member- Faculty of Science & Technology, Engineering of other Universities.

- **Life Member, Indian Society for Technical Education (ISTE).**
- **Life Member, Computer Society of India (CSI).**
- **Life Member(L-26402), Indian Science Congress Association**
- **Life Member IAPR.**
- As a working member of All India Board (AICTE) for Computer science, applications and Information Technology.
- Professional expert/Subject expert /Accreditor / Expert member in various bodies such as UGC/AICTE/DIET.
- Participated and participating as an expert in the selection / promotion of scientists/ Engineers, faculty (Lecturers, Readers, and Professors) for various Govt. institutes, research labs, universities and organizations.
- Chair, Co-chair, Programme Committee member for several International, National Conferences and Workshops.
- Advisory Chair, Editor for Proceedings of several International and National Conferences.
- On Editorial board of many journals.

## 9. **RESEARCH GUIDANCE**

- **TITLES OF Ph.D. THESES COMPLETED UNDER MY SUPERVISION:**
  - Generation of Complete Large Document Images From Split Components
  - Mosaicing Algorithm for the Generation of Well Formed Images
  - Transformation of Epigraphical Objects into Machine Readable Image Pattern.
  - An Attempt towards the Automation of Spoken English Language to its Equivalent Pitman Shorthand language.
  - An Attempt towards the Developments of Universal OCR for the Recognition of Multilingual Documents.
  - Development of Automatic Face Recognition System: Some New Approaches
  - Robust Phoneme Segmentation and Large Vocabulary Continuous Speech Recognition: Some Novel Approaches.

- Data Extraction from Preprinted Documents: Some New Approaches
- Some Robust Algorithms For Person Verification Using Multimodal Biometrics
- Some Approaches for Camera Based Text Recognition.
- Novel Algorithms for Recognition of Chinese Numerals and Frequently used Words.
- An approach towards design of Biometric system using Multiple Trait.
- Machine Learning Approaches via An Ensemble of Classifiers for Lung Nodule Diagnosis
- **TOPICS OF ONGOING RESEARCH WORKS UNDER MY SUPERVISION:**
  - Face recognition under partial visibility.
  - Detection and classification of animals.
  - Multimodal Biometrics with Template Security.
  - Multi-Oriented-Type Text Detection and Recognition in Multi-Lingual Environment.

## **Research Citations**

Total Number of Research **Papers** as on July **2017 –282 papers**

[**Citations –740, H-Index –14, i10-Index –21, as on 018-07-2017**]

## **10. MEMBERSHIP IN ACADEMIC BODIES**

- Member of **Board of Examiners (BoE)** to M.Sc, and MCA degree to various Universities in India.
- Adjudicator of Ph.D, M. Phil and M.Tech degrees to various Universities in India.
- Member of **Board of Appointment (BoA)** to various Universities in Karnataka and other states.
- Member of the Selection **Committees (Expert).**

- Expert Committee Panel in Computer Science- **Government of Karnataka**

## **11. MEMBERSHIP IN SCIENTIFIC SOCIETIES**

- Governing Council Member, Gopalswamy Shishu Vihara Trust, MYSORE
- Governing council Member, Sharada Villas Educational society, Mysore.
- Member, Maharaja Education Trust, Mysore.

## **Research Publications**

1. Graph-Theoretic Interpretation and Contour Traversal Based Algorithm for Automatic Recognition of Pitman Shorthand Notation, Artificial Neural Networks and Cognitive Systems, ANCS-97, Cochin, India.
2. Automatic Recognition of Pitman Shorthand Notation using Hough Transform, International Conference on Cognitive System (ICCS'97), New Delhi, India.
3. Automatic Recognition of English words from Pitman Shorthand Notation, International Conference-IGS' 97, Italy:International Gramaphonics Society: Research on Handwriting and Drawing [IAPR].
4. Pattern Analysis and Phonetic Knowledge-base for Deciphering Phonetic Words in Pitman Shorthand, International Conference on Combinatorics, Statistics, Pattern Recognition and Related Areas, Dec 1998, Mysore.
5. Octal Directional Coding and Automata Based Discrimination Using Hexa-Deci Code for Automatic Recognition of Pitman Shorthand., International Conference on Cognitive Systems, ICCS-98, Delhi, India.
6. Mosaicing of Color Documents: A Technique based on Pattern Matching Approach. Proceedings of National Conference on NCCIT, Kilakarai, Tamilnadu, 24<sup>th</sup> and 25<sup>th</sup> September 2001, pp 69-74.
7. Pattern Matching Approach based Image Sequencing useful for Document Image Mosaicing. Proceedings of the National Conference on Document Analysis and Recognition (NCDAR-2001), Mandya, Karnataka, July 13-14, 2001.
8. Document Image Mosaicing: A Novel Technique Based on Pattern Matching Approach. Proceedings of the National Conference on Recent Trends in Advanced Computing (NCRTAC-2001), Tamil Nadu, Feb 9-10, 2001, pp 01-08.
9. Filtering Technique based on Minimum Majority Function to eliminate noises from the Epigraphical Script Images, Proceedings of National Conference on Recent Trends in Information Technology, Karpagam Arts and Science College, Coimbatore, Tamil Nadu, August 22-24, 2002, pp 35-39.



- 10.** A Novel Method Based on Texture Analysis of Epigraphical Image to predict the period of the Inscription, Proceedings of National Workshop on Computer Vision, Graphics and Image Processing (WVGIP 2002), February 15-16, 2002, pp 89-93.
- 11.** Texture Based Algorithmic Analysis of Epigraphical Image to Predict the Period of the Inscription, Proceedings of National Conference on Recent Trends in Advanced Computing, Manonmanian University, February 2002, pp 46-50.
- 12.** Generation of Pitman Shorthand Language Symbol for Gramalogues, Diphthongs and Punctuations from spoken English Language Text: An Approach based on Mel Frequency Cepstral Coefficients and Vector Quantization, Recent Trends in Information Communication Technology and Applications. Proc of RTICTA-2002, Department of Computer Science, North Maharashtra University, Jalgaon, pp 19.
- 13.** Automatic Segmentation of Text Lines and Words from Skewed Text Document: A Technique Based on Nearest Neighbor Clustering Approach. Proceedings of National Conference on Recent Trends in Information Communication Technology and Applications-RTICIA-2002, Jalgaon (MS), North Maharashtra University, October 10 and 11<sup>th</sup> 2002, pp 7.
- 14.** Skew Detection in Binary Document Image Using Linear Regression Analysis, National conference. Proceedings of National conference on Advanced Computer Applications – NCACA-2002, Dept. of Computer Science, NGM college, Pollachi, Coimbtore, Tamil Nadu, October 11<sup>th</sup> and 12<sup>th</sup>, 2002, pp 41-46.
- 15.** An Attempt Towards Automatic Segmentation of Visiting Cards Enabling the Extraction of the Key Information. 2002
- 16.** Text skew detection through contour following. Proceedings of National Workshop on Computer Vision, Graphics and Image processing (WVGIP – 2002), Tamil Nadu, Feb 15-16 2002, pp 39-44.
- 17.** Mosaicing of Scrolled Split Images Based on Pattern Matching Approach. Proceedings of Third National Conference on Recent Trends in Advanced Computing (NCRTAC – 2002), Tamil Nadu, Feb 13-15, 2002.

