

Mehul S. Raval

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OBJECTIVE

To be an active learner.

EDUCATION

Sept. 2003 – March 2008	Ph.D. (Electronics and Telecommunication Engineering) University of Pune, India
August 2001 – May 2003	M.E. (Digital Systems) College of Engineering Pune (COEP)
August 1993 – July 1996	B.E. (Electronics and Telecommunication Engineering) College of Engineering Pune (COEP)
July 1990 – August 1993	Diploma in Electronics and Communication Engineering Board of Technical Exams, Mumbai

AWARDS, FELLOWSHIPS & HONOURS

1. [IEEE Access Outstanding Associate Editor of 2022](#)
2. Member - International Neural Network Society
3. Member [The Asia-Pacific Signal and Information Processing Association \(APSIPA\)](#)
4. Member, International Neural Network Society (INNS)
5. Member [The Asia-Pacific Signal and Information Processing Association \(APSIPA\)](#)
6. [Best Paper Award](#)- Foram Shah, Dhaval Patel, Kashish Shah, Mehul S Raval, Mukesh Zaveri, Shabbir N Merchant, "[Novel Crash Prevention Framework for C-V2X using Deep Learning](#)," [Workshop on Connected Vehicles And Autonomous Driving](#), Colocated with [15th International Conference on COMMunication Systems & NETWORKS](#), 4th Jan. 2023, Bengaluru, India
7. [Best Paper Award](#) - Snehal Rajput, Rupal Kapdi, Kanhaiya Sharma, Mehul S. Raval and Mohendra Roy, "[Survival Prediction of Malignant Brain Tumor Patients](#)," [International conference on recent and future Trends in Smart Electronics System and Manufacturing and its applications \(SESMIC\)](#), Dec. 2022, Pune, India
8. [Guest Associate Editor](#), [Frontiers in Artificial Intelligence Section: Machine Learning and Artificial Intelligence](#)
9. International Travel Support by Science and Engineering Research Board, Government of India / Conference Grant by IEEE Computational Intelligence Society to attend [IEEE IJCNN 2022](#), July 2022

10. [Review editor - Frontiers in Artificial Intelligence Section: Machine Learning and Artificial Intelligence](#) - May 2022 -
11. [Review editor - Frontiers in Imaging Section: Image coding](#)- April 2022 -
12. Best Paper in [student paper competition](#) at [IEEE InGARSS - 2021](#) - Team (Maitrik Shah, Mehul S Raval, Srikrishnan Divakaran) - Paper - Deep Learning-Based Emulator for 6S Atmospheric Correction Model
13. Member Association of Computing Machinery (ACM) - September 2021
14. Outstanding Associate Editor, IEEE Access - 2018, 2019, 2020, 2021
15. Chair, IEEE Computational Intelligence Society – Gujarat Section Chapter, Jan 2021 -
16. Member, Multimedia Security and Forensics (MSF), Technical Committee, Asia-Pacific Signal and Information Processing Association (APSIPA), Feb. 2020 -
17. Editorial Board Member, Azerbaijan Journal of High-Performance Computing, Azerbaijan State Oil and Industry University (Baku, Azerbaijan), Jan 2020 – July 2021
18. 1st Rank on Survival Task, Multimodal Brain Tumor Segmentation Challenge 2019: 17th Oct. 2019, Team MARS: Rupal Agravat, Ahmedabad University, Mehul S Raval, Pandit Deendayal Petroleum University, India. Intel AI Prize
19. 50 Fabulous Edutech Leaders Award, World Education Congress, Mumbai, 4th July 2019
20. Enrolled as Fellow (F-1239879), The Institution of Engineers (India), Kolkata from 30th May 2018.
21. Session Chair, Security in personal communication (SPC), 20th IEEE International Symposium on Wireless Personal Multimedia Communications (WPMC 2017), 18th Dec. 2017
22. Joined as an Associate Editor, IEEE Access, 2017 - 2020
23. NVIDIA Corporation GPU grant 2017 for Quadro K5200 GPU (8 GB), September 2017
24. Best Paper Award at IEEE International Conference on Computing, Analytics and Security Trends (CAST-2016)" at College of Engineering Pune during 19th to 21st December 2016.
25. Fellowship under Sakura Exchange Program in Science for Collaborative Research Activity Course B at Okayama University, Japan, July - August 2016
26. Appreciation Award as Guide under Gandhian Young Technological Award (GYTI) - 2016 to CheckIT: A Low cost mobile OMR system.
27. Distinguished Speaker, Computer Society of India, 2015
28. Appreciation Certificate for "Dedicated leadership and support of the activities for SPS Chapter", IEEE Signal Processing society (SPS), 2014
29. Elected Senior Member, Institute of Electrical and Electronics Engineers (IEEE), USA, 2013.
30. IEEE Region-10 (Asia Pacific) Outstanding Student Branch Counselor award for 2012.
31. Elected Senior Member Computer Society of India (CSI), 2009.
32. Sardar Patel University and Hari Om Ashram Prerit Best Computer Science and Engineering Paper award, 2008.
33. Elected Fellow for Institution of Electronics and Telecommunication Engineers, New Delhi, 2008.
34. Appreciation certificate from Sarvajanic College of Engineering and Technology for exemplary service, 2008.
35. Indian Society for Technical Education (ISTE) Best Engineering College Teacher award for the State of Gujarat, 2005.

