BIO-DATA OF DR. D. S. GURU

CURRENTLY:

PROFESSOR, DEPARTMENT OF STUDIES IN COMPUTER SCIENCE,
MEMBER, WORKING GROUP FOR DISTANCE EDUCATION BUREAU (DEB), UGC.
MEMBER, EXPERT COMMITTEE TO FINE TUNE NEP DRAFT REGULATIONS-2023, UGC.
MEMBER, EXPERT COMMITTEE UGC-NET BUREAU, UGC.

EARLIER:

MEMBER, BOARD OF MANAGEMENT, PRAVARA INSTITUTE OF MEDICAL SCIENCES
(DEEMED TO BE UNIVERSITY), LONI, MAHARASHTRA
(NOMINATED BY MHRD, GOVERNMENT OF INDIA) (2017-2020)

VISITING RESEARCH SCIENTIST (ON SABBATICAL) , NYMO AICITTA INTELLIGENT TECHNOLOGY PVT LTD, BANGALORE. (NOV. 2019 – OCT. 2020)

CHAIRMAN, DEPT OF STUDIES IN COMPUTER SCIENCE (APRIL 2016 – MARCH 2018, NOV. 2020 - NOV. 2022)

CHAIRMAN, ADMISSION REFORMATION AND IMPLEMENTATION COMMITTEE (2017-2019)

FOUNDER DIRECTOR, DIRECTORATE OF DISTANCE EDUCATION (FEB. 2018- NOV. 2019)

DIRECTOR, INTERNAL QUALITY ASSURANCE CELL (MAY 2018 – OCT. 2019)

CHAIRMAN, BOARD OF STUDIES IN COMPUTER SCIENCE (PG & UG) (2013-2016)

CHIEF COORDINATOR, PG ENTRANCE EXAMINATION-2016

AND

NODAL OFFICER, CBCS EDUCATION (2009-2014)

ALSO:

FOUNDER TRUSTEE, MAHARAJA EDUCATION TRUST (R), MYSORE

FOUNDER PRESIDENT, SRI GURUMALLESHWARASEVA SAMITHI (R), DEVANUR

Social Media Interviews:

* Bimba Program, Mysuru Akashavani, 2008.
* Saadhakara Hejje Programme on Ciri TV, 2017. Link: HTTPS://YOUTU.BE/HTTYVRHKYB0

DBLP Link: https://dblp.uni-trier.de/pers/hd/g/Guru:D=_S=

Google Scholar Link: HTTPS://SCHOLAR.GOOGLE.CO.IN/CITATIONS?USER=OWIOLCAAAAAJ&HL=EN

UNIVERSITY OF MYSORE, MANASAGANGOTRI,

MYSORE - 570 006, INDIA.

01. Personal details.

Name	:	Dr. D. S. GURU
Father's Name & Occupation	:	Late. D. M. Shanthabasavaiah Rtd. Head Master.
Permanent address	:	Devanur - 571 119 Nanjangud Taluk Mysore District, INDIA. Mobile: +91-96202 28005
Address for Correspondence		
(Off) Professor Dept. of Studies in Computer Science, University of Mysore Manasagangotri, 570 006 MYSORE, INDIA.	:	(Res) # 830, VISHESHAPEKSHA, Kanakadasa Nagar, 3rd Stage, Dattagalli, Mysore 570 022 MYSORE, INDIA.
Phone : +91-821-2419325		+91-821-2415355
E-mail	:	dsg@compsci.uni-mysore.ac.in, dsguruji@yahoo.com
Date of Birth	:	July 27, 1970.
Place of Birth	:	Devanur, Mysore District, INDIA.
Sex	:	Male.
Nationality	:	Indian.
Marital Status	:	Married, Blessed with a son and a daughter.

02. Educational Details

- **Ph.D. (1997 - 2000)** Doctorate in Computer Science from the University of Mysore under the supervision of Prof. P. Nagabhushan

  Title: Towards accurate recognition of objects employing a partial knowledge base: Some new approaches

  (An extensive exploration of efficient TOPOLOGY and SHAPE based algorithms for 2D-object recognition by creating a partial knowledge base)

- **M.Sc. (1991-1993)** Master of Science in Computer Science from the University of Mysore.

  SECURED FIRST RANK WITH 78.25% OF MARKS.

  Project: "SYNTHESIZER+": A MINIMAL RDB DESIGNER.

(An automated software tool for the minimal Relational Data Base design with respect to a given set of integrity constraints in general, functional dependencies in particular. The designs produced are shown to be minimal. A novel idea was incorporated)

* **Based on this project work, two technical papers were presented in student conferences and one of them was awarded a best prize**.

- **B.Sc. (1988-1991)** Bachelor of Science in Physics, Mathematics and Computer Science from the University of Mysore.

SECURED EIGHTH RANK WITH 80.33% OF MARKS.

03. Awards

- Recognized as "Best Ethical Teacher" from Rotary north, Mysore.
- Awardee of ARP (Award for Research Publication) by Vision Group of Science and Technology, Karnataka State Government under Engineering Sciences for the year 2009 – 2010 based on research publication.
- Awarded BOYSCAST FELLOWSHIP by the Department of Science and Technology, Govt. of India to visit Michigan State University for advanced research for 6 months from April-2005 to Sept. 2005 as a post-doctoral work.
- Awarded National Merit Scholarship during PG. Studies.
- Qualified in National Eligibility Test (1995) accredited by UGC, which is mandatory for any faculty position in Universities.
- Awarded the best student paper presentation prize in CSI convention – 1993.

04. Professional Experience

04.01 Regular

- Feb. 2012- **Professor,** Dept. of Studies in Computer Science, University of Mysore, Mysore.
- Feb. 2009 – Feb. 2012 **Associate Professor**, Dept. of Studies in Computer Science, University of Mysore, Mysore.
- Feb. 2006 - Feb. 2009 **Reader** Dept. of Studies in Computer Science, University of Mysore, Mysore.
- Feb. 2001 to Jan. 2006 - **Senior scale Lecturer,** Dept. of Studies in Computer Science, University of Mysore, Mysore.
- Oct. 1996 to Jan. 2001 - **Lecturer**, Dept. of Studies in Computer Science, University of Mysore, Mysore.

04.02 Additional

- **Visiting Research Scientist** (on Sabbatical), Nymo AiCitta Intelligent Technology Pvt Ltd, Bangalore. (Nov.2019 – Oct. 2020)

- **Visiting professor**, Huanghuai University of China, Zhumadian, China, April 2008.
- **Adjunct Professor**, International School of Information Management (ISiM), University of Mysore, Mysore (Aug. 2007 – July 2012).
- **Adjunct Assistant Professor**, Vidhyaranya Academy of Computing, Affiliated to University of Mysore, Mysore (Nov. 1995 to Oct. 1996)
- **Lecturer (Temporary)**, Dept. of Studies in Computer Science, University of Mysore, Mysore (Oct. 1993 to Sept. 1996).

05. Administration Experience

- **Chairman,** Department of Studies in Computer Science, Manasagangotri, Mysore (April 2016 – March 2018 and Nov. 2020 – Nov. 2022)
- **Founder Director,** Directorate of Distance Education, UoM (Feb. 2018 – Nov. 2019).
- **Director**, Internal Quality Assurance Cell, UoM (May 2018-Oct. 2019).
- **Chairman,** Board of Studies (University of Mysore)
    - Computer Science (PG and UG) (Nov. 2009 – Aug. 2010), (Oct. 2014 – Oct. 2017).
    - Board of Studies in Computer Science & Engineering (Artificial Intelligence & Machine Learning) (June 2021 - June 2024)
    - Board of Studies in BCA (Internet of Things) (UG) (March 2021- March 2024)
    - Board of Studies in BCA (Cloud Computing and Digital Science) (UG) (March 2021 - March 2024)
- **Chairman,** Admission Reformation and Implementation Committee (May 2017 – Oct. 2019).
- **Joint Coordinator,** PG Entrance Examination-2016, University of Mysore. (2015 - 2016)
- **Nodal Officer**, CBCS Education, University of Mysore, Mysore (July 2009 – June 2014)
- **Chairman,** Governing Council, Maharaja Institute of Technology Mysore, Belavadi, SR Patna Taluk, Mandya District (Sept. 2019 – Sept. 2022)
- **Chairman**, Board of Examiners (University of Mysore)
    - BCA (Cloud Computing and Digital Science) and BCA (Internet of Things) (March 2021 – March 2024)
    - Bachelor of Engineering (BE) in Computer Science and Design, School of Engineering.
- **Chairman**, Infrastructure and Technology Reforms Committee, Tumakuru University, Tumkur. (October 2022 -)

06. Professional Recognition.

- **Member,** Board of Management, Pravara Institute of Medical Sciences, Lony, Maharashtra (Nominated by MHRD, Govt of India) (2017 – 2020)
- **Member,** Committees constituted by University Grants Commission (UGC), New Delhi.
    - Working Group for Distance Education Bureau (DEB) (Dec. 2022-)

  - Expert Committee to fine tune NEP draft Regulations-2023(July 2023-)
  - Expert Committee UGC-NET Bureau (July 2023-)

- **Member**, School Research Board, School of Computing and Informatics, Vignan's Foundation for Science, Technology and Research (VFSTR), Deemed to be University, Guntur, Andra Pradesh. (Nov. 2022-)
- **Member,** Board of Appointment, CFTRI Mysuru, SJCE Mysuru, M G University (2018-), Kannur University (2021 -), University of Delhi (2020-), Jawaharlal Nehru University (2020 -).
- **Member,** State Level Board of Studies in Computer Science for framing model syllabus and regulation for Computer Science Education under National Educational Policy (NEP), Karnataka Government.
- **Member**, Board of Studies (University of Mysore)
  - Computer Science (PG), University of Mysore. (1996-)
  - Information Management (PG), University of Mysore. (2009-2012), (2014-2017)
  - Library & Information Science, University of Mysore. (2016-2019)
  - Statistics (2016-2019)
  - Professional Communication (RIIIT, PG) , University of Mysore. (2010-2012)
- **Member**, Board of Studies (Other Institutions)
  - Computer Science and Engineering, Walchand College of Engineering, Sangli, Maharastra. (March 2022 -)
  - Computer Science (M.Sc & MCA), Kuvempu University, Shankaraghatta, Shivamogga. (April 2023 -)
  - Computer Science (PG), SBRR Mahajana First Grade College (Autonomous), Mysuru. (Sept. 2022 -)
  - Computer Science (PG), JSS College of Arts, Commerce and Science (Autonomous), Ooty Road, Mysuru. (2013 - 2017)
  - Computer Science and Engineering, School of CSE, RV University, Bangalore. (March 2022 -)
  - Computer Science (PG) and MCA, Kuvempu University, Shivamogga. (May 2017 – May 2020)
- **Member**, Board of Studies, University of Calicut, University of Mangalore, Karnataka University, Gulbarga University, Bangalore University, Bangalore Central University, JSS college for Women (Autonomous), Yuvaraja College (Autonomous), Many other autonomous colleges and Universities.
- **Member,** Technical Advisory Committee, Abhijatha Kannada Literary Welfare Project, Kannada Pusthaka Pradhikara, Karnataka State Government. (2019-)
- **Member,** Technical Supervisory Committee Planning, Approval and Implementation of projects, e-Kannada Scheme, Karnataka Government. (2020-)
- **Member,** State level Executive Committee, Unified University and College Management System(UUCMS) Design, Nominated by Karnataka Government. (Dec. 2020-)
- **Member,** Academic Council

  - NITTE Meenakshi Institute of Technology, (Autonomous Institute under VTU) Banglore. (July 2021 –)
  - JSS College for Women, Saraswathipuram, Mysuru. (2011- 2013)
  - JSS Institute of Speech and Hearing, Saraswathipuram, Mysuru. (2015- 2018)
- **Member**, Governing Council
  - Citizen First Grade College, Nanjangud.(University Nominee)
  - JSS Institute of Speech and Hearing, Mysore, (2018-)
  - JSS Teacher Training College, Chamaraja Nagara,(2020-)
- **Member**, Board of Examiners in Computer Science M.Sc.Tech/ M.S. (IT)/ M.Sc./ MCA & M.Tech, University of Mysore, Mysuru. (January 2023 –)
- **Member**, Board of Examiners (both UG and PG), University of Mysore (many times)
- **Sectional Secretary**, Information Communication Science and Technology Section, 103rd Indian Science Congress 2016 held at University of Mysore from 3rd to 7th Jan 2016.
- **Member,** Post-Graduate Sports Council, University of Mysore (2015-2018)
- Was assessed by students as the top **rank 1 (best)** faculty in the department.
- Worked as a **Subject Expert**, Karnataka Public Service Commission, Karnataka Govt 1997.
- **Member**, Core Committee, University of Mysore in implementing the choice based credit based system for the entire university.
- Assisted the Chairman of the Department of Studies in Computer Science in designing and implementing M. Tech in Computer Science and Technology, M. Tech in Computer Cognition Technology and 3 years M.S (integrated) in Computer Science and Technology programs in University of Mysore and also to restructure the same programs towards credit based, choice based continuous assessment patterned programs.
- The **first permanent faculty** member in the discipline of Computer Science and Technology, University of Mysore, Mysore.
- **Member,** Board of Appointment of regular employees, Universities outside Karnataka including Jawaharlal Nehru University, JNU Delhi and MG University, Kerala.
- **Chairman and Member**, Board of Adjudicating Committee, Doctoral Thesis, of many universities including IIT Mumbay, IIIT Allahabadh, Anna University, Cochin University of Science and Technology, University of Kerala, Kannur University, Mother Theresa Univeristy, PSG Tech Coimbatore, Nanded University, and many other.
- **Visiting faculty**, Mangalore University, Mangalore (1998- 2002)
- Worked as the **Treasurer**, **Vice President**, **Student Counselor** and **President** Computer Society of India, Mysore Chapter.
- **Chairman and Member** (many times), Selection committee, admission to M.Sc, MCA, M.Tech and M.S, University of Mysore.
- Have been actively involved in teaching PG programs such as M.Sc Computer Science, MCA Master of Computer Application, M.Tech in Computer Science and Technology, M.Tech in Computer Cognition and Technology and M.S (integrated).

- **Resource person** for UGC/AICTE/ISTE orientation, refresher and short term teachers training courses at Academic colleges, Human Resource Development Centers, and engineering colleges in Mysore, Hyderabad, Trivandrum, Calicut, Bangalore, Darawar and many others.

07. Research Recognition

- ❖ Served as a **General Chair**, Second International Conference on Data Analytics and Learning 2022 on 30th- 31st Dec. 2022, Mijar, Moodbidri, India, **ICDAL22.**
- ❖ Served as **Advisory Board Member**, Sixth IAPR International Conference on Computer Vision and Image Processing (CVIP 2021), IIT, Ropar, Punjab, 03th - 05th Dec. 2021.
- ❖ **Associate Editor,** International Journal of Pattern Recognition, Elsevier Science, Nederland. **A top journal in the field of pattern recognition.**
- ❖ **Have been identified as a reviewer for**
  - (a) International Journal of Pattern Recognition Letters, Elsevier.
  - (b) Journal of Pattern Recognition, Elsevier.
  - (c) Journal of Document Analysis and Recognition,
  - (d) Journal of Image and Vision Computing,
  - (e) IEEE Transactions on Neural Networks.
  - (f) IEEE Transactions on Patter Analysis and Machine Intellegence
  - (g) IEEE Transactions on systems, Man, and cybernetics
  - (h) IEEE transactions on Image Processing
  - (i) Journal of Information systems

  Etc.,
- ❖ Delivered several Webinars on Machine Learning, Data Structures, Artificial Intelligence during Covid-2019 pandemic situation.
- ❖ Delivered many talks during AICTE ATAL FDP program conducted by various institutes across India.
- ❖ Served as an **Organizing Chair**, International Conference on Data Analytics and Learning 2018 (DAL'18), Mysore. **DAL'2018**
- ❖ Served as a member of **Program Committee**, on Document Analysis and Recognition, Kyoto, Japan. **ICADAR2017**
- ❖ Served as a **General Chair**, International Conference on Cognition and Recognition, 2016, MIT Mysore. **ICCR2016, ICCR2021.**
- ❖ Served as a member of **Program Committee**, International Conference Series -Mining Intelligence and Knowledge Exploration (MIKE), **MIKE2013 - MIKE2018.**
- ❖ Served as a **Program Chair**, International Conference on Multimedia data Communication and Computer Applications 2012. **ICMCCA2012.**
- ❖ Served as a **program chair**, International Conference on Signal and Image Processing, 2009, Mysore. **ICSIP2009.**
- ❖ Served as an **Organizing Secretary**, International Conference on Cognition and Recognition, 2011, Mysore. **ICCR2011**
- ❖ Delivered an invited talk at Marshal University, West Verginia state university, USA.
- ❖ Delivered an invited talk at International Conferences **ICCIMA-07**, **ICCBIR'08**, **RTIP2R 2016, RTI2PR 2018**, **CVIP2020**, **ICCET2020.**

- ❖ Have been working as a referee / reviewer for National and International Conferences including **ACM** and **IEEE** sponsored conferences.
- ❖ Have been chairing sessions in National and International Conferences, **ICDAR, NCDAR, ICCIMA, ICVGIP** etc.
- ❖ Recognized as a research guide to supervise candidates working towards M.Sc (Tech) by Research and Ph.D in Computer Science and Technology, University of Mysore.
- ❖ Delivered sequence of lecturers on Research and its importance and Documentation at National workshop conducted by National Engineering College, Kovilpatti, November 17-18, 2006.
- ❖ Served as a member of the organizing committees, National Conference on Document Image Analysis and Recognition, **NCDAR2001** and **NCDAR2003** and International Conference on Cognition &Recognition, **ICCR2005** and **ICCR2008**.
- ❖ Worked as resource person in several Symposiums, Workshops and Short-term courses.
- ❖ Established and have been the person in charge, Research Lab (DALL), Department of Studies in Computer Science, University of Mysore, Mysore.
- ❖ Served as the team leader in conducting a three days workshop on image processing at Lady Doak College, Madurai, Tamil Nadu, Feb 18^{th} – 20^{th} , 2002.
- ❖ Pixel Show-2004, State-level Technical Seminar on "Document Image Processing, Mainframe, Net and Embedded system", Academy of Muthayammal College of Arts and Science, Rasipuram, Tamil Nadu, 7th Feb. 2004. (Resource person).
- ❖ Pixel Show – 2002, State-level Technical seminar on "Pattern Recognition", Academy of Muthayammal College of Arts and Science, Rasipuram, Tamilnadu, 16^{th} Feb. 2002 (Resource Person).
- ❖ Organized and conducted a week workshop on 'Hands on experience on Image Processing' for the benefit of researchers and faculty members in and around Mysore at the Department of Studies in Computer Science, Manasagangothri, Mysore, 25^{th} of Feb - 2^{nd} of Mar 2002.
- ❖ Guided a number of projects at M.Sc/ M.C.A/ M.Tech level and based on these some papers have been published.