- 18.**Extraction of Multi-Oriented Text Lines and Their Orientation Determination. Proceedings of Sixth Annual National Conference of Society of Statistics Computer and Applications, Lucknow University, Uttar Pradesh, December 5 – 7, 2003, pp 8.
- 19.**Role of preprocessing techniques in the automation of epigraphical scripts' images Proceedings of National Conference on Ancient Science and Archeology, Sri Parashakthi College for women, Courtallam, Tamilnadu, March 7-9, 2003, pp 28-37.
- 20.**Automatic decoding of epigraphical scripts, Proceedings of National Conference on Ancient Science and Archeology, Sri Parashakthi college for women, Courtallam, Tamilnadu, March 7-9, 2003, pp19-27.
- 21.**Partial Eight Direction Based Algorithm for Line Segmentation of Epigraphical Script Images, Proceedings of National Conference ETA-2003, Saurashtra University, Rajkot, July 11-13, 2003, pp 55-61.
- 22.**Neural Network classifier for the prediction of an epigraphical script, Proceedings of National Workshop on signal Processing, Intelligent systems and Networking (SPIN-2003), MSRIT, Bangalore, December 4-5, 2003 pp 36-42.
- 23.**Texture features for the prediction of period of an epigraphical script, Proceedings of second National conference on Document Analysis and Recognition, July 11-12, 2003 PES College of Engineering, Mandya, pp 192-196.
- 24.**Segmentation of Spoken English Word to its Consonants and Vowels to generate Pitman Shorthand Language Symbol: A Wavelet Transform and Symbolic Data Approach. Proc of CSI-2003, New Delhi, pp 54-62.
- 25.**Generation of Pitman Shorthand Language Symbol for Consonants and Vowels from Spoken English Language Text: An Approach based on Mel Frequency Cepstral Coefficients and Vector Quantization, Proc of NWMISC-2003, Chennai, pp 113-119.
- 26.**Generation of Pitman Shorthand Language Symbol for Diphthongs Grammalogues and Punctuation from Spoken English Language Text: An Approach based on Discrete Wavelet Transform and Dynamic Time Warping Technique.Proc of WITSA-2003,Jamia Milia Islamia University, New Delhi, March 2003, pp-8.

- 27.** Generation of Pitman Shorthand Symbols for Consonants and Vowels from Spoken English Language Text: An approach based on Discrete Wavelet Transform and Dynamic Time Warping Techniques. Proc of NCDAR, Mandya, July 2003, pp 182-191.
- 28.** Regression Line based Skew Detection for Text Document Images useful for Document Image Mosaicing. Proceedings of National Convention of CSI, Delhi, December 11 – 13 2003.
- 29.** Projection Profile based Technique for Recognition of Braille Symbols. Proceedings of Sixth Annual National Conference of Society of Statistics Computer and Applications, Lucknow University, Uttar Pradesh, December 5 – 7, 2003.
- 30.** A Novel Feature Extraction Scheme for Malayalam Character Recognition. Proceedings of Sixth Annual National Conference of Society of Statistics Computer and Applications, Lucknow University, Uttar Pradesh, December 5 – 7, 2003.
- 31.** Mosaicing of Distorted Split Document Images using Wavelet Decomposition. Proceedings of National Conference on Signal Processing, Intelligent Systems and Networking – SPIN 2003, Bangalore, India, December 4 -5, 2003, pp 153-156.
- 32.** Document Image Mosaicing: A Novel Approach Based on Column Block Matching. Proceedings of National Workshop on Machine Intelligence using Soft Computing NWMISC – 2003, Dept. of Computer Applications, RMK Engineering College, Kavaraipettai, Tamil Nadu, August 9<sup>th</sup> 2003, pp 16.
- 33.** Rotation Invariant Approach for Text Document Images Useful for Document Image Mosaicing. Proceedings of Second National Conference on Document Analysis and Recognition (NCDAR - 2003), PES College of Engineering, Mandya-571401, Karnataka, July 11<sup>th</sup> and 12<sup>th</sup>, 2003, pp 20-27.
- 34.** Skew Estimation of Binary Document Images using Static and Dynamic Thresholds Useful for Document Image Mosaicing. Proceedings of National Workshop on IT Services and Applications-WITSA – 2003, Centre for Information Technology and Development of Computer Science, Jamia Milia Islamia (A Central University), New Delhi, Feb 27-28, 2003, pp 8.
- 35.** Skew Estimation of Binary Document Images: An Approach based on Text Line Boundary Fitting. Proceedings of National Seminar on Algorithms and Artificial System,

Department of Computer Science, University of Madras, January 30 – February 1, 2003, pp 253-270.

- 36.** Skew Detection in Binary Text Document Images based on Statistical Analysis Useful for Document Image Mosaicing. Proceedings of Fifth Annual Conference on Society of Statistics, Computer and Applications, Dept. of Statistics, Udaipur, Rajasthan, January 17-19, 2003, pp 12.
- 37.** Linear Predictive Coefficient based approach for generation of Pitman Shorthand Language Characters from Spoken English Language, International Conference on Cognitive Systems (ICCS-2003), New Delhi, pp 69-75.
- 38.** Fourier Transform Based Column-Block and Row-Block Matching Procedure for Document Image Mosaicing. Lecture Notes in Computer Science (LNCS), WILF 2003, LNAI 2955, 2006, pp 240-254.
- 39.** Feature Extraction for Alphanumeric Symbols Recognition: An Approach Based on Distance Measures. Proceedings of 1<sup>st</sup> Indian International Conference on Artificial Intelligence (IICAI-03), Hyderabad, India, December 18-20 2003, pp 590-599.
- 40.** Fourier Transform based Column-Block and Row-Block Matching Procedure for Document Image Mosaicing, International Workshop on Fuzzy Logic and Applications (WILF – 2003), Palazzo Serra di Cassano, Via Monte di, Dio 14, Napoli, ITALY October 9-11, 2003.
- 41.** Statistical Methodology for Skew Detection in Binary Text Document Images for Document Image Mosaicing. Journal of the Society of Statistics, Computer and Applications, Vol.1, Nos 1 and 2, 2003 (New series), pp 81-90.
- 42.** Efficient and Rotation Invariant Rule-Based Thinning Algorithm for Character Recognition. Proceedings of 12<sup>th</sup> International Conference on Advanced Computing and Communication – ADCOM 2004, Ahmedabad, Gujarat, December 15-18, pp 167-172.
- 43.** Invariant Moments Based Feature Extraction for the Classification of Epigraphical Characters, Proceedings of National conference, Venkateswara college of Engg, New Delhi, Dec 22-24, 2004, pp16.

- 44.** A Novel method based on rectangle fitting for noise removal in an epigraphical script, Proceedings of 39<sup>th</sup> Annual convention of Computer Society of India, Mumbai, December 1-4, 2004, pp 166-171.
- 45.** A Novel method based on rectangle fitting for noise removal in an epigraphical script, Proceedings of 39<sup>th</sup> Annual convention of Computer Society of India, Mumbai, December 1-4, 2004, pp 166-171.
- 46.** Generation of Pitman Shorthand Language Symbol for Gramalogues, Diphthongs and Punctuations from spoken English Language Text: An approach based on Linear Predictive Coefficients, IT-2004 Proc of National Conference on Information Technology, 2004, DAV College, Amritsar (Punjab).pp-409-416.
- 47.** Generation of Pitman Shorthand Characters from Spoken English Language Text: An approach based on Discrete Wavelet Transform and Dynamic Time Warping Techniques, Proc of WCVGIP-2004, Madhav Institute of Technology and Science, Gwalior (M.P). pp 105-111
- 48.** Invariant Moments Based Feature Extraction for the Classification of Epigraphical Characters. Proceedings of Seventh Annual Conference of Statistics, Computer and Applications, Department of Statistics, University of Delhi, December 22-24, 2004, pp 25.
- 49.** A New Invariant Ring Projection Profile Based Method for Recognition of Braille Symbols. Proceedings of Seventh Annual Conference of Statistics, Computer and Applications, Department of Statistics, University of Delhi, December 22-24, 2004, pp 33.
- 50.** A Novel Triangle Geometry based Technique for the Detection and Recognition of Human Faces. Proceedings of Seventh Annual Conference of Statistics, Computer and Applications, Department of Statistics, University of Delhi, December 22-24, 2004, pp 26.
- 51.** Rotation Invariant Approach for Recognition of Multi-Lingual Documents Through Character Recognition. Proceedings of Seventh Annual Conference of Statistics, Computer and Applications, Department of Statistics, University of Delhi, December 22-24, 2004, pp 21.

