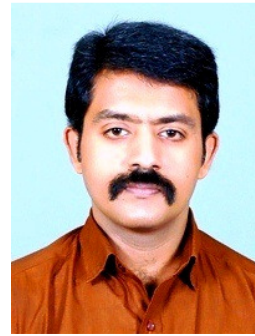


# Dr. Naveen S.

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Dept of ECE



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[Scholar Link](#)

## Qualifications:

- B.Tech (2002-2006)– Electronics and Communication. (University of Kerala)
- M.Tech (Oct 2006-Sept 2008)– Electronics and Communication (Signal Processing), (University of Kerala)
- Ph.D(Dec 2012-August 2017)- Electronics and Communication (University of Kerala)

## Professional Experience:

- Assistant Professor, LBSITW, Thiruvananthapuram (May 2012-Till date)
- Assistant Professor, MBCET, Thiruvananthapuram (August 2009-May 2012)
- Assistant Manager, Syndicate Bank, Muniyal, Karnataka (December 2008-July 2009)
- Development Engineer, CMS Computers Pvt Ltd, Thiruvananthapuram (July 2006- September 2006)

## Recently Taught Courses:

- Estimation and Detection Theory
- Applied Linear Algebra
- Digital Signal Processing
- Digital Image Processing.
- Signal Processing Lab

## Other Responsibilities:

- NBA Accreditation Coordinator for ECE and AEI Program (2012-2014)
- NBA Accreditation Coordinator for ECE Program (2014-2015)
- Member, Quality Assurance Cell of ECE Dept (2014-2015)
- Staff Advisor (2011-2015 AEI)
- Staff Advisor (2015-2019 ECE)

- Staff in-charge of ECE AEI Association (2015-2019)

## Important Publications:

### Journals

1. Naveen S, Dr. R.S Moni, Multimodal Approach for Face Recognition using 3D-2D Face Feature Fusion International Journal of Image Processing (IJIP), June 2014, Volume-8: Issue (3), Page No:73-86, ISSN - 1985-2304
2. Naveen S, Dr. R.S Moni, 3D Face Recognition using Fourier-Cosine Transform Coefficients Fusion, International Journal of Engineering and Advanced Technology(IJEAT),July 2015, Volume-4:Issue 5,Page No:50-56, ISSN: 2249 –8958
3. Shilpa S. Nair, Naveen S., Moni R.S, 3D Face Recognition Using Weiner Filter and DFT Based On Optimized Directional Faces, International Journal of Engineering and Advanced Technology(IJEAT), August 2015, Volume-4:Issue 6,Page No:64-69, ISSN: 2249 – 8958
4. DivyaDileep, Naveen S, Differential Video Encoder Design Using Cascaded DWT and DCT, International Journal of Engineering and Advanced Technology(IJEAT), Volume-4 Issue 6, August 2015, ISSN: 2249 – 8958
5. Ahalya R.K, Naveen S, and Dr.R.S.Moni, “A Robust Method for Multimodal Face Recognition using 2DPCA, DCT and Polynomial Coefficients ”, International Journal of Research in Advent Technology (IJRAT), Vol.4, No.7, July 2016, Page No: 27-31, ISSN: 2321-9637
6. Shihana Fathima R, Naveen S, and Dr.R.S.Moni, “Face Recognition with Mask Detection using LBP and MLBP” , International Journal of Research in Advent Technology (IJRAT), Vol.4, No.7, July 2016, Page No: 36-39, ISSN: 2321-9637
7. Rugmini K.P, Naveen S, and Dr.R.S.Moni, “3D Face Surface Rendering by Pose Correction and Face Resurfacing ”, International Journal of Research in Advent Technology (IJRAT), Vol.4, No.7, July 2016, Page No: 32-35, ISSN: 2321-9637
8. Archana Babu S, Arunima SJ, Athira J, Bhavana Chandran, and Naveen S, “An Economic Automatic Waste Segregator using Arduino”, International Journal of Research in Advent Technology (IJRAT), Vol.4, No.7, July 2016, Page No: 112-116, ISSN: 2321-9637
9. Hima M.S, Josphin Subha, Kalyani Devi G, Karthika Sankaran and Naveen S, “Earthquake Indicator Using Arduino”, International Journal of Research in Advent Technology (IJRAT), Vol.4, No.8, August 2016, Page No: 40-43, ISSN: 2321-9637
10. Roshna N.R and Naveen S, “Multimodal Face Recognition Using Minimum Average Correlation Energy Filter”, International Journal of Research in Advent Technology (IJRAT), Vol.4, No.8, August 2016, Page No: 116-119, ISSN: 2321-96
11. Janaki Venukumar and Naveen S, “Arduino Based Door Access Control”, International Journal of Research in Advent Technology (IJRAT), Vol.4, No.8, August 2016, Page No: 122-124, ISSN: 2321-96
12. Roshna N. R., Naveen S., Face Recognition from Low Resolution Face Images; A Review, International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering (IJIREEICE), March 2017, Volume-5, Issue(1), Page No: 175-179, ISSN-2321 –2004
13. Roshna N. R. , Naveen S. , “Comparison of Multimodal Low Resolution Face Recognition using SVD and DSR Methods”, International Journal of Advanced Scientific Technologies ,Engineering and Management Sciences, IJASTEMS, Volume.3,Special Issue.1,April.2017, Page No:257-261, ISSN: 2454-356X
14. Silpa B.S, Dr Naveen S, “Review on traffic light control systems for Emergency vehicles” International Journal of Current Engineering And Scientific Research, IJCESR, Vol 4(12), December 2017, Page No: 56-58, ISSN:2394-0697
15. Anjali.S, Dr Naveen S, “Review on vision based methods to detect objects on highways” International Journal of Current Engineering And Scientific Research, IJCESR, Vol 4(12), December 2017, Page No: 30-32, ISSN:2394-0697