08. Research projects

S.No.	Organisation Name	Nature of project	Duration of project	Amount of grant (Rupees)
01.	UGC, New Delhi	Major Research	2001-2004 (3 years)	3,81,000.00
02.	UGC, New Delhi	Major Research	Jan 2005 -Dec 2007 (3years)	4,62,600.00
03.	DST, New Delhi BOYSCAST	Career Advancement	April 2005 - Sep 2005	7,04,000.00
04.	UGC- UPE, New Delhi	University Development (High Performance Computing Laboratory)	2012-2019	5,00,00,000.00
05.	DST Inspire	Major Research	Oct 2013 - May2018 (4.6 years)	18,37,275.00
06.	Visvesvaraya Technological University	Major Research	2021-2022 2022-2023 (2 Years)	5,00,000.00

09. International Exposure

a) **Michigan State University, East Lansing, MI, USA, April 2005-Sept. 2005**: Visiting researcher, Biometric group, PRIP lab

b) **West Verginia University,USA, Aug. 2005 (One week):** Delivered an invited talk on Eigen values for feature extraction

c) **Marshal University, West Verginia, USA, Sept. 2005 (One week):** Delivered an invited talk on advanced issues in Pattern Recognition and Image Processing

d) Visiting professor, **Huanghuai University of China, Zhumadian, China**, April 2008.

e) Invited speaker of the Workshop on EMERGING APPLICATIONS OF COMPUTER VISION(EACV-2011), **Russia. Moscow**, Russia, 1st–5th November 2011.

10. Member of Professional / Academic bodies.

- Life member of Computer Society of India (CSI). (Membership No: 8675) (Served as student counselor, Vice Chairman, Teacher and Chairman of CSI Mysore Chapter)
- Life member of Indian Society for Technical Education (ISTE). (Membership No: 928)
- Life member of the Society of Statistics, Computer and Applications, New Delhi. (Membership No: LM0202, served as advisory board member and also Executive Council)
- Life member of Indian Unit of Pattern Recognition and Artificial Intelligence (IUPRAI) (Membership No: L 007).
- Life member of Indian Science Congress Association (ISCA). (Membership No: L26774)
- Has been a member of Faculty of Science & Technology, University of Mysore.

11. Areas of interest.

11.1 Academic interest

Discrete mathematics and Graph theory, Automata theory and Compiler design, Analysis and Design of Algorithms, Data structures, Data Base Systems, Software Engineering, Pattern Recognition, Image Processing.

11.2 Research Interest

Object recognition, Feature extraction, Cluster analysis, Spatial knowledge representation, Image retrieval, Advanced data structures, Symbolic data analysis, Image segmentation, Character recognition, Document image analysis, Sign language recognition, Shape analysis, Text classification, Image/Video processing, Biometrics, Automation of Relational database design, Data Mining, Fuzzy Symbolic Databases, Precision Algorithm.

12. Post-Doctoral Research Activities

1. Fuzzy-Symbolic Data Analysis for Object Recognition.
2. Design of Intelligent Fuzzy-Symbolic databases for data/image mining.
3. Classification of Symbolic Data through Symbolic Similarity and Dissimilarity Measures.
4. Design of intelligent models for Image archival and retrieval based on spatial relationship.
5. Automation of Sign language recognition and interpretation.
6. Document image analysis and recognition both printed and hand written.
7. Indexing of Biometrics.
8. Signature recognition/verification (both online and offline)
9. Face recognition and indexing
10. Video Archival and Retrieval and case study with respect to flower images and videos.
11. Text classification and text data dimensionality reduction.
12. Precision Agriculture, Tobacco leaf classification, Mango fruit classification.
13. Classification and retrieval of Vachanas in Kannada from a large corpus.
14. Classification and recognition of celebrity faces in cartoon images.
15. Recognition of children faces in real time videos.

13. Research Supervision

13.1.Ph. D

Awarded

1. **Sumithra R.** Study of Longitudinal Face Data of Children for Stable Face Recognition Accuracy **(2022).**
2. **Mostafa Ali.** Agriculture Information System: Association Rules mining to Analyze Farmers' Complaints **(2020).**
3. **Jyothi V K.** Archival and Retrieval of Flower Videos **(2020).**
4. **Vinay Kumar N.** Dimensionality Reduction of Interval Valued Data **(2019).**
5. **MahamadSuhil.** Representation and Classification of Text Data **(2018).**
6. **ManjunathaK S.** User dependent Online signature verification system**(2017).**
7. **Ravikumar M.** Estimation of Multiple skews in Trilingual Handwritten Document Images (**2016).**
8. **Sharath Kumar Y. H.** Classification and Retrieval of Flowers **(2014).**
9. **Mallikarjuna P. B.** Computer vision based solution for agricultural related problems**(2013).**
10. **Elham D**CARTV:Classification, Archival and Retrieval of Traffic Videos. (Iran) **(2013).**
11. **Nagasundara K B.** Biometric Indexing**(2013)**
12. **Manjunath S.** VARS:Video Archival and Retrieval System **(2012).**

13. **Harish B. S.** Classification of large textual data **(2011).**
14. **Prakash H.N**Analysis and understanding of handwritten signatures **(2010).**
15. **Suraj M.G.** Image processing based approaches for sign language interpretation (**2009).**
16. **H.S. Nagendraswamy.** Fuzzy symbolic approaches for representation and classification of 2D shapes **(2007).**
17. **B. H. Shekar.** Intelligent algorithmic models for 3D object recognition **(2007).**
18. **Bapu B. Kiranagi.** Classification of Symbolic data through symbolic similarity and dissimilarity measures **(2006).**
19. **Dinesh R.** POOR: Partially Occluded Object Recognition – Some new techniques **(2006).**
20. **Punitha P.** IARS: Image Archival and Retrieval systems (**2006).**

Ongoing

21. **Annapurna H.** Writer Dependent Characteristics for Verification and Updation of Reference Offline Signatures.
22. **Prajna S.** Detection and Recognition of faces of celebrities in cartoon images.
23. **Tayebeh Rahmati**. Printed Persian Text recognition in Natural scene images.
24. **Shivaprasad D. L**. Design and Development of Video-based children face recognition and mood prediction system.
25. **Basavanna C**. Kannada Text Classification and Retrieval: A Case Study on Vachana Corpus.
26. **Nandhini D**. (Quality Assurance on Food Products: Computer Vision based Approaches).
27. **Saritha N**. (Retrieval of Cartoon Images).
28. **Swaroop D**. (Enrolled).

13.2 M.Sc (Technology) by Research

Awarded

1. **Siddesha S.** Image Processing and Pattern Recognition approaches for classification of pollen grains **(2008)**.
2. **Naveen**. Representation of document images: Spatial Relationship based approaches **(2006)**.
3. **Girish R**. Pattern Recognition methodologies for recognition and interpretation of a sign language **(2005)**.

14. Workshops/ Symposiums / Conferences attended and Delivered:

(for recent 4 year)

2022-23

1. Inaugurated and Delivered a keynote lecture. Online one week ISTE approved Faculty Development Program on Python Programming & Introduction to Artificial Intelligence, 24th-28th July 2023 at JSS polytechnic for Differently Abled, Mysuru. (24th July 2023)
2. Inaugurated, released Proceedings and Delivered a keynote lecture. The 16th Multi-Disciplinary International Conference on Artificial Intelligence, MIWAI-2023 during 21th – 22th, July 2023, Organised by CVR College of Engineering, Hyderabad, in association with Mahasarakham University, Thailand. (21th July 2023)
3. Inaugurated and Delivered a keynote lecture. A Three-Day FDP on Transforming Research into Publication, Patent, Project and Product during 20th - 22th July 2023 at R.M.K. College of Engineering and Technology, Chennai. (20th July 2023)
4. Delivered a lecture on "Research: Civilization to DataScience (Fourth Paradigm of Science)". One day National level seminar on Research methodology held at JSS Arts, Commerce and Science College, Mysuru in association with Karnataka State Higher Education Council, Bangalore. (24th June 2023)
5. Delivered a talk on "Video Analytics in Reality: Challenges and Opportunities". International Conference on Innovative Technologies and Applications (ICICTA-2023) during 15th -16th June 2023, School of Computer Science and Applications, Reva University, Bangalore. (16th June 2023)
6. Inaugurated and Delivered a keynote lecture. Two-day International conference on "Advances in computing, Control, and Telecommunication Technologies – ACT2023" during 15th-16th June 2023, Rajeev Institute of Technology, Hassan. (15th June 2023)
7. Participated and chaired a session in Two-day Workshop "Kannada Kammata" at Administrative Training Institute during on 27th – 28th Feb. 2023, Organized by Centre for e-Governance (CeG), Government of Karnataka.
8. Delivered a lecture on "Artificial Intelligence in Physical Education", 13th Refresher Course in Physical Education during on 14th -27th Feb. 2023, Sponsored UGC - HRDC, DoS in Physical Education and Sports Sciences, University of Mysore. (22nd Feb. 2023)
9. Inaugurated and Delivered a lecture, Two-day Workshop on "Hypothesis Formulation and Techniques of Data Analysis" during on 27th-28th Jan. 2023, Dept. of Library and Information Science, University of Mysore, Manasagangotri, Mysuru. (27th Jan. 2023)
10. Delivered a talk on "User Dependent Parameters in Biometrics", ATAL sponsored Workshop on "Research Avenues in Biometrics using Handled Devices" during on 05th -16th DEC. 2022, Dept. of Computer Applications, SJCE, Mysuru. (12th Dec. 2022)
11. Delivered an Inaugural speech and keynote, One week national level workshop on "Deep Learning and its Applications" during on 14th -19th Nov. 2022, Dept. of Computer Applications, SJCE, Mysuru. (14th Nov. 2022)
12. Delivered two lectures (Online), 4th Faculty Induction Programme, UGC Sponsored Webinar at HRDC, University of Mysore. (04th Nov. 2022)
13. Served as Advisory committee member, and delivered a talk on "Learning in Digital Era", A two-day National Seminar on E-learning in NEP perspective during on 28th-29th Oct. 2022, Dept. of Studies in Social Work, University of Mysore, Mysuru. (28th Oct. 2022)
14. Delivered a talk on "General Aspects of NEP: Academic Point of View", Faculty Development Program on Artificial Intelligence and Machine Learning Techniques for Precision Agriculture, ATAL sponsored, JSS Academy of Technical Education, Bengaluru. (20th Oct. 2022)
15. Delivered a talk, Five days Faculty Development Programme during on 10th – 14th Oct. 2022, IEEE Circuits and System (CAS), Malnad College of Engineering, Hassan. (12th Oct. 2022)

16. Delivered a convocation address as Chief Guest, 18th Graduation Day Celebration, Sudharsan Engineering College, Sathiyamangalam, Pudukkottai, Tamil Nadu. (08th Oct. 2022)
17. Delivered a talk, One day seminar on New National Educational Policy 2022: Impacts on Future Indian Education System, JSS Academy of Technical Education, Bengaluru. (02nd Sept. 2022)
18. Delivered a Special lecture on "Research: A Philosophical View", One day state level workshop on Research methodology for researchers and teachers, Library and Information centre and IQAC, JSS College for Women, Chamarajanagar. (16th July 2022)
19. Delivered a talk on "Research Opportunities in Machine Learning (Philosophical Views on Challenges and Avenues)", Two day Exchanging Futuristic Ideas for innovative Research during on 08th- 09th July 2022, School of Computing, VFSTR, Vadlamudi, Andhra Pradesh. (08nd July 2022)

2021-22

20. Delivered a lecture (Online) on "Internationalization of Higher Education", UGC Sponsored Webinar HRDC, University of Mysore. (27th June 2022)
21. Delivered a talk on "Research and Documentation", A Research Awareness and Capacity Building Programme, JSS Academy of Technical Education, Bengaluru. (22nd April 2022)
22. Inaugurated and Delivered a Keynote, UGC sponsored Two-day Workshop on Machine Learning and Deployable Artificial Intelligence during on 29th-30th March 2022, Department of Computer Science and MCA, Kuvempu University, Shivamogga. (29th March 2022)
23. Delivered a talk on "Opportunities and Challenges in AI-enabled Vision Applications", Three day national level seminar on Machine Learning and its applications during on 24th – 27th March. 2022, ATME College of Engineering, Mysore. (24th March 2022)
24. Delivered an expert talk (Online) on "Research and Documentation", One week Virtual Faculty Development Programme on "Essential dimensions of High Quality Research" during on 24th Feb. – 03rd March 2022, School of Computer Science, VET Institute of Arts and Science, Erode. (24th Feb. 2022)
25. Inaugurated and Delivered a Keynote (Online), Five Days Faculty Development Programme on Artificial Intelligence Supported by AICTE Training and Learning (ATAL) program during on 21th-25th Feb. 2022, Department of Computer Science, Central University of Kerala. (21st Feb. 2022)
26. Delivered a lecture (Online) on "Machine Learning", UGC Sponsored Webinar at HRDC, University of Mysore on 11th Feb. 2022.
27. Delivered a keynote (Online), International Conference on Humans and Technology: A Holistic and Symbiotic Approach to Sustainable Development (ICHT 2022) during on 17th – 22th Jan. 2022, MES College, Marampally, Kochi. (17th Jan. 2022)
28. Chaired Inaugural Session and delivered presidential address, National Seminar on Soft Computing Techniques to Pattern Recognition (SCTPR21), Department of Studies in Computer Science, University of Mysore. (27th Nov. 2021)
29. Delivered a Keynote (online) on "Machine Learning in Video Analytics", Five day Faculty Development Program (FDP) during on 26th– 30th Nov. 2021, ATAL sponsored Principles of AI, ML and DL (advanced), Department of Studies in Computer Science, University of Mysore. (26th Nov. 2021)
30. Delivered four lectures (Online), UGC Sponsored 3rd Faculty Induction Programme at HRDC, University of Mysore. (13th Nov. 2021 and 20th Nov. 2021)
31. Delivered a lecture (Online) on "Research Methodology and Documentation", Research and Innovation programme, R.M.K College of Engineering and Technology, Chennai. (06th Oct. 2021)

32. Delivered a talk (Online) on "Signature Biometric: Verification and Recognition", Five day Faculty Development Program (FDP) during on 20th - 24th Sep. 2021, ATAL sponsored program, An Insight into Biometrics for Digital Forensics, SJ College of Engineering, Mysore. (21th Sept. 2021)
33. Delivered talk (Online) on "Data Representation in Machine Learning", Faculty Development Series Program on "Mathematics in Artificial Intelligence, Machine Learning and Deep Learning for Faculty and Practitioners" during on 01th- 05th Sept. 2021, Dept. of CSE, KLET, Hubli. (04th Sept. 2021)
34. Delivered two lectures (Online), UGC Sponsored 9th Refresher Course in Mathematical Science at HRDC, University of Mysore. (02nd Sept. 2021 and 03rd Sept. 2021)

2020-21

35. Delivered a keynote speech, Fifth National Level Research Symposium on Computing (RSC 2021) during on 19th – 21st March 2021, TEQIP-III activities, Walchand College of Engineering (WCE), Sangli. (19th March 2021)
36. Delivered an invited speech, Three days International Conferene on Artificial Intelligence and Soft Computing (ICAISC2021) during on 11th – 13th Feb. 2021, Karnataka State Akkamahadevi Women's University, Vijayapura. (11th Feb. 2021)
37. Delivered a talk, ATAL FDP on mathematics for machine learning during on 18th – 22nd Jan. 2021, sponsored by AICTE, SJ College of Engineering, Mysore. (18th Jan. 2021)
38. Delivered an invited talk, International conference on Computer Vision and Image Processing 2020 (CVIP2020) during on 4th - 6th Dec. 2020, Allahabad. (4th Dec. 2020)
39. Delivered a keynote talk, ATAL FDP on Machine Learning and Deep learning for Video Analytics during on 2nd Nov. – 6th Nov. 2020, sponsored by AICTE, Dept. of Computer Science, Mangalore University, Mangalore. (2nd Nov. 2020)
40. Delivered a lecture (online), Alva's TECHNOTHON-2020 held on 27th October 2020, Alva's Institute of Engg. & Technology, Moodbidri. (27th October 2020)
41. Participated and read out a poem in Parents' Kavigosti, 29th Sept. 2020, Excel Public School, Mysore. (29th Sept. 2020)
42. Delivered an invited talk and valedictory address, ATAL 5 days FDP on Computer Vision and Pattern Recognition: Challenges and Opportunities during on 21st – 25th Sept. 2020, sponsored by AICTE, Dept. of CSE, SJ College of Engineering, Mysore. (21st Sept. 2020)
43. Delivered an invited talk, STTP on "Design of Knowledge-Based Systems using Artificial Intelligence and Machine Learning models: In the context of Agricultural and Food Products" during on 07th – 12th Sept. 2020, sponsored by AICTE, Computer Science and Engineering Department(CSE), MIT, MAHE, Manipal. (08th Sept. 2020)