- 52.** A New Genetic Algorithm Based Technique for Document Image Mosaicing. Proceedings of Seventh Annual Conference of Statistics, Computer and Applications, Department of Statistics, University of Delhi, December 22-24, 2004, pp 32.
- 53.** A Simple and New Connected Component Labeling Based Method for Document Image Mosaicing. Proceedings of Seventh Annual Conference of Statistics, Computer and Applications, Department of Statistics, University of Delhi, December 22-24, 2004, pp 31.
- 54.** A Novel method based on Rectangle Fitting for Noise Removal in an Epigraphical Script. Proceedings of 39<sup>th</sup> Annual National Convention of Computer Society of India, Taj Inads End, Mumbai, December 1-4.
- 55.** Sliding Window based Technique for Document Image Mosaicing. Proceedings of National Conference on IT: Pathway for Transformation of Society, DAV College, Amritsar, Punjab, March 13 and 14, 2004, pp 90-99.
- 56.** Invariant Approach for South Indian Script Lines useful for Document Image Mosaicing. Proceedings of Second National Workshop on Computer Vision, Graphics and Image Processing – WCVGIP – 04, MITS, Gwalior, Madhya Pradesh. Feb 21-22, 2004, pp 81-90.
- 57.** Nearest Neighbor clustering based approach for line and character segmentation in epigraphical scripts, Proceedings of International conference on cognitive systems (ICCS-2004), New Delhi, December 14-15, 2004, pp 29.
- 58.** Generation of Pitman Shorthand Language Symbols for Consonant-Vowel (CV) from Spoken English Language: An approach based on Linear Predictive Coefficients. Proc of ICSCI-2004, International Conference, Hyderabad, pp 103-110.
- 59.** A New Gradient Vector Based Skew Estimation Technique for Binary Document Images. Proceedings of Fifth International Conference on Knowledge Based Computer System (KBCS), Hyderabad, India, December 19-22, 2004, pp 325-335.
- 60.** An Improved Hough Transform Based Skew Estimation Technique for Binary Document Images. Proceedings of International Conference on Human Machine Interfaces -ICHMI – 2004, Bangalore, India, December 20-23, 2004, pp 369-374.

- 61.** An Efficient Skew Estimation Technique for Binary Document Images Based on Boundary Growing and Linear Regression Analysis. Proceedings of 11<sup>th</sup> International Conference on Neural Information Processing – ICONIP – 2004, Science City, Kolkata, India, November 22 - 25, 2004, pp 659-665.
- 62.** Accurate Skew Detection Algorithm Based on Principal Component Analysis for Binary Document Images. Proceedings of 12<sup>th</sup> International Conference on Advanced Computing and Communication – ADCOM 2004, Ahmedabad, Gujarat, December 15-18, pp 669-674.
- 63.** Document Image Mosaicing: An Approach Based on Zernike Moments. Proceedings of 6<sup>th</sup> International Conference on Cognitive Systems – ICCS 2004, Centre for Research in Cognitive Systems, New Delhi, India, December 14-15, 2004, pp 27.
- 64.** Nearest Neighbor Clustering based Approach for Line and Character Segmentation in Epigraphical Scripts. Proceedings of 6<sup>th</sup> International Conference on Cognitive Systems – ICCS 2004, Centre for Research in Cognitive Systems, New Delhi, India, December 14-15, 2004, pp 25.
- 65.** A New Invariant Feature Extraction Technique for Classification of Pitman Shorthand Symbols. Proceedings of 6<sup>th</sup> International Conference on Cognitive Systems – ICCS 2004, Centre for Research in Cognitive Systems, New Delhi, India, December 14-15, 2004, pp 17.
- 66.** A New Invariant Algorithm for Recognition of Alphabets of Multi-Lingual Documents. Proceedings of 6<sup>th</sup> International Conference on Cognitive Systems – ICCS 2004, Centre for Research in Cognitive Systems, New Delhi, India, December 14-15, 2004, pp 16.
- 67.** Rotation Invariant Histogram Feature for Recognition of Braille Symbols. Proceedings of 6<sup>th</sup> International Conference on Cognitive Systems – ICCS 2004, Centre for Research in Cognitive Systems, New Delhi, India, December 14-15, 2004, pp 32.
- 68.** A New Skew Estimation Technique for Cone Shaped Text Line. Proceedings of 6<sup>th</sup> International Conference on Cognitive Systems – ICCS 2004, Centre for Research in Cognitive Systems, New Delhi, India, December 14-15, 2004, pp 16.
- 69.** A Novel Feature Extraction Scheme for Recognition of Symbols of Telugu License Plate using Distance Measures. Proceedings of International Conference on Recent Trends and

New Directions of Research in Cybernetics and Systems Theory, Institute of Advanced Study in Science and Technology – IASST, Guwahati, January 1 – 3, 2004, pp 25

- 70.** Mosaicing of Multiple Split Document Images: A Novel Approach based on Region Growing. Proceedings of International Conference on Recent Trends and New Directions of Research in Cybernetics and Systems Theory, Institute of Advanced Study in Science and Technology – IASST, Guwahati, January 1 – 3, 2004.
- 71.** A Neural Network Classifier for Prediction of the Period of an Epigraphical Script, Journal of Computer Society of India (CSI), Vol. 34, No. 4, Oct-Dec 2004, pp 28-35.
- 72.** Multi-Sensor Data Fusion and Mosaic Construction, Journal of the Computer Society of India (CSI), Vol. 34, No. 1, January-March 2004, pp 48-55.
- 73.** Skew Detection in Binary Document Images based on Boundary Growing Approach. Journal of Computer Society of India (CSI), Vol. 34, No. 2, Apr-Jun 2004, pp 50-56.
- 74.** A Novel Feature Extraction Scheme for Malayalam Character Recognition. Journal of the Society of Statistics, Computer and Applications, Vol. 2, No.1, 2004 (New Series), pp 101-113.
- 75.** Document Image Mosaicing: A Novel Approach. Journal SADHANA, Indian Academy of Sciences, Vol. 29, Part 3, June 2004, pp 329-341.
- 76.** An Efficient and Rotation Invariant 4-Steps thinning Algorithm for Binary Document Images, Proceedings of International Conference on Information and Automation, 2005, Colombo, Sri Lanka, pp. 74-79.
- 77.** Recognition of Numerals of Indian Languages: A New Feature Extraction Technique. Proceedings of National Conference on Biometrics, P.G & Research Department of Mathematics and Computer Science, Erode Arts College, Erode, January 28-29, 2005 pp 103-111.
- 78.** An Accurate and an Efficient Principal Component Analysis Based Skew Estimation Technique for Binary Document Images. Proceedings of International Conference on Cognition and Recognition, Mysore -ICCR - 2005, India, December 22-23, 2005, pp 453-461.



