Detailed CV

Name   : Dr. B H SHEKAR

Educational Qualification   : M.Sc. Ph.D.,

Designation   : Professor

Address for Correspondence:

Department of Computer Science

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Research Areas   : Pattern Recognition

Image Processing

Machine Learning

Artificial Intelligence

Professional Teaching Experience : 23 Years

Research Guidance (M.Phil. /Ph.D.):

Completed students' list:

01.   M. Sharmila Kumari: Analysis, Indexing and Retrieval of Digital Video: Some New Approaches; June 2012

02.   G. Thippeswamy: Some New Algorithmic Models for Face Representation and Recognition; Aug 2012

03.   R. K. Bharathi: Design and Development of an Efficient Online Signature Verification System; Apr 2013

04.   M. L. Smitha: Text Detection in Document Images and Video frames; Dec 2015

05.   K. RaghuRama Holla: Descriptor Based Models for Video Indexing and Retrieval; May 2017

06.   Bharathi Pillar: Morphology based shape representation and classification; June 2017

07.   Rajesh, D. S.: e-FACE: efficient Algorithms for face recognition in uncontrolled environment; July 2018

08.   Uma K. Pare: MARS: Multimedia Archival and Retrieval Systems; Dec. 2019

09.   N. Harivinod: Multimodal Biometrics: Some New Techniques; June 2020

10.   Guesh Dagnew Demewez: Exploring New Feature Selection and Classification Models for Microarray Cancer Data; Aug. 2020

11.   Sharada S Bhat: e-IRIS: efficient Algorithms for Iris Representation and Recognition, Dec. 2020

Ongoing Registered Students' list:

01.   Sunil Kumar: e-PASS: Person Authentication based on Signature Biometrics;

02.   Raveeshwara, S.: Robust Detection and Tracking Methods for Text Reading in Video;

03.   Rathnakara Shetty: Human Action Recognition in RGB-Depth Data;

04.   Nausheeda B S: Exploration of RGB-D and Hyper-spectral Image Modalities for Face Recognition;

05.   Habtu Hailu: Exploring Segmentation and Classification Algorithms to Analyze Medical Images;

06.   Vidya Kumari: Biometric Encoding and Authentication Protocols for Secured Digital Payment;

07.   Swathi, K: A²TM : Algorithms for Authentication of Digital Transactions based on Multi-biometric;

08.   Wincy Abraham: Under course work (VIDEO FORENSICS);

Research Projects:

PRINCIPAL INVESTIGATOR:
On the Analysis and Understanding of Video Image Data
Funding Agency: University Grants Commission, New Delhi, India.
Fund: Rs. 8,13,400/-
Duration: 5th May 2009 – 4th May 2012 (3 Years) - Completed

Spatial Modeling of Human Faces for Real time Classification and Analysis
Funding Agency: Department of Science and Technology, New Delhi, India. And Russian Foundation for Basic Research, Moscow, Russia - **A Collaborative Research Project with Moscow State University, Moscow, Russia.**
Fund: Rs. 14,62,280/-
Duration: 10th June 2009 – 9th June 2011 (2 Years) - **Completed**

Mathematical models and morphological analysis based algorithms for image comparison and classification in computer based vision system
Funding Agency: Department of Science and Technology, New Delhi, India. And Russian Foundation for Basic Research, Moscow, Russia - **A Collaborative Research Project with Moscow State University, Moscow, Russia.**
Fund: Rs. 22,50,000/-
Duration: 10th June 2012 – 9th June 2014 (2 Years) – **Completed**

Exploration of Continuous Morphological Models for Analysis, Understanding and Classification of Dynamic Depth Images/Videos
Funding Agency: Department of Science and Technology, New Delhi, India. And Russian Foundation for Basic Research, Moscow, Russia - **A Collaborative Research Project with Moscow State University, Moscow, Russia.**
Fund: Rs. 28,40,400/-
Duration: Apr. 2017 – Aug. 2019 (2 ½ Years) – **Completed**

CO-INVESTIGATOR:
Design and Development of Real-Time Transportation Safety Monitoring System for Smart Cities

Professional Collaboration:

International   :   Moscow State University, Russia

National   :   Indian Institute of Technology, Hyderabad

Indian Institute of Information Technology, Allahabad

University of Mysore, Manasagangothri, Mysore.

Research Journal Publications:

In International Journals

— A Deep Learning Approach for Microarray Cancer Data Classification, CAAI Transactions on Intelligence Technology, Dec. 2019, IET Publications.

— Key Frame Based Video Clip Retrieval Using LBP Variance, International Journal of Information Processing, 10(4), 34-46, ISSN : 0973-8215, IK International Publishing House Pvt. Ltd., New Delhi, India, 2016,

— Video Clip Retrieval Based on LBP Variance, Twelfth International Multi-Conference on Information Processing-2016 (IMCIP-2016), Elsevier Procedia Computer Science, Vol. 89, pp. 828 – 835, 2016

— Discrete Cosine Transformation and Height Functions based Shape Representation and Classification, Published in Int. Journal of Procedia Computer Science, volume 58, (2015), pages: 714- 722.