2019-20

44. Delivered a talk, three days webinar on Artificial Intelligence during on 25th - 27th Aug. 2020, sponsored by DST-CURIE, Dept. of Computer Science, Karnataka State Akkamahadevi Women's University, Vijayapura. (25th Aug. 2020)
45. Delivered two invited talks and also a valedictory address (online), ATAL Six days online Short Term Training Program on Machine Learning for Societal Applications during on 24th – 29th Aug. 2020, sponsored by AICTE, PA College of Engineering, Mangalore.
46. Delivered an Exemplary talk, One Week Online faculty Development Programme on Exemplary Practices in Teaching-Learning and Evaluation of Courses in Computer Science and Information Technology during on 3th -7th Aug. 2020, jointly organized by Visvesvaraya Technological University, Belagavi and Indian Institute of Technology, Allahabad. (06th Aug. 2020)

47. Delivered a lecture (online), virtual webinar series on Research Frontiers in Intelligent Computing during on 25th June - 3rd July 2020, BNM Institute of Technology, Bangalore. (27th June 2020)
48. Inaugurated and Delivered a Keynote, two days National level FDP webinar on E-content preparation and effective presentation of online classes using ICT tools during on 22th -23rd June 2020, JSS College of Arts and Commerce, Gudlupet. (22th June 2020)
49. Delivered a keynote, Workshop on Applications of Mathematics, for the 10+ education teachers, Government of Tamil Nadu. (22nd June, 2020)
50. Chaired an inaugural session and delivered an inaugural speech (Also served as Seminar Advisor), International Seminar on Artificial Intelligence: Challenges and Opportunities held on 13th Jan. 2020, SJ College of Engineering, Mysore. (13th Jan. 2020)
51. Co-ordinated a panel discussion (served as a member of advisory board), 5th International Conference on Computing in Engineering and Technology ICCET 2020 during on 09th -11th Jan. 2020, MGM's College of Engineering, Nanded, Maharashtra.
52. Delivered lectures in 122nd Orientation programme, Sponsored by UGC at HRDC, University of Mysore on 23rd Nov. 2019.
53. Delivered a lecture on "Emotional literacy and Dynamic teaching", to the Faculty members of Sheshadripuram College, Mysuru on 06 Sept. 2019.
54. Delivered a lecture on "Learning Models", Second national level workshop on "Data Analytics & Learning – Advanced Topics" during 29th – 31th August 2019, Sponsored by TEQiP III, Dept. of Computer Applications, SJCE, Mysuru. (29h August 2019)
55. Delivered series of lectures on "Research Methodology, Thesis writing and Publication", Five days workshop on Research Methodology and Digital Pedagogy: Under EAP and twinning arrangement during 16th – 20th July 2019, Sponsored by TEQiP III, MLV textile and Engineering College, Bhilwara, Rajasthan. (16th and 17th July 2019)

Note: Up to 2019, more than 200 talks were delivered.

15. Social Responsibility and Services

01. Founder Trustee cum Treasurer, Maharaja Education Trust (R), Mysore, responsible for establishing,
    A. Maharaja Institute of Technology Mysore (MITM), Belavadi, SR Patna Taluke.
    B. Maharaja Institute of Technology Thandavapura (MITT), NanjangudTaluke
    C. Agriculture Food Management Institute, Mysore.
    D. Gopalaswamy Independent PU college, Mysore.
    E. Gopalaswamy High School, Mysore.
    F. MIT First Grade College, Mysore.
    G. Maharaja Education Trust Academy, Mysore.
02. Founder President, GurumalleshwaraSeva Samithi (R), Devanur, responsible for organizing health camps, special programs for school children at native village.
03. Member, Heritage City Lions Club, Mysore, responsible for organizing various camps for the benefits of needy people.

16. Research Outcomes

16.1. Patents Published

1. Anitha Raghavendra, Mahesh Rao, **D S Guru**., **"**Apparatus & Method for Internal Quality Inspection of Agricultural Products", The Patent Office Journal No. 45/2022, Dated 11/11/2022, Application No. 202141020442 A, PP.71960.
2. **D S Guru** and Kavitha R, "Method for Prediction of Shelf-life Period and Edibility of Bread using Artificial Intelligence Enabled Solution", The Patent Office Journal No. 25/2023, Dated 23/06/2023, Application No. 202341031997 A, PP. 45489.

16.2. Publications

	International	**National**	**Total**
Journals	82	09	91
Proceedings	210	51	261
Souvenir	06	-	06
Book Chapters	06	-	06
Grand Total	**304**	**60**	**364**

Citations as on 10/08/2023	
Citations	**3663**
h-index	**31**
i10-index	**84**

	Authored	**Edited**	**Total**
Books	03	07	10
Journals	-	02	02
Grand Total	**03**	**09**	**12**

16.2.1. In International Journals

1. Kapre B S, A M Rajurkar, and **D S Guru**., An Improved Video Keyframe Detection Technique Leads to Video Authentication. International Journal of Engineering Trends and Technology, Vol 71, Seventh Sense Research Group (SSRG) publications, **2023,** pp. 171-189.
2. Divyanth L G, **D S Guru**, Peeyush Soni, Rajendra Machavaram, Mohammad Nadimi, and Jitendra Paliwal., Image-to-Image Translation-Based Data Augmentation for Improving Crop/Weed Classification Models for Precision Agriculture Applications. Algorithms, Vol 401, Multidisciplinary Digital Publishing Institute (MDPI) publications, **2022,** pp. 1-18.
3. Shivakumar G, M Ravikumar, B J Shivaprasad, and **D S Guru**., Signature Extraction from Bilingual Document Images Using Blobs Method. Modern Approaches in Machine Learning & Cognitive Science: A Walkthrough, Vol 1027, Springer, **2022**, pp.283-294.
4. Mallikarjuna P. B. and **D S Guru**., Selective Harvesting of Tobacco Leaves: An Approach Based on Texture Features. Statistics and Applications, Vol 20, SSCA publications, **2022**, pp 33-49.
5. Channabasava Chola, J. V. Bibal Benifa, **D S Guru**, Abdullah Y. Muaad, Hanumanthappa Jayappa, Mugahed A. Al-antari, Hussain Alsalman, and Abdu Gumaei., Gender Identification and Classification of Drosophila melanogaster Flies Using Machine Learning Techniques. Computational and Mathematical Methods in Medicine, Vol 2022, Hidawi publications, **2022**, pp 1-9.
6. Abdullah Y. M, Hanumanthappa Jayappa Davanagere**, D S Guru**, Bibal Benifa, Channabasava Chola , Hussain AlSalman, Abdu H. Gumaei, and Mugahed A. Al-antari., Arabic Document Classification:

Performance Investigation of Preprocessing and Representation Techniques. Mathematical Problems in Engineering, Vol 2022, Hidawi publications, **2022**, pp 1-16.

7. Mestetskiy Leonid M, **D. S. Guru**, J. V. Bibal Benifa, H. S. Nagendraswamy, and Channabasava Chola., Gender Identification of Drosophila Melanogaster based on Morphological Analysis of Microscopic images. The visual computer, Vol 166, Springer, **2022**, pp 1-13.
8. Ravikumar M, B J Shivaprasad and **D.S. Guru**., Enhancement of MRI Brain Images Using Notch Filter Based on Discrete Wavelet Transform. International Journal of Image and Graphics, Vol. 22, World Scientific Publications, **2021**, pp 2250010.
9. Nithyananda B S, G V Naveen Prakash, V N Manjunath Aradhya, Basavaraju H T, **D S Guru**, and Anand A., Generalized Regression Neural Network (GRNN) for the Prediction of CRDI Engine Responses Fuelled with Pongamia Biodiesel. Journal of Advanced Research in Mechanical Engineering and Technology, Vol 8, Advanced Research Publications (ADR), **2021**, pp. 1-8.
10. Lohithashva B H, V N Manjunath Aradhya, and **D S Guru**., An integration of handcrafted features for violent event detection in videos. Theoretical Foundations and Applications, Science Direct (Elsevier), **2021**, pp. 295-305.
11. Shivaprasad B J, M Ravikumar and **D S Guru**., Analysis of Brain Tumor Using MR Images: A Brief Survey. International Journal of Image and Graphics, Vol. 22, World Scientific Publications, **2021**, pp. 2250023.
12. Manjunath Aradhya V. N, H. T. Basavaraju, and **D. S. Guru**., Decade research on text detection in images/videos: a review. Evolutionary Intelligence, vol. 14, Springer, **2021**, pp 405-431.
13. Jyothi V K, Manjunath Aradhya V N, Sharath Kumar, and **Guru D S**., Retrieval of flower videos based on a query with multiple species of flowers. Artificial Intelligence in Agriculture, Vol. 5, Science Direct (Elsevier), **2021,** pp 262–277.
14. Basavaraju H T, Manjunath Aradhya V N, and **D. S. Guru**., Neighborhood Structure-Based Model for Multilingual Arbitrarily-Oriented Text Localization in Images/Videos. International Journal of Interactive Multimedia and Artificial Intelligence, vol 7, Universidad International de la Rioja (UNIR) Publications, **2021**, pp 1-7.
15. Manjunath Aradhya V N, Mufti Mahmud, **D. S. Guru,** Basant Agarwal, and Shamim Kaiser., One-shot cluster-based approach for the detection of COVID–19 from chest X–ray images. Cognitive Computation, Springer, Vol 13, **2021**, https://doi.org/10.1007/s12559-020-09774-w, pp. 873-881.
16. Lokesh Nandanwar, P. Shivakumara, Swati Kanchan, V. Basavaraja, **D. S. Guru**, Umapada Pal, Tong Lu, and Michael Blumenstein., DCT-phase statistics for forged IMEI numbers and air ticket detection. Expert Systems with Applications (ESWA), Vol 164, **2021**, pp 114014.
17. Anitha Raghavendra, **D.S. Guru** and Mahesh K Rao., Mango Internal Defect Detection Based On Optimal Wavelength Selection Method Using NIR Spectroscopy. Artificial Intelligence in Agriculture, Vol 5, Science Direct (Elsevier), **2021**, pp 43-51.
18. Basavaraju H. T, V. N. Manjunath Aradhya, M. S. Pavithra, **D. S. Guru**, and Vikrant Bhateja., Arbitrary oriented multilingual text detection and segmentation using level set and Gaussian mixture model. Evolutionary Intelligence, Vol. 14, Springer, **2020**, pp 881-894.
19. Lohithashva B.H, V.N Manjunath Aradhya, and **D.S Guru**., Violent Video Event Detection Based on Integrated LBP and GLCM Texture Features. Revue Intelligence Artificial (RIA), Vol. 34, International Information and Engineering Technology Association (IIETA) publications, **2020**, pp 179-187.
20. Anitha Raghavendra, **D.S. Guru**, Mahesh K Rao and R. Sumithra., Hierarchical Approach for Ripeness Grading of Mangoes. Artificial Intelligence in Agriculture, Vol. 4, Science Direct (Elsevier), **2020**, pp 243-252.
21. Lohithashva B. H., V. N. Manjunath Aradhya, and **D.S Guru.**, Violent video event detection based on spatio-temporal features. International Journal of Safety and Security Engineering (IJSSE), International Information and Engineering Technology Association (IIETA) publications, **2020**.
22. **Guru D S**, K Swarnalatha, N Vinay Kumar, and Basavaraj S Anami., Effective Technique to Reduce the Dimension of Text Data. International Journal of Computer Vision and Image Processing (IJCVIP), Vol. 10, IGI Global publications, **2020**, pp 67-85.
23. Jyothi V K, **D S Guru**, Y H Sharath Kumar, Deep Learning for Retrieval of Natural Flower Videos. Elsevier Procedia Computer Science, Vol 132, Science Direct (Elsevier), **2018**, pp.1533-1542.

24. Basavaraju H.T, V.N. Manjunath Aradhya, **D.S. Guru**, and B.S. Harish., LoG and Structural Based Arbitrary Oriented Multilingual Text Detection in Images/Video. International Journal of Natural Computing Research (IJNCR), Vol. 7, IGI Global publications, **2018**, pp 1-16.
25. **Guru D S,** Mahamad Suhil, Lavanya Naryana Raju, and N Vinay Kumar., An alternative framework for univariate filter based feature selection for text categorization. Pattern Recognition Letters, Vol. 103, Science Direct (Elsevier), **2018**, pp. 23-31.
26. **Guru D S,** N Vinay Kumar and Mahamad Suhil., Feature Selection of Interval Valued Data through Interval K-Means Clustering. International Journal of Computer Vision and Image Processing (IJCVIP), Vol. 7(2), IGI Global publications, **2017**, pp. 64-80.
27. **Guru D S,** K.S. Manjunatha, S. Manjunath, and M.T. Somashekara., Interval valued symbolic representation of writer dependent features for online signature verification. Expert Systems with Applications, Vol. 80, Science Direct (Elsevier), **2017**, pp. 232-243.
28. Harsha S Gowda, Mahamad Suhil, **D S Guru** and Lavanya Narayana Raju., Semi-Supervised Text Categorization using Recursive K-means clustering. RTIP2R 2016, Vol 709, Springer CCIS, **2017**, pp. 217–227.
29. Lavanya Narayana Raju, Mahamad Suhil, **D S Guru** and Harsha S Gowda (2016)., Cluster Based Symbolic Representation for Skewed Text Categorization. RTIP2R 2016, Vol 709, Springer CCIS, **2017**, pp. 202–216.
30. Manjunatha K.S, S. Manjunath, **D.S. Guru**, and M.T. Somashekara., Online signature verification based on writer dependent features and classifiers. Pattern Recognition Letters, Vol. 80, Science Direct (Elsevier), **2016**, pp. 129-136.
31. Vinay Kumar N, Pratheek, V Vijaya Kantha, K N Govindaraju, and **Guru D S**., Features Fusion for Classification of Logos. Procedia Computer Science, Vol. 85, Science Direct (Elsevier)**, 2016**, pp. 370-379.
32. **Guru D S** and N Vinay Kumar., Class Specific Feature Selection for Interval Valued Data through Interval K-Means Clustering. RTIP2R 2016, Vol 709, Springer CCIS, **2016,** pp. 228–239.
33. Nagendraswamy H S, Chethana Kumara B M, **Guru D S**, and Naresh Y G., Symbolic Representation of Sign Language at Sentence Level. International Journal of Image, Graphics and Signal Processing, Vol. 9, Modern Education and Computer Science press (MECS) Publications, **2015**, pp. 49-60.
34. Sharath Kumar Y H and **Guru D S**., Retrieval of Flower Based on Sketches. Procedia Computer Science, Vol. 46, Science Direct (Elsevier), **2015**, pp. 1577–1584.
35. Sharath Kumar Y. H, N. Vinay Kumar, and **Guru D S.,** Delaunay Triangulation on Skeleton of Flowers for Classification. Procedia Computer Science, Vol. 45, Science Direct (Elsevier), **2015**, pp. 226-235.
36. Sumithra R, Mahamad Suhil, and **Guru D S.,** Segmentation and Classification of Skin Lesions for Disease Diagnosis. Procedia Computer Science, Vol. 45, Science Direct (Elsevier), **2015**, pp. 76-85.
37. **Guru D S** and Mahamad Suhil., A Novel Term_Class Relevance Measure for Text Categorization. Procedia Computer Science, Vol. 45, Science Direct (Elsevier), **2015**, pp. 13-22.
38. **Guru D S,** M. Ravikumar and S. Manjunath., Multiple skew estimation in multilingual handwritten documents. International Journal of Computer Science Issues, Vol. 10, Issue 5, No 2, ProQuest Publications, **2013**, pp. 1694-0784.
39. Elham Dallalzadeh and **Guru D S.,** Shape features of overlapping boundary for classification of moving vehicles. International Journal of Computer Vision and Image Processing, Vol. 3, No 1, ACM Digital Library Publications, **2013**, pp. 42-54.
40. **Guru D S**, P B Mallikarjuna, S Manjunath and M M Shenoi., Machine Vision Based Classification of Tobacco Leaves for Automatic Harvesting. Journal of Intelligent Automation and Soft Computing, Auto Soft Publisher, **2012**, pp 577-586.
41. Harish B S, S Manjunath and **Guru D S**., Text Document Classification: An Approach based on Indexing. International Journal of Data Mining & Knowledge Management Process (IJDKP), vol. 2, No. 1, AIRCC Publications, **2012**, pp. 43 – 62.
42. Nagasundara K B and **Guru D S**., Multi-algorithm based Palmprint Indexing. International Journal of Computer Applications (IJCA) Publications, **2012**, pp. 52 – 57.(Also appeared in the proceedings of the International Conference and Workshop on Emerging Trends in Technology, Mumbai, Maharashtra, India, 2012)