- 79.** A New Envelope Based Technique for Identification of Languages of Different Words in a Document. Proceedings of International Conference on Cognition and Recognition - ICCR - 2005, Mysore, India, December 22-23, 2005, pp 567-572.
- 80.** Document Image Mosaicing: A New Approach based on Distance Measure. Proceedings of International Conference on Cognition and Recognition -ICCR - 2005, Mysore, India, December 22-23, 2005, pp 445-452.
- 81.** A New Hybrid Approach for Efficient Face Representation and Recognition Based on 2DPCA and IMLDA Techniques. Proceedings of International Conference on Cognition and Recognition -ICCR - 2005, Mysore, India, December 22-23, 2005, pp 806-817.
- 82.** A New Best Line Fitting Technique based on Boundary Growing, Thinning and Moments for Complex Documents. Proceedings of International Conference on Cognition and Recognition -ICCR - 2005, Mysore, India, December 22-23, 2005, pp 555-566.
- 83.** An Improved Version of Two Steps Method for Accurate Thinning for Binary Document Images. Proceedings of second international conference on Artificial Intelligence (IICAI-2005), Pune, December 20-22, 2005, pp 3129-3142.
- 84.** An Accurate and Efficient Skew Estimation Technique based on Moment of Inertial for Binary Document Images. Proceedings of second international conference on Artificial Intelligence (IICAI-2005), Pune, December 20-22, 2005, pp 3115-3128.
- 85.** New Moments based Skew Estimation Technique using Pixels in the Word for Binary Document Images. Proceedings of 8<sup>th</sup> International Conference on Document Analysis and Recognition - ICDAR – 2005, Seoul, South Korea, August 29 – September 1 2005. pp 151-156.
- 86.** A Novel Approach for Document Image Mosaicing Using Wavelet Decomposition Proceedings of International Conference on Multi-lingual Computing and Information Management in Networked Digital Environment, Cochin University of Science and Technology, Kochi, Kerala, February 2-4, 2005, pp 377 - 391.
- 87.** A New Contour Based Invariant Feature Extraction Approach for the Recognition of Multi-lingual Documents. Proceedings of International Conference on Multi-lingual

Computing and Information Management in Networked Digital Environment, Cochin University of Science and Technology, Kochi, Kerala, February 2-4, 2005, pp 94 -108.

- 88.** Robust Word-Wise Moments based Skew Estimation Technique for Binary Document Images. Proceedings of International Conference on Systematic, Cybernetic and Informatics- ICSCI, Hyderabad, India, January 06-09, 2005, pp 771-778.
- 89.** A Novel Pattern Matching Based Technique for Mosaicing the Multiple Split Document Images. Proceedings of International Conference on Systematic, Cybernetic and Informatics- ICSCI, Hyderabad, India, January 06-09, 2005, 394-399.
- 90.** An Improved Rotation Invariant Rule-Based Thinning Algorithm for Character Recognition. Proceedings of Second International Conference on Intelligent Sensing and Information processing – 2005, Chennai, India, January 4-7, 2005, pp 39-40.
- 91.** A New Boundary Growing and Hough Transform Based Approach for Accurate Skew Detection in Binary Document Images. Proceedings of Second International Conference on Intelligent Sensing and Information Processing – 2005, Chennai, India, January 4-7, 2005, pp 140-146.
- 92.** Subpattern Based Principal Component Analysis: Robust and Efficient Approach for 3D Object Recognition, International Journal of Robotics and Modeling.
- 93.** Robust Skew Estimation Technique for binary Document Images based on Thinning and LRA, International Journal of Document Analysis and Recognition (IJ DAR).
- 94.** Skew Estimation Technique for Binary Document Images based on Thinning and Moments, International Journal of Engineering Letters.
- 95.** A Novel Skew Detection Technique for Binary Document Images Based on Character Centroid and LRA, International Journal of Graphics, Vision and Image Processing, Vol. 5, Issue 9, 2005.
- 96.** Skew Angle Estimation Technique for Binary Document Images: A Novel Approach, ITS Journal of IT and Management, Special issue on IT, September 2005, Gaiziabad, India, pp 1-9.
- 97.** Generation of Pitman Shorthand Language Characters from Spoken English Language: An Approach based on Mel Frequency Cepstral Coefficients and Vector Quantization

Techniques. Journal of the Computer Society of India, New Delhi, Vol.35, No.2, April-June 2005, pp 3-12.

- 98.** Ring-Projection based Approach for Document Image Mosaicing. Journal of Computer Society of India (CSI), Vol. 35, No. 3, July-September 2005, pp 8-17.
- 99.** Robust Skew Estimation Technique based on Boundary Growing and Radon Transform, Journal of Computer Science, Karpagam Publications, Coimbatore, Vol. 1, No. 2, 2005, pp 267-178.
- 100.** An Efficient and Robust Face Recognition System based on Two Dimensional Fisher Linear Discriminant Analysis: A New Approach. Journal of Computer Science, Karpagam Publications, Coimbatore, Vol. 1, No. 3, Nov-Dec 2005, pp 234-242.
- 101.** Invariant Moments Based Feature Extraction for the Classification of Epigraphical Characters. Journal of Statistics and Computer Applications, Vol. 3, Nos. 1 & 2, 2005 (New Series), pp 139-151.
- 102.** Novel Technique for Estimation of Skew in Binary Text Document Images based on Linear Regression Analysis. Journal of SADHANA, Indian Academy of Sciences, Vol. 30, Part 1, February 2005, pp 69-85.
- 103.** An Efficient and Robust Input Enhancement 2D-Principal Component Analysis Based Technique for Face Recognition. Proceeding of International Conference on Advanced Computing of Communication (ADCOM 2005), Coimbatore, Tamil Nadu, India, December 14-17.
- 104.** Recognition of Handwritten Kannada Numerals using 7-segment Projection: An Extension Work, Proceedings of national conference on convergence of linguistics, E-Governance & I.T. for making Kannada- A Tech-savvy Language, JNNCE, Shimoga, 21-22 April 2006, pp 91-97.
- 105.** Some up-to-date Subspace Analysis Methods Based on Fisher Linear Discriminant Analysis for Face Recognition: A Comparative Study, National Conference on Recent Trends in Information System, ReTIS, Kolkata, INDIA, pp. 204-207, July 14-15, 2006.
- 106.** An accurate and efficient character segmentation technique for south Indian scripts, National Conference on Recent Trends in Information Systems, ReTIS, Kolkata, INDIA, pp. 172-175, July 14-15, 2006.