— Kirsch directional derivatives based shot boundary detection: an efficient and accurate method, Second International Symposium on Computer Vision and the Internet (VisionNet'15), Elsevier Procedia Computer Science 58, 565 – 571, 2015

— DCT-MLP based offline signature verification, International Journal of Information Processing, vol. 7(3), 34-44, 2013.

— Surface measures for accuracy evaluation in 3d face reconstruction. Pattern Recognition 45(10): 3583-3589, 2012.

— KDE Technique with ECA for Accurate Face Image Classification, International Journal of Information Processing, 6(1), 60-66, 2012.

— Face Recognition Using Kernel Entropy Component Analysis, International Journal of Neurocomputing, 74(6): 1053-1057, 2011.

— Video cut detection using chromaticity histogram, International Journal of Machine Intelligence, ISSN-0975-2927, vol. 3(3), pp. 371-375, Dec. 2011.

— An edge based model for efficient representation and accurate recognition of human faces, International Journal of Multidisciplinary Research & Advances in Engineering, ISSN 0975-7074, Vol. 3(3), pp. 259-274, 2011

— An efficient and accurate shot boundary detection technique based on color moments, International Journal of Artificial Intelligence and Knowledge Discovery, Vol. 1(1), pp. 77-80, 2011.

- Weber's local descriptor based model for text detection in document images, International Journal of Information Processing, Vol. 4(4), pp. 17-25, 2010
- Moments Based Shot Boundary Detection Algorithm, MES Journal of Technology and Management, Vol. no. 1(2), pp. 42-45, 2010.
- Text Detection in Video Frames: An Integrated Approach Based On Weber's Local Descriptor And Differential Excitation Difference, MES Journal of Technology and Management, Vol. no. 1(2), pp. 76-82, 2010.
- Discriminative SIFT model: A robust and an accurate face representation and recognition model, International Journal of Information Processing, vol. 4(2), pp. 51-61, 2010.
- $(2D)^2$LPP: A new dimensionality reduction technique with application to face/object recognition, International Journal of Systemics, Cybernetics and Informatics, pp. 17-22, 2009.
- Identification of Camouflaged Defects in Image through Zernike Moments and Pyramid Segmentation, Journal of Computer Science (JCS), Coimbatore, TamilNadu.
- Identification of camouflaged defects through central moments and hierarchical segmentation, International Journal of Tomography and Statistics, vol. 8(8), pp. 83-98, 2008.
- $(2D)^2$ FLD: An efficient approach for appearance based object recognition. Journal of Neurocomputing, vol. 69(7-9), pp. 934-940, 2006.
- Visual Learning and Recognition of 3D Objects Using Two Dimensional Principal Component Analysis: A Robust and an Efficient Approach, Pattern Recognition, vol. 39(4), pp. 721-725, 2006.
- Dominant lines perceptual organization and eigenvalue analysis: An integrated approach for 3D object recognition. International Journal of Systemics, Cybernetics and Informatics, vol. 1(1), pp. 81-87, 2006.
- A simple and robust line detection algorithm based on small eigenvalue analysis. Journal of Pattern Recognition Letters, vol. 25(1), pp 1-13, 2004.
- Modified 2D-FLD: An efficient approach for appearance based object recognition. International Journal of Tomography and Statistics.

In International Proceedings

- Iris Recognition by Learning Fragile Bits on Multi-patches using Monogenic Riesz Signals. Pattern Recognition and Machine Intelligence - 2019: 462-471, Springer LNCS.
- L1-Regulated Feature Selection and Classification of Microarray Cancer Data using Deep Learning, The Third International Conference on Computer Vision and Image Processing,-2018, Advances in Intelligent Systems and Computing, Springer Series.
- Comparison of Machine Learning Algorithms for Skin Disease Classification Using Color and Texture Features, Third Symposium on Emerging Topics in Computing and Communications (SETCAC'18), 19-22, Sept. 2018.
- A Multi-Classifier Approach on L1-Regulated Features of Microarray Cancer Data, Third Symposium on Advances in Applied Informatics (SAI'18), 19-22, Sept. 2018.
- A bimodal biometric system using palmprint and face modality, First International Conference on Data Analytics and Learning-2018, Lecture Notes in Networks and Systems, Springer Series, 199-208.
- Circular Map Pattern Spectrum—An Accurate Descriptor for Shape Representation and Classification, First International Conference on Data Analytics and Learning-2018, Lecture Notes in Networks and Systems, Springer Series, 209-222.
- Classification of Multi-class Microarray Cancer Data Using Ensemble Learning Method, First International Conference on Data Analytics and Learning-2018, Lecture Notes in Networks and Systems, Springer Series, 281-294.
- Offline Signature Verification Based on Partial Sum of Second-Order Taylor Series Expansion, First International Conference on Data Analytics and Learning-2018, Lecture Notes in Networks and Systems, Springer Series, 361-370.