43. Manjunath S and **Guru D S.,** Eigen conjugation for shot boundary detection. International Journal of Machine Intelligence, Vol. 3, No. 4, Bioinfo Publications, **2011,** pp. 241-244.
44. **Guru D S**, Bharath Bhushan, Manjunath S and Harish B S., A novel approach for text classification based on LZW compression technique. International Journal of Machine Intelligence, Vol. 3, No. 4, Bioinfo Publications, **2011**, pp. 364-370.
45. Nagasundra K B, Manjunath S and **Guru D S.,** Indexing of online signatures. International Journal of Machine Intelligence, Vol. 3, No. 4, Bioinfo Publications, **2011**, pp. 289-294.
46. Elham Dallalzadeh and **Guru D S**., Moving vehicles extraction in traffic videos. International Journal of Machine Intelligence, Vol. 3, No. 4, Bioinfo Publications, **2011**, pp. 236-240.
47. Mallikarjuna P B and **Guru D S**., Performance evaluation of segmentation and classification of tobacco seedling diseases. International Journal of Machine Intelligence, Vol. 3, No. 4, Bioinfo Publications, **2011**, pp. 204-211.
48. **Guru D S.** and Sharath Kumar Y H., Skeleton based approach for flower classification. International Journal of Machine Intelligence, Vol. 3, No. 4, Bioinfo Publications, **2011**, pp. 191-198.
49. **Guru D S** , Suraj M G and Manjunath S., Fusion of covariance matrices of PCA and FLD. Journal of Pattern Recognition Letters, Vol. 32, Science Direct (Elsevier), **2011**, pp 432-440.
50. Harish B S, **Guru D S** and Manjunath S., Cluster based Text Classification: A Symbolic Approach. International Conference and Workshop on Emerging Trends in Technology, vol. 9, no. 1, International Journal of Computer Applications (IJCA) Publications, **2011**, pp. 38 – 44.
51. **Guru D S**, Nagasundara K B, Manjunath S and Dinesh R., An Approach for Hand Vein Representation and Indexing. International Journal of Digital Crime and Forensics, Vol.3, No. 2, IGI Global Publishers, **2011**, pp 1-15.
52. **Guru D S**, Sharath Kumar Y H and Manjunath S., Textural Features in Flower Classification. Journal of Mathematical and Computer Modeling, Vol, 34, No 3-4, Science Direct (Elsevier), **2011**, pp 1030-1036.
53. **Guru D S**, Y H Sharath Kumar, and S Manjunath., Texture features and KNN in classification of flower images. Special Issue on RTIPPR (1), International Journal of Computer Applications (IJCA) Publications, **2010,** PP.21-29.
54. Dinesh R and **Guru D S.,** Concept of Triangular Spatial Relationship and BTree for Partially Occluded Object Recognition: An efficient and robust approach. International Journal of Image and Graphics, Vol. 10, No, 3, World Scientific Publications, **2010**, pp 423 – 448.
55. Harish B S, **Guru D S** and Manjunath S., Representation and Classification of Text Documents: A Brief Review. Special Issue on Recent Trends in Image Processing and Pattern Recognition, Vol. 2, International Journal of Computer Applications (IJCA) Publications, **2010**, pp 110 – 119.
56. Prakash H N and **Guru D S**., Retrieval of Offline Handwritten Signatures. International Journal of Futuristic Computer Applications, Vol. 1, No, 18, International Journal of Computer Applications (IJCA) Publications, **2010**, pp 62- 68.
57. Kiranagi B B and **Guru D S**., A New Symbolic Dissimilarity Measure for Multivalued Data Type and Novel Dissimilarity Approximation Techniques. International Journal of Futuristic Computer Applications, Vol. 1, No. 26, International Journal of Computer Applications (IJCA) Publications, **2010**, pp 38- 43.
58. Prakash H. N. and **Guru D S**., Offline Signature Verification an Approach Based on Score Level Fusion. International Journal of Futuristic Computer Application, Vol. 1, No. 18, International Journal of Computer Applications (IJCA) Publications, **2010**, pp. 55-61.
59. Dinesh R and **Guru D S**., Non-parametric adaptive approach for the detection of dominant points on boundary curves based on non-symmetric region of support. International Journal of Image and Graphics, Vol. 9, No. 4, World Scientific Publications, **2009**, pp 541 – 557.
60. Kiranagi B B, **Guru D S.** Manjunath S and B S Harish., MNV for Clustering based on Non Symmetric Symbolic Proximity. International Journal of Recent Trends in Engineering, Vol. 2, No. 1, American Council for an Energy-Efficient Economy (ACEEE) publications, **2009**, pp. 121-124.
61. **Guru D S** and Prakash H N., Online signature verification and recognition: An approach based on symbolic representation. IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 31, No. 6, **2009**, pp 1059 - 1073.

62. Punitha P and **Guru D S**., Symbolic image indexing and retrieval by spatial similarity: An approach based on B-tree. Journal of Pattern Recognition, Science Direct (Elsevier), Vol. 41, **2008**, pp. 2068 - 2085.
63. **Guru D S** and Nagendraswamy H S., Symbolic representation of two-dimensional shapes. Journal of Pattern Recognition Letters, Science Direct (Elsevier), Vol. 28, **2007**, pp 144-155.
64. Nagendraswamy H.S and **Guru D S**., A new method of representing and matching two dimensional shapes. Journal of Image and Graphics, World Scientific Publications, Vol. 7, No. 1, **2007**, pp 377 – 405.
65. Nagendraswamy H. S and **Guru D S**., K-Mutual nearest neighbor approach for clustering two-dimensional shapes described by fuzzy-symbolic features. International Journal of Engineering Letters: Special Issue on Soft Computing in Artificial Intelligence, International Association of Engineers Publishers, Web and Data Mining and Machine Learning, Electronic Letters, Vol. 14, No.1, **2007**.
66. Punitha P and **Guru D S**., An effective and efficient exact match retrieval scheme for image database systems based on spatial reasoning: A logarithmic search time approach. IEEE Transactions on Knowledge and Data Engineering, Published by IEEE Computer Society ,Vol. 18, No. 10, **2006**, pp 1368-1381.
67. Gudivada V N, Nandigam J and **Guru D S**., A learning - centered approach to designing computer science courses. The Journal of Computing Science in College, Consortium for Computing Sciences in College Newsletter, Vol. 21, No. 4, ACM Digital Library Publications, **2006**, pp 96-103.
68. Nagabhushan P, **Guru D S** and Shekar B H., $(2D)^2$ FLD: An efficient approach for appearance based object recognition. Journal of Neurocomputing, Science Direct (Elsevier), Vol. 69. No.7-9, **2006**, pp 934-940.
69. Nagabhushan P, **Guru D S** and Shekar B H., Visual Learning and Recognition of 3D Objects Using Two Dimensional Principal Component Analysis: A Robust and an Efficient Approach. Journal of Pattern Recognition, Science Direct (Elsevier), Vol. 39. No.4, **2006**, pp 721-725.
70. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Sliding window based approach for document image mosaicking. Journal of Image and Vision Computing, Science Direct (Elsevier), Vol. 24. No.1, **2006**, pp 94-100.
71. Dinesh R and **Guru D S.**, POOR: Partially Occluded Object Recognizer. *GESTS* International Transaction Journal on Computer Science and Engineering, Vol. 17. No. 1, Published by Global Engineering, Science, and Technology Society, **2005**, pp 2214-2223.
72. Punitha P and **Guru D S**., An invariant scheme for exact match retrieval of symbolic images: Triangular spatial relationship based approach. Pattern Recognition Letters, Vol 26, No. 7, Science Direct (Elsevier), **2005**, pp 893-907.
73. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., A novel technique for estimation of skew in binary text document images based on linear regression analysis. Journal of Sadhana, Vol 30, Part 1, Published by the Indian Academic Science, **2005**, pp 69-85.
74. **Guru D S** and Kiranagi B B., Multivalued type dissimilarity measure and concept of mutual dissimilarity value for clustering symbolic patterns. Journal of Pattern Recognition, Vol. 38, No. 1, Science Direct (Elsevier), **2005**, pp 151-156.
75. **Guru D S**, Kiranagi B B and Nagabhushan P., Multivalued type proximity measure and concept of mutual similarity value useful for clustering symbolic patterns. Journal of Pattern recognition Letters, Vol. 25, No. 10, Science Direct (Elsevier), **2004**, pp 1203-1213.
76. **Guru D S** and Punitha P., An invariant scheme for exact match retrieval of symbolic images based upon principal component analysis. Journal of Pattern recognition Letters, Vol. 25, No. 1, Science Direct (Elsevier), **2004**, pp 73-86.
77. **Guru D S**, Shekar B H and Nagabhushan P., A simple and robust line detection algorithm based on small eigenvalue analysis. Journal of Pattern Recognition Letters, Vol. 25, No. 1, Science Direct (Elsevier), **2004**, pp 1-13.
78. **Guru D S** and Dinesh R., Non-parametric adaptive region of support useful for corner detection: a novel approach. Journal of Pattern Recognition, Science Direct (Elsevier), Vol. 37, **2004**, pp 165-168.
79. Hemantha Kumar G, Shivakumara P, **Guru D S** and Nagabhushan P., Document image mosaicing: a novel approach. Journal of Sadhana**,** Vol. 29(3), Published by the Indian Academic Science, **2004**, pp 329-341.

80. **Guru D S**, Punitha P and Nagabhushan P., Archival and retrieval of symbolic images: an invariant scheme based on triangular spatial relationship. Journal of Pattern Recognition Letters, Vol. 24, No. 14, Science Direct (Elsevier), **2003**, pp 2397-2408.
81. **Guru D S** and Nagabhushan P., Triangular spatial relationship: a new approach for spatial knowledge representation. Journal of Pattern Recognition Letters, Vol. 22, Science Direct (Elsevier), **2001,** pp 999-1006.
82. Nagabhushan P and **Guru D S**., Incremental circle transform and eigen value analysis for object recognition: an integrated approach. Journal of Pattern Recognition Letters, Vol. 21, Science Direct (Elsevier), **2000**, pp 989-998.

16.2.2. In National Journals

83. **Guru D S**, Nagabhushan P and Shekar B H., Dominant lines perceptual organization and eigenvalue analysis: An integrated approach for 3D object recognition. Indian Journal of Systems, Cybernetics and Informatics, Published by International Institute of Informatics and Cybernetics, **2005**.
84. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Ring project based approach for document image mosaicing. Journal of CSI. Published by Computer Society of India, Vol. 35, No. 3, Sept-**2005**, pp 8-17.
85. Punitha P and **Guru D S.,** A dissimilarity measure based spatial similarity retrieval of symbolic images: A novel approach to handle multiple instances of iconic objects. Journal of Society of Statistics, Computer and Applications, Published by Wiley Interscience,Vol.3, Nos. 1 & 2,(New series) **2005**, pp 117-132.
86. Shivakumara P, Hemantha Kumar G, **Guru D S**, and Nagabhushan P., Skew detection in binary document images based on boundary growing approach. Journal of CSI. Published by Computer Society of India, Vol. 34, No. 2, **2004**, pp 50-56.
87. **Guru D S** and Dinesh R., Eigen value based polygon approximation useful for area estimation. Journal of the Society of Statistics, Computer and Applications, Published by Wiley Interscience,Vol.2, Nos. 1, (New series), **2004**, pp 91-100.
88. Kiranagi B B and **Guru D S.**, A novel similarity measure and the concept of mutual similarity value for clustering interval valued featured objects. Journal of Society of Statistics, Computer and Applications, Published by Wiley Interscience, Vol.2, No.2, (New series), Jan 17-19, **2004**, pp 19 -31.
89. Shivakumara P, **Guru D S**, Hemantha Kumar G and Nagabhushan P., Statistical methodology for skew detection in binary text document images for document image mosaicing. Journal of the Society of Statistics, Computer and Applications, Published by Wiley Interscience, Vol.1, No. 1 and 2(New series), **2003**, pp 81-90.
90. Shivakumara P, **Guru D S**, Hemantha Kumar G and Nagabhushan P., Skew detection in binary text document images based on statistical analysis useful for document image mosaicing. Journal of Society of Statistics, Computer and Applications, Published by Wiley Interscience Vol.1, No. 1(New series), **2003**, pp 12.
91. **Guru D S**, Raghavendra H.J and Suraj M.G., An adaptive binary search based sorting by insertion: an efficient and simple algorithm. Journal of statistics, computer and application, Published by Wiley Interscience, Vol. 2, No. 1 and 2, **2000**, pp 85-96.

16.2.3. In International Proceedings (Book Series)

92. Shivaprasad D L, **D S Guru**, R Kavitha, and N Saritha., Clustering based Indexing of Celebrity Cartoon Images for Retrieval. International Conference on Cognitive and information Processing, CCIP 2022, IEEE, **2022,** pp.1-6.
93. Kavitha, R, and **Guru D S**., Identifying Vital Features for the Estimation of Fish Toxicity Lethal Concentration. International Conference on Advances in Data-driven Computing and Intelligent Systems, Springer publication, **2022**, pp. 419-430.
94. Kavitha R, D Nandini, **D S Guru**, and G Parvathi., Texture Features in Prediction of Bread Edibility. International Conference on Engineering and Emerging Technologies, ICEET 2022, IEEE, **2022**, pp. 1-6.
95. Kapre B S, A. M. Rajurkar, and **D S Guru**., Self-embedding and Variable Authentication Approach for Fragile Image Watermarking Using SVD and DCT. International Conference on Cognition and Recognition, ICCR 2021, Springer, **2022**, pp. 366–379.

96. Banwaskar M R, A. M. Rajurkar, and **D S Guru**., Selected Deep Features and Multiclass SVM for Flower Image Classification. International Conference on Cognition and Recognition, ICCR 2021, Springer, **2022**, pp. 352–365.
97. Sumithra R, **D S Guru**, and Manjunath Aradhya., Face Image-Based Gender Classification of Children. International Conference on Cognition and Recognition, ICCR 2021, Springer, **2022**, pp. 213–228.
98. Chaitra K N, V K Jyothi, M Chandrajit, and **D S Guru**., Flower classification in videos: a hog-PCA-NN method. International Conference on Artificial Intelligence: Advances and Applications, Springer, **2022**, pp.231-242.
99. Shivakumar G, M Ravikumar, B J Shivaprasad, and **D S Guru**., Extraction of Logo from Real Time Document Images Using Masking and Median Filter Approaches. International Conference for Emerging Technology (INCET), IEEE, **2022**, pp.1-7.
100. Ravikumar M, M. C. Prashanth, and **D. S. Guru**., Matching Pattern in DNA Sequences Using Machine Learning Approach Based on K-Mer Function. Modern Approaches in Machine Learning & Cognitive Science: A Walkthrough, Springer, Vol 184, **2022**, pp 159–171.
101. Prajna S, N Vinay Kumar, and **D S Guru**., Classification of Gender in Celebrity Cartoon Images. Computer Vision and Image Processing, CVIP 2021, Springer, **2021**, pp. 525-537.
102. Ravikumar M, B. J. Shivaprasad, and **D S Guru**., Enhancement of MRI Brain Images Using Fuzzy Logic Approach. Recent Trends in Image Processing and Pattern Recognition (RTIP2R 2020), Springer, **2021**, pp.131-137.
103. Ravikumar M, P G Rachana, B J Shivaprasad, and **D S Guru**., Enhancement of Mammogram Images Using CLAHE and Bilateral Filter Approaches. Cybernetics, Cognition and Machine Learning Applications, Springer, **2021**, pp.261-271.
104. Aradhya VNM, M Mahmud, M Chowdhury, **D S Guru**, MS Kaiser, and S Azad., Learning Through One Shot: A Phase by Phase Approach for COVID-19 Chest X-ray Classification. IEEE-EMBS Conference on Biomedical Engineering and Sciences (IECBES), **2021**, pp. 241-244.
105. **Guru D S**, Anitha Raghavendra, and Mahesh K Rao., Post-harvest Handling of Mangoes: An Integrated Solution Using Machine Learning Approach. International Conference on Computer Vision and Image Processing, Vol 205, Springer, **2021**, pp 243–253.
106. Lohithashva B H, V N Manjunath Aradhya, and **D S Guru**., Violent event detection: an approach using fusion GHOG-GIST descriptor. Advances in Automation, Signal Processing, Springer, **2021**, pp.881-890.
107. Swarnalatha K, N V Kumar, **D S Guru**, and BS Anami., Analysis of Dimensionality Reduction Techniques for Effective Text Classification. International Conference on Intelligent Technologies (CONIT), IEEE, **2021**, pp.1-5.
108. Sumithra R, **D S Guru**, VNM Aradhya, and R Anitha., Transfer Learning for Children Face Recognition Accuracy. Computational Vision and Bio-Inspired Computing, Springer, **2021**, pp.553-565.
109. Sumithra R., **D S Guru**, V. N. Manjunath Aradhya, and Anitha Raghavendra., Face Verification Using Single Sample in Adolescence. International Conference on Computer Vision and Image Processing (CVIP 2020), Springer, **2020**, pp 354-366.
110. Annapurna H, K S Manjunatha, and **D S Guru**., Clustering of Writers and Cluster Dependent Classifier Selection for Offline Signature Verification. International Conference on Computer Vision and Image Processing, **2020**, pp 407-419.
111. Sumithra R, N Vinay Kumar, and **D S Guru**., Detection of A Stable Age in Children for Face Recognition Application. Evolution in Computational Intelligence, Advances in Intelligent Systems and Computing, Vol 1176, Springer, **2020**, pp 619-631.
112. Jyothi V K, **D S Guru**, N Vinay Kumar, and V N Manjunath Aradhya., Retrieval of Videos of Flowers Using Deep Features. Evolutionary Computing and Mobile Sustainable Networks, Vol 572, Springer, **2020**, pp 605–614.
113. Anitha Raghavendra, **D S Guru**, and Mahesh K Rao., An Automatic Predictive Model for Sorting of Artificially and Naturally Ripened Mangoes. Evolution in Computational Intelligence, Advances in Intelligent Systems and Computing, Vol 1176, Springer, **2020**, pp 633-646.