36. Young Scientist Fellowship by Department of Science and Technology, GUJCOST, Govt. of Gujarat, 2005.
37. Securing Best Chapter award for CSI Surat chapter for Category III, 2004-05.
38. Best Paper award at National Conference on Image Processing (NCIP) Bangalore, 2005.
39. First Rank, Master of Engineering-Electronics (Digital Systems), University of Pune, Dec. 2002

EXPERIENCE Full Time

July 2020 -	Associate Dean – Experiential Learning and Professor, School of Engineering and Applied Science, Ahmedabad University, Ahmedabad, India
December 2018 – July 2020	Professor, ICT / Computer Engineering, Pandit Deendayal Petroleum University, Gandhinagar, India.
July 2013 – December 2018	Associate Professor, Ahmedabad University, Ahmedabad, India
July 2008 – July 2013	Assistant Professor, DA-IICT, Gandhinagar.
March 2005 – July 2008	Assistant Professor, Sarvajanic College of Engineering and Technology, Surat.
June 1997 – February 2005	Lecturer, Sarvajanic College of Engineering and Technology, Surat.

Visiting Faculty Positions

July – August 2019	Supported under the International Exposure Program between PDPU, India and Sacred Heart University, CT, US Visiting Professor and Chaperone, Sacred Heart University
Winter 2018	Visiting Professor, Ahmedabad University, Ahmedabad, India
Fall 2016	Supported under the Argosy Fellowship Program between Ahmedabad University, India and Olin College of Engineering, MA, US (2016 – 2018) Argosy Visiting Associate Professor
2004 – 2005	Visiting faculty, MTech (Electronics) program, Sardar Vallabhbhai NIT, Surat.
2004 – 2008	Visiting faculty MSc IT and MSc Tech Programs, Veer Narmad South Gujarat University, Surat.

Teaching Experience: 25 years

FIELDS OF INTEREST

Computer Vision, Image Processing, Engineering Education

RESEARCH PROJECTS

Current Projects

Title: New Initiatives on Two Wheelers Safety (2023)

Sponsoring Agency: 2023 IEEE Intelligent Transportation Systems Society
Grant - \$19715

Team:

- Hrishikesh Venkataraman – IIIT Sricity, Andhra Pradesh
- Maryam Kavesghar – Ahmedabad University
- Mehul S Raval – Ahmedabad University

Title: Semantic Person Retrieval in Surveillance (2022 - 2025)

Sponsoring Agency: Gujarat Council on Science and Technology (GUJCOST)

Grant Amount: 33.18 Lacs

Research Team

Principal Investigator (PI): Mehul S Raval, Professor, School of Engineering and Applied Science, Ahmedabad University

CI: Paawan Sharma, Associate Professor, School of Technology, Pandit Deendayal Energy University (PDEU)

Title: Design and Development of 5G enabled Intelligent Transportation System in Gujarat (2022 – 2025)