- Video clip retrieval using serial walk local descriptor. IEEE International Conference on Advances in Computing, Communications and Informatics – 2017: 1506-1510.
- Video clip retrieval: An integrated approach based on KDM and LBPV. IEEE International Conference on Advances in Computing, Communications and Informatics – 2017: 1613-1618
- Bezier Curve Based Continuous Medial Representation for Shape Analysis: A Theoretical Framework. The Sixth International Conference on Mining Intelligence and Knowledge Exploration, 2017: 54-63
- Supervised Asymmetric Metric Extraction: An Approach to Combine Distances. The Sixth International Conference on Mining Intelligence and Knowledge Exploration, 2017: 123-132
- Face Detection Based on Frequency Domain Features. 7th International Conference on Pattern Recognition and Machine Intelligence, 2017: 203-211
- Multi-Patches Iris Based Person Authentication System Using Particle Swarm Optimization And Fuzzy C-Means Clustering, International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences (ISPRS), Volume 42, Issue 2/W4, p243-249, 2017.
- Block-wise Binary Pattern: A Robust And An Efficient Approach For Offline Signature Verification, International Archives of the Photogrammetry, Remote Sensing & Spatial Information Sciences, 2017 May 10; 42 (At MOSCOW, Russia)
- Shot Boundary Detection Using Correlation based Spectral Residual Saliency Map, IEEE International Conference on Advances in Computing, Communications and Informatics – 2016, Sept. 21-24, 2016, Jaipur, India, pp. 2242—2247, 2016.
- Video Clip Retrieval Using Local Phase Quantization, IEEE International Conference on Advances in Computing, Communications and Informatics- 2016, Sept. 21-24, 2016, Jaipur, India, pp. 1522—1527, 2016.
- Eigenvalue Analysis with 2D-DCT and BBP for Shape Representation and Classification, Published in the Proceeding of Third International Symposium on Computer Vision and Internet (VisionNet'16), ACM Sept 2016, ISBN No. 978-1-4503-4301-5, pp. 30-35, DOI : 10.1145/2983402.2983414, at LNMIIT Jaipur, Rajasthan, India.

- *Video Retrieval based on Patterns of Oriented Edge Magnitude. In Proceedings of the Third International Symposium on Computer Vision and the Internet (VisionNet'16). ACM, New York, pages 115-120, Sep-2016.*

- An integrated approach of Radon Transform and Block-wise Binary Pattern for Shape Representation and Classification, Published in Proceedings of International Conference on Advances in Computing, Communications and Informatics (ICACCI'16), at LNMIIT Jaipur, Rajasthan,India, IEEE, Sept 2016, ISBN: 978-1-5090-2029-4, pp. 1976-1982, DOI:10.1145/2983402.2983455.
- Stockwell transform based face recognition, 5th International Conference on Advances in Computing, Communications and Informatics ICACCI (2016), held in Jaipur, June 2016
- Undecimated Dual Tree Complex Wavelet Transform (UDTCWT) based Face Recognition, 5th International Conference on Advances in Computing, communications and informatics ICACCI, (2016), held in Jaipur, June 2016.
- Reassigned Time Frequency Distribution Based Face Recognition, presented at International conference on computer vision & image processing CVIP (2016) held at IIT, Roorkee, Feb 26-28, 2016, Springer- Advances in Intelligent Systems and Computing Series.
- Shape Representation and Classification Based on Discrete Cosine Transformation and IDSC", Published in the Proceeding of the Third International Symposium on Women in Computing and Informatics (WCI'15), at SCMS, Kochi, India , ACM, Aug 2015, ISBN: 978-1-4503-3361-0, pp. 341-347, DOI: 10.1145/2791405.2791488.
- An unification of Inner Distance Shape Context and Local Binary Pattern for Shape Representation and Classification." Published in Proceedings of the 2nd International Conference on Perception and

Machine Intelligence (PERMIN'15) at CDAC Kolkata, India, ACM, Jan 2015, ISBN: 978-1-4503-2002-3, pp. 46-55, DOI:10.1145/2708463.2709062.

— Video Retrieval: An Accurate Approach Based On Kirsch Descriptor. In Contemporary Computing and Informatics (IC3I), 2014 International Conference on, pages 1203-1207.

— An ensemble of morphology based Pattern Spectrum and Height functions for shape representation and classification" Published in Proceedings of 2014 International Conference on Advances in Computing, Communications and Informatics (ICACCI'14), IEEE, 2014, ISBN : 978-1-4799-3078-4, pp. 2264-2272, DOI: 10.1109/ICACCI.2014.6968428.