16. Aparna sasiharan, Dr Naveen S., "Modified Sparse Representation Based Classification With Feature Extraction For Robust Face Recognition", International Journal of Management, Technology And Engineering, Volume 9, Issue 5, May 2019, Page No: 1105-1111, ISSN: 2249-7455.

17. Haritha R., Dr Naveen S., "Military Object Detection From Hyperspectral Imagery", ", International Journal of Management, Technology And Engineering, Volume 9, Issue 5, May 2019, Page No: 1112-1116, ISSN: 2249-7455.

18. Megha Chandran, Dr. Naveen S, A Review on Facial Expression Recognition using Deep Learning, International Journal of Engineering Research & Technology, (IJERT), Techsynod – 2019 (Feb2020, Volume 7 – Issue 13) ISSN (Online) : 2278-0181

19. Megha Chandran, Dr. Naveen S, Facial Expression Recognition –A Review, International Research Journal of Engineering and Technology(IRJET) Volume: 07 Issue: 08| Aug2020 e-ISSN: 2395-0056 Page 355-357

#### **International Conferences**

20. Praseeda Lekshmi, Sasikumar M, Naveen S, "Analysis of facial expressions using PCA on half and full faces", International Conference on Audio, Language and Image Processing, (ICALIP'08), July 7-9, 2008, Shanghai, China. Page No: 1379 – 1383, ISBN: 978-1-4244-1723-0

21. Praseeda Lekshmi, Sasikumar M, Naveen S, "Analysis of Facial Expressions from Video images using PCA" International Conference of Computer Science and Engineering (ICCSE'08), London, U.K., 2-4 July, 2008, Page No: 188-191, ISBN: 978-988-98671-9-5

22. Praseeda Lekshmi, Sasikumar M, Naveen S, "PCA Based Facial Expression using Wavelets" International Conference on Artificial Intelligence(ICAI'08) , Monte Carlo Resort, Las Vegas, Nevada, USA (July 14-17, 2008), Page No: 286-290, CSREA Press, ISBN 1-60132-072-8