- 107.** (2D)<sup>2</sup>LDA: An Efficient Approach for Face Recognition, International Journal of Pattern Recognition, Vol. 39, No. 7, July 2006, pp 1396-1400.
- 108.** Skew Estimation Technique for Kannada Document, Proceedings of national conference on convergence of linguistics, E-Governance & I.T. for making Kannada- A Tech-savvy Language, JNNCE, Shimoga, 21-22 April 2006, pp 72-77.
- 109.** Prediction of Era of Epigraphical scripts based on texture features-A statistical approach, Proceedings of national conference on convergence of linguistics, E-Governance & I.T. for making Kannada- A Tech-savvy Language, JNNCE, Shimoga, 21-22 April 2006, pp 62-71.
- 110.** Skew estimation technique for Kannada documents, Proceedings of KANCON-2006, April 21-22, 2006, Shimoga, INDIA (Accepted).
- 111.** A New Principal Component Analysis Based Skew Estimation Technique for Lines of a Binary Document, Proceedings of Workshop on Computer Vision, Graphics and Image Processing –WCVGIP 2006, Jan 12-13, 2006, Hyderabad, India, pp 42-47
- 112.** Incomplete Beta Function And Average Level Crossing Rate Based Phoneme segmentation, Proceedings of the ISCO 2006 on 9-11, August 2006, Coimbatore, India, pp. 208-210
- 113.** A New Generalized Skew Estimation Technique for Binary Document images, Proceedings of International Conference on Intelligent Systems and Control, ISCO, 2006, August 9-11, 2006, Coimbatore, INDIA, pp. 58-63
- 114.** An Efficient Approach for Skew Angle Estimation Technique based on Boundary Sliding Method, Proceedings of 5th International Symposium on Robotics and Automation (ISRA-2006), Mexico, August 25-28, 2006, ISBN 970-769-070-4, pp. 265-270.
- 115.** Development of Single OCR System: An Improved Contour Based Technique. Proceedings of ICSC- 2006, Bhubneswar, Orissa, 17<sup>th</sup> to 19<sup>th</sup>, 2006, India (Accepted).
- 116.** An Efficient Moment of Inertia based Skew Estimation Technique for Binary Document Images. Proceedings of ICSC- 2006, Bhubneswar, Orissa, 17<sup>th</sup> to 19<sup>th</sup>, 2006, India (Accepted).

- 117.** An Accurate Skew Detection for Document Images Using Hough Transform, Proceedings of International Conference on Emerging Applications of IT (EAIT-2006), Feb 10-11, Kolkata, India, pp 125-128.
- 118.** A New Generalized Skew Estimation Technique for Binary Document Images using Two Steps Thinning Algorithm and Linear Regression Analysis. Proceedings of International Conference on Recent Trends in Information System -IRIS-06, Kovilpatti, Tamil Nadu, India, January 06-08 2006, pp 153-166.
- 119.** Identification of Languages of Different Lines in a Grey/Binary Document: A New Approach Based on Structural Features. Proceedings of International Conference on Recent Trends in Information System -IRIS-06, Kovilpatti, Tamil Nadu, India, January 06-08 2006, pp 187-195.
- 120.** An Efficient and Robust Technique for face Recognition Based on Principal Component Analysis: A new approach. Proceedings of International Conference on Recent Trends in Information System -IRIS-06, Kovilpatti, Tamil Nadu, India, January 06-08 2006, pp 142-152.
- 121.** A New Principal Component Analysis Based Technique for Accurate Skew Estimation. Proceedings of International Conference on Recent Trends in Information System -IRIS-06, Kovilpatti, Tamil Nadu, India, January 06-08 2006, pp 167-179.
- 122.** A New Envelope Based Technique for Identification of Languages of Different Lines in a Document. Proceedings of International Conference on Systematics, Cybernatics, and Information-ICSCI-2006, Hyderabad, India, January 4-8 2006, pp 739-748.
- 123.** A New Generalized Skew Estimation Technique for Binary Document Images using 20 Rules of Thinning Algorithm and Linear Regression Analysis. Proceedings of International Conference on Systematics, Cybernatics, and Information – ICSCI – 2006, Hyderabad, India, January 4 – 8 2006, pp 868-875.
- 124.** A New Mountain Function Based Technique for Extraction of Text and Non Text Components in a Document Images. Proceedings of International Conference on Systematics, Cybernatics, and Information-ICSCI-2006, Hyderabad, India, January 4-8 2006, pp 735-738.

- 125.** Automatic Continuous Speech Segmentation, Proceedings of the IEEE ICSIP- International Conference on Signal & Image Processing, 2006, Hubli, Karnataka, INDIA.
- 126.** Fisher Linear Discriminant Analysis based Technique Useful for Efficient Bi-lingual Character Recognition, Proceedings of the International Conference on Intelligent Sensing and Information processing (ICISIP 2006), Bangalore, INDIA.
- 127.** Character Skew Estimation: A New and Simple Edge based Model, Proceedings of the International Conference on Advanced Computing and Communication – ADCOM 2006, Surathkal, Karnataka, INDIA.
- 128.** A New Eigen Value Based Method for Recognition of Alphabets of Multi-Lingual Documents, Journal of Computer Society of India, Vol 36, No. 1, 2006.
- 129.** Prediction of Era of Epigraphical Documents Based on Texture Features- A Statistical Approach, Journal of Analysis and Computation, Vol. 2, No.1, (2006): 1-8.
- 130.** Skew Detection Technique for Binary Document Images Based on Mathematical Morphology and Hough Transform, Journal of Analysis and Computation, Vol. 2, No.1, (2006): 85-96.
- 131.** A Linear Predictive Coefficient Based Algorithmic Approach for the Generation of Pitman Shorthand Language Symbols for Consonants and Vowels, Journal of Analysis and Computation, Vol. 2, No.1, (2006):9-17.
- 132.** Fourier-Fisher Linear Discriminant Analysis Approach for Efficient Character Recognition, International Journal of Tomography and Statistics (IJTS), Fall 2006, Vol. 4, F06, pp. 28-39.
- 133.** Language Independent Skew Detection and Correction of Printed Text Document Images: A Non-rotational Approach, Journal of Vivek, A Quarterly in Artificial Intelligence, Special Issue on Document Analysis, Vol. 16, No.2, 2006, 8-15.
- 134.** Skew Estimation by Improved Boundary Growing for Text Documents in South Indian Languages. Journal of Vivek, A Quarterly in Artificial Intelligence, Special Issue on Document Analysis, Vol. 16, No.2, 2006, 16-21.
- 135.** Skew Detection Technique for Binary Document Images based on Hough Transform, International Journal of Information Technology, Vol.3, No.3, 2006, 194-200.

- 136.** Hidden Markov Model based approach for generation of Pitman shorthand Language symbols for Consonants and Vowels from spoken English Language, Journal of Sadhana, Indian Academy of Science, Vol. 31, Part 3, June 2006, pp. 277-290.
- 137.** Diagonal Fisher Linear Discriminant Analysis for Efficient Face Recognition, International Journal of Neurocomputing, Vol.69, No:13-15, August 2006, pp 1711-1716.
- 138.** A Novel Boundary Growing Approach for Accuracy Skew Estimation of Binary Document Images, International Journal of Pattern Recognition Letters, Vol. 27, 2006, pp 791-801.
- 139.** Sliding Window based Approach for Document Image Mosaicing, International Journal of Image and Vision Computing, Volume 24, Issue 1, 1 January 2006, pp 94-100.
- 140.** Automatic Continuous Speech Segmentation Using Level Crossing Rate, Proceedings of the International Conference on Advances in Pattern Recognition -ICAPR 2007, ISI, Kolkata, INDIA.
- 141.** Unconstrained handwritten digit recognition: Experimentation on MNIST database, Proceedings of the International Conference on Advanced Pattern Recognition – ICPAR 2007, Kolkata, INDIA.
- 142.** Divide and Conquer Strategy Incorporated Fisher Linear Discriminant Analysis: An Efficient Approach for Face Recognition, Proceedings of the International Conference on Advanced Pattern Recognition – ICAPR 2007, Kolkata, INDIA.
- 143.** Incomplete Beta Function Based Multi-Level Crossing Approach for Signal Sampling. IICAI 2007: 2104-2112
- 144.** New Filter Based Unsupervised Rules for Boolean Blur Metric. ICCTA 2007: 611-617
- 145.** Performance Evaluation of Subspace Methods And a Study of Their Robust Behavior. IICAI 2007: 601-620
- 146.** Signal Resampling Technique Combining Level Crossing and Auditory Features. PReMI 2007: 447-454
- 147.** Language Independent Skew Estimation Technique Based on Gaussian Mixture Models: A Case Study on South Indian Scripts. PReMI 2007: 487-494
- 148.** Mixture-of-Laplacian Faces and Its Application to Face Recognition. PReMI 2007: 568-575

