

## Banshidhar Majhi, Ph.D. (Computer Science & Engineering)

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### On Lien from

Professor (HAG-Scale),  
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National Institute of Technology Rourkela  
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- **Date of Birth:** 14th April, 1963
- **Thesis Supervised:**

	<i>Completed</i>	<i>Ongoing</i>
Ph.D.:	15	02
M.Tech (Res.)	08	-
M.Tech.:	68	04
B.Tech.:	90	03
- **Research Publications:**

Journals:	78
Patents:	03
Conferences:	103
Book Chapters:	06
E-Prints:	05
- **Professional Experience:**

Teaching and Research:	25 years,
Industry:	3 years
- **Books Reviewed:** Software Engineering, A Practitioner's Approach, By Roger Pressman, Prentice Hall of India, 6<sup>th</sup> Edition
- **Courses Developed:**

Undergraduate:	06
Postgraduate :	04
- **Awards/Scholarships:**
  - JC Bose Gold Medal for Best Engg. Paper IETE, 2001
  - Gold Medal from Orissa Engineering. Congress, 2000
  - First Class First in M. Tech.(CSE)
  - National Scholarship in HSC
- **Conferences/Short-term course/  
FDP/Workshop conducted**
  - **Conferences:** 02
  - **Workshops:** 07
  - **FDPs :** 02
  - **Short Term Courses** 25
- **Short-term Courses attended:** 27 weeks

- **Research Interests:** Image Processing and Computer Vision, Data Compression, Security Protocols, Parallel Computing, Soft Computing, Biometrics
  
- **Visiting Faculty Assignments Abroad**
  - Visited as a Professor to the Department of Computer Engineering, King Khalid University, Abha, Kingdom of Saudi Arabia (a Govt. of Jordan University) [10/10/2010 to 02/02/2011]
  - Visited as an Assistant Professor to the Department of Computer Engineering and Information Technology, Al-Hussein Bin Talal University, Ma'an, Jordan (a Govt. of Jordan University)[07/10/2004 to 26/6/2005]
  
- **Conferences Attended Abroad**
  - Presented paper at IEEE/ACM Conference on Distributed Smart Cameras, 2012 (Oct 29-02 Nov, 2012) at Hong Kong.
  - Presented paper at IEEE International Conference on Image Processing, Cairo, Egypt November 7-11, 2009
  - Presented paper at International Conference on Image, Signal and Vision Computing (ICISVC 2008), Venice, Italy, October 29-31, 2008
  - Presented paper at Int. Conference on Intelligent Computing (ICIS-2005) Kuala Lumpur (Malaysia), December 01-03, 2005.
  
- **Conference/Workshop/Short-term Course Conducted**
  - GIAN course on Artificial Intelligence for MR Brain Image Processing, sponsored by MHRD, Govt. of India during October 9- 18, 2017.
  - Short term course on Image Processing (10-16 Dec,2012, 13-18 Dec,2011)
  - Staff Development Programme on “Image Processing: Fundamentals and Advances” 15-28 December, 2009
  - National Conference on “Soft Computing Techniques for Engineering Applications”, 24-26th March, 2006.
  - ISTE short-term course on “Advanced AI and its Applications”, December 15-22, 1998.
  - Two workshops on “Management Information System: A Basic Necessity”, for the staff of the Institution in April, 1998 under UK-India Project.
  - 15 short term courses under Continuing Engineering Education Program [CEEP] on Unix, C, C++ and advanced database systems
  
- **Award for Theses Supervised**
  - INAE Best M. Tech. Thesis award,2007, Pankaj K. Sa, “Development of Impulse Noise Removal Schemes”
  - INAE Best M. Tech. Thesis award, 2010, Ms. Hunny Mehrotra, “Iris Identification using Key Point Descriptors and Geometric Hashing”.  
She has also received Google Woman India award, 2010 for her contribution in M.Tech. Thesis.
  - INAE Best M. Tech. Thesis award, 2011, Mr. Sambit Bakshi, “Development of Robust Iris Localization and Impairment Pruning Schemes”