Sponsoring Agency: Gujarat Council on Science and Technology (GUJCOST)

Grant Amount: 22.10 Lacs

Research Team

Principal Investigator (PI): Dhaval Patel, Associate Professor,

CI: Mehul S Raval (Co-PI), Professor, School of Engineering and Applied Science, Ahmedabad University, Mukesh Zaveri (Co-PI), Professor SVNIT Surat,

Mentor: S N Merchant, Professor Emeritus, EE Department, IIT Bombay, Mumbai

Past Projects

1. Title: Description based person identification in unconstrained surveillance video (2016 - 2019)

Sponsoring agency: Board of Research in Nuclear Science (BRNS), Bhabha Atomic Research Centre, Department of Atomic Energy, Government of India.

Grant Amount: Rs. 20.92 lacs

Research Team:

Principal Investigator (PI): Mehul S Raval, Associate Professor, School of Engineering and Applied Science, Ahmedabad University

CI: Sanjay Chaudhary, Professor and Associate Dean, School of Engineering and Applied Science, Ahmedabad University

Project Collaborator (PC): Anand Laddha, Scientific Officer - G, Physical Protection System Section, Control Instrumentation Division, BARC, Trombay.

SRF: Hiren Galiyawala

Project Detail:

The goal of the project is to locate a person-of-interest based on specific set of soft biometric attributes from a surveillance video without prior registration. The project will integrate and minimize semantic gap between human descriptions and soft biometric traits. Moreover it aims at extracting soft biometric features from an input image or a video frame and then uses these features to locate a matching individual in the video stream. This project will add another dimension to surveillance as human cognitive perceptions are used while searching the video streams.

2. Title: Developing Data Analytics Architecture: Applications in Agriculture (2017 - 2019)

Sponsoring agency: Department of Science and Technology, New Delhi, (NRDMS - NSDI) Grant

Amount: Rs. 27.51 lacs

Research Team:

Principal Investigator: Sanjay Chaudhary, Professor and Associate Dean, School of Engineering and Applied Science, Ahmedabad University

Co-Principal Investigator (Co-PI): Mehul S Raval, Associate Professor, School of Engineering and Applied Science, Ahmedabad University

Project Detail:

Geo-spatial data is very important to develop flexible and versatile functions and applications, for developing multidisciplinary applications, helping in planning, managing and utilizing natural resources efficiently using spatial analysis. We need common standards for data integration and effective analytical infrastructure and we aim to use OGC standards for big data processing of spatial data. The core scientific and technological objectives are:

- Development of big data integration and analytical platform built on open source architecture for enrichment of large data sets including geo-spatial data bases. Agriculture will be used as the domain to realize various aspects of proposed architecture.
- Integration with already developed and deployed Decision Support Systems and Spatial Decision Support Systems for an application domain.
- Indexing, querying, analyzing, and visualizing Geo-spatial data at scale using open source.
- To connect structured and unstructured data in real time or batch processing for data management and analytics of systems for decision making in operational environment, e.g applications like agro advisory system should be able to process event streams in a real time, extract relevant information and identify values that do not follow the general trends.
- Develop and implement distributed algorithm(s) to store and process geo-spatial data.
- Implement advanced data structures to store and process geo-spatial data in an efficient manner.

3. Title: Developing Data Content Standards for Data Representation, Sharing and Interoperability (Soil, Forest and Surface Geological Map Data) 2018

Funding Organization: NRDMS- NSDI, Dept. of Science and Technology, Govt of India

Funding Amount: Rs. 4.34 lacs

Duration: Four months

Principal Investigator: Sanjay Chaudhary, School of Engineering and Applied Science, Ahmedabad University

Co-Investigator: Mehul S. Raval, School of Engineering and Applied Science, Ahmedabad University

Project Objectives:

- Standards for data representation
- Search for service standards for data acquisition and integration
- Global XML schema for data
- Search for required OGC web service development standards
- Soil, forest and Geological Map Ontology development for data classification and inferencing
- Generation of information regarding accessibility, interoperability and utility of the sharable Soil and Forest data infrastructure
- Conceptual models for Soil and Forest data
- Identification of relevant use cases

4. Title: Techniques for Robust Face Recognition with Pose Variations (2012 - 2015)

Sponsoring agency: Board of Research in Nuclear Science (BRNS), Bhabha Atomic Research Centre, Department of Atomic Energy, Government of India.