- 149.** Skew Estimation Technique for Binary Document Images based on Thinning and Moments. Engineering Letters 14(1): 127-134 (2007)
- 150.** New Filter Based Unsupervised Rules for Boolean Blur Metric. ICCTA 2007: 611-617
- 151.** Subjective Performance of Texture Based Algorithm for Face Verification: The Role of Databases. ICVGIP 2008: 421-428
- 152.** Fisher Linear Discriminant Analysis and Connectionist Model for Efficient Image Recognition. Speech, Audio, Image and Biomedical Signal Processing using Neural Networks 2008: 269-282.
- 153.** Performance Evaluation of Different Subspace Methods and Distance Measures for Handwritten Kannada Character Recognition, National Conference on Next Generation Computing Technologies (NGCT), ITS Ghaziabad, India, 17th & 18th October, 2008, pp. 286 - 298.
- 154.** Multilingual OCR system for South Indian scripts and English documents: An approach based on Fourier transform and principal component analysis. Eng. Appl. of AI 21(4): 658-668 (2008)
- 155.** Document Skew Detection - a Novel Approach. Int. J. Image Graphics 8(1): 47-59 (2008)
- 156.** Gaussian Mixture Model Coupled with Independent Component Analysis for Palmprint Verification. AIAI Workshops 2009: 110-117
- 157.** Texture Based Approach for Cloud Classification Using SVM. ARTCom 2009: 688-690.
- 158.** A Novel Approach for Biclustering Gene Expression Data Using Modular Singular Value Decomposition. CIBB 2009: 254-265
- 159.** A Novel Approach for Multimodal Biometric Score Fusion Using Gaussian Mixture Model and Monte Carlo Method. ARTCom 2009: 90-92
- 160.** Qualitative Weight Assignment for Multimodal Biometric Fusion. ICAPR 2009: 193-196
- 161.** Article: Research Avenues in Multimodal Biometrics. IJCA, Special Issue on RTIPPR(1):1-8, 2010. Published By Foundation of Computer Science



- 162.** Multimodal Biometric Score Fusion Using Gaussian Mixture Model and Monte Carlo Method. J. Comput. Sci. Technol. 25(4): 771-782 (2010)
- 163.** Multimodal person verification system using face and speech. Procedia CS 2: 181-187 (2010).
- 164.** Probabilistic Neural Network based Approach for Handwritten Character Recognition, International Conference On Advances in Computer, Communication Technology & Applications (ACCTA), Bhubaneswar, Orissa, 2010, pp. 9-13.
- 165.** Multibiometric systems: A comparative study of multi-algorithmic and multimodal approaches. Procedia CS 2: 207-212 (2010)
- 166.** Image dewarping and text extraction from mobile captured distinct documents. Procedia CS 2: 330-337 (2010)
- 167.** An Improved and Efficient Rotation Invariant Thinning Algorithm for Binary Document Images, Journal of Intelligent System . 2011.
- 168.** An Improved CART Decision Tree for Datasets with Irrelevant Feature. SEMCCO (1) 2011: 539-549.
- 169.** Designing efficient fusion schemes for multimodal biometric systems using face and Palmprint Pattern Recognition.
- 170.** Particle swarm optimization based fusion of near infrared and visible images for improved face verification. Pattern Recognition 44(2): 401-411 (2011)
- 171.** A Multistage Approach for Handwritten Kannada Numeral Recognition. IICAI 2011: 5-14
- 172.** Comparative Study on Performance of Single Classifier with Ensemble of Classifiers in Predicting Radiological Experts Ratings on Lung Nodules, Indian International Conference on Artificial Intelligence (IICAI -11), Tumkur, ISBN: 978-0-9727412-8-6, pp 393-403,2011.
- 173.** An Approach towards Illumination Reduction and Comparative Analysis of Feature Extraction Methods for Camera Captured Documents. IICAI 2011: 415-426.
- 174.** An Efficient Metric for Evaluating the Quality of Color Image Enhancement, Indian International Conference on Artificial Intelligence (IICAI), Dec 2011.

- 175.** An improved text line segmentation technique, International Conference on Advances in Computing and Communications (ACC), Kochi, 2011.
- 176.** Text Line Segmentation of Unconstrained Handwritten Kannada Script, Proceedings of ACM International Conference on Communication, Computing and Security (ICCCS), 2011.
- 177.** SiMOR: Single Moving Object Recognition, Journal of Intelligent Systems, Vol 20, No. 1, 2011, pp. 33-45.
- 178.** Designing efficient fusion schemes for multimodal biometric systems using face and palmprint. Pattern Recognition 44(5):1076-1088 (2011).
- 179.** SVM Classifier for the Prediction of Era of an Epigraphical Script, International Journal of Peer to Peer Networks (IJP2P) Vol.2, No.2, pg 12-22. 2011.
- 180.** Cancellable Face Biometrics Using Image Blurring published in the International Journal of Machine Intelligence, ISSN: 0975-2927 & E-ISSN: 0975-9166, Volume 3, Issue 4, 2011, pp-272-276.
- 181.** Skew Estimation for Unconstrained Handwritten Documents. ACC (3) 2011: 297-303.
- 182.** A New Run Length based Method for Scene Text Detection. IICAI 2011: 1730-1736.
- 183.** Automatic Decipherment of Ancient Indian Epigraphical Scripts - A Brief Review, International Journal of Computer Science & Emerging Technologies (E-ISSN: 2044-6004) Volume 2, Issue 1, pg 139-143, 2011.
- 184.** Computerized Analysis of Classification of Lung Nodules and Comparison between Homogeneous and Heterogeneous Ensemble of Classifier Model, Hubli, Third National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics, 978-0-7695-4599-8/11, IEEE DOI 10.1109/NCVPRIPG.2011.56, pp 231-234, 2011.
- 185.** An Improved Handwritten Text Line Segmentation Technique. ACC (3) 2011: 289-296
- 186.** Comparative Study on Performance of Single Classifier with Ensemble of Classifiers in Predicting Radiological Experts Ratings on Lung Nodules, Indian International Conference on Artificial Intelligence (IICAI -11), Tumkur, ISBN: 978-0-9727412-8-6, pp 393-403, 2011.
- 187.** A Multistage Approach for Handwritten Kannada Numeral Recognition. IICAI 2011: 5-14.