— Shape representation and classification through Height functions and Local Binary Pattern-a decision level fusion approach." Published in Proceedings of 2014 International Conference on Advances in Computing, Communications and Informatics (ICACCI'14), IEEE, 2014, ISBN : 978-1-4799-3078-4, pp. 2481-2488, DOI: 10.1109 / ICACCI.2014.6968558.

— A decision level fusion of morphology based Pattern Spectrum and IDSC for shape representation and classification." Published in Proceedings of 2014 International Conference on Contemporary Computing and Informatics (IC3I'14), IEEE, 2014, ISBN: 978-1-4799-6628-8, pp. 908-914, DOI: 10.1109/IC3I.2014.7019663.

— Shape Representation and Classification through Pattern Spectrum and Local Binary Pattern–A Decision Level Fusion Approach, Published in 2014 Fifth International Conference on Signal and Image Processing ICSIP -2014, IEEE, 2014, ISBN: 978-0-7695-5100-5, pp. 218-224, DOI:10.1109/ICSIP.2014.41.14199001.

— Local Morphological Pattern Spectrum Based Approach for Off-line Signature Verification-International Conference on Pattern recognition and Machine Intelligence (PReMI' 13) held in Kolkata, India, SPRINGER Dec 2013, ISBN: 978-3-642-45061-7, pp-335-342, DOI:10.1007/978-3-642-45062-4_45.

— Affine Normalized Stockwell transform based Face Recognition, in IEEE International Conference on Signal Processing, Informatics, Communication and Energy Systems (SPICES) held at NIT, Calicut, pp 1-6, 2015

— Iris Recognition using partial sum of second order Taylor series expansion, Proceedings of the Tenth Indian Conference on Computer Vision, Graphics and Image Processing, pages: 81, 2016, ACM Publications.

— Video Clip Retrieval Based on LBP Variance, Procedia Computer Science, 2016

— Video clip retrieval using local phase quantization, International Conference on Advances in Computing, Communications and Informatics- 2016,

— Shot boundary detection using correlation based spectral residual saliency map, International Conference on Advances in Computing, Communications and Informatics- 2016,

— Gabor Moments Based Shot Boundary Detection, Proceedings of the Third International Symposium on Women in Computing and Informatics August 10-13, 2015, pp. 359--364, Kochi, India, DOI: http://dx.doi.org/10.1145/2791405.2791499.

— Kirsch directional derivatives based shot boundary detection: an efficient and accurate method, Procedia Computer Science, 2015

— Steerable Riesz Wavelet based approach for Iris recognition, IEEE 3rd IAPR Asian Conference on Pattern Recognition (ACPR), pages: 431-436, 2015.

— B H Shekar and D S Rajesh, Affine Normalized Krawtchouk moments based Face Recognition, Procedia Computer Science, vol.58, pp. 66-75, 2015.

— Logarithmic dyadic wavelet transform based face recognition, Advances in Computing, Communications and Informatics (ICACCI), 2015 International Conference on, 2015, pp.1428-1435

— Approximate Radial Gradient Transform based Face Recognition, Advances in Computing, Communications and Informatics (ICACCI), 2015 International Conference on, 2015, pp.1071-1077

— Illumination Invariant Text Recognition System Based On Contrast Limit Adaptive Histogram Equalization in Videos/Images, Third International Symposium on Women in Computing and Informatics (WCI-2015) , ACM Publications, pp. 249-254 held at SCMS, Cochin, August 2015.

— Grid Structured Morphological Pattern Spectrum for Off-line Signature Verification, Proceedings of the 8th IAPR conference on Biometrics, ICB-2015, Page(s):430-435, May 19 – 22, 2015, Phuket, Thailand.

— Phase Congruency and Morphology Based Approach for Text Localization in Videos, Fourth International Conference on Advances in Computing, Communications and Informatics, IEEE Conference Publications, DOI: 10.1109/ICACCI.2015.7275947, pp. 2221 – 2225 held at SCMS, Cochin, August 2015.

— Text Localization in Video/Scene Images using Kirsch Directional Masks, Fourth International Conference on Advances in Computing, Communications and Informatics, IEEE Conference Publications, DOI: 10.1109/ICACCI.2015.7275814, pp. 1436 – 1440 held at SCMS, Cochin, August 2015.

— Text Localization in Video Using Multi-scale Weber's Local Descriptor, IEEE SPICES, IEEE Conference Publications, DOI: 10.1109/SPICES.2015.7091559, pp. 1 - 6 held at NIT, Calicut, Feb 2015.