23. PraseedaLekshmi, Sasikumar M, Naveen S, "Facial Expression Analysis From Enhanced Edge Images Using Gabor Wavelets", International Symposium on Information Technology-2008, Kualalampur, Malaysia,

24. PraseedaLekshmi, Sasikumar M and Naveen S, "Facial Expression Analysis Using PCA", World Congress on Engineering 2008, Lecture Notes Electrical Engineering- Volume 39- Advances in Electrical Engineering and Computational Science- Springer Netherlands. Page No: 355-364, ISBN: 978-90-481-2310-0

25. Lekshmi V.P., Sasikumar M., Vidyadharan D.S., Naveen S, "Facial Expression Analysis Using PCA", ,Advances in Electrical Engineering and Computational Science,Lecture Notes in Electrical Engineering, Springer, Dordrecht,2009,Vol 39, Page:355-364, ISBN:978-90-481-2311-7

26. Parvathy S.B, Naveen S, A Novel Approach for Color Image Enhancement based on NTF", International Conference on Control, Communication and Computing, ICC2013,College of Engineering Thiruvananthapuram, December 2013, pg 131-136, ISBN: 978-1-4799-0573-7

27. Poornima S.K, Naveen S, HOG Descriptor Based Face Recognition for RGB-D face data, ICSSP '14, TKMCE, Kollam, Kerala, August 2014, Publisher: ElsevierST, Chapter -48, Page No: 259-263, ISBN:978-9-3510-7267-6

28. Bodhi S.R, Naveen S, A Noval Pose Correction Method For 3D Faces, ICSSP '14, TKMCE, Kollam, Kerala, August 2014,Publisher: ElsevierST,Chapter -46, Page No: 250-253,ISBN:978-9-3510-7267-6

29. Naveen S and DrMoni R S, A robust novel method for Face recognition from 2D Depth Images using DWT and DCT Fusion, ICICT 2014, Cochin, Kerala, Publisher: ELSEVIER Journal of Procedia Computer Science, December 2014, Volume-46,Page No:1518–1528, ISBN: 1877-0509

30. Naveen S and DrMoni R S, Multimodal Face Recognition System using Spectral Transformation of 2D Texture feature and Statistical processing of Face Range Images, ICICT 2014, Cochin, Kerala, Publisher: ELSEVIER Journal of Procedia Computer Science, December 2014, Volume-46, Page No:1537–1545,ISBN: 1877-0509

31. Poornima S.K, Naveen S, RGB-D Face Recognition System Verification Using Kinect and FRAV3D database, ICICT 2014, Cochin, Kerala, Publisher: ELSEVIER Journal of Procedia Computer Science, December 2014, Volume 46, Page No:1653–1660,ISSN:1877-0509

32. Bodhi S R and Naveen S , Face Detection, Registration and Feature Localization Experiments with RGB-D Face database, ICICT 2014, Cochin, Kerala, December 2014, Publisher: ELSEVIER Journal of Procedia Computer Science, Volume 46, Page No:1778–1785,ISSN: 1877-0509