- 188.** Neural Network based Classification of ECG Arrhythmia Patterns, International Conference on Advances in Mathematical and Computational Methods (AMCM), Tirupati, Volume-1, pp 210-214, 2011.
- 189.** Some Issues on Choices of Modalities for Multimodal Biometric Systems. SocProS 2012: 1513-1523.
- 190.** Multi-Oriented Text Detection in Scene Images. IJPRAI 26(7)(2012).
- 191.** Multi-algorithm Feature Level Fusion Using Finger Knuckle Print Biometric. FGIT-FGCN/DCA 2012: 302-311.
- 192.** Multibiometric: Feature Level Fusion Using FKP Multi-Instance biometric. CoRR abs/1210.0818 (2012).
- 193.** Performance Analysis of Different Facial Feature Extraction Algorithms Across Pose, Lighting, Expression and Robustness: An Overview. ICSIP.
- 194.** Prediction of Lung Nodule Characteristic Rating using Best Classifier Model. Internal Journal of Computer Application, ISSN 0975-8887, Volume 56, No.18, October 2012.
- 195.** Feature Extraction of Currency Notes: An Approach Based on Wavelet Transform, Advanced Computing & Communication Technologies (ACCT), 2012 .Pages 255-258.
- 196.** A Linked List Approach for Unconstrained Handwritten Text Line Segmentation, Journal of Intelligent Systems, 2012.
- 197.** Some Issues on Choices of Modalities for Multimodal Biometric Systems, Proceedings of the Second International Conference on Soft Computing for Problem Solving (SocProS 2012), December 28-30, 2012.
- 198.** An Application of K-means Clustering for Improving Video Text Detection, Proceedings of the International Symposium on Intelligent Informatics ISI12, Chennai, India, 2012, pp. 41-47.
- 199.** In vitro regeneration of high yielding indica rice (*Oryza sativa* L.) varieties, Journal of Environmental Science and Natural Resources. 2012.
- 200.** Biometric vault scheme using data hiding and standard encryption, published in Springer journal, Emerging Research in Electronics, Computer Science and Technology, Proceedings of International Conference, ICERECT 2012, Lecture Notes in Electrical Engineering, Vol. 248, ISBN 978-81-322-1156-3.

- 201.** Combining Ensemble of Classifiers using Voting Based Rule to Predict Radiological Ratings for Lung Nodule Malignancy, International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT), Mandya, 2012.
- 202.** Stacked Classifier Model with Prior Resampling for Lung Nodule Rating Prediction, International Conference on Multimedia processing, Communication and Computing Applications (ICMCCA-2012), Bangalore, PESIT, 2012.
- 203.** Sampling Driven Approaches for Lung Nodule Characteristic Rating Prediction, The 3rd International Conference on Intelligent Information Systems and Management (IISM), Coimbatore, pp 52- 56, 2012.
- 204.** A comparative study between Ridgelet PCA and PCA using different distance measure technique for 2D shape recognition and retrieval Proceedings of 2nd World Congress on Information and Communication Technologies (WICT'12) - Online Proceedings, Trivandrum, India, pp. 40-45.
- 205.** Multimodal biometric fusion of face and palmprint at various levels. ICACCI 2013: 1793-1798.
- 206.** A Novel Full Reference Color Image Quality Assessment based on Energy Computation in Wavelet Domain, Journal of Intelligent Systems, Vol. 22, No. 2, 2013, pp. 155-177. Proceedings of the 2013 Students Research Symposium Co-located with ICACCI-2013, Mysore, India, Aug 22-25, 2013.  
2011,
- 207.** Classifiers in Context: Prediction of Radiological Characteristic Ratings for Lung Nodule Malignancy International Journal of Applied Information Systems (IJ AIS), ISSN: 2249-0868, Volume 5, No.2, January 2013.
- 208.** A Survey on Face Recognition Under Partial Visibility, State level conference, Sharadavilas, Mysore, 2013.
- 209.** Incorporating Template Security of Face Biometrics Using Different Edge Detection Methods published in Elsevier journal, Seventh International Conference on Image and Signal Processing (ICISP-2013), ISBN 9789351071068.
- 210.** Enhancing Template Security of Face Biometrics by Using Edge Detection and Hashing published in International Journal of Image Processing, Volume 7 Issue 4 (IJIP-2013), ISSN: 0973–8215.

- 211.** A Novel Full-Reference Color Image Quality Assessment Based on Energy Computation in the Wavelet Domain. J. Intelligent Systems 22(2): 155-177 (2013).
- 212.** Dating of Ancient Epigraphs using Random Forest Classifier, pg 331-339, International Conference on Emerging Computation and Information Technologies (ICECIT-2013), Elsevier publications, Siddaganga Institute of Technology, 2013.
- 213.** A Robust Analysis of FLD and Orthogonal FLD on Handwritten Characters,
- 214.** International Conference on Communication Systems and Network Technologies - (CSNT), Gwalior, India, 2013, pp. 105-108.
- 215.** Indexing Large Class Handwritten Character Database, 2nd International Symposium on Intelligent Informatics (ISI), Springer, 2013, pp. 227-234.
- 216.** A New Framework for Retinex based Color Image Enhancement using Particle Swarm Optimization, International Journal of Swarm Intelligence, Inderscience, 2013.
- 217.** eCS: enhanced Character Segmentation - A Statistical Concept Approach International Conference on Mining Intelligence and Knowledge Exploration (MIKE), Springer, 2013.
- 218.** Enhancing Template Security of Face Biometrics by Using Edge Detection and Hashing. CoRR abs/1401.5632 (2014).
- 219.** GPU Based Password Cracking of Compromised Systems using MD5 Hashing Emerging Research in Computing, Information, Communication and Applications (ERCICA 2014), ISBN: 9789351072638, Vol.3.
- 220.** GPU Based Parallel Hashing Verification for Biometric Smart Cards and Aadhaar IDs International Conference on Electronics and Communication Systems (ICECS-2014), ISBN: 978-1-4799-2320-5/14, pp. 407-410.
- 221.** Performance Analysis of Random Forests with SVM and KNN in Classification of Ancient Kannada Scripts, International Journal Of Computers and Technology(IJCT), Vol. 13, No. 9, pg 4907-4921, 2014.
- 222.** Feature Extraction and Recognition of Ancient Kannada Epigraphs, pg 469-478, Proceedings of International Conference on Computational Intelligence in Data Mining (ICCIDM-2014)- Volume 3, Smart Innovation, Systems and Technologies 33, Springer publications, Veer Surendra Sai University of Technology( VSSUT), 2014

- 223.** Zernike Moment features for the Recognition of Ancient Kannada Base Characters, International Journal of Graphics & Image Processing (IJGIP), Volume 4, Issue 2, pg 99-104. 2014.
- 224.** Feature Extraction and Recognition of Ancient Kannada Epigraphs, pg 469-478, Proceedings of International Conference on Computational Intelligence in Data Mining (ICCIDM-2014)- Volume 3, Smart Innovation, Systems and Technologies 33, Springer publications, Veer Surendra Sai University of Technology (VSSUT), 2014.
- 225.** Coslets: A Novel Approach to Explore Object Taxonomy in Compressed DCT Domain for Large Image Datasets. ISI (1) 2014: 39-48.
- 226.** An Exploration of Mixture Models to Maximize between Class Scatter for Object Classification in Large Image Datasets. SIRS 2014: 451-461.
- 227.** Recognition of Ancient Kannada Epigraphs using Fuzzy-Based Approach, pg 657-662, International Conference on Contemporary Computing and Informatics (IC3I-2014), IEEE publications ,SJCE, Mysore, 2014.
- 228.** Classification of ancient epigraphs into different periods using Random Forests, pg 172-178, Fifth International Conference on Signal and Image Processing (ICSIP-2014), IEEE publications , BNMIT, 2014.
- 229.** A Survey on Face Recognition under Partial Visibility – National conference, Sharadavilas Mysore, 2014.
- 230.** A New Framework for Retinex based Color Image Enhancement using Particle Swarm Optimization. CoRR abs/1409.4046 (2014).
- 231.** Recognition of Historical Documents using Gabor and Zonal Features, Signal & Image Processing : An International Journal (SIPIJ) Vol.6, No.4, pg 57-69, August 2015.
- 232.** A Robust Script Identification System for Historical Indian Document Images, Malaysian Journal of Computer Science (MJCS, Vol. 28(4), pp 283-300, 2015. (ISI-Cited Publication).
- 233.** Fourier Features for the Recognition of Ancient Kannada Text, Proceedings of Second International Conference on Computational Intelligence in Data Mining (ICCIDM-2015) - Volume 1, Advances in Intelligent Systems and Computing 410, Springer publications, pg 421-428, 2015.