□ **Educational Qualifications**

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|-------------------------------------|---|
| 1. Ph.D.(CSE),                      | 2003, REC Rourkela (Sambalpur University)         |
| 2. M.Tech. .(CSE),                  | 1998, REC Rourkela (Sambalpur University), 79.45% |
| 3. Mater of Computer Applications,  | 1988, REC Rourkela (Sambalpur University), 68.72  |
| 4. B.Sc.(Physics with Distinction), | 1984, GM College, Sambalpur, 68.66%               |
| 5. I.Sc. (Phy, Chem, Math., Stat),  | 1982, GM College, Sambalpur, 80.44%               |
| 6. HSC, First Class,                | 1980, MP High School Dhama, 69.50%                |

□ **Ph.D. Students Supervised (15)**

SI #	Student Name	Year	Title of Thesis
1	Prof. S. Meher (50407003)	2005	Development of some Novel Nonlinear and Adaptive Digital Image Filters for efficient noise Suppression
2	Prof. P. K. Sa (50606002)	2010	Restoration Algorithm for Blurred and noisy Images
3	Jayaprakash Kar 22-Comp.Sc.06-07	2011	Algorithms for Cryptographic Protocols using Elliptic Curve Cryptography
4	Ratnakar Dash (507CS002)	2012	Parameters Estimation for Image Restoration
5	Sujata Mohanty (508CS405)	2013	On the Design of Digital Signature Protocols and their Variants
6	Suvendu Rup (508CS103)	2013	Intra-Key-Frame Coding and Side Information Generation Schemes in Distributed Video Coding
7	Hunny Mehrotra (510CS101)	2013	On the Performance improvement on Iris Biometrics
8	Punyaban Patel (347/2010/ CSE)	2014	Development of Noise Removal Algorithms for Images
9	Tushar Kanti Mishra (511CS107)	2015	Development of Features for Recognition of Handwritten Odia Characters
10	Subasish Mohapatra (511CS804)	2016	On Solving some Issues in Cloud Computing
11	Jagadeesh Kakarla (512CS1010)	2016	Development of Energy and Delay Efficient Protocols for WSN
12	Shradhananda Beura (512CS1008)	2016	Development of Features and Feature Reduction Techniques for Mammogram Classification
13	Soubhagya S Barpanda (512CS605)	2016	Development of Multi-rate filter based Region Features for Iris Identification
14	Ramesh Kumar Mohapatra (511CS402)	2016	On Development of handwritten character recognition for Odia language
15	Manoj Ranjan Mishra	2016	A Novel Construction of One-pass Key Establishment Protocol for Wireless Sensor Networks

□ **M. Tech.(Research) Students Supervised (08)**

Sl #	Name of the Student	Year	Title of Thesis
1	Prof. P.K. Sa	2006	Development of impulse noise removal schemes
2	Subrajeet Mohapatra	2008	Development of impulsive noise detection schemes for selective filtering in images
3	Hunny Mehrotra	2010	Iris identification using key point descriptors and geometric hashing
4	Anukul Ch. Panda	2011	Parallel algorithms for Iris Biometrics
5	Sunita Kumari	2013	Comparative analysis of ICA based gender classification schemes
6	Ravi Kumar	2014	Comparative Analysis of Hashing Schemes for Iris Identification using Local Features
7	Shree Prakash	2014	Numeral Recognition using Gesture
8	Satybrata Swain	2015	Level 3 Feature based iris identification

□ **Sponsored Projects Completed**

Srl#	Title of the project	Sponsoring Agency	Sanctioned amount(Lacs )	Duration
1	Development of Local features and feature reduction schemes for Iris Biometrics	DIT, Govt. of India	22.56	2 years 2012-14
2	Set down study of projectile through in flight imaging,	PXE, Chandipur	9.91	2 years 2012-14
3	Restoration and Deblurring of Images using Blind Deconvolution Techniques,)	ISRO (VSSC, Trivandrum)	7.22	2 years 2007-09
4	Development of Soft Computing Lab	MHRD, GOI	8.00	3 years 2002-05

□ **List of previous Employments**

Position Held	Pay Scale	From	To
Professor (HAG Scale)	67000 -79000	15-Feb-2014	Continuing
Professor	37400 - 67000	01-Jul-2006	14-Feb-2014
Associate Professor	37400 - 67000	01-Jan-2006	30-Jun-2006
Assistant Professor/Reader	12000 - 37000	01-Sep-1998	31-Dec-2005
Lecturer	8000 - 13500	03-Sep-1991	31-Aug-1998