Grant Amount: Rs. 19,00,000

Research Team:

Principal Investigator: Suman Mitra, Professor, DA-IICT.

Co-Investigator: Mehul S Raval, Assistant Professor, DA-IICT

Project Collaborator (PC): S K Parulekar, Scientist H+, Head Computer security division, BARC, Mumbai.

Project Details:

Face recognition is the most common and natural means for person identification. This has been a prime focus of research since the introduction of digital technology. Within the scope of machine vision, face recognition sets a great challenge due to the dynamic conditions under which face images are captured. One of the most challenging tasks is to recognize the face under varying poses. Research is continuing to propose more robust face recognition systems, especially under pose variations. An additional challenge is face recognition from partial information or when the face has undergone some changes. The present project aims to improve the face recognition system so as to handle pose variations and face recognition from partial information. Most of the current systems of face recognition try to get face features which are global in nature and then use these in recognition. Here, a system would be built that captures global as well as local features to make more accurate decisions. The present system would also take up a modular approach that would enable recognition from important areas such as the eye region, the lip region and so on. This could be an answer to recognize faces even under disguise.

5. Title: Securing biometric data using data hiding techniques (2010 - 2013)

Sponsoring agency: Board of Research in Nuclear Science (BRNS), Bhabha Atomic Research Centre, Department of Atomic Energy, Government of India.

Grant Amount: Rs. 14,00,000

Research Team:

Principal Investigator (PI): Mehul S Raval, Assistant Professor, DA-IICT

CI: Priti P. Rege, Professor and Dean Academics, COEP, Pune

Project Collaborator (PC): S K Parulekar, Scientist H+, Head Computer security division, BARC, Mumbai.

SRF: Vaibhav Joshi, DA-IICT

Project Detail:

Biometrics based authentication systems have been gaining widespread acceptance in the information security domain. However there are several loopholes in biometric systems. This project aims at improving the security and authentication mechanisms of biometric systems by using

complementary data hiding techniques. Fragile watermarking will be used to check the integrity and authenticity of biometric templates before identification. This will improve the overall security.

PUBLICATIONS

Book

1. [Explainable AI in Healthcare Unboxing Machine Learning for Biomedicine](#), Editors: Mehul S Raval, Mohendra Roy, Tolga Kaya, Rupal Kapdi, [Book Series - Analytics and AI for healthcare](#), Chapman and Hall / CRC, 2023, ISBN 9781003333425, DoI: <https://doi.org/10.1201/9781003333425> - First book under the book series.
2. [Digital Ecosystem for Innovation in Agriculture](#), Editors: Sanjay Chaudhary, Chandrashekhar M. Biradar, Srikrishnan Divakaran, Mehul S Raval. Book series: [Studies in Big Data](#) (SBD, volume 121), Springer Nature, 2023, ISBN 978-981-99-0576-8
3. [Data Science in Agriculture and Natural Resource Management](#) Editors: Reddy, G.P.O., Raval, M.S., Adinarayana, J., Chaudhary, S. Series - Studies in big data, Springer Nature, ISBN: 978-981-16-5846-4 DOI 10.1007/978-981-16-5847-1, Vol. 96, October 2021.
4. Image and Video Compression: Fundamentals, Techniques and Applications, Madhuri A. Joshi, Mehul S. Raval, Yogesh H. Dandawate, Kalyani R. Joshi, Shilpa P. Metkar, Chapman and Hall / CRC, FL, US, 17th Nov. 2014, DOI: 10.1201/b17738-1, Print ISBN 978-1-4822-2822-9 eBook ISBN: 978-1-4822-2823-6