- 234.** Linear Regression Line Based Face Recognition - International Journal of Computer Applications November 2015.
- 235.** Partial Face Recognition by Template Generation- International Conference on Emerging Research in Electronics, Computer science and Technology, ICERECT, Mandy, -2015.
- 236.** Enhancement and Segmentation of Historical Records, Vol 5, No.13, pg 95-113, Fifth International Conference on Digital Image Processing and Pattern Recognition (DPPR 2015), Computer Science Conference Proceedings – AIRCC publications, Chennai, 2015.
- 237.** Animal Classification System: A Block Based Approach. International Conference on Advanced Computing Technologies and Applications (ICACTA- 2015).
- 238.** Linear Regression Line Based Partial Face Recognition, International Journal of Computer Applications, IJCA,2015.
- 239.** Partial Face Recognition by Template Matching, International Conference on Emerging Research in Electronics, Computer science and Technology, ICERECT,Mandya,2015.
- 240.** A Novel Term Class Relevance Measure for Text Categorization. International Conference on Advanced Computing Technologies and Applications (ICACTA- 2015).
- 241.** Small Eigenvalue Based Skew Estimation of Handwritten Devanagari Words. The Fourth International Conference on Mining Intelligence and Knowledge Exploration MIKE 2015: 216-225.
- 242.** Multithreading approach for face part localization. IEEE International Advance Computing Conference IACC 2015.
- 243.** Efficient Implementation of Parallel Sorting algorithm using multicore to many core processor. Proceedings with ISBN Number: 978-81-930115-1-5.2015.
- 244.** An Enhanced natural scene Classification based image browsing and retrieval system. National Conference on Recent trends in Physics, Mathematics and Engineering. Proceedings with ISBN Number: 978-81-930115-1-5. 2015.
- 245.** Hybrid Tree Guided Patch Matching, International Conference on Virtual Reality and Visualization. 2015.

- 246.** Using Hidden Markov Model for dynamic malware analysis: First impressions. International Conference on Fuzzy Systems and Knowledge Discovery, FSKD 2015: 816-821.
- 247.** A Novel Approach to Signature Verification and Identification, International Conference on Computer Communication and Informatics, ICCCI 2016, Coimbatore.
- 248.** New Sharpness Features for Image Type Classification Based on Textual Information. Document Analysis Systems, DAS, 2016.
- 249.** Adaptive Histogram Analysis for Scene Text Binarization and Recognition, Malaysian Journal of Computer Science (MJCS), (ISI-Cited Publication). 2016.
- 250.** Text Line Segmentation in Degraded Historical Document Images, Egyptian Informatics Journal, (ISI-Cited Publication). 2016.
- 251.** Character Segmentation using Watershed Model from Degraded Text Lines, International Journal of Electronics and Communication (AEUE).2016.
- 252.** Fourier Coefficients for Fraud Handwritten Document Classification Through Age Analysis, 15th International Conference on Frontiers in Handwriting Recognition (ICFHR-2016).
- 253.** Script Independent Approach for Multi-Oriented Text Detection in Scene Image, Neurocomputing, 2016.
- 254.** Counting the Number of Persons in a Crowd Based on skin color Segmentation, First International Conference on Image processing and Pattern Recognition, International Conference on Recent Trends in Image Processing and Pattern Recognition, RTIP2R, Bidar, 2016.
- 255.** Gabor Texture Kernels for Partial Face Recognition, First International Conference on Image processing and Pattern Recognition, International Conference on Recent Trends in Image Processing and Pattern Recognition, RTIP2R, Bidar, 2016.
- 256.** LBPV Based Partial Face Recognition, International Journal of Computer Science Issues, IJCSI, 2016.
- 257.** A new approach to Face Detection under Partial visible conditions based on Fusion, International Journals of Advanced Research in Computer Science and Software Engineering, IJARCCSE, 2016.



- 258.** Recognition and Classification of Animals based on Texture Features through parallel computing, International Conference on Cognitive Computing and Information Processing, CCIP, Mysuru 2016.
- 259.** Supervised and Unsupervised learning in Animal Classification, International Conference on Advances in Computing, Communications and Informatics, ICACCI, Jaipur 2016
- 260.** Identification and Classification of fruit diseases, Internal Journal of Engineering Research and Applications, IJERA Vol6. Issue 7, pp14-20, 2016.
- 261.** Contour Restoration of Text Components for Recognition in Video/Scene Images, IEEE Transaction in Image Processing (TIP), 2016.
- 262.** Robust Analysis of Multibiometric Fusion versus Ensemble Learning Schemes : A case study using Face and Palmprint, International journal of Biometrics and Bioinformatics (IJBB), pp - 24- 33. 2016
- 263.** Multi-modal Biometric system on various levels of fusion using LPQ features, Journal of Information and Optimization Sciences, (JIOS). 2016
- 264.** Combination of Physiological and Behavioral modalities based on score level fusion, IEEE International conference on Electrical, Computer and communication technologies. 2016.
- 265.** Evaluation of texture features for Biometric verification system using Handvein and finger knuckleprint, First International Conference on Image processing and Pattern Recognition, International Conference on Recent Trends in Image Processing and Pattern Recognition, RTIP2R 2016.
- 266.** A new approach to Face Recognition under Partial visible conditions based on Fusion, International Journals of Advanced Research in Computer Science and Software Engineering, IJARCCSE, 2016.
- 267.** Partial Face Recognition System (PFRS): an approach based on Graph Matching, International Journal of Engineering and Science, IJES, 2016.
- 268.** Detection and Rectification of Distorted Palm Print Images, International Journal of Engineering and Science, IJES, 2016.

- 269.** Graph Based Approach For Distorted Palm Print and Vein Recognition, International Journal of Engineering Research and Development, IJERD.2016.
- 270.** Face Recognition Under partial visibility: Classifiers Fusion based Approach, International organization of Scientific Research Journal of Engineering, IOSRJEN, 2016,
- 271.** Verification of fingerprint for Person identification using biometric, International Journal of Engineering and Science, IJES, 2016.
- 272.** Fingerprint Verification System using Minutiae Extraction Technique, International Journal of Engineering and Computer Science, IJECS, 2016.
- 273.** Face Recognition in Translucent and Diffused Images, The Fourth International Conference on Mining Intelligence and Knowledge Exploration, MIKE,2016.
- 274.** Riesz Fractional Operator for Enhancing License Plate Detection and Recognition System, IEEE Transaction on Circuit System and Video Technology. 2017.
- 275.** Animal Tracking and Detection System, Neurocomputing. 2017
- 276.** Feature level fusion of texture based methods: A comparative study, International Conference on Communication and Computing. 2017
- 277.** Text Line Based Symbolic Approach for Fraud Handwritten Document Identification, IEEE Transactions on Information Forensics and Security, 2017.
- 278.** Sharpness and Contrast Features for Word-Wise Image Type Classification, International Conference on Document Analysis, ICDAR 2017.
- 279.** New Stroke Width Symmetry Features for Classification of Multi-Type License Plate Images, International Conference on Document Analysis, ICDAR 2017.
- 280.** Multi- Oriented-Type Text Detection and Recognition in Video/Scene/Born Digital Images, IEEE Transactions on Circuit System and Video Technology, 2017.
- 281.** Skin Color Segmentation for Persons detection, International Conference on Signal and Image Processing, ICSIP,2017
- 282.** Partial Face Recognition Based on Gabor Texture Kernels, International Conference on Signal and Image Processing, ICSIP,2017