□ **Administrative Experience**

Position Held	Duration
Dean(Academic)	01-Jul-2014 –Continuing (2.7 years)
Chairman Automation Cell	01-Jul-2004 – Continuing (13 years)
Prof. in-Charge Examinations	01-Jul-2011 – 30-Jun-2014 (3 years)
Member of BOG	April,2016 – March,2018
Coordinator of Centre of Excellence	1. Centre of Data Analytics and Decision Sciences 2. Centre of Computer Vision and Pattern Recognition
Member of various institute committees	1. Institute Ranking and Accreditation

	2. DFAC and IFAC
National Accreditation Committee	NBA, AICTE
Head of Dept.(CSE)	01-Jul-2007 – 30-Jun-2010 (3 years)
Warden of Hall	01-Jul-2006 – 30-Jun-2007 (1 year)

## Research Publications

### □ Patents (Filed)

1. Pankaj K. Sa, Kalyan Hati, Banshidhar Majhi, “System and method for detecting objects in videos acquired with static camera”, Patents filed. 1217/KOL/2013, 28-Oct-2013
2. Pankaj K. Sa, Rahul Raman, Banshidhar Majhi, “Position and time localization of occlusion between two objects using a static camera”, Patents filed. 1218/KOL/2013, 28-Oct-2013
3. Pankaj K. Sa, Ansuman Mohapatra, Banshidhar Majhi, “Systems and Methods for generating Synopsis of Multi-View Videos”, Patents filed. 201731028957, 16-Aug-2017.

### □ Journals

1. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, Shuihua Wang, "Combining extreme learning machine with modified sine cosine algorithm for detection of pathological brain", *Journal of Computer and Electrical Engineering (Elsevier)*, 2018. (IF: 1.570) (Accepted)
2. Bodhisattva Dash, Suwendu Rup, Anjali Mohapatra, Banshidhar Majhi, M.N.S Swamy, “Decoder side Wyner-Ziv frame estimation using Chebyshev polynomial-based FLANN technique for distributed video coding”, *Journal of Multidimensional Systems and Signal Processing, (Springer)* Accepted.
3. R. Raman, L. Boubchir, P.K. Sa, B. Majhi, and S. Bakshi, "Beyond Estimating Discrete Directions of Walk: A Fuzzy Approach," *Machine Vision and Applications*, 2018. DOI: 10.1007/s00138-018-0939-6
4. Shreeya Swagatika Sahoo, Sujata Mohanty, and Banshidhar Majhi, "An Improved and Secure Two-factor Dynamic ID Based Authenticated Key Agreement Scheme for Multiserver Environment", *Wireless personal Communication, (Springer)*, 2018. DOI: 10.1007/s11277-018-5764-8 (IF: 0.95)
5. Soubhagya Sankar Barpanda, Banshidhar Majhi, Panjak Kumar Sa, Arun Kumar Sangaiah, Sambit Bakshi, “Iris feature extraction through wavelet mel-frequency cepstrum coefficients”, *Optics & Laser Technology (Elsevier)*, 2018. DOI: doi.org/10.1016/j.optlastec.2018.03.002 (IF: 2.109)
6. Bodhisattva Dash, Suwendu Rup, Anjali Mohapatra, Banshidhar Majhi, M.N.S Swamy, “Multi-resolution extreme learning machine-based side information estimation in distributed video coding”, *Multimedia Tools and Applications (Springer)*, 2018. DOI: doi.org/10.1007/s11042-018-5921-9 (IF: 1.530)
7. Figlu Mohanty, Suwendu Rup, Bodhisattva Dash, Banshidhar Majhi, MNS Swamy, “Mammogram classification using contourlet features with forest optimization-based feature selection approach”, *Multimedia Tools and Applications (Springer)*, 2018. DOI: doi.org/10.1007/s11042-018-5804-0 (IF: 1.530)
8. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, Vijendra Prasad, “Automated pathological brain detection system: A fast discrete curvelet transform and probabilistic neural network based approach”, *Journal of Expert Systems with Applications (Elsevier)*, pp. 152-164, 88, 2017. DOI: doi.org/10.1016/j.eswa.2017.06.038 (IF: 3.928)
9. Anurag Satpathy, Sourav Kanti Addya, Ashok Kumar Turuk, Banshidhar Majhi, Gadadhar Sahoo, “Crow search based virtual machine placement strategy in cloud data centers with live migration”, *Journal of Computer and Electrical Engineering, (Elsevier)*, 2017. DOI: https://doi.org/10.1016/j.compeleceng.2017.12.032 (IF: 1.570)
10. Susmita Mandal, Sujata Mohanty, and Banshidhar Majhi, "Cryptanalysis and Enhancement of an Anonymous Self-Certified Key Exchange Protocol." *Wireless Personal Communications (Springer)*, pp. 1-29, 2017. DOI: https://doi.org/10.1007/s11277-017-5156-5. (IF: 0.951)
11. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, “Discrete ripplelet-II transform and modified PSO based improved evolutionary extreme learning machine for pathological brain detection”, *Journal of Neurocomputing (Elsevier)*, 2018. DOI: https://doi.org/10.1016/j.neucom.2017.12.030 (IF: 3.317)

12. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, "An improved pathological brain detection system based on two-dimensional PCA and evolutionary extreme learning machine", *Journal of Medical Systems (Springer)*, 2017. DOI: <https://doi.org/10.1007/s10916-017-0867-4> (IF: 2.456)
13. Rahul Raman, Pankaj Kumar Sa, Sambit Bakshi, Banshidhar Majhi, "Kinesiology-inspired estimation of pedestrian walk direction for smart surveillance", *Journal of Future Generation Computer Systems (Elsevier)*, 2017. DOI: <https://doi.org/10.1016/j.future.2017.10.033> (IF: 3.997)
14. Deepasikha Mishra, Banshidhar. Majhi, Sambit Bakshi, A.K. Sangaiah, and Pankaj K. Sa, "Single Image Super Resolution for Texture Images through Neighbor Embedding", *Multimedia Tools and Applications (Springer)*, 2017. DOI: [10.1007/s11042-017-5367-5](https://doi.org/10.1007/s11042-017-5367-5) (IF: 1.530)
15. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, "Development of pathological brain detection system using Jaya optimized improved extreme learning machine and orthogonal ripplelet-II transform", *Multimedia Tools and Applications (Springer)*, 2017. DOI: <https://doi.org/10.1007/s11042-017-5281-x> (IF: 1.530)
16. Aparajita Nanda, Pankaj K. Sa, Dushyant Singh Chauhan, Banshidhar Majhi, "A person re-identification framework by inlier-set group modeling for video surveillance" *Journal of Ambient Intelligence and Humanized Computing (Springer)*, pp. 1-13, 2017. DOI: <https://doi.org/10.1007/s12652-017-0580-7> (IF: 1.588)
17. Bodhisattva Dash, Suwendu Rup, Anjali Mohapatra, Banshidhar Majhi, M.N.S Swamy, "Decoder driven side information generation using ensemble of MLP networks for distributed video coding", *Multimedia Tools and Applications (Springer)*, 2017. DOI: <https://doi.org/10.1007/s11042-017-5103-1> (IF: 1.530)
18. Sambit Bakshi, Pankaj K. Sa, H. Wang, Soubhagya S. Barpanda, and Banshidhar Majhi, "Fast periocular authentication in handheld devices with reduced phase intensive local pattern," *Multimedia Tools and Applications (Springer)*, pp. 1-29, 2017. DOI: [10.1007/s11042-017-4965-6](https://doi.org/10.1007/s11042-017-4965-6) (IF: 1.530)
19. Sonali Mishra, Banshidhar Majhi, Pankaj Kumar Sa, Lokesh Sharma, "Gray level co-occurrence matrix and random forest based acute lymphoblastic leukemia detection", *Biomedical Signal Processing and Control (Elsevier)*, vol.33, pp. 272-280, 2017. DOI: [10.1016/j.bspc.2016.11.021](https://doi.org/10.1016/j.bspc.2016.11.021) (IF: 2.214)
20. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, "Pathological brain detection using curvelet features and least squares SVM", *Multimedia Tools and Applications (Springer)*, pp. 1-24, 2016. DOI: [10.1007/s11042-016-4171-y](https://doi.org/10.1007/s11042-016-4171-y) (IF: 1.530)