33. Naveen S and DrMoni R S, Multimodal Face recognition using Spectral Coefficients of Face Texture Images and Statistical Processing of Spectral Coefficients of Face Range images, Presented in Fifth International Conference on Advances in Computer Engineering – ACE 2014, December 2014, Cochin, Kerala, Publisher: McGraw Hill Education, ISBN:978-9-3392-2169-0
34. Naveen S and DrMoni R S, A robust novel method for Face recognition from 2D Depth Images using DWT and DFT Score Fusion, ICCSC-2014, Trivandrum, Kerala, December 2014, Publisher: IEEE, Page No:1 – 6, ISBN:978-1-4799-6012-5
35. Bodhi S R and Naveen S. Face Registration and Feature Localization on Depth data, ICCSC-2014, Trivandrum, Kerala, December 2014, Publisher: IEEE, Page No:105-110, ISBN:978-1-4799-6012-5
36. Parvathy S.B and Naveen S. A Novel Approach For Multimodal Face Recognition System Based on Modular PCA, ICCSC-2014, Trivandrum, Kerala Publisher, December 2014, Publisher:IEEE, Page No:127 – 132, ISBN:978-1-4799-6012-5
37. Naveen S, Dr R.S Moni, Contourlet and Fourier Transform Features Based 3D Face, Recognition System, ISTA 2015, SCMS College, Aluva, Publisher: Springer, August 2015, Volume-1, Page No: 411-425, ISBN: 978-3-3192-3036-8
38. Shilpa S. Nair, Naveen S, Dr R.S Moni, 3D Face Recognition Using Optimised Directional Faces And Fourier Transform, ICACCI 2015, SCMS Aluva, August 2015, Publisher:IEEE, Page No: 1856 –1861, ISBN: 978-1-4799-8790-0
39. Naveen S, Aiswarya V.A, Image Denoising by Fourier block processing and Wiener filtering, VISIONNET, ICACCI 2015, SCMS College, Aluva, Publisher: Elsevier, Procedia Computer Science, August 2015, Volume 58, 2015, Pages 683–690, ISBN: 1877-0509
40. Ahalya R.K, Naveen S, and Dr.R.S.Moni, “Multimodal Face Recognition using Spectral Transformation by LBP and Polynomial Coefficients”, IEEE International Conference on Communication Systems and Networks2016, ComNet 2016, July 2016, ISBN: 978-1-5090-3349-2
41. Rugmini K.P, Naveen S, and Dr.R.S.Moni, “3D face reconstruction by pose correction, patch cloning and texture wrapping”, IEEE International Conference on Communication Systems and Networks2016, ComNet 2016, July 2016, ISBN: 978-1-5090-3349-2
42. ShihanaFathima , Naveen S, and Dr.R.S.Moni, “Face recognition and authentication using LBP and BSIF mask detection and elimination”, IEEE International Conference on Communication Systems and Networks2016, ComNet 2016, July 2016, ISBN: 978-1-5090-3349-2
43. Ahalya R.K, Naveen S, and Dr.R.S.Moni, “3D Face Recognition System using LBP and Polynomial Coefficients”, International Conference on Signal Processing & Advanced Communication '16 (SPAAC'16), at Le Meridien, Kochi, organized by College of Engineering Cherthala, August 10-11, 2016, Published by McGraw Hill
44. Rugmini K.P, Naveen S, and Dr.R.S.Moni, “Error Characterisation of Texture Wrapped Reconstructed 3D Faces”, International Conference on Signal Processing & Advanced Communication '16 (SPAAC'16), at Le Meridien, Kochi, organized by College of Engineering Cherthala, August 10-11, 2016, Published by McGraw Hill
45. Shihana Fathima R, Naveen S, and Dr.R.S.Moni, “Face Recognition with Mask Detection using Spectral Transformation”, International Conference on Signal Processing & Advanced Communication '16 (SPAAC'16), at Le Meridien, Kochi, organized by College of Engineering Cherthala, August 10-11, 2016, Published by McGraw Hill
46. Roshna N.R, Naveen S, Multimodal Low-Resolution Face Recognition using SVD, International Conference on Circuits, Power and Computing Technologies-17 (ICCPCT 2017), 20-21 April 2017, ISBN:9781-5090-4967-7

#### **National Conferences**

47. Naveen S, Tara Raveendran, A Novel Approach for 3D Face Recognition, National Conference on Technological Trends NCTT-08, College Of Engineering Trivandrum-Nov 08
48. Naveen S., Shiras, S., Nithin, N., Tony, J., Gayathri, K.: Multiple audio marking using discrete wavelets transform and singular value decomposition. Proceedings. First National Conference on Emerging Technologies,