— Morphological Gradient Based approach for Text Localization in Video/Scene images, Third International Conference on Advances in Computing, Communications and Informatics, IEEE Conference Publications, DOI: 10.1109/ICACCI.2014.6968426, pp. 2426 – 2431, held at Galgotia College of Engineering & Technology, Greater Noida, September 2014.

— Gradient Difference based approach for Text Localization in Compressed domain, Second International Conference on Emerging Research in Computing, Information, Communications and Applications, Elsevier Publications, ISBN: 9789351072638, vol. III, pp. 299-308, held at NMIT, Bangalore August 2014.

— Skeleton Matching based approach for Text Localization in Scene Images, Eighth International Conference on Image and Signal Processing, Elsevier Publications, ISBN: 9789351072522, pp. 145-153, held at UVCE, Bangalore in July 2014.

— Video Text Localization with an emphasis on Edge Features, Eighth International Conference on Image and Signal Processing, Elsevier Publications, ISBN: 9789351072522, pp. 324-330, held at UVCE, Bangalore in July 2014.

— Discrete Wavelet Transform and Gradient Difference based approach for text localization in videos, Fifth International Conference on Signals and Image Processing, IEEE, DOI 10.1109/ICSIP.2014.50, pp. 280-284, held at BNMIT, Bangalore in January 2014.

— Video Retrieval: An accurate approach based on Kirsch Descriptor, International conference on Contemporary Computing and Informatics, IC3I 2014, November 27-29, 2014, SJCE, Mysore, India.

— Discriminative DCT:An efficient and Accurate Approach for Off-line Signature Verification, 5th International Conference in Signal and Image Processing - ICSIP(2014), IEEE DOI 0.1109/ICSIP.2014.34, B N M I T, Bangalore, Jan 8-10 2014, pages : 179-184.

— Discriminative DCT-MLP based approach for off-line signature verification, International Conference on Advances in Computing, Communications and Informatics-ICACCI 2014, Galgotia Institute of Technology, Greater Noida, Noida, pp.2309 - 2315, 24-27, September -2014. (doi: 10.1109/ICACCI.2014.6968585)

— Local Morphological Pattern Spectrum Based Approach for Off-line Signature Verification, 5th International Conference on Pattern Recognition and Machine Intelligence, PReMI'13, Lecture Notes in Computer Science - Springer, Indian Statistical Institute, Kolkata, December 10-14, 2013, volume 8251, pages: 335-342.

— Off-line Signature Verification based on Chain Code Histogram and Support Vector Machine, IEEE International Symposium on Women in Computing and Informatics (WCI-2013), SJCE, Mysore, Aug-2013, pages: 2063-2068.

— Off-line Signature Verification based on Principal Component Analysis and Multi-layer Perceptron, Second International Symposium on Intelligent Informatics (ISI'13), SJCE, Mysore, Published in Recent Advances in Intelligent Informatics, volume:235, series of 'Advances in Intelligent Systems and Computing', Springer International Publishing pages:101-109.

— KID: Kirsch Directional Features Based Image Descriptor, In Proceedings of Fifth International Conference on Pattern Recognition and Machine Intelligence 2013 (PReMI 2013), Lecture Notes in Computer Science, Springer Berlin Heidelberg, Vol. 8251, pp 327-334, Dec 2013.

— On the use of monogenic scale space for efficient face representation and recognition,5th International Conference on Pattern Recognition and Machine Intelligence ,PReMI 2013, December 10-14, 2013, Indian Statistical Institute, Kolkata.

— Shot Detection Using Cumulative Color Histogram, In Proceedings of the Fourth International Conference on Signal and Image Processing 2012 (ICSIP 2012), Lecture Notes in Electrical Engineering. Springer India, vol. 222, pp. 353–363, Dec 2012.

— LOG-Grid based Off-line Signature Verification System, In Lecture notes in Electrical Engineering (LNEE), Springer India, Proceedings of the 4th International Conference in Signal and Image Processing (ICSIP'12), Dr.NGP Institute of Technology, Coimbatore, Dec-13-15 2012, pp. 321-330. [Rewarded as the Best Paper].

— DCT-SVM based Technique for Off-line Signature Verification, Proceedings of International Conference on Emerging Research in Electronics and Computer Science Technology (ICERECT 2012), Lecture Notes in Electrical Engineering - Springer, PESCE Mandya, December 21-22, 2012, Vol-248, pp. 843-853.

— Monogenic Scale Space Based Region Covariance Matrix Descriptor: An Efficient and Accurate Face Recognition Algorithm, International Conference on Computing, Communication and Informatics, Aug. 2012.

— Monogenic Scale Space Based Region Covariance Matrix Descriptor for Face Recognition, International Conference on Computer Science, Engineering and Applications, Feb. 2012.

— Video Cut and Fade Detection Using Gabor Moments", in Bilateral Russian-Indian Scientific Workshop on Emerging Applications of Computer Vision, Russia, Moscow, November 1-5, 2011.