114. Vinay Kumar N, K Swarnalatha, **D S Guru**, and Basavaraj S Anami., Interval-Valued Feature Selection for Classification of Text Documents. Intelligent Systems Design and Applications, ISDA, Springer, **2020**, pp 1028-1038.
115. **Guru D S** and N Vinay Kumar., Clustering of Interval Valued Data Through Interval Valued Feature Selection: Filter Based Approaches. Mining Intelligence and Knowledge Exploration (MIKE 2019), Springer, **2020**, pp.270-285.
116. Basavaraja V, Palaiahnakote Shivakumara, **D S Guru**, Umapada Pal, Tong Lu, and Michael Blumenstein., Age Estimation using Disconnectedness Features in Handwriting. ICDAR, IEEE, **2019**, pp 1131-1136.
117. Chandra Sekhar Vorugunti, Prerana Mukherjee, **D S Guru**, and Viswanath Pulabaigari., Online Signature Verification Based on Writer Specific Feature Selection and Fuzzy Similarity Measure. Computer Vision and Pattern Recognition (CVPR Workshops), **2019**, pp 88-95.
118. Chandra Sekhar Vorugunti, **D S Guru**, and Viswanath Pulabaigari., An Efficient Online Signature Verification Based on Feature Fusion and Interval Valued Representation of Writer Specific Features. International Conference on Identity, Security, and Behavior Analysis (ISBA), IEEE, **2019**, pp 1-9.
119. Chandra Sekhar Vorugunti, **D S Guru**, Prerana Mukherjee, and Viswanath Pulabaigari., OSVNet: Convolutional Siamese Network for Writer Independent Online Signature Verification. International Conference on Document Analysis and Recognition (ICDAR), IEEE, **2019**, pp.1470-1475.
120. Chandra Sekhar Vorugunti, Prerana Mukherjee, **D S Guru**, and Viswanath Pulabaigari., OSVNet: Convolutional Siamese Network for Writer Independent Online Signature Verification, CoRR abs, **2019**, pp 1904.00240.
121. Chandra Sekhar Vorugunti, Prerana Mukherjee, **D S. Guru**, and Viswanath Pulabaigari., Online Signature Verification Based on Writer Specific Feature Selection and Fuzzy Similarity Measure. CoRR abs, **2019**, pp 1905.08574.
122. Basavaraju H T, V N Manjunath Aradhya, and **D S Guru.**, Neighborhood Pixel Based Approach for Arbitrary Oriented Multilingual Text Localization. ISTA Workshop on Computational Intelligence Systems and Applications, (CISA 2019), Springer, **2019**, Trivandrum, India.
123. Manjunatha K S, H Annapurna, and **D S Guru**., Offline Signature Verification: An approach based on user-dependent features and classifiers. Lecture Notes in Networks and Systems, Springer LNNS 43, **2019**, pp 235-244.
124. **Guru D S**, V K Jyothi, and Y H Sharath Kumar., Features Fusion for Retrieval of Flower Videos. Proceedings of DAL18, LNNS 43, Springer, **2019**, pp.221-234.
125. **Guru D S**, Mostafa Ali, and Mahamad Suhil., A Study of Applying different Term Weighting schemes on Arabic Text Classification. Lecture Notes in Networks and Systems, Springer LNNS 43, **2019**, pp 293-305.
126. **Guru D S**, Mostafa Ali, and Mahamad Suhil., A Novel Feature Selection Technique for Text Classification. Advances in Intelligent Systems and Computing, Springer, Vol 813, **2018**, pp 721-733.
127. **Guru D S**, Mostafa Ali, and MahamadSuhil., A Novel Term Weighting Scheme and an Approach for Classification of Agricultural Arabic Text Complaints. ASAR, IEEE, **2018**, pp 24-28.
128. Vijeta Khare, Palaiahnakote Shivakumara, B J Navya, G C Swetha, **D S Guru**, Umapada Pal, and Tong Lu., Weighted-Gradient Features for Handwritten Line Segmentation. ICPR, IEEE, **2018**, pp 3651-3656.
129. **Guru D S** and N Vinay Kumar., Interval Chi-Square Score (ICSS): Feature Selection of Interval Valued Data. ISDA (2), Springer, **2018**, pp 686-698.
130. Jyothi V K, **D S Guru**, and Y H Sharath Kumar., Classification of Natural Flower Videos Through Sequential Keyframe Selection Using SIFT and DCNN. RTIP2R (1), Springer, **2018**, pp 305-318.
131. Basavaraju H T, V N Manjunath Aradhya, and **D S Guru.**, Text Detection Through Hidden Markov Random Field and EM - algorithm, International Conference on Information System Design and Intelligent Applications, Springer, **2018**, pp. 19-29.
132. Maryam Asadzadeh Kaljahi, P V Vidya Varshini, Palaiahnakote Shivakumara, Umapada Pal, Tong Lu, and **D S Guru**., Word-Wise Handwriting Based Gender Identification Using Multi-Gabor Response Fusion. DAR@ICVGIP, Springer, **2018**, pp 119-132.
133. Chandra Sekhar Vorugunti**, D S Guru**, and Viswanath Pulabaigari., A Secure and Light Weight User Authentication System Based on Online Signature Verification for Resource Constrained Mobile Networks. DAR@ICVGIP, Springer, **2018**, pp 133-140.

134. Navya B J, G. C. Swetha, P. Shivakumara, S. Roy, **D S Guru**, U. Pal, and T. Lu., Multi-Gradient Directional Features for Gender Identification. IAPR International Conference on Pattern Recognition, IEEE, **2018**, pp. 3657-3562.
135. Shivakumara P, V. Basavaraja, Harsha S. Gowda, **D S Guru**, U. Pal, and T. Lu., A New RGB based Fusion for Forged IMEI Number Detection in Mobile Images. IAPR International Conference on Frontiers in Handwriting Recognition, IEEE, **2018**, pp. 386-391.
136. B. J. Navya, Palaiahnakote Shivakumara, G. C. Swetha, Sangheeta Roy, **D. S. Guru**, Umapada Pal, and Tong Lu., Adaptive Multi-Gradient Kernels for Handwritting Based Gender Identification. ICFHR, IEEE, **2018**, pp.392-397.
137. K Swarnalatha, **D S Guru**, Basavaraj S Anami, and N Vinay Kumar., A Filter Based Feature Selection for Imbalanced Text Classification. RTIP2R (3), Springer, **2018**, pp.194-205.
138. Navya B J, P Shivakumara, G C Swetha, S Roy, **D S Guru**, U. Pal, and T. Lu., Adaptive Multi-Gradient Kernels for Handwriting based Gender Identification. IAPR International Conference on Frontiers in Handwriting Recognition, IEEE, **2018**, pp. 392-397.
139. Mostafa Ali, Mahamad Suhil, and **D S Guru**., Classifying Arabic Farmers Complaints Based on Crops and Diseases Using Machine Learning Approaches. International Conference on Recent Trends in Image Processing and Pattern Recognition, Springer, **2018**, pp. 416-428.
140. **Guru D S**, Jyothi V K, and Y H Sharath Kumar., Cluster based approaches for keyframe selection in natural flower videos. International Conference on Intelligent Systems Design and Applications, ISDA 2017, Springer AISC, **2017**, Vol. 736,pp. 474-484.
141. **Guru D S**, Mahamad Suhil, Pavithra S K, and Priya G R., Ensemble of feature selection methods for text classification: An analytical study. International Conference on Intelligent Systems Design and Applications, ISDA 2017, Springer AISC, Vol. 736, **2017**, pp. 337-349.
142. **Guru D S**, N Vinay Kumar, K N Mahalakshmi Gupta, S D Nandini, H N Rajini and G Namratha Urs., An Hierarchical Framework for Classroom Events Classification. International Conference on Intelligent Systems Design and Applications, ISDA 2017, Springer AISC, Vol. 736, **2017**, pp. 166-179.
143. **Guru D S** and N Vinay Kumar., Interval valued feature selection for classification of logo images. International Conference on Intelligent Systems Design and Applications, ISDA 2017, Springer AISC, Vol. 736, **2017**, pp. 154-165.
144. Manjunatha K S, **D S Guru** and H Annapurna., Interval-valued Writer-Dependent Global Features for Off-line Signature Verification. International Conference on Mining Intelligence and Knowledge Exploration, Springer LNAI, **2017,** Vol. 10682, pp. 133-143.
145. Vinay Kumar N and **D S Guru**., A novel feature ranking criterion for supervised interval valued feature selection for classification. Proceedings of 14th IAPR International Conference on Document Analysis and Recognition, ICDAR WML-2017, IEEE CPS, **2017**,pp 71-76.
146. Mahamad Suhil, L Manju Sharma, Lavanya Narayana Raju, and **D S Guru**., Ensembling of feature selection methods and their parallel implementation for text classification. Proceedings of International Conference on Signal and Image Processing, Springer, **2017**.
147. Jyothi V K, Y H Sharath Kumar and **D S Guru.**, Sequential approach for keyframe selection in natural flower videos. Proceedings of International Conference on Signal and Image Processing, Springer, **2017**.
148. Basavaraju H T, V N Manjunath Aradhya, and **D S Guru.**, A Novel Arbitrary Oriented Multilingual Text Detection in Images/Video. 6th International Conference on Frontiers of Intelligent Computing: Theory and Applications (FICTA), Springer AISC, **2017**, pp. 519-529.
149. Manjunatha K S, S Manjunath, **D S Guru.**, Writer Specific Parameters for Online Signature Verification. Proceedings of the 5th International Conference on Frontiers in Intelligent Computing: Theory and Applications, Springer AISC, **2017**, pp. 407-416.
150. Mahamad Suhil, **Guru D S**., Lavanya Narayana Raju, and Harsha S Gowda., Simple yet Effective Classification Model for Skewed Text Categorization. International Conference on Advances in Computing, Communications and Informatics, IEEE, **2016**, pp. 909-915.
151. **Guru D S**, Mahamad Suhil, Harsha S Gowda and Lavanya Narayana Raju., Detection of a New Class in a Huge Corpus of Text Documents through Semi-Supervised Learning. International Conference on Advances in Computing, Communications and Informatics, IEEE, **2016**, pp. 508-513.

152. **Guru D S** and Mahamad Suhil., Term-Class-Max-Support (TCMS): A Simple Text Document Categorization Approach Using Term-Class Relevance Measure. International Conference on Advances in Computing, Communications and Informatics, IEEE, **2016**, pp. 1058-1061.
153. **Guru D S** and N Vinay Kumar., Novel Feature Ranking Criteria for Interval Valued Feature Selection. International Conference on Advances in Computing, Communications and Informatics**,** IEEE, **2016**, pp. 149-155.
154. **Guru D S** and N Vinay Kumar., Symbolic Representation and Classification of Logos. International Conference on Computer Vision and Image Processing (CVIP), Springer AISC, Vol. 459, **2016**, Chap. 50.
155. Ravikumar M, **Guru D S**, S Manjunath, and V N Manjunath Aradhya., Script based trilinguial handwritten word level multiple skew estimation. Third international conference on Information System design and Intelligent Applications (INDIA 2016), Springer AISC, **2016.**
156. Manjunath S, K S Manjunatha, **Guru D S** and M T Somashekara., Cluster dependent classifiers for online signature verification. Third International conference on Mining Intelligence and Knowledge exploration (MIKE 2015), Springer LNAI 9468, **2015**, pp. 58-69.
157. **Guru D S**, Mahamad Suhil, M Ravikumar and S Manjunath., Small Eigenvalue based Skew Estimation of Handwritten Devanagari Words. Third International conference on Mining Intelligence and Knowledge exploration (MIKE 2015), Springer LNAI 9468**, 2015**, pp. 216-225.
158. Ravikumar M, S Manjunath, and **D S Guru.**, Analysis and Automation of Handwritten Word Level Script Recognition. International Joint Conference CISIS'15 and ICEUTE'15, Advances in Intelligent Systems and Computing, Springer, **2015,** Vol. 369, pp. 213-225.
159. Aruna Kumar S V, B S Harish, and **D S Guru**., Segmenting MRI brain images using evolutionary computation technique. CCIP – 2015, IEEE, **2015**, pp. 1 – 6.
160. Harish B S, Aruna Kumar S V, **D S Guru** and Minh Ngoc Ngo., A novel iris segmentation algorithm based on small eigenvalue analysis. Seventh International Conference on Graphic and Image Processing (ICGIP 2015), Vol 9817, SPIE Digital Library Publications, **2015,** pp. 1-5.
161. Shivakumara P, N Vinay Kumar, **D S Guru**, and C. L. Tan., Separation of Graphics (Superimposed) and Scene Text in Video Frames. Document Analysis Systems, IEEE, **2014**, pp. 344-348.
162. Shivakumara P, Mahamad Suhil, **D S Guru**, and Chew Lim Tan., A New Laplacian Method for Arbitrarily-Oriented Word Segmentation in Video. Document Analysis Systems, IEEE, **2014**, pp. 339-343.
163. Elham Dallalzadeh and **Guru D S**., Content based classification of traffic videos using symbolic features. ICACCI 2014, IEEE, **2014**, pp. 288-294.
164. Elham Dallalzadeh and, and **Guru D S**., Archival and Retrieval of Traffic Video Shots: an Approach Using TTSR. Proceedings of the First National Conference on Computer, Information Technology and Communications (CCITC-2014), Civilica Publications, **2014**, pp. 494-502.
165. Sharath Kumar Y H and **Guru D S**., Whorl based Approach for Flower Segmentation. International Conference on Advance Computing, Communications, and Information Science, ACM Digital Library Publications, **2014**, June 26-28.
166. **Guru D S** and V N Manjunath Aradhya., Indexing Large Class Handwritten Character Database. 2nd International Symposium on Intelligent Informatics (ISI), Springer, **2013**, pp. 227-234.
167. Sharath Kumar Y H and **Guru D S**., Classification of Flowers: A Symbolic Approach. Proceedings of International Conference on Multimedia Processing, Communication and Info. Tech., MPCIT, **2013**, pp. 216-222.
168. Manjunath S, **Guru D S**, and M. Ravikumar., Handwritten Script Identification: Fusion based Approaches. Proceedings of International Conference on Multimedia Processing, Communication and Info. Tech., MPCIT, **2013**, pp. 228:235.
169. **Guru D S** and Mahamad Suhil., Histogram based split and merge framework for shot boundary detection. Proceedings First International Conference, MIKE 2013, Springer - LNAIVol. 8284, **2013**, pp. 180-191.
170. **Guru D S** and H. G. Shivamurthy., Segmentation of mango region from mango tree image. In: Proc. First International Conference, MIKE 2013, Springer - LNAI Vol. 8284, **2013**, pp. 201-211.
171. **Guru D S**, Manjunatha K. S and Manjunath S., Online signature verification based on recursive subset training. In: Proc. First International Conference, MIKE 2013, Springer - LNAI Vol. 8284, **2013**, pp. 350-361.