Journal

1. Maitrik Shah, Mehul S Raval, Srikrishnan Divakaran, Debajyoti Dhar & Har sit Parmar (2023) [SAAC-Net: deep neural network-based model for atmospheric correction in remote sensing](#), [International Journal of Remote Sensing](#), 44:23, 7365-7389, DOI: 10.1080/01431161.2023.2282407
2. J. N. Chaudhari, H. Galiyawala, M. Kuribayashi, P. Sharma and M. S. Raval, "[Designing Practical End-to-End System for Soft Biometric-Based Person Retrieval from Surveillance Videos](#)," in [IEEE Access](#), doi: 10.1109/ACCESS.2023.3337108.
3. Rajput Snehal, Rupal Kapdi, Mehul S Raval, Mohendra Roy. "[Multi-view brain tumor segmentation \(MVBTS\): An ensemble of planar and triplanar attention UNets](#)." [Turkish Journal of Electrical Engineering and Computer Sciences](#) 31, no. 6 (2023): 908-927. <https://doi.org/10.55730/1300-0632.4026>
4. Bhavsar, Yagnik M., Mazad S. Zaveri, Mehul S. Raval, and Shaheriar B. Zaveri. "[Vision-based Investigation of Road Traffic and Violations at Urban Roundabout in India using UAV Video: A Case Study](#)." [Transportation](#)

5. Snehal Rajput, Rupal Kapdi, Mehul S. Raval and Mohendra Roy, "[Interpretable Machine learning model to predict survival days of malignant brain tumor patients](#)," [Machine Learning: Science and Technology](#), IOPscience <https://doi.org/10.1088/2632-2153/acd5a9>, IF: 6.013.
6. Brinky Desai, Arpitkumar Patel, Vaishwi Patel, Supan Shah, Mehul S. Raval, and Ratna Ghosal. "[Identification of free-ranging mugger crocodiles by applying deep learning methods on UAV imagery](#)." [Ecological Informatics](#), Vol.72, pp. 101874, Dec. 2022. ISSN 1574-9541 IF: 4.498
7. Hiren Galiyawala, Mehul S Raval, Meet Patel, "Person Retrieval in Surveillance Videos using Attribute Recognition," in [Springer Journal of Ambient Intelligence and Humanized Computing](#), April 2022, IF: 7.1
8. S. Senbel, S. Sharma, M. S. Raval, C. Taber, J. Nolan, N. S. Artan, D. Ezzeddine, T. Kaya, "[Impact of Sleep and Training on Game Performance and Injury in Division-1 Women's Basketball amidst the Pandemic](#)", in [IEEE Access](#), Jan. 2022. IF: 3.367 doi: 10.1109/ACCESS.2022.3145368
9. Hiren Galiyawala, Mehul S Raval, "Person Retrieval in Surveillance Using Textual Query: A Review", [Multimedia Tools and Applications](#), Springer, 80, 27343–27383 (2021). <https://doi.org/10.1007/s11042-021-10983-0>
10. Rupal Agravat, Mehul S Raval, "A Survey and Analysis on Automated Glioma Brain Tumor Segmentation and Overall Patient Survival Prediction " [Archives of Computational Methods in Engineering - State of the art reviews](#), Springer, March 2021 (Online), IF: 6.7, <https://doi.org/10.1007/s11831-021-09559-w>
11. Snehal Rajput, Mehul S Raval, "A Review on End-To-End Methods for Brain Tumor Segmentation and Overall Survival Prediction", [Azerbaijan Journal for High Performance Computing](#), (Invited Paper), Vol. 3, No. 1, June 2020, pp. 119 - 138, DOI: 10.32010/26166127, ISSN: 2616-6127
12. Veena Iyer, Susanna Abraham Cottagiri, Ayushi Sharma, Divya Nair, Mehul S. Raval, Bhavin Solanki, Dileep Mavalankar, "Effect of El Niño Southern Oscillations on the incidence of enteric fever in Ahmedabad, India from 1985 to 2017", [Asian Pacific Journal of Tropical Medicine](#), Hainan Medical University, IF: 1.772, Vol. 12, No. 12, pp. 531 - 576, December 2019. DOI:10.4103/1995-7645.272485.