49. Parvathy S.B, Naveen S, Modified Local Approach for Color Image Enhancement based on Non Linear Transfer Function" NCACICT 2013, June 2013, LBSITW
50. Poornima S.K, Naveen S, Differential Evolution Algorithm for Colour Image Enhancement Based on Incomplete  $\beta$  Transform", 2nd National Conference on Emerging Technologies-2013, NCET-2013, July 2013, Government Engineering College Barton Hill, Thiruvananthapuram
51. Bodhi S.R, Naveen S, Improved Path-Based Stereo Matching", 2nd National Conference on Emerging Technologies-2013, NCET-2013, July 2013, Government Engineering College Barton Hill, Thiruvananthapuram
52. Anila S., Naveen S, Live Face Detection using Spectra Analysis and Detecting Eye Blinking, NADCOM, PRSCET – March 2014
53. Naveen S, Dr. R.S Moni, Multimodal Scheme for Face Recognition using 2D-2.5D Face Spectral Data Feature Fusion, NCET2014, GEC Bartohill, Trivandrum, Kerala, August 2014, Page No: 351-358
54. Poornima S.K, Naveen S, Facial Recognition system Using Histogram of Oriented Gradients and Tree Bagger, NCET2014, GEC Bartohill, Trivandrum, Kerala, August 2014, Page No: 317-322
55. Bodhi S.R, Naveen S, Face Detection, Registration and Feature Localization on Depth data from Kinect, NCET2014, GEC Bartohill, Trivandrum, Kerala, August 2014, Page No: 302-307
56. Parvathy S.B, Naveen S, An efficient multimodal face recognition system based on modular PCA, NCET2014, GEC Bartohill, Trivandrum, Kerala, August 2014, Page No: 297-301
57. C.Anushya, Meghna Sivaram, R.Kavya, Najma Moideen Kunju and Naveen S, Multiple Objects Tracking in Videos Using Bio-Inspired Vision, NCET2014, GEC Bartohill, August-2014, pg 338-344
58. Naveen S, Dr R.S Moni, Face Recognition using texture and statistical processing of depth data using DWT, NCVOS 2015, Model Engineering College, Cochin, May 2015.
59. Shilpa S. Nair, Naveen S, Dr R.S Moni, Optimised Directional Faces Based Multimodal Face Recognition System Using Modified LBP, NCVOS 2015, Model Engineering College, Cochin, May 2015.
60. Divya Dileep, Naveen S, Shaji N M, Design of a Novel Video Encoder using DWT and DCT, NCVOS 2015, Model Engineering College, Kochi, May 2015..
61. Rugmini K.P, Naveen S, Dr R.S Moni Face Resurfacing Using Patch Cloning, NCACICT 2016, February 2016, LBS Institute of Technology for Women, Trivandrum, Kerala, ISBN: 978-9-3825-7074-5, Page No: 58-61
62. Ahalya R.K, Naveen S, Dr R.S Moni, Multimodal Face Recognition System Using Polynomial Coefficients, NCACICT 2016, February 2016, LBS Institute of Technology for Women, Trivandrum, Kerala, ISBN: 978-9-3825-7074-5, Page No: 62-65
63. Divya G.Ajith, Naveen S, An effective label recognition aid for the visually impaired, National Conference on Advances in Informatics and Computing Technologies(AICT'16), College of Engineering, Perumon, March 2016.
64. Janaki V.K, Naveen S, Discriminant Feature Extraction for Intelligent Facial Expression Recognition A Review, NACTET17, February 2017. Trinity College of Engineering, Trivandrum, Kerala.
65. Janaki V.K, Naveen S, Feature Selection for Intelligent Facial Expression recognition A Review, NCPCCC17, February 2017, College of Engineering, Adoor, Kerala.
66. Janaki V.K, Naveen S, A Review On Feature Selection For Intelligent Facial Emotion Recognition, nCORETech-2016, LBS College of Engineering Kasargod, March 2017.
67. Roshna N.R, Naveen S, Low-Resolution Face recognition of Texture Images using SVD, National Conference on Emerging Trends in Engineering-17(NACTET'17), February 2017, Trinity College of Engineering, Trivandrum, Kerala.
68. Roshna N.R, Naveen S, Face Recognition From Low-Resolution Face images; A Review, nCORETech-2016, LBS College of Engineering Kasargod, March 2017.
69. Roshna N.R, Naveen S, A Review on Low-Resolution Face recognition, National Conference on Power

Control Communication and Computing (NPCCC'17), College of Engineering Adoor, Kerala.