172. Elham Dallalzadeh, **Guru D S** and B.S. Harish., Symbolic classification of traffic video shots. In: Proc. Third International Conference on Computational Science, Engineering and Information Technology, Springer, Vol. 225, **2013**, pp. 11 – 22.
173. Shivakumara P, H. T. Basavaraju, **Guru D S** and C. L. Tan., Detection of curved text in video: quad tree based method. 12th International Conference on Document Analysis and Recognition, ICDAR 2013, **2013**, pp.25-28.
174. **Guru D S**, Y H Sharath Kumar, and M. T. Krishnaveni., Sketch Based Flower Detection and Tracking. Multimedia Processing, Communication and Computing Applications, Lecture Notes in Electrical Engineering ,LNEE-213, **2013**, Volume 213, pp. 309-320.
175. **Guru D S**, K S Manjunatha, and S Manjunath., User Dependent Features in Online Signature Verification. Multimedia Processing, Communication and Computing Applications, Lecture Notes in Electrical Engineering ,LNEE-213,**2013**, Volume 213, pp.229-240.
176. **Guru D S**, Mahamad Suhil, and P Lolika. A Novel Approach for Shot boundary Detection in Videos. Multimedia Processing, Communication and Computing Applications, Lecture Notes in Electrical Engineering Volume 213, ,LNEE-213, **2013**, pp.209-220.
177. **Guru D S**, S Siddesha, and S Manjunath., Texture in Classification of Pollen Grain Images. Multimedia Processing, Communication and Computing Applications, Lecture Notes in Electrical Engineering ,LNEE-213,**2013**, Volume 213, pp 77-89.
178. Shivakumara P,**Guru D S**, and H T Basavaraju., Color and Gradient Features for Text segmentation form Video frames. Multimedia Processing, Communication and Computing Applications Lecture Notes in Electrical Engineering Volume 213,LNEE-213,**2013**, pp.267-278.
179. Nagasundara K B,**Guru D S** and Manjunath S., Feature selection and Indexing of Online Signatures. Proceedings of 12th International Conference on Hybrid Intelligent Systems.**2012**, pp. 408-414.
180. Nagasundara K B, Manjunath S, and **Guru D S.**, Multimodal Biometric System Based on Hand geometry. Palmprint and Signature, ACM Compute 2012, Pune, Maharashtra, India, **2012**.
181. **Guru D S**, Dallalzadeh Elham, and Manjunath S., A Symbolic Approach for Classification of Moving Vehicles in Traffic Videos. Proceedings of the First International Conference on Pattern Recognition Applications and Methods (ICPRAM2012), February 6th--8th, Vilamoura, Algarve, Portugal, **2012**, pp. 351-356.
182. Dallalzadeh Elham, **Guru D S**, Manjunath S and Suraj M G., Classification of Moving Vehicles in Traffic Videos. Proceedings of the Second International Conference on Computer Science and Information Technology (CCSIT 2012), LNICST, Vol. 85, No. 2, January 2nd--4th, Bangalore, India, **2012**, pp. 211-221.
183. Harish B S, **Guru D S** and Manjunath S., Classification of Text Documents Using B-Tree. Proceedings of the Second International Conference on Computer Science and Information Technology (CCSIT 2012), LNICST, Vol. 85, No. 2, January 2nd--4th, Bangalore, India,**2012**, pp.627-636.
184. Mallikarjuna P B and **Guru D S.,** Performance Evaluation of Segmentation of Frog-eye Spot Lesions on Tobacco Seedling Leaves. The Second International Conference on Computer Science and Information Technology (CCSIT- 2012), Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering series, Bangalore, India, January 2-4, vol. 85, **2012**, pp. 444- 453.
185. Nagasundara K. B, S. Manjunath, and **Guru D S.,** Multi-algorithmic Approach for Palmprint Identification. International workshop on Emerging Applications on Computer Vision, **2011**, pp. 21 – 28, Moscow (Russia).
186. **Guru D S** and P. B. Mallikarjuna., Classification of Tobacco Leaves for Automatic Harvesting: An Approach Based on Feature Level Fusion and SBS Method. International workshop on Emerging Applications on Computer Vision, **2011**. pp. 102 –109, Moscow (Russia).
187. **Guru D S** and Y. H. Sharath Kumar., Fusion Based Flower Classification System. International workshop on Emerging Applications on Computer Vision, **2011**. pp. 110 –122, Moscow (Russia).
188. **Guru D S**, S. Manjunatha, and P. Punitha., Spatial Data Structures for Image Databases. International workshop on Emerging Applications on Computer Vision, **2011**. pp. 130 –140, Moscow (Russia).
189. Harish B. S, **Guru D S**, S. Manjunath, and Bapu B. Kiranagi., Symbolic Similarity and Symbolic Feature Selection for Text Classification. International workshop on Emerging Applications on Computer Vision, **2011**. pp. 141 –146, Moscow (Russia).

190. **Guru D S** and Elham Dallalzadeh., Detection and Classification of Moving Vehicles in Traffic Videos. International workshop on Emerging Applications on Computer Vision, **2011**. pp. 184 –200, Moscow (Russia).
191. **Guru D S**, K B Nagasundara, and S Manjunath., Indexing of Offline Signatures. Fifth Indian International Conference on Artificial Intelligence, IICAI **2011**, pp. 47 – 57, Tumkur, Karnataka, India.
192. Dallalzadeh Elham, **Guru D S**, Manjunath S and Suraj M G., Corner-Based Tracking of Moving Vehicles in Traffic Videos. Fifth Indian International Conference on Artificial Intelligence, **2011**, IICAI 2011, pp. 956-969.
193. **Guru D S**, Y H Sharath Kumar, and S Manjunath., Classification of flowers based on whorl region. 5th Indian International Conference on Artificial Intelligence (IICAI-11), Springer publication, Tumukur, India, Dec 14-16, **2011**, pp 1070-1088.
194. **Guru D S**, P B Mallikarjuna and S Manjunath., Grading of Cured Tobacco Leaves: An Approach Based on Inter-valued data. 5th Indian International Conference on Artificial Intelligence (IICAI-11), Springer publication, Tumukur, India, Dec 14-16, **2011**, pp 167-177.
195. Nagasundara K B, **Guru D S**, and S Manjunath., Kd-tree based Palm print Indexing. Second International Conference on Computational Vision and Robotics (ICCVR-2011), **2011** pp. 51 – 55, Bhubaneswar, Orissa, India.
196. **Guru D S** and Mallikarjuna P B., Fusion of Texture Features and Sequential Forward selection method for Classification of Tobacco Leaves for Automatic Harvesting. In proceedings of second International conference on Computational Vision and Robotics,(ICCVR-2011) Bhubaneshwar, India, August 14-15, **2011**, pp. 168-172.
197. Manjunath S, **Guru D S**, Suraj M G and Harish B S., A Non Parametric shot boundary detection: An eigen gap approach. Proceedings of Fourth Annual ACM Compute,2011, March 25 – 26, Bangalore, India, **2011**.
198. **Guru D S**, Mallikarjuna P B and Manjunath S., Segmentation and Classification of Tobacco Seedling Diseases. Proceedings of Fourth Annual ACM Bangalore Conference (ACM Compute 2011), Bangalore, India, Mar 25-26, **2011**.
199. Harish B S, **Guru D S** and Manjunath S., Dissimilarity Based Feature Selection for Text Classification: A Cluster Based Approach. Proceedings of ACM International Conference and Workshop on Emerging Trends and Technology, Feb 25 -26, Mumbai, India, **2011**.
200. **Guru D S**,Mallikarjuna P B, Manjunath S and Shenoi M M., Grading of Cured Tobacco Leaves: An Approach Based on Symbolic Representation. Proceedings of 13th Annual Conference of Society of Statstics, Computer and Applications, NAARM, Hyderabad, India, Febrauary 24-26, **2011**.
201. Harish B S, **Guru D S** and Manjunath S., A Symbolic Approach for Text Classification Based on Dissimilarity Measure. Proceedings of First ACM Intelligent Interactive Technologies and Multimedia, Allahabad, Uttar Pradesh, India, pp 106 - 109, **2010**.
202. **Guru D S**, Nagasundara K B and Manjunath S., Feature Level Fusion of Multi-instance Finger Knuckle Print for Person Identification. Proceedings of First ACM Intelligent Interactive Technologies and Multimedia, Allahabad, Uttar Pradesh, India, **2010**, pp 183–186.
203. Elham D and **Guru D S.**, Feature-Based Tracking Approach for Detection of Moving Vehicles in Traffic Videos. Proceedings of First ACM Intelligent Interactive Technologies and Multimedia, Allahabad, Uttar Pradesh, India, **2010**, pp 256 - 262.
204. **Guru D S** and Mallikarjuna P B., Spots and Color Based Ripeness Evaluation of Tobacco Leaves for Automatic Harvesting. Proceedings of First ACM Intelligent Interactive Technologies and Multimedia, Allahabad, Uttar Pradesh, India, **2010**, pp 193-196.
205. **Guru D S**, Sharath Y H and Manjunath S., Whorl Identification in Flower: A Gabor based Approach. Proceedings of First ACM Intelligent Interactive Technologies and Multimedia, Allahabad, Uttar Pradesh, India, **2010**, pp 170-176.
206. **Guru D S**, Mallikarjuna P B, Manjunath S and Shenoi M M., Machine Vision Based Classification of Tobacco Leaves for Automatic Harvesting. Proceedings of Fourth International conference on Computer and Computing Technologies in Agriculture, Nanchang, China, October, **2010** 22-25.
207. Harish B S, **Guru D S**, Manjunath S, and Dinesh R., Cluster Based Symbolic Representation and Feature Selection for Text Classification. Proceedings of Advanced Data Mining and Applications, Vol. 2, **2010**, pp. 158-166.

208. **Guru D S**, B. Vijaya Kumari and S. K. Lathamba., Automatic Incorporation of Corrections into Reviewed Documents, Information Processing and Management. Proceedings of the International Conference on Recent Trends in Business Administration and Information Processing, BAIP, Trivandrum, Kerala, India, March 26-27, **2010**, pp 446-451.
209. **Guru D S**, Manjunath S and Kiranagi B B., SVARS: Symbolic Video Archival and Retrieval System. ACM Compute 2010, Bangalore, January 21-22, **2010**.
210. **Guru D S**, B S Harish and S Manjunath., Symbolic Representation for Text Documents. ACM Compute 2010, Bangalore, January 21-22, **2010**.
211. Elham D and **Guru D S.**, Identification of Moving Vehicles in Traffic Videos. Proceedings of First International Multi-disciplinary Conference on Current Research Trends- Mysore, India, **2009**, pp. 224 – 229.
212. Manjunath S, **Guru D S**, Suraj M. G, and Dinesh R., 2D-LPI: Two Dimensional Locality Preserving Indexing. Proceedings of 3rd International Conference on Pattern Analysis and Machine Intelligence, Delhi, India,19-24, December 16-20, **2009**, pp 19 – 24.
213. Dinesh R, Harish B S, **Guru D S** and Manjunath S., Concept of status matrix in classification of text documents. Proceedings of Indian International Conference on Artificial Intelligence, December 16-18, Tumkur, **2009**, pp 2071 – 2079.
214. **Guru D S**, Manjunath S and Punitha P., Topological triangular spatial relationship. Proceedings of Indian International Conference on Artificial Intelligence, December 16-18, Tumkur, **2009**, pp 1873 – 1886.
215. Prakash H. N, and **Guru D S.**, Bi-Interval valued symbolic feature vector for offline signature verification: A fusion based approach. Proceedings of Indian International Conference on Artificial Intelligence, December 16-18, Tumkur**, 2009**, pp 1887 – 1990.
216. Kiranagi B B, and **Guru D S.**, Symbolic similarity and dissimilarity for clustering: A hybrid measure. Proceedings of Indian International Conference on Artificial Intelligence, December 16-18, Tumkur, **2009**, pp 433 – 441.
217. Kiranagi B B, Harish B S. Manjunath S and **Guru D S.**, New symbolic proximity approximation techniques and clustering algorithms. Proceedings of International Conference on Signal and Image Processing (ICSIP), Mysore**, 2009**, pp 363-366.
218. **Guru D S**, Harish B S and Manjunath S., Clustering textual data: A brief survey. Proceedings of International Conference on Signal and Image Processing (ICSIP), Mysore, **2009**, pp 409 – 413.
219. **Guru D S**, Nagasundara K B, Manjunath S, and Nagendraswamy H S., An Eigen Value based Approach for Hand Vein Representation & Retrieval. Proceedings of International Conference on Signal and Image Processing (ICSIP), Mysore**, 2009**, pp 562 - 565.
220. Prakash H N and **Guru D S.**, Handwritten signature verification: A brief survey. Proceedings of International Conference on Signal and Image Processing (ICSIP), Mysore**, 2009**, pp 549 - 556.
221. Prakash H N and **Guru D S.**, Geometric Centroids and their Relative Distances for Off-line Signature Verification. Proceedings of Tenth International Conference on Document Analysis and Recognition (ICDAR-09), Spain, **2009**, pp. 121 – 125.
222. Prakash H N and **Guru D S.**, Relative orientations of geometric centroids for offline signature verification. Proceedings of International conference of Advanced Pattern Recognition, ISI Kolkatta, February **2009**, pp 201 – 204.
223. **Guru D S**, Prakash H N and Manjunath S., Online signature verification: An approach based on cluster representation of global features. Proceedings of International conference of Advanced Pattern Recognition, ISI Kolkatta, February **2009**, pp 209 – 212.
224. Mirkamali S S, **Guru D S** and Dinesh R., A rule based offline system for Persian/Arabic multifont word recognition. Proceedings of International Conference on Information Processing (ICIP), Bangalore, 8 – 10, August, **2008**, pp 71 – 77.
225. Vikram T. N., Chidananda G K., **Guru D S**, and Shalini R. U., Face Indexing and Retrieval by Spatial Similarity. Proceedings of Congress on Image and Signal Processing, Vol. 1, **2008**, pp.543-547.
226. **Guru D S** and Suraj M G., Recognition of postal codes for fingerspelling video sequence. Proceedings of the International Conference on Intelligence and Multimedia Applications (ICCIMA 2007), Sivakasi, India, December 13-15, **2007**, Vol 2, pp. 271-275.

227. Jyothi B K, Kiranagi B B and **Guru D S**., Automation of document editing: A vision based approach. Proceedings of the International Conference on Intelligence and Multimedia Applications (ICCIMA 2007),Sivakasi, India, December 13-15, **2007**, Vol 3, pp. 453-457.
228. **Guru D S** and Prakash H N., Symbolic representation of online signatures. Proceedings of the International Conference on Intelligence and Multimedia Applications (ICCIMA 2007), Sivakasi, India, **2007**, Vol 2, pp. 313-317.
229. Renju J, Raju G and **Guru D S.**, 1D Wavelet Transform of Projection Profiles for Isolated Handwritten Malayalam Character Recognition. Proceedings of the International Conference on Intelligence and Multimedia Applications (ICCIMA 2007), Sivakasi, India, December 13-15, **2007**, Vol 2, pp. 481-485.
230. **Guru D S**, Prakash H N and Vikram T N., The spatial topology of equitemporal points on signatures for retrieval. Proceedings of the Second International Conference on Pattern Recognition and Machine Intelligence (PReMI 2007), Kolkata, India, **2007**, pp. 128-135.
231. Naveen O and **Guru D S.**, Modified 9DLT Matrix for similarity retrieval of line drawing images. Proceedings of the Second International Conference on Pattern Recognition and Machine Intelligence (PReMI 2007), Kolkata, India, December 18-22, **2007**, pp 136-144.
232. **Guru D S** and Suraj M G., Fusion of PCA and FLD at feature extraction level for finger spelling recognition. Proceedings of the Third Indian International Conference on Atrificial Intelligence (IICAI 2007), Pune, India, December 17-19, **2007**, pp 2113-2123.
233. Kiranagi B B, Dinesh R and **Guru D S.**, A symbolic approach for classification of numerals. Proceedings of the Third Indian International Conference on Atrificial Intelligence (IICAI 2007), Pune, India, December 17-19, **2007**, pp 474-485.
234. Kiranagi B B and **Guru D S.**, Pulling leader oriented clustering approach for non-symmetric proximity matrices. Proceedings of the Third Indian International Conference on Atrificial Intelligence (IICAI 2007), Pune, India, December 17-19, **2007**, pp 630-643.
235. Shekar B H, Thippeswamy G, Nagabhushan P and **Guru D S.**, Ploar eigen space: A linear transformation invariant model for appearance based object/face recognition. Proceedings of the Third Indian International Conference on Atrificial Intelligence (IICAI 2007), Pune, India, December 17-19, **2007**, pp 575-585.
236. Vikram T N and **Guru D S.**, Appearance based models in document script identification. Proceedings of Ninth International Conference on Document Analysis and Recognition (ICDAR, 07), Vol. 2, September **2007**, pp. 709 – 713.
237. **Guru D S** and Vikram T N., 2D pairwise FLD: A robust methodology for face recognition. Proceedings of the Fifth IEEE Workshop on Automatic Identification Advanced Technologies, (AutoID-2007) 7-8 June, Alghero, Italy, June 7-8, **2007**, pp. 99-102
238. Kiranagi B B, **Guru D S** and Ichino M., Exploitation of multivalued type proximity for symbolic feature selection. Proceedings of the International Conference on Computing: Theory and Applications, (ICCTA'07), Kolkata, India, March 5-7, **2007**, pp. 320 - 324
239. Suraj M G and **Guru D S.**, Secondary diagonal FLD for fingerspelling recognition. Proceedings of the International Conference on Computing: Theory and Applications, (ICCTA'07,)Kolkota, India, March 5-7, **2007**, pp. 693-697.
240. Dinesh R and **Guru D S.**, Finite Automata inspired model for dominant point detection: A non-parametric approach. Proceedings of the International Conference on Computing: Theory and Applications, (ICCTA'07), Kolkata, India, March 5-7, **2007**, pp. 579-583.
241. Punitha P, Naveen and **Guru D S.**, Indexing of Document Images based on Triangular Spatial Relationships. Proceedings of the International Conference on Computing: Theory and Applications, (ICCTA'07), Kolkata, India, March 5-7, **2007**, pp. 533 – 537.
242. Suraj M G and **Guru D S.**, Appearance based Recognition Methodology for Recognising Fingerspelling Alphabets. Proceedings of the International Joint Conference on Artificial Intelligence (IJCAI'07), Hyderabad, India. Jan 9-12, **2007**, pp. 605-610.
243. Punitha P, Naveen and **Guru D S.**, Indexing and Retrieval of Document Images by Spatial Reasoning. Proceedings of the Third International Conference on Distributed Computing and Internet Technology (ICDCIT'2006), Bhubaneswar, India. Dec 20-23, **2006**, LNCS 4317, pp. 457-464.