— Shot Boundary Detection Algorithm Based On Color Texture Moments", in Second International Conference on Advances in Communication, Network, and Computing, LNCS, vol. 142, Springer Berlin Heidelberg, March, 2011.

— On the use of phase of the discrete cosine transform for text detection in document images and video frames under variations in illumination, Indian International Conference on Artificial Intelligence, Dec. IICAI 2011.

— Face recognition based on discriminative fractional discrete cosine transform, Indian International Conference on Artificial Intelligence, Dec. IICAI 2011.

— Face Recognition Based on Fractional Discrete Cosine Transform. IEEE International Conference on Recent Trends in Information Technology, Digital Object Identifier: 10.1109/ICRTIT.2011.5972457, Publication Year: 2011, Page(s): 987 - 991.

— Video cut detection using chromaticity histogram, International Conference on Cognition and Recognition-2011 (ICCR-2011), Mysore, India. pp. 371-375, Dec. 2011.

— Monogenic Scale Space Based Region Covariance Matrix Descriptor for Face Recognition, DST-FRBR sponsored Russian-Indian Bilateral workshop on 'Emerging Applications of Computer Vision', pp. 29-36, Nov. 2011.

— Kernel eigen-signature: An Online Signature Verification Technique based on Kernel Principal Component Analysis, DST-FRBR sponsored Russian-Indian Bilateral workshop on 'Emerging Applications of Computer Vision', pp. 37-44, Nov. 2011.

— Orientation Map based Palm print Recognition, DST-FRBR sponsored Russian-Indian Bilateral workshop on 'Emerging Applications of Computer Vision', pp. 45-50, Nov. 2011.

— Video Cut and Fade Detection Using Moments of Gabor Filtered Images, DST-FRBR sponsored Russian-Indian Bilateral workshop on 'Emerging Applications of Computer Vision', pp. 216-224, Nov. 2011.

— Monogenic Scale Space Based Region Covariance Matrix Descriptor for Face Recognition, DST-FRBR sponsored Russian-Indian Bilateral workshop on 'Emerging Applications of Computer Vision', pp. 29-36, Nov. 2011.

— Video Cut and Fade Detection Using Moments of Gabor Filtered Images, DST-FRBR sponsored Russian-Indian Bilateral workshop on 'Emerging Applications of Computer Vision', pp. 216-224, Nov. 2011.

— Kernel Discriminative Embedding Technique with Entropy Component Analysis for Accurate Face Image Classification, International Conference on Image Processing, K.R. Venugopal and L M Patnakik (Eds.), CCIS 157, Springer-Verlag, pp. 181-189.

— Text Detection in Document Images and Video Frames: An Accurate and Robust Approach Based on Phase of the Fourier Transform, International Conference on Frontiers of Computer Science, IISc, Bangalore, Aug. 2011. [BEST PAPER AWARD]

— 3D Face Recognition using Orientation Maps, International Conference On Advances In Computing And Communications in Kochi, India, A. Abraham et al., (Eds.), CCIS-192, Springer-Verlag, pp. 396-405.

— On the use of Moravec operator for text detection in document images and video frames, IEEE International Conference on Recent Trends in Information Technology, Digital Object Identifier: 10.1109/ICRTIT.2011.5972394, Publication Year: 2011 , Page(s): 910 - 914 .

— Face Recognition Based on Fractional Discrete Cosine Transform. IEEE International Conference on Recent Trends in Information Technology, Digital Object Identifier: 10.1109/ICRTIT.2011.5972457, Publication Year: 2011, Page(s): 987 - 991.

— 3D Face Recognition using Significant Point based SULD Descriptor. IEEE International Conference on Recent Trends in Information Technology, Digital Object Identifier: 10.1109/ICRTIT.2011.5972443, Publication Year: 2011, Page(s): 981 - 986.

— *eigen-signature*: A Robust and an Efficient Offline Signature Verification Algorithm, IEEE International Conference on Recent Trends in Information Technology, Digital Object Identifier: 10.1109/ICRTIT.2011.5972461, Publication Year: 2011, Page(s): 134 - 138.

— FLD-SIFT: Class Based Scale Invariant Feature Transform for Accurate Classification of Faces, Second International Conference on Advances in Communication, Network, and Computing – CNC, V V Das, J Stephen and Y. Chaha (Eds.), CCIS-142, Springer_verlag, pp. 15-21.

— Shot Boundary Detection Algorithm Based on Colour Texture Moments, Second International Conference on Advances in Communication, Network, and Computing – CNC, V V Das, J Stephen and Y. Chaha (Eds.), CCIS-142, Springer_verlag, pp. 591-594. Mar. 2011

— An Efficient and Accurate Shot Boundary Detection Technique Based on Colour Moments, International Conference on Advanced Computing & Communication Technologies, Rohtak, India, Jan. 2011.