70. Roshna N. R. , Naveen S. , "Comparison of Multimodal Low Resolution Face Recognition using SVD and DSR Methods", NCTIMEMIC 2017, LMCST, April 6-7, 2017.

71. Aparna sasiharan, Dr Naveen S., "Modified Sparse Representation Based Classification With Feature Extraction For Robust Face Recognition", National Conference On Recent Trends In Electrical, Electronics And Computing Technologies-2K19, UKFCET, Parippally,Kollam. May 03, 2019.

72. Haritha R., Dr Naveen S., "Military Object Detection From Hyperspectral Imagery", ", National Conference On Recent Trends In Electrical, Electronics And Computing Technologies-2K19, UKFCET, Parippally,Kollam. May 03, 2019.

73. Aparna Sasidharan and Dr. Naveen S," Survey of Sparse Representation based Classification for Robust Face Recognition", Proceedings of the 4th Kerala Technological Congress KETCON 2019, vol4, pp 525-530.

74. Megha Chandran and Dr. Naveen.S. (2020),"Facial Expression Recognition Using Deep Learning", National Conference on Advancement in Communication, Signal Processing and Instrumentation (NCACSI 2020), LBSITW, August 2020 Pages 108–113.

75. Haleema S. H, Naveen S, Deepambika V. A, "A Review on Deformation Measurement from Speckle Patterns using Digital Image Correlation" International Research Journal of Engineering and Technology (IRJET) Volume 9, Issue 5, May 2022, Pages 3528- 3531

## Research & Consultancy:

- Co investigator of SERB Funded Project - "Laser Speckle Interferometry based analysis of Embankments on Soft Soil Reinforced with Encapsulated Prestressed Geosynthetic"- Jointly with Dept of Civil Engineering.

## Membership in Professional Organizations

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### Conference/Paper Presentation:

#### Conference/Courses/ Workshops Organized

Sl.No	Event	Venue	From	To
1	Coordinated-National Conference on Advances in Computational Intelligence and Communication Technologies-NCACICT 2013	LBSITW	26-06-2013	27-06-2013
2	Coordinator-STTP-Computer Vision and Image Processing	LBSITW	20-11-2013	22-11-2013
3	Coordinator-STTP- Big Data Analysis	LBSITW	29-05-2015	30-05-2015
4	Coordinator-STTP-Frontiers in Advanced Communication Engineering	LBSITW	22-06-2015	27-06-2015
5	Reviewer of-First International Conference on Computational Systems and Communications	TVM	17-12-2014	18-12-2014

6	Publicity Committee Member-First International Conference on Computational Systems and Communications	TVM	17-12-2014	18-12-2014
7	Programme Committee member for National Seminar on "Transformation towards sustainable and resilient society for all" in association with CeDS, Thiruvananthapuram	Kanakkakunnu Palace, TVM	17-03-2018	18-03-2018