244. Punitha P, Naveen and **Guru D S.**, Indexing of Document Images based on Nine-Directional Codes. Proceedings of the Fourth International Conference on Intelligent Sensing and Information Processing (ICISIP'2006), Bangalore, India. Dec. 14-16, **2006**, pp. 5-10.
245. Shekar B H, **Guru D S** and Nagabhushan P., Two-dimensional optimal transform for appearance based object recognition. Proceedings of the Fifth Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP- 2006), Madurai, Tamilnadu, India. December 13-16, **2006**, pp. 650-661.
246. Shekar B H, Nagabhushan P and **Guru D S.**, Concept of polar-fisher space for appearance based object recognition: An approach invariant to linear transformation. Proceedings of IEEE International Conference on Visual Information Engineering (VIE'06), Bangalore, India, September 26-28, **2006**. pp. 577-582.
247. Naveen and **Guru D S.**, Retrieval of document images based on page layout similarity. Proceedings of the Fourth International Workshop on Adaptive Multimedia Retrieval (AMR'06), Geneva, Switzerland, July 27-28, **2006**, pp. 136-148.
248. Nagendraswamy H S and **Guru D S.**, Clustering of shapes described by fuzzy-symbolic features using a similarity measure and the concept of k-mutual nearest neighborhood. Proceedings of the International Conference on Intelligent Systems and Control (ISCO'06), Coimbatore, India, August 9-11, **2006**. pp. 6-10.
249. Kiranagi B B and **Guru D S.**, Feature selection scheme for unsupervised classification of symbolic data. Proceedings of the International Conference on Intelligent Systems and Control (ISCO'06), Coimbatore, India, August 9-11, **2006**. pp. 64-68.
250. Ashkan M Y, **Guru D S** and Punitha P., Skew estimation in persian documents: A novel approach. Proceedings of the International Conference on Computer Graphics, Imaging and Visualization (CGIV'06), United Kingdom, June 19-22, **2006**. pp. 64-70.
251. Shekar B H, **Guru D S** and Nagabhushan P., Appearance based object recognition using two-dimensional optimal feature transformation. Proceedings of the IEEE International Conference on Engineering of Intelligent Systems, Islamabad, Pakistan, April 22-23, **2006**. pp. 283-288.
252. Nagendraswamy H S and **Guru D S.**, Symbolic representation scheme for matching and retrieval of two dimensional shapes. Proceedings of the IEEE International Conference on Engineering of Intelligent Systems, Islamabad, Pakistan, April 22-23, **2006**. pp. 431-436.
253. Kiranagi B B and **Guru D S.**, Unsupervised feature selection scheme for clustering of symbolic data using multivalued type similarity measure. Proceedings of the International Workshop on feature selection and datamining: Interfacing machine learning and statistics, Maryland, USA, April 22, **2006**, pp. 67-74.
254. **Guru D S** and Nagendraswamy H S., Clustering of symbolic patterns based on similarity measure and the concept of k-mutual nearest neighborhood. Proceedings of the Seventh Asian Conference of Computer Vision (ACCV), Hyderabad, India, Jan. 13-16, **2006**, LNCS 3852, pp. 234-243.
255. Dinesh R and **Guru D S.**, Corner Detection Using Morphological Skeleton: An Efficient and Robust Approach. Proceedings of the Seventh Asian Conference of Computer Vision (ACCV), Hyderabad, India, Jan. 13-16, **2006**, LNCS 3852, pp. 752-760.
256. Shekar B H, **Guru D S** and Nagabhushan P., Object recognition through the principal component analysis of spatial relationship amongst lines. Proceedings of the Seventh Asian Conference of Computer Vision (ACCV), Hyderabad, India, Jan. 13-16, **2006**, LNCS 3851, pp. 170-179.
257. Dinesh R and **Guru D S.**, Corner Detection and Interpretation of Boundary Segments Useful for Production of Symbolic Images for 2D Objects. Proceedings of the International Conference on Recent Trends in Information Systems (IRIS), Kovilpatti, Tamilnadu, INDIA, Jan. 6-8, **2006**, pp. 80-88.
258. Kiranagi B B and **Guru D S.**, Unsupervised learning of symbolic patterns using unconventional dissimilarity measure. Proceedings of the International Conference on Recent Trends in Information Systems (IRIS),Kovilpatti, Tamilnadu, INDIA, Jan. 6-8, **2006**, pp. 180-186.
259. Shekar B H, **Guru D S** and Nagabhushan P., Object recognition through the principal component analysis of spatial relationship amongst corners. Proceedings of the International Conference on Systemics, Cybernetics and Informatics, Hyderabad, India, Jan 4-8, **2006**, pp. 855-861.

260. Shekar B H , Sharmila Kumari M, **Guru D S** and Nagabhushan P., An appearance based model for efficient representation and recognition of coins. Proceedings of the International Conference on Systemics, Cybernetics and Informatics, Hyderabad, India, Jan 4-8, **2006**, pp. 488-492.
261. **Guru D S** and Nagendraswamy H S., Two-dimensional shape representation and matching: An unconventional approach. Proceedings of the International Conference on Systemics, Cybernetics and Informatics, Hyderabad, India, Jan 4-8, **2006**, pp. 862-867.
262. Punitha P and **Guru D S.**, Concept of Direction of Reference and B-Tree for Preserving Spatial Relationships in Symbolic Images: An Invariant Approach Useful for Exact Match Retrieval. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 283-290.
263. Dinesh R and **Guru D S.**, Partially Occluded Object Recognition by Incorporating Adjacency Relationship of Feature Points: An Efficient and Robust Approach. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 277-282.
264. Kiranagi B.B and **Guru D S.**, SD and COV Based Feature Selection Scheme and Clustering of Symbolic Data. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 90-94.
265. Nagabhushan P, **Guru D S** and Shekar B H., Object Recognition <= Lines + PCA. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 250-256.
266. **Guru D S** and Nagendraswamy H S., A new method for representing and matching two dimensional shapes. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 52-59.
267. Ashkan M Y, Punitha P and **Guru D S.**, Skew estimation in digitized Kannada documents: A simple approach. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 273-280.
268. Punitha P, **Guru D S** and Vikram T N., Relative spatial distance matrix: A novel & invariant data structure for representation & retrieval of exact match symbolic images. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 257-263.
269. **Guru D S**, Nagabhushan P and Shekar B H., Two Dimensional Principal Component Analysis for Visual learning and recognition of 3D objects: A robust and an efficient approach. Proceedings of the International Conference on Cognition and Recognition, (ICCR), Mysore, India, Dec 22-23, **2005**, pp. 272-276.
270. Shekar B H, **Guru D S** and Nagabhushan P., Visual learning and recognition of 3-dimensional objects using 2-dimensional Fishers Linear Discriminant Analysis: A robust and an efficient approach. Proceedings of the Second Indian International conference on Artificial Intelligence (IICAI), Pune, India, Dec 20-22, **2005**, pp. 3207-3218.
271. **Guru D S** and Nagendraswamy H S., Matching and retrieval of distorted and occluded two dimensional shapes: An unconventional approach. Proceedings of the Second Indian International conference on Artificial Intelligence (IICAI), Pune, India, Dec 20-22, **2005**, pp. 3161-3173.
272. Dinesh R, Damle S and **Guru D S.**, A split based method for polygonal approximation of shape curves. Proceedings of the First International Conference on Pattern Recognition and Machine Intelligence (PReMI), Kolkata, India, Dec 18-22, **2005**, LNCS 3776, pp. 382-387.
273. Nagabhushan P, **Guru D S** and Shekar B H., Eigen transformation based edge detector for Gray images. Proceedings of the First International Conference on Pattern Recognition and Machine Intelligence (PReMI), Kolkata, India, Dec 18-22, **2005**, LNCS 3776, pp. 434-440.
274. Nagabhushan P, **Guru D S** and Shekar B H., Object recognition ← Corners + PCA. Proceedings of the Thirteenth International conference on Advanced Computing and Communications (ADCOM), Coimbatore, India, Dec 14-17, **2005**, pp. 158-164.
275. Kiranagi B B and **Guru D S.**, An unconventional similarity measure based divisive clustering approach for unsupervised learning of symbolic patterns. Proceedings of the thirteenth International conference on Advanced Computing and Communications (ADCOM), Coimbatore, India, Dec 14-17, **2005**, pp. 99-105.

276. **Guru D S** and Nagendraswamy H S., Landmark based shape representation scheme for recognition of two-dimensional shapes. Proceedings of the Image and Vision Computing, Newzealand (IVCNZ), University of Otago, Dunedin, Newzealand, Nov. 28-29, **2005**, pp. 299-304.
277. Dinesh R and **Guru D S.**, Recognition of Partially Occluded Objects Using Perfect Hashing: An Efficient and Robust Approach. Proceedings of the Second Canadian Conference on Computer and Robot Vision, CRV-2005, Victoria, British Columbia, May 9-11, **2005**, pp. 528-535.
278. **Guru D S**, Nagabhushan P and Shekar B H., Dominant lines perceptual organization and eigen value analysis: an integrated approach for object recognition. Proceedings of the International Conference on Systemic, Cybernetics and Informatics ICSCI-05, Hyderabad, India, Jan 6-9, **2005**, pp 431-437.
279. Shivakumar P, Hemanthakumar G, **Guru D S** and Nagabhushan P., A new boundary growing and Hough Transform based approach for accurate skew detection in binary document images. Proceedings of the International Conference on Intelligent Sensing and Information Processing, Chennai, Tamil Nadu, India, Jan 4-5, **2005**, pp. 140-146.
280. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., An improved Hough transform based skew estimation technique for binary document images. Proceedings of the international conference on Human Machine Interface (ICHMI) 2004, Bangalore, India, Dec. 20-23, **2004**, pp. 369-374.
281. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., A new gradient vector based skew estimation technique for binary document images. Proceedings of the Fifth International Conference on Knowledge Based Computer Systems, KBCS-2004, Hyderabad, India, Dec. 19-22, **2004**, pp. 325-335.
282. Dinesh R and **Guru D S.**, Recognition of partially occluded objects using B-tree index structure: an efficient and robust approach. Proceedings of the Fourth Indian Conference on Computer Vision, Graphics and Image Processing ICVGIP-2004, Kolkata, Dec. 16-18, **2004**, pp. 246-251.
283. Punitha P and **Guru D S.**, Similarity retrieval of symbolic images with multiple instances of iconic objects: a novel approach. Proceedings of the Fourth Indian Conference on Computer Vision, Graphics and Image Processing ICVGIP-2004, Kolkata, Dec. 16-18, **2004**, pp. 417-422.
284. **Guru D S**, Punitha P and Mahesh S., Skew estimation in digitized documents: a novel approach. Proceedings of the Fourth Indian Conference on Computer Vision, Graphics and Image Processing ICVGIP-2004, Kolkata, Dec. 16-18, **2004**, pp. 314-319.
285. Dinesh R and **Guru D S.**, Mathematical morphology based corner detection scheme: a non-parametric approach. Proceedings of the Fourth Indian Conference on Computer Vision, Graphics and Image Processing ICVGIP-2004, Kolkata, Dec. 16-18, **2004**, pp. 76-81.
286. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Accurate skew detection algorithm based on principal component analysis for binary document images. Proceedings of the Twelfth International Conference on Advanced Computing and Communication – ADCOM 2004, Ahmedabad, Gujarat, India, Dec.15-18, **2004**, pp. 669-674.
287. **Guru D S** and Punitha P., An invariant scheme for exact match retrieval of symbolic images: direction of reference based approach. Proceedings of the Twelfth International conference on Advanced Computing and Communication ADCOM 2004, Ahmedabad, Gujarat, India, Dec.15-18, **2004**, pp. 647-655.
288. **Guru D S** and Dinesh R., Determination of adaptive corner non-symmetric region of support useful for dominant point detection: a nonparametric approach. Proceedings of the Twelfth International conference on Advanced Computing and Communication ADCOM 2004, Ahmedabad, Gujarat, India, Dec.15-18, **2004**, pp. 656-662.
289. Shivakumara P, Hemantha Kumara G, **Guru D S** and Nagabhushan P., Document image mosaicing: an approach based on Zernike moments. Proceedings of the sixth International Conference on Cognitive Systems – ICCS 2004, Centre for Research in Cognitive Systems, New Delhi, India, Dec. 14-15, **2004**.
290. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., An efficient skew estimation technique for binary document images based on boundary growing and linear regression analysis. Proceedings of the Eleventh International Conference on Neural Information Processing, ICONIP-2004, Kolkata, India, Nov. **2004**, pp. 659-665.

291. **Guru D S** and Dinesh R., Finite automata model for determination of adaptive region of support useful for dominant point detection. Proceedings of the Eighth World Multi-Conference on Systemics, Cybernatics and Informatics, Orlando, Florida, USA, Vol.16, July 18-21, **2004**, pp. 309-314.
292. **Guru D S**, Dinesh R and Nagabhushan P., Boundary based corner detection and localization using new cornerity index: a robust approach. Proceedings of the First Canadian conference on Computer and Robot Vision (CRV'04), at University of western Ontario-London, Ontario, Canada, May 17-19, **2004**, pp. 417- 423.
293. **Guru D S**, Nagabhushan P and Shekar B H., Tri-line grouping and principal component analysis for object recognition: an integrated approach. Proceedings of the International Conference on Systemics, Cybernatics and Informatics, Pentagram Research Center, Hyderabad, India, February **2004**, pp. 134-137.
294. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Mosaicing of multiple script images: novel approach based on region growing. Proceedings of the International Conference on Recent Trends and New Directions of Research in Cybernetics and Systems Theory, Guwahati, India, January 1-3, **2004**.
295. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Fourier transform based column-block and row-block matching procedure for document image mosaicing. Proceedings of the International Workshop on Fuzzy Logic and Applications (WILF – 2003), Palazzo Serra di Cassano, Via Monte di, Dio 14, Napoli, ITALY October 9-11, **2003**, LNAI 2955, 2006, pp. 240-254.
296. Nagabhushan P, Anami B S and **Guru D S.**, Dictionary supported generation of English text from Pitman shorthand scripted phonetic text. Proceedings of the International Conference on Language Engineering, University of Hyderabad, published by IEEE Computer Society USA, December 13-14, **2002**, pp.33-45.
297. Chandra K S, Sharma M and **Guru D S.**, Loss and delay behavior of an ATM multiplexer for aggregated PMPP (Pareto Modulated Poisson Process). Proceedings of Ninth IEEE International Conference on Networks (ICON' 01), October **2001**, pp. 314.
298. **Guru D S** and Nagabhushan P., Triangular spatial relationships of the components in a symbolic image for object recognition. Proceedings of the Fourth International Conference on Advances in Pattern Recognition and Digital Techniques ICAPRDT'99, ISI Calcutta, India, Dec. 27-29, **1999**, pp. 117-121.
299. **Guru D S**, Nagabhushan P and Suraj M G., Complete shape from imperfect boundary of an object: an attempt towards a rule based system. Proceedings of the International Conference on Cognitive Systems ICCS'99, New Delhi, India, Dec. 13-15, **1999**, pp. 427-433.
300. Nagabhushan P and **Guru D S.**, Transformation of the physical image of an object into symbolic image using segmentation of the boundary curve. Proceedings of the International Conference on Cognitive Systems (ICCS'98) New Delhi, India, Dec 13-15, **1998**. pp. 183-187.
301. Nagabhushan P and **Guru D S.**, Principal Component Analysis on symbolic image for accurate object recognition: a new approach. Proceedings of the International Conference on Cognitive System (ICCS'97), New Delhi, India, Dec. 13-17, **1997**, pp. 94-99.

16.2.4. In National Proceedings

302. **Guru D S**, Ravikumar R and Harish B S., A Review on Offline Handwritten Script Identification. *National Conference on Advanced computing and Communications* (*NCACC-12)*, 27 – 28, April 2012, Shimoga, Karnataka, India, pp. 246 – 250.
303. **Guru D S**, Harish B S and Manjunath S., An review on text classification. *National Seminar on Recent Trends in Image Processing and Pattern Recognition (RTIPPR 2010)*, Bidar, Karnataka, India, pp. 108 – 113, **2010**.
304. **Guru D S**, Sharath Y H and Manjunath S., Texture features based KNN Classifier for flower classification. *National Seminar on Recent Trends in Image Processing and Pattern Recognition (RTIPPR 2010),* Bidar, Karnataka, India, pp.95 – 99, **2010**.
305. **Guru D S** and Suraj M G., Clustering of principal component for fast finger spelling recognition. *Proceedings of the Third National Conference on Advanced Image Processing and Networking*, National Engineering College, kovilpatti, Tamilnadu, March 2 – 3, **2007**. pp. 16-21.