— Text Detection in Document Images and Video Frames: An Accurate and Robust Approach Based on Phase of the Fourier Transform, International Conference on Frontiers of Computer Science, IISc, Bengaluru**,** Aug. 2011.

— Kernel Entropy Component Analysis Based Model for Face Recognition, ACM Sponsored Indian Conference on Vision, Graphics and Image Processing, 2010.

— Moments Based Shot Boundary Detection Algorithm, International Conference on Computational Engineering, Practices and Techniques, pp. 42-45, Nov. 25-26, 2010, Kerala

— Text Detection in Video Frames: An Integrated Approach Based On Weber's Local Descriptor And Differential Excitation Difference, International Conference on Computational Engineering, Practices and Techniques, pp. 76-82, Nov. 25-26, 2010, Kerala.

— Weber's local descriptor based model for text detection in document images, Accepted for presentation in the International Conference on Information Processing, Bangalore, India. Aug. 06-08, 2010.

— r-PCA: An Illumination Invariant Model For Accurate Classification Of Faces, International Conference on Computational Engineering, Practices and Techniques, Nov. 25-26, 2010, Kerala.

— A rule based model for efficient representation and accurate recognition of human faces, International Conference on Advances in Computer Engineering, Bangalore, India, June 21-22, 2010.

— Color-SIFT model: A robust and an accurate shot boundary detection algorithm, International Conference on Digital Image Processing (ICDIP-2010), NEC, Nanyang Technological University, Singapore. Feb. 26-28, 2010.

— SIFT-PCA: An efficient and accurate face representation and recognition model, International Conference on Artificial Intelligence, IICAI-2009, Dec. 16-18, 2009.

— Discriminative Scale Invariant Feature Transform (SIFT-FLD) model for efficient representation and accurate recognition of faces, International Conference on Artificial Intelligence, IICAI-2009, Dec. 16-18, 2009.

— Discriminative SIFT model: A robust and an accurate face representation and recognition model, International Conference on Information Processing 2009 (ICIP-09), UVCE, Bangalore, India. 6-9 Aug. 2009.

— $(2D)^2$LPP: A new dimensionality reduction technique, Proceedings of the International Conference on Cognition and Recognition (ICCR 08), Mandya , India, pp. 443-448, 2008.

— Diagonal two dimensional Locality Preserving Projection for Clustering, Proceedings of the International Conference on Open Source Computing (INCOSC 08), Nitte, Mangalore, India, pp. 162-167, 2008.

— 3D object recognition using Laplacian-objects. In the Proceedings of the Third Workshop on Computer Vision, Graphics and Image processing, WCVGIP-2006, IIIT, Hyderabad, Jan. 12-13, pp. 234-240, 2006.

— Two-dimensional Optimal Transform for Appearance Based Object Recognition, Indian International Conference on Vision, Graphics and Image Processing, ICVGIP-06, Madurai, Dec. 13-16, 2006, pp. 650-661, LNCS 4338, Springer-Verlag.

— Polar-fisherspace: A linear transformation invariant model for appearance based object recognition. IEE International Conference on Visual Information Engineering (VIE-2006), Bangalore, Sept. 26-28, 2006, pp. 577-582.

— Optimal feature transform for appearance based object recognition. IEEE International Conference on Engineering of Intelligent Systems, Islamabad, Pakistan, Apr. 22-23, 2006, pp. 283-288.

— Object recognition through the principal component analysis of spatial relationship amongst lines. Seventh Asian Conference of Computer Vision (ACCV), Jan. 14-16th 2006, pp. 170-179, LNCS 3851, Springer-Verlag.

— Object recognition through the principal component analysis of spatial relationship amongst corners. International Conference on Systemics, Cybernetics and Informatics, Jan 4-8, 2006, Hyderabad, India.