13. Hiren Galiyawala, Mehul S Raval, Shivansh Dave, "Visual Appearance Based Person Retrieval in Unconstrained Environment Videos", *Image and Vision Computing*, Vol. 92, Dec. 2019, Elsevier, IF: 2.7 <https://doi.org/10.1016/j.imavis.2019.10.002>, Available online 24th Oct. 2019.
14. Mehul S Raval, "Hybrid Project Based Learning in Computer Vision", *The International Journal of Electrical Engineering & Education*, Sage Publishing, USA, ISSN: 0020-7209, IF - 0.941, <https://doi.org/10.1177/0020720919857632> Indexing: SCOPUS, EBSCO
15. Vaibhav B Joshi, Mehul S Raval, Minoru Kuribayashi, "Reversible Data Hiding based Compressible Privacy Preserving System for Color Image", *Multimedia Tools and Applications*, pp. 1 - 26, Oct. 2017, Springer, US <https://doi.org/10.1007/s11042-017-5230-8>, ISSN 13807501 Impact Factor: 1.53
16. Vaibhav B Joshi, Mehul S Raval, Dhruv Gupta, Priti P Rege, S K Parulkar, "A Multiple Reversible Watermarking Technique for Fingerprint Authentication", *Springer Multimedia Systems*, Published online 18th April 2015, ISSN: 0942-4962 (print version), DOI: 10.1007/s00530-015-0465-6, Impact Factor: 0.43
17. Jaladhi Vyas, M V Joshi, Mehul S Raval, " Automatic Target Image Detection for Morphing ", *Elsevier Journal of Visual Communication and Image Representation*, Vol. 27, pp:28-43, Feb. 2015, DOI: <http://dx.doi.org/10.1016/j.jvcir.2014.12.005> Impact Factor:1.36.
18. Jignesh Bhatt, Manjunath Joshi, Raval Mehul S , "A Data-driven Stochastic Approach for Unmixing Hyperspectral Imagery ", *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, Vol.7, No. 6, pp. 1936 - 1946, June 2014 DOI 10.1109/JSTARS.2014.2328597. Impact Factor: 2.87.
19. Harikumar, Prakash Gajjar, M V Joshi, Raval Mehul S, "Multiresolution Image Fusion: Use of Compressive Sensing and Graph Cuts ," *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, Vol. 7, No.5, pp:1771 - 1780, May 2014. ISSN:1939-1404, DOI: 10.1109/JSTARS.2013.228789. Impact Factor: 2.87
20. Joshi Vaibhav, Mehul S Raval, Rege Priti P., Parulkar S. K., "Multistage VQ Based Exact Authentication for biometric Images," *Computer Society of*

India(CSI) Journal of Computing, Vol. 2, No. 1-2, pp: R3-25-29, 2013.
eISSN:2277-7091.

21. Akshya Gupta, Mehul S Raval, "A robust and secure watermarking scheme based on singular value replacement" Sadhana – Springer and Indian academy of science journal, Vol 37, part 4, Aug. 2012, pp: 425 – 440.
22. Raval Mehul S, "Informed Embedding and Whitening Filter Correlator Based Spatial Domain Data Hiding Technique", SRIMCA National Journal on system and Information technology, vol.2, no.1, pp.31-41, June 2009.
23. Raval Mehul S and Chirag Paunwala, "Techniques for secret writing in digital images", Journal of Veer Narmad South Gujarat University, Vol. IV B, 2006, pp. 43 - 55.
24. Raval Mehul S, Rege Priti P, "DWT based robust image protection technique", Journal of The Institution of Engineers (India), Vol.86, pp:73-78, January 2006.
25. Raval Mehul S, Rege Priti P, "Scalar quantization based multiple patterns data hiding technique for gray scale images", ICGST International Journal on Graphics, Vision and Image Processing (GVIP), Vol.5, No.9, pp: 61-55, December 2005.
26. Raval Mehul S , Rege Priti P, "Multiple water marking schemes for digital images", Journal of Education, The Institution of Electronics and Telecommunication Engineers (IETE), India,Vol.36, No.3, pp:109-116, September 2005.
27. Raval Mehul S, Rege Priti P, "DWT based covert communication technique", Journal of Computer Society of India (CSI), Vol.34, No.1, pp: 69-75, Jan. 2004.