21. Susmita Mandal, Sujata Mohanty, Banshidhar Majhi, "Design of electronic payment system based on authenticated key exchange", *Electronic Commerce Research (Springer)*, pp. 1-30, 2016. DOI: [10.1007/s10660-016-9246-3](https://doi.org/10.1007/s10660-016-9246-3) (IF: 1.320)
22. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, "Stationary wavelet transform and AdaBoost with SVM based pathological brain detection in MRI scanning", *CNS & Neurological Disorders Drug Targets (Bentham Science Publishers)*, vol. 16, no. 2, pp. 137-149, 2016. DOI: [10.2174/1871527315666161024142036](https://doi.org/10.2174/1871527315666161024142036) (IF: 2.506)
23. Suman Kumar Choudhury, Pankaj Kumar Sa, Banshidhar Majhi, and Sambit Bakshi, "An evaluation of background subtraction for object detection vis-a-vis mitigating challenging scenarios", *IEEE Access (IEEE)*, 4, pp. 6133-6150, 2016. DOI: [10.1109/ACCESS.2016.2608847](https://doi.org/10.1109/ACCESS.2016.2608847) (IF: 3.244)
24. Rahul Raman, Pankaj Kumar Sa, Sambit Bakshi, and Banshidhar Majhi, "Direction Estimation for Pedestrian Monitoring System in Smart Cities: An HMM based Approach", *IEEE Access (IEEE)*, 4, pp. 5788-5808, 2016. DOI: [10.1109/ACCESS.2016.2608844](https://doi.org/10.1109/ACCESS.2016.2608844) (IF: 3.244)
25. Deepak R Nayak, Ratnakar Dash, Banshidhar Majhi, Jahangir Mohammed, "Non-linear cellular automata based edge detector for optical character images", *Simulation: Transactions of the Society for Modeling and Simulation International (SAGE publication)*, vol. 92, issue 9, pp. 849-859, 2016. DOI: [10.1177/0037549716665156](https://doi.org/10.1177/0037549716665156) (IF: 0.713)
26. Deepasikha Mishra, Banshidhar Majhi, Pankaj K Sa, and Ratnakar Dash, "Development of Robust Neighbor Embedding based Super-Resolution Scheme", *Neurocomputing (Elsevier)*, vol. 202, pp. 49-66, 2016. DOI: [http://dx.doi.org/10.1016/j.neucom.2016.04.013](https://doi.org/10.1016/j.neucom.2016.04.013) (IF: 3.317)
27. Jagadeesh Kakarla, Banshidhar Majhi, and Ramesh Babu Battula, "A Delay and Energy Aware Reliable Coordination Mechanism for WSA", *Journal of Communication Systems (Wiley)*, 2016. DOI: [10.1002/dac.3121](https://doi.org/10.1002/dac.3121) (IF: 1.066)
28. Ansuman Mahapatra, Pankaj K. Sa, Banshidhar Majhi, and Sudarshan Padhy, "MVS: A Multi-view Video Synopsis Framework", *Signal Processing: Image Communication (Elsevier)*, vol. 42, pp. 31-44, 2016. DOI: [10.1016/j.image.2016.01.002](https://doi.org/10.1016/j.image.2016.01.002) (IF: 2.244)