- Identification of Camouflaged Defects in Image through Zernike Moments and Pyramid segmentation, Proceedings of the International Conference on Intelligent Systems and Control (ISCO-2006), pp. 52-57, Aug, 2006, Karapagam College of Engineering, Coimbatore.
- Eigenspace model for efficient representation and recognition of coins, Proceedings of International Conference on Systemics, Cybernetics and Informatics, Jan 4-8, 2006, Hyderabad, India.
- Task management feature in Intel processors: An experimental investigation from designers prospective, Proceedings of International Conference on Systemics, Cybernetics and Informatics, Jan 6-9, 2006, Hyderabad, India.
- Object recognition ← Lines + PCA. Proceedings of the International Conference on Cognition and Recognition, ICCR-2005, Mandya, India, Dec. 22-23, 2005, pp. 250-256.
- 3D Object recognition using two dimensional principal component analysis: A robust and an efficient approach. International Conference on Cognition and Recognition, ICCR-05, Mandya, Dec. 22-23, 2005, pp. 272-276.
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- A Comparative Analysis of Skeleton Pruning Methods for Shape Representation", Presented in SACAIM-13, A National conference on Advanced IT, Engineering and Management, organized by IT Dept of AMIT, St Aloysius College Mangalore on 6th and 7th Sept 2013.
- Multispectral palmprint matching based on joint sparse representation", Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), 2013 Fourth National Conference on, NCVPRIPG 2013, IIT Rajasthan, Jodhpur, pp.1-4, 18-21 Dec. 2013
- Video Shot Boundary Detection: An efficient and an accurate approach based on Gabor Moments ,National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics,19-21 December 2013, Jodhpur, India
- Survey of online external multidimensional indexed data structures for efficient query processing. National Conference on Distributed computing, NCDC-2004, March 5-6, 2004, NMAMIT, Karkala, India.
- Decamouflage through Eigen techniques, National Conference on Scientific Achievements of SC/ST Scientists & Technologies, 14-16 April, 2009, pp 96-97, NAL, Bangalore
- Alternate 2DLPP: A new dimensionality reduction technique for clustering, Proceedings of the National Conference on Recent Trends in Information and Communication Technology (RTICT2008), Sathyamangalam, Tamilnadu, INDIA, pp. 240-244, 2008.
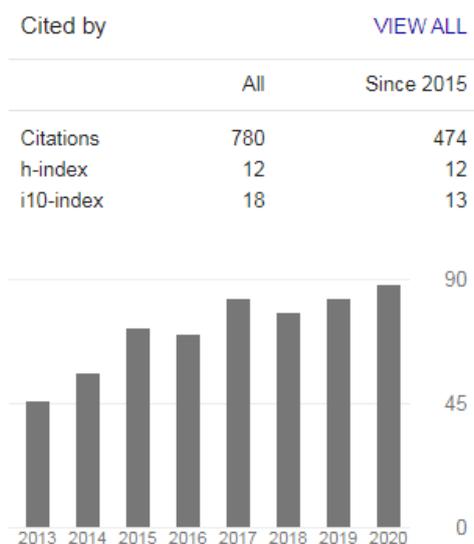
— Small eigenvalue based edge detector in binary images: a simple and robust approach. Proceedings of 2nd National Conference on Document Analysis and Recognition NCDAR-2003, PES College of Engineering, Mandya, India, July 11-12, 2003, pp 81-87, 2003.

Conferences/Seminars/Workshops Organized

Invited / plenary talks delivered (list) (if applicable)

— A research monograph on 'EMERGING APPLICATIONS OF COMPUTER VISION', edited book as a part of DST-RFBR sponsored bilateral workshop on 'Emerging Applications of Computer Vision', Nov 1-5, 2011.

— Data Analytics and Learning, 2018, Lecture Notes in Networks and Systems, Volume 43, Editors: P. Nagabhushan • D. S. Guru • B. H. Shekar • Y. H. Sharath Kumar.

— E-Governance, National Conference at Govt. College, Mandya. Feb. 2020, Editors: B. H. Shekar

Impact of publications in terms of citations:

Cited by		VIEW ALL
	All	Since 2015
Citations	780	474
h-index	12	12
i10-index	18	13

Conferences / Seminars / Workshops / Symposia organized:

— DST-RFBR Sponsored First International Collaborative workshop on 'Emerging Applications of Computer Vision, 1-5, Nov. 2011, Conducted at Moscow State University, Moscow, Russia

— MHRD sponsored GIAN programme on 'Visual Object Recognition', Jan. 2018.

— MHRD sponsored GIAN programme on 'Digital Payments: Technology for Cashless Society', July 2018.

— AICTE sponsored FDP programme on 'Machine Learning and Deep Learning for Video Analytics', Nov. 2020.

Awards / Fellowship / Recognition:

- Awarded Commonwealth Academic Fellowship to carryout post-doctoral work at University of Surrey, Guildford, UK.
- Awarded DAAD fellowship (2000) by the University Grants Commission, Govt. of India to carry out part of research work at University of Erlangen, Nurenburg, Germany.
- Awarded National Merit Scholarship during UG, PUC and Matriculation Studies.
- Awarded DRDO fellowship during PG studies
- Qualified in National Education Test (1996) accredited by UGC, which is mandatory for any faculty position in Universities.
- Awarded Teacher fellowship (2005-06) to carry out Research in the Department of Studies in Computer Science, University of Mysore, Mysore.

Membership of Professional Bodies:

- Member of Faculty of Science & Technology, Mangalore University.
- Member of Board of Studies in Computer Science (PG)
- Member of Board of Examiners (Both PG. & UG).
- Member of Board of Studies in Computer Science, University of Mysore
- Member of Board of Studies in Computer Science, PES College of Engineering, Mandya
- Member of Board of Studies in Computer Science, Basaveswara Engineering College, Bagalkot.