306. Nagendraswamy H S and **Guru D S.**, Learning and classification of two dimensional shapes. *Proceedings of the Third National Conference on Advanced Image Processing and Networking*, National Engineering College, kovilpatti, Tamilnadu, March 2 – 3, **2007**. pp 28-39.
307. **Guru D S** and Roopa M J., Graph edit distance based similarity useful for pattern classification. *Proceedings of the Third National Conference on Advanced Image Processing and Networking*, National Engineering College, kovilpatti, Tamilnadu, March 2 – 3, **2007**. pp. 40-47.
308. **Guru D S**, Vikram T N and Punitha P., Indexing and retrieval of symbolic images by spatial similarity: An approach based on kd-tree. *Proceedings of the Third National Conference on Advanced Image Processing and Networking*, National Engineering College, kovilpatti, Tamilnadu, March 2 – 3, **2007**. pp. 22-27.
309. Kiranagi B B and **Guru D S.**, Pulling Leader: A clustering approach for non symmetric proximity matrices. *Proceedings of the Third National Conference on Advanced Image Processing and Networking*, National Engineering College, kovilpatti, Tamilnadu, March 2 – 3, **2007**. pp. 588-594.
310. **Guru D S** and Nagendraswamy H S., Symbolic representation and classification of two-dimensional shapes. *Proceedings of the Third Workshop on Computer Vision, Graphics and Image Processing (WCVGIP),* Hyderabad, INDIA, Jan 12-13, **2006**. pp. 19-24.
311. Shekar B H, **Guru D S** and Nagabhushan P., 3D object recognition using Laplacian-objects. *Proceedings of the Third Workshop on Computer Vision, Graphics and Image Processing (WCVGIP),* Hyderabad, INDIA, Jan 12-13, **2006**. pp. 234-240.
312. **Guru D S** and Girisha R., Online hand identification system useful for recognition of sign language: A heuristic approach. *Proceedings of the National Conference on current trends in Computer Technology and Bio-informatics***,** Organized by CSI division-8, Lucknow chapter, May 13-15, **2005**, pp 20.
313. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Sliding window based technique for document image mosaicing. *Proceedings of the National Conference on IT: Pathway for Transformation of Society*, DAV College, Amritsar, Punjab, India, March 13 -14, **2004**, pp. 90-99.
314. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Invariant approach for south indian script lines useful for document image mosaicing. *Proceedings of the Second National Workshop on Computer Vision, Graphics and Image Processing – WCVGIP – 04*, MITS, Gwalior, Madhya Pradesh, India. Feb 21-22, **2004**, pp. 81-90.
315. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Regression line based skew detection for text document images useful for document image mosaicing. *Proceedings of National Convention of CSI*, Delhi, India, Dec. 11–13, **2003**
316. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Mosaicing of distorted split document images using wavelet decomposition. *Proceedings of the National Conference on Signal Processing, Intelligent Systems and Networking – SPIN 2003*, Bangalore, India, December 4 -5, **2003**, pp. 153-156.
317. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P, Document image mosaicing: a novel approach based on column block matching. *Proceedings of the National Workshop on Machine Intelligence using Soft Computing NWMISC – 2003*, Kavaraipettai, Tamil Nadu, India, August 9-**2003**, pp 16.
318. **Guru D S**, Dinesh R and Nagasundara K B., Co-occurrence matrix based approach for recognition of Indian currency. *Proceedings of the Second National Conference on Document Analysis and Recognition NCDAR-2003,* PES College of engineering, Mandya, India, July 11-12, **2003**, pp. 103-109.
319. **Guru D S**, Kiranagi B B and Nagabhushan P., Multivalued type proximity measure and concept of mutual similarity value useful for clustering of interval valued symbolic patterns. *Proceedings of the Second National Conference on Document Analysis and Recognition NCDAR-2003*, PES College of engineering, Mandya, India, July 11-12, **2003**, pp. 95-102.
320. **Guru D S**, Dinesh R and Nagabhushan P., Small eigen value based adaptive region of support useful for dominant point detection. *Proceedings of the Second National Conference on Document Analysis and Recognition NCDAR-2003,* PES College of engineering, Mandya, India, July 11-12, **2003**, pp 88-94.
321. **Guru D S**, Nagabhushan P and Shekar B H., Small eigen value based edge detector in binary images: a simple and robust approach. *Proceedings of the Second National Conference on Document Analysis*

and Recognition NCDAR-2003, PES College of engineering, Mandya, India, July 11-12, **2003**, pp. 81-87.

322. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Rotation invariant approach for text document images useful for document image mosaicing. *Proceedings of the Second National Conference on Document Analysis and Recognition NCDAR-2003*, PES College of engineering, Mandya, India, July 11-12, **2003**, pp. 20-27.
323. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Skew estimation of binary document images using static and dynamic thresholds useful for document image mosaicing. *Proceedings of the National Workshop on IT Services and Applications - WITSA – 2003*, Centre for Information Technology and Department of Computer Science, Jamia Milia Islamia, New Delhi, India, Feb 27-28, **2003**, pp 8.
324. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Skew estimation of binary document images: an approach based on text line boundary fitting. *Proceedings of National seminar on Algorithms and Artificial Systems*, Department of Computer Science, University of Madras, India, Jan.30 – Feb. 1, **2003**, pp 253-270.
325. Shivakumara P, **Guru D S**, Hemantha Kumar G and Nagabhushan P., Skew detection in binary document image using linear regression analysis. *Proceedings of the National Conference on Advanced Computer Applications – NCACA*, Department of Computer Science, NGM college, Pollachi, Coimbatore, Tamil Nadu, India, Oct. 11 - 12, **2002**, pp. 41-46.
326. Shivakumara P, **Guru D S**, Hemantha Kumar G and Nagabhushan P., Automatic segmentation of text lines and words from skewed text document: a technique based on nearest neighbor clustering approach. *Proceedings of the National Conference on Recent Trends in Information Communication Technology and Applications-RTICIA*, Jalagaon (MS), North Maharastra University, India, Oct. 10 - 11, **2002**, pp. 7.
327. Nagabhushan P, Anami B S and **Guru D S.**, A secant knowledge based technique for recognition of PSL primitives useful in automatic English text production from PSL documents. *Proceedings of the National workshop on Computer Vision, Graphics and Image Processing (wcvgip - 02)*, Madurai, Tamil Nadu, India, Feb. 15-16, **2002**, pp. 172-176.
328. Shivakumara P, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Text skew detection through contour following in a document image. *Proceedings of the National workshop on Computer Vision, Graphics and Image Processing*, Madurai, Tamil Nadu, India, Feb. 15-16, **2002**, pp. 39-44.
329. **Guru D S**, Kiranagi B B and Nagabhushan P., Similarity measure for interval valued symbolic data type: a novel technique. *Proceedings of the National workshop on Computer Vision, Graphics and Image Processing*, Madurai, Tamil Nadu, India, Feb. 15-16, **2002**, pp. 156-161.
330. Nagamani M R, Nagabhushan P and **Guru D S.**, Creation of postal knowledge base and discernment of destination postal code: A step towards postal automation in India. *Proceedings of the Third National Conference on Recent Trends in Advanced Computing - NCRTAC*,Thirunelveli, Tamil Nadu, India, Feb 13-15, **2002**. pp. 110-119.
331. Shivakumara P, **Guru D S**, Hemantha Kumar G and Nagabhushan P., Mosaicing of scrolled split images based on pattern matching approach. *Proceedings of the Third National Conference on Recent Trends in Advanced Computing - NCRTAC*, Thirunelveli, Tamil Nadu, India, Feb 13-15, **2002**.
332. Nagabhushan P, Anami B S and **Guru D S.**, A context free grammar for validation of PSL strokes. *Proceedings of the National conference on mathematical and computational models*, PSG College of Technology, Coimbatore, Tamil Nadu, India, December 27-28, **2001**.
333. Shivakumara P, **Guru D S**, Hemantha Kumar G and Nagabhushan P., Mosaicing color documents: a technique based on pattern matching approach. *Proceedings of the National Conference on Computers and Information Technology*, Kilakarai, Tamil Nadu, India, 24-25 Sept. **2001**, pp. 69-74
334. **Guru D S**, Ahmed S K and Irfan K., An attempt towards recognition of handwritten Urdu characters: a decision tree approach. *Proceedings of the National Conference on Computers and Information Technology*, Kilakarai, Tamil Nadu, India, Sept. 24-25, **2001**, pp. 75-83.
335. Dinesh R and **Guru D S.**, Corner detection schemes: a brief survey. *Proceedings of the National Conference on Computers and Information Technology*, Kilakarai, Tamil Nadu, India, Sept. 24-25, **2001**, pp. 55-68.

336. Punitha P and **Guru D S.**, Spatial knowledge representation: a brief survey. *Proceedings of the National Conference on Computers and Information Technology*, Kilakarai, Tamil Nadu, India, Sept. 24-25, **2001**, pp 103-115.
337. Vasudev T, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Knowledge base for recognition of handwritten numerals using 7-segment projection. *Proceedings of the National Conference on Computers and Information Technology*, Kilakarai, Tamil Nadu, India, Sept. 24-25, **2001**, pp. 47-54.
338. Vasudev T, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Extension of 7-segment display concept for handwritten numeral recognition: a simple projection approach. *Proceedings of the National Conference on Document Analysis and Recognition.*Mandya, Karnataka, India, July 13-14, **2001**, pp 57-61.
339. Ramesh Babu D R, Hemantha Kumar G, **Guru D S** and Nagabhushan P., Mosaicing of orthonormal images: an approach based on texture analysis. *Proceedings of the National Conference on Document Analysis and Recognition.* Mandya, Karnataka, India, July 13-14, **2001**, pp. 165-170.
340. Shivakumara P, **Guru D S**, Hemantha Kumar G and Nagabhushan P., Pattern matching approach based image sequencing useful for document image mosaicing. *Proceedings of the National Conference on Document Analysis and Recognition.*Mandya, Karnataka, India, July 13-14, **2001**, pp. 192-198.
341. Kiranagi B B, **Guru D S** and Nagabhushan P., The concept of forest distance useful for cluster validation: an efficient and simple approach. *Proceedings of the National Conference on Document Analysis and Recognition*. Mandya, Karnataka, India, July 13-14, **2001**, pp. 220-224.
342. **Guru D S**, Prathiba R and Supriya H S., Pattern recognition methodologies for retrieving information from symbolic relational databases. *Proceedings of the National Conference on Document Analysis and Recognition.*Mandya, Karnataka, India, July 13-14, **2001**, pp. 212-219.
343. **Guru D S.**, Classification of text documents: an overview, the challenges and future avenues. *Proceedings of the pre-conference workshop on Document Image Processing*, Mandya, India, July 12, **2001**, pp. 28-34.
344. Nagabhushan P, **Guru D S** and Kiranagi B B., Suitability study of some distance measures: a critical analysis. *Proceedings of the National Conference on Recent Trends in Advanced Computing, NCRTAC*, Kovilpatti, India, Feb.9-10, **2001**, pp. 120-129.
345. Shivakumara P, **Guru D S**, Hemantha Kumar G, and Nagabhushan P., Document image mosaicing: a novel technique based on pattern matching approach. *Proceedings of the National Conference on Recent Trends in Advanced Computing, NCRTAC*, Kovilpatti, India, Feb.9-10, **2001**, pp. 1-8.
346. **Guru D S** and Prathiba R., Axiomatization of fuzzy-symbolic functional dependencies: a new formal system (World Mathematical Year – 2000). *Proceedings of the National conference on Challenges of the 21st century in mathematics and its allied topics*, University of Mysore, Mysore, Feb 3-4, **2001**, pp. 302-310
347. **Guru D S** and Nagabhushan P., Fuzzy theory based unconventional distance measure useful for object recognition. *Proceedings of the National conference on neural network and expert systems on civil engineering applications*. Hyderabad, Dec.15, **2000**, pp. 143-151.
348. **Guru D S**, Radha R and Archana R., Axiomatization of fuzzy functional dependencies with only two inference rules: a new formal system. *Proceedings of the XXXV annual convention of Computer Society of India*, CSI 2000, Chennai, India, Sept. 12 - 16, **2000**, pp. 99-105.
349. **Guru D S** and Nagabhushan P., A novel algebraic discriminating function for classification of corners based on n directional codes. *Proceedings of the National Seminar on Applied Systems Engineering and Soft Computing- SASESC-2000*, Agra, India, March 4-5, **2000**.
350. **Guru D S** and Nagabhushan P., Transformation of the physical image of an object into a symbolic image through detection and labeling of corners on boundary curve. *Proceedings of the National Conference on Recent Trends in Advanced Computing - NCRTAC*, Thirunelveli, India, Feb 11-12, **2000**, pp. 152 - 157.
351. **Guru D S**, Bhavani K N and Goli S M., Thorough investigation of an automated tool for relational database design. *Proceedings of the XXXIV Annual National Convention of Computer Society of India, CSI99*. Mumbai, India, Nov. 1- 4, **1999**, pp. 228-237.
352. Nagabhushan P and **Guru D S**, An experimental investigation to minimize the look area in the symbolic image for accurate object recognition. *Proceedings of the National Seminar on Artificial Neural Networks & Cognitive Systems (ANCS-98),* Cochin, India, Sept. 23-25, **1998**, pp. 152-155.

16.2.5. In Book Chapters

353. M Ravikumar, PG Rachana, BJ Shivaprasad, and **D.S. Guru**., Enhancement of Mammogram Images Using CLAHE and Bilateral Filter Approaches. *Cybernetics, Cognition and Machine Learning Applications*, 261-271, **2021** (Springer Book Chapter) (Published : March 2021).
354. Mallikarjuna P B, **D S Guru**, and Shadaksharaiah C., Ripeness Evaluation of Tobacco Leaves for Automatic Harvesting: An Approach Based on Combination of Filters and Color Models. In: Verma, G.K., Soni, B., Bourennane, S., Ramos, A.C.B. (eds) Data Science. Transactions on Computer Systems and Networks. Springer, Singapore. https://doi.org/10.1007/978-981-16-1681-5_13. (Book Chapter in Springer, Aug. **2021**).
355. BH Lohithashva, VNM Aradhya, and **D.S. Guru**., An integration of handcrafted features for violent event detection in videos. Recent Trends in Computational Intelligence Enabled Research, 295-305., Theoretical Foundations and Applications, **2021**, Pages 295-305. (Book Chapter in ScienceDirect, Academic Press, Aug. 2021).
356. Manjunath S, Guru D S, K. B. Nagasundara and M. G. Suraj., 2D2 LPI: Two directional two dimensional locality preserving indexing. International Journal of Computer Vision and Image Processing, Vol.3, No.2, IGI Global publications, 2013, pp. 17 – 31.
357. Prakash H N and **Guru D S.**, Retrieval of online signatures. *Machine Interpretation of Patterns: Image Analysis, Data Mining*. Editors R.K. De, D.P. Mandal and A Ghosh, **2010**, World Scientific Press.
358. Punitha. P and **Guru D S.**, Intelligent image archival and retrieval system. *Encyclopedia of data warehousing and mining*, 2nd Edition, Vol., 2, **2009**, pp 1066 – 1072.

16.2.6. In Souvenir

359. Kiranagi B B and **Guru D S.**, Unconventional multivalued dissimilarity measure and dimensionality reduction useful for classification of symbolic data. *Abstract published in the proceedings of the conference of Society of Statistics, Computer and Applications,* New Delhi, India, Dec. 22-24, **2004**, pp 172-173.
360. Dinesh R and **Guru D S.**, Detection and labeling of corner points useful for transformation of 2D objects into symbolic images. *Abstract published in the proceedings of the conference of Society of Statistics, Computer and Applications,* New Delhi, India, Dec. 22-24, **2004**, pp. 172-173.
361. **Guru D S**, Raghavendrachari H J and Suraj M G., Binary search based sorting by insertion: a new approach. *Souvenir of the National Seminar & Second annual conference of the society of Statistics, Computer and Applications*, Pala, Kerala, India, Nov. 28– Dec. 1, **1999**, pp. 28-29.
362. Nagabhushan P and **Guru D S.**, Object recognition through the analysis of spatial relationships: a study of two models. *Souvenir of the International Conference on Combinatorics, Statistics, Pattern Recognition and Related areas*., Mysore, India, Dec. 28-30, **1998**, pp. 57.
363. **Guru D S** and Ganesh S., Synthesizer +, a minimal RDB designer. *Abstract of VII Karnataka Student CSI Convention*, **1993**.
364. Ganesh S and **Guru D S.**, Automated relational database designer: a software system using optimal cover. *Abstract of VI Karnataka Student CSI Convention*, **1992.**

17. Contribution to Books and Journals (Scholarly Achievements)

17.1. PHI Publications (Text Books Authored): 03

1. Somashekara M T, **D S Guru** and K S Manjunatha., Problem Solving with C. **PHI Publications**, 2018.
2. Somashekara M T, **D S Guru** and K S Manjunatha., Object Oriented Programming with Java. **PHI Publications**, 2017.
3. Somashekara M T, **D S Guru**, H S Nagendraswamy and K S Manjunatha., Object Oriented Programming with C++. **PHI Publications**, 2012.

17.2. Springer Publications (Edited Books): 04

1. **Guru D S**, Sharath Kumar Y H, Balakrishna K, R. K. Agrawal, Manabu Ichino., Cognition and Recognition. Communications in Computer and Information Science 1697, **CCIS-1697**, Proceedings of ICCR-2021, **Springer Publishers,** 2022.
2. Nagabhushan P, **D S Guru**, B H Shekar and Y H Sharath Kumar., Data Analytics and Learning. Proceedings of DAL 2018, Lecture Notes in Networks and Systems 43, **LNNS-43, Springer Publishesrs**, 2019.
3. **Guru D S**, Vasudev T., Chethan H.K., and Sharath Kumar Y.H., Cognition and Recognition. Proceedings of ICCR 2016, Lecture Notes in Networks and Systems 14, **LNNS-14, Springer Publishers**, 2018.
4. Punitha P and **Guru D S**, Multimedia Processing, Communication and Computing Applications. Proceedings of ICMCCA 2012, Lecture Notes in Electrical Engineering 213, **LNEE-213, Springer Publishers**, 2013.

17.3. CRC Press Publications (Edited Books): 01

1. Santosh K.C, Sameer Antani, **D S Guru**, Nilanjan Dey., Medical Imaging: Artificial Intelligence, Image Recognition, and Machine Learning Techniques. 1st Edition, **CRC Press, Taylor and Francis Group**, 2019.

17.4. Other Publications (Edited Books): 02

1. Mahesh P K, **Guru D S**., Second International Conference on Signal Processing, Image Processing and VLSI. **ICrtSIV-2015**, **Institution of Doctors Engineers and Scientist (IDES) Publishers,** 2015, ISBN: 978-981-09-6200-5.
2. **Guru D S** and Vasudev T., Signal and Image Processing. Proceedings of ICSIP, **Excel India Publishers**, India.2009.

17.5. Journal issues (Edited Volumes): 02

International Journal of Machine Intelligence. Volume – 3, **Issue 3 and 4**, 2011.

ISSN: 09752927.

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