29. Deepak Ranjan Nayak, Ratnakar Dash, Banshidhar Majhi, “Brain MR image classification using two-dimensional discrete wavelet transform and AdaBoost with Random Forests with manuscript number”, *Neurocomputing* (**Elsevier**), vol. 177, pp. 188–197, 2016. DOI: 10.1016/j.neucom.2015.11.034 (**IF: 3.317**)
30. Hunny Mehrotra, Mayank Vatsa, Richa Singh, Banshidhar Majhi, “Incremental Granular Relevance Vector Machine: A Case Study in Multimodal Biometrics”, *Pattern Recognition* (**Elsevier**), vol. 56, issue C, pp. 63-76 2016. DOI: 10.1016/j.patcog.2015.11.013 (**IF: 4.582**)
31. Ramesh Mohapatra, Banshidhar Majhi, Sanjay K Jena, “Classification of handwritten Odia basic character using Stockwell Transform”, *Journal of Applied Pattern Recognition* (**Inderscience**), vol. 2, no. 3, pp.235-253, 2015. DOI: 10.1504/IJAPR.2015.073854 . (**ESCI**)
32. Jagadeesh Kakarla, Banshidhar Majhi, Ramesh Babu Battula, “IAMMAC: An Interference Aware Multi-channel MAC protocol for Wireless Sensor-Actor Networks”, *Journal of Communication Systems* (**Wiley, SCI-E**), pp.1-22, 2015. DOI: 10.1002/dac.3034 (**IF: 1.066**)
33. Soubhagya S Barpanada, Banshidhar Majhi, Pankaj K Sa, “Region Based Feature Extraction from Non-Cooperative Iris Images using CDF 9/7 Filter bank”, *Innovation in Systems and Software Engineering* (**Springer**), vol. 11, no. 3, pp. 1-6, 2015. 10.1007/s11334-015-0251-9. (**Scopus indexed**)
34. Jagadeesh Kakarla, Banshidhar Majhi, Ramesh Babu, “Comparative Analysis of Routing Protocols in wireless sensor actor networks: A review”, *Journal of Wireless Information Networks* (**Springer**), vol. 22, no. 3, pp. 220-239, DOI 10.1007/s10776-015-0271-2 (**Scopus indexed**)
35. Soubhagya S Barpanada, Banshidhar Majhi, Pankaj K Sa, “Region Based Feature Extraction from Non-Cooperative Iris Images using Triplet Half-Band Filter Bank”, *Optics & Laser Technology* (**Elsevier**), vol. 72, pp. 6-14, 2015. DOI: 10.1016/j.optlastec.2015.03.003 (**IF: 2.109**)
36. Jagadeesh Kakarla, Banshidhar Majhi, “IDMMAC: Interference aware Distributed Multi-channel MAC protocol for WSN”, *Journal of Information Processing Systems* (**Korean info. Proc. Soc.**), 2015. DOI: 10.3745/JIPS.03.0038 (**ESCI and Scopus indexed**)
37. Shradhananda Beura, Banshidhar Majhi, Ratnakar Dash, Susnata Roy, “Classification of mammogram using two-dimensional discrete orthonormal S-Transform for breast cancer detection”, *IET Healthcare Technology Letters* (**IET**), vol. 2, no. 2, p. 46 – 51, 2015. DOI: 10.1049/htl.2014.0108 (**Scopus indexed**)
38. Shradhananda Beura, Banshidhar Majhi, Ratnakar Dash, “Mammogram Classification using two-dimensional discrete wavelet transform and gray-level co-occurrence matrix for detection of breast cancer”, *Neurocomputing* (**Elsevier**), vol. 154, pp. 1-14, 2015. DOI: 10.1016/j.neucom.2014.12.032 (**IF: 3.317**)
39. Manoj Ranjan Mishra, Jayaprakash Kar, Banshidhar Majhi, "Practical Deployment of One-pass Key Establishment Protocol on Wireless Sensor Networks", *Journal of Pure and Applied Mathematics* (**Springer**), vol. 100, no. 4, pp. 531-542, 2015 (**IF: 0.325**)
40. Suman Kumar Choudhury, Pankaj Kumar Sa, Banshidhar Majhi, and Tapan Kumar Biswal, “Set Down Study of Projectile in Flight Through Imaging”, *Defense Science Journal*, vol. 64, no. 6, pp. 530-535, 2014. DOI: 10.14429/dsj.64.8114 (**IF: 0.500**)
41. Rig Das, Ratnakar Dash, Banshidhar Majhi, “Hyperspectral Image Classification Based on Quadratic Fisher's Discriminant Analysis and Multi-class Support Vector Machine”, *IETE Journal of Research* (**Taylor & Francis**), vol. 60, no. 6, pp.406-413, 2014. DOI: 10.1080/03772063.2014.962629 (**IF: 0.909**)
42. Tusar Kanti Mishra, Banshidhar Majhi, Ratnakar Dash, “A Contour Descriptors-Based Generalized Scheme for Handwritten Odia Numerals Recognition”, *Journal of Information Processing Systems* (**Korean info. Proc. Soc.**), 2014. DOI:10.3745/JIPS.02.0012 (**ESCI and Scopus indexed**)
43. Sanjeet Nayak, Sujata Mohanty, Banshidhar Majhi, “CLB-ECC: Certificateless Blind Signature using ECC”, *Journal of Information Processing Systems* (**Korean info. Proc. Soc.**), 2014. DOI: 10.3745/JIPS.03.0029. (**ESCI and Scopus indexed**)
44. Sambit Bakshi, Pankaj K Sa, Banshidhar Majhi, “A Novel Phase-intensive Local Pattern for Periocular Recognition under Visible Spectrum”, *Biocybernetics and Biomedical Engineering* (**Elsevier**), vol. 35, no. 1, pp. 30-44, 2014. DOI: 10.1016/j.bbe.2014.05.003 (**IF: 1.031**)
45. Tusar Kanti Mishra, Banshidhar Majhi, Pankaj K Sa, “Model Based Odia Numeral Recognition using Fuzzy Aggregated Features”, *Frontiers of Computer Science*, (**Springer**), no. 8, vol. 6, pp. 916-922, 2014. DOI: 10.1007/s11704-014-3354-9 (**IF: 1.039**)