**Conferences Attended/Presented**

Sl.No	Conference Name	Presen No	Title	From	To	No of Days
1	NCET-2013, National Conference on Emerging Technologies	1	Differential Evolution Algorithm for Colour Image Enhancement Based on Incomplete $\beta$ Transform	19-07-2013	20-07-2013	2
		2	Improved Path-Based Stereo Matching	19-07-2013	20-07-2013	2
2	ICICT-2014 International Conference on Information and Communication Technologies-	3	A robust novel method for Face recognition from 2D Depth Images using DWT and DCT Fusion	03-12-2014	05-12-2014	3
		4	Multimodal Face Recognition System using Spectral Transformation of 2D Texture feature and Statistical processing of Face Range Images	03-12-2014	05-12-2014	3
3	ICCSC-2014, First International Conference on Computational Systems and Communications	5	A robust novel method for Face recognition from 2D Depth Images using DWT and DFT Score Fusion,	17-12-2014	18-12-2014	2
4	ACE 2014-International Conference on Advances in Computer Engineering	6	Multimodal Face recognition using Spectral Coefficients of Face Texture Images and Statistical Processing of Spectral Coefficients of Face Range images	27-12-2014	27-12-2014	1

5	NCVOS 2015-National Conference On Emerging Trends In Vlsi, Embedded Systems, Opto-Electronics & Signal Processing	7	Face Recognition using texture and statistical processing of depth data using DWT	14-05-2015	16-05-2015	3
6	ICACCI-15-International Conference On Advances in Computing, Communications and Informatics	8	Contourlet and Fourier Transform Features Based 3D Face, Recognition System	10-08-2015	13-08-2015	4
		9	3D Face Recognition Using Optimised Directional Faces And Fourier Transform	10-08-2015	13-08-2015	4
		10	Image Denoising by Fourier block processing and Wiener filtering	10-08-2015	13-08-2015	4
7	ComNet 2016-International Conference on Communication Systems and Networks	11	Multimodal Face Recognition using Spectral Transformation by LBP and Polynomial Coefficients	21-07-2016	23-07-2016	3
		12	Statistical Error Characterization of Reconstructed 3D Faces	21-07-2016	23-07-2016	3
		13	Face Recognition and Authentication by Feature Extraction	21-07-2016	23-07-2016	3
8	NPCCC 2017-National Conference on Power, Control, Communication and Computing	14	A Review on Low-Resolution Face recognition	01-02-2017	03-02-2017	3
9	NCTIMEMIC 2017-National Conference On Technology Innovation In Mechatronics, Energy Management And Intelligent Communication	15	Comparison of Multimodal Low Resolution Face Recognition using SVD and DSR Methods	06-04-2017	07-04-2017	2

#### As Reviewer for Conferences

Sl.No	Conference	Period
1	International conference on signal processing, Communication, computing and networking technologies (ICSCCN 2011)	2011
2	NCACICT13 (Second National Conference on Advances in Computational Intelligence and Communication Technologies 2013)	2013
3	ICCSC-2014 (First International Conference on Computational Systems and Communications-2014)	2014
4	GHTC-SAS 2014 (2014 IEEE Global Humanitarian Technology Conference - South Asia Satellite)	2014



5	NCACICT16 (Second National Conference on Advances in Computational Intelligence and Communication Technologies 2016)	2016
6	IC4 2018 (2018 International Conference on Control, Communication, and Computing)	2018

**As resource person**

Sl.No	Event	Venue	Date
1	Designed and developed the MATLAB codes used for training conducted as a part of "A Course on Digital Signal Processing"	College of Engineering, Thiruvananthapuram	December 2007
2	Hands on Session: Exercise based on Image Processing in "Short term training programme on Image Processing with Practical applications"	Mar Baselios College of Engineering and Technology, Nalanchira, Thiruvananthapuram	14-06-2010 to 18-06-2010
3	Hands on session in MATLAB	Marian Engineering College, Thiruvananthapuram	13-06-2013
4	Introductory lecture session in NBA Accreditation	Government Engineering College, Barton Hill, Thiruvananthapuram	05-11-2013
5	Hands on Session: Exercise based on Basics of Communication Engineering for faculty, in STTP on Frontiers in Advanced Communication Engineering	LBS Institute of Technology for Women, Thiruvananthapuram	22-06-2015 to 27-06-2015
6	Lecture session in NBA Accreditation,	College of Engineering, Perumon	October 2015.