46. Subasish Mohapatra and Banshidhar Majhi, "Scalable architecture for ubiquitous healthcare using sensor cloud platform", *Int. J. Information and Communication Technology (Inderscience)*, vol. 6, no. 2, pp. 156-174, 2014. **(Scopus indexed)**
47. Ratnakar Dash, Banshidhar Majhi, "Motion Blur Parameters Estimation for Image Restoration", *Optik: Journal for Light and Electron Optics (Elsevier)*, vol. 125, pp. 1634-1640, 2014. DOI: 10.1016/j.ijleo.2013.09.026. **(IF: 0.835)**
48. Hunny Mehrotra, Mayank Vatsa, Richa Singh, and Banshidhar Majhi. "Does Iris Change Over Time?", *PLoS ONE*, 8 (11), e78333, 2013. DOI: 10.1371/journal.pone.00783332013 **(IF: 2.806)**
49. Ansuman Mohapatra, Tushar Kanti Mishra, Pankaj K Sa, Banshidhar Majhi, "Human Recognition System for outdoor videos using Hidden Markov Model ", *AEU-Journal of Electronics and Communications (Elsevier)*, vol. 68, no. 3, pp. 227-236, 2014 **(IF: 1.147)**
50. Suvendu Rup, Banshidhar Majhi, Sudarshan Padhi, "An Improved Side Information Generation for Distributed Video Coding", *AEU- Journal of Electronics and Communications (Elsevier)*, vol. 68, no. 3, pp. 201-209, 2014. **(IF: 1.147)**
51. Sambit Bakshi, Pankaj K Sa, Banshidhar Majhi, "Optimized Periocular Template Selection for Human Recognition", *BioMed Research International (BMRI) (Hindawi)*, vol. 2013, 2013. DOI: 10.1155/2013/481431 **(SCIE and Scopus indexed)**
52. Hunny Mehrotra and Banshidhar Majhi, "Local Feature based Retrieval Approach for Iris Biometrics", *Frontiers of Computer Science (Springer)*, vol. 7, no. 5, pp. 767-781, 2013. DOI: 10.1007/s11704-013-3073-7 **(IF: 1.039)**
53. Kalyan K Hati, Pankaj K Sa, Banshidhar Majhi, "Intensity Range based Background Subtraction for Effective Object Detection", *IEEE Signal Processing Letters (IEEE)*, vol. 20, no. 8, pp.759-762, 2013. **(IF: 2.528)**
54. Suvendu Rup and Banshidhar Majhi, "A Mixed Framework for Transformed Domain Wyner Ziv Video Coding", *Optik - Journal for Light and Electron Optics (Elsevier)*, vol. 124, issue 21, pp. 4929-4938, 2013. DOI: 10.1016/j.ijleo.2013.03.152 **(IF: 0.835)**
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