Conference

1. Harsh Tripathi, Jay Chaudhari, Hiren Galiyawala, Paawan Sharma, "[Integrating Datasets with Discrete and Natural Language Annotations for Person Retrieval](#)," The Tenth IEEE International Workshop on Security and Privacy for Internet of Things and Cyber-Physical Systems (IoT/CPS-Security 2023) colocated VTC2023-Fall in Hong Kong, 10th - 13th October 2023.
2. Erica Juliano, Chelsea Thakkar, Christopher Taber, Mehul S Raval, Tolga Kaya, Samah Senbel, [A Dynamic Online Dashboard for Tracking the Performance of Division 1 Basketball Athletic Performance](#), International Sports Analytics Conference and Exhibition (Preconference workshop), Singapore, 27th October 2023.

3. Srishti Sharma, Srikrishnan Divakaran, Tolga Kaya, Christopher Taber, Mehul S. Raval, "[A Framework for Biomechanical Analysis of Jump Landings for Injury Risk Assessment](#)," 1st International Sports Analytics Conference and Exhibition (ISACE), Preconference workshop), Singapore, 27th October 2023.
4. Mohendra Roy, Mehul S Raval, "[Unmasking DeepFake Visual Content With Generative AI](#)," [IEEE R10 Humanitarian Technology Conference](#), 16th - 18th October 2023, Rajkot, India.
5. Maitrik Shah, Mehul S Raval, Srikrishnan Divakaran, Pragnesh Patel, "[Study and Impact Analysis of Data Shift in Deep Learning based Atmospheric Corrections](#)," IGARSS 2023 - 2023 IEEE International Geoscience and Remote Sensing Symposium, 2023, 15th - 22nd July 2023, Pasadena, USA
6. Sagar Kavaia, Dhaval Patel, Mukesh Zaveri, Mehul S Raval, Shabbir N Merchant, "[VeCEn: A Data Acquisition Framework for Heterogeneous Vehicular Networks](#)," [Workshop on Connected Vehicles And Autonomous Driving](#), Colocated with [15th International Conference on COMMunication Systems & NETworkS](#), 4th Jan. 2023, Bengaluru, India
7. Foram Shah, Dhaval Patel, Kashish Shah, Mehul S Raval, Mukesh Zaveri, Shabbir N Merchant, "[Novel Crash Prevention Framework for C-V2X using Deep Learning](#)," [Workshop on Connected Vehicles And Autonomous Driving](#), Colocated with [15th International Conference on COMMunication Systems & NETworkS](#), 4th Jan. 2023, Bengaluru, India
8. Snehal Rajput, Rupal Kapdi, Kanhaiya Sharma, Mehul S. Raval and Mohendra Roy, "[Survival Prediction of Malignant Brain Tumor Patients](#)," International conference on recent and future Trends in Smart Electronics System and Manufacturing and its applications (SESMIC), Dec. 2022, Pune, India
9. Mehul S Raval, Mohendra Roy, Minoru Kuribayashi, "Survey on Vision Based Fake News Detection and Its Impact Analysis", 2022 Asia Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC), 7th - 10th November 2022, Chiang Mai, Thailand.
10. Param Raval, Hiren Khakhi, Minoru Kuribayashi, Mehul S Raval, "Defense Against Adversarial Examples Using Beneficial Noise", 2022 Asia Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC), 7th - 10th November 2022, Chiang Mai, Thailand.
11. Hiroto Takiwaki, Minoru Kuribayashi, Nobuo Funabiki, Mehul S Raval, "Privacy Protection Against Automated Tracking System Using Adversarial Patch", 2022 Asia Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC), 7th - 10th November 2022, Chiang Mai, Thailand.

12. R. Parmar, M. Kuribayashi, H. Takiwaki and M. S. Raval, "[On Fooling Facial Recognition Systems using Adversarial Patches](#)," 2022 International Joint Conference on Neural Networks (IJCNN), 2022, pp. 1-8, doi: 10.1109/IJCNN55064.2022.9892071.
13. S. U. Sharma, S. Divakaran, T. Kaya and M. Raval, "[A Hybrid Approach for Interpretable Game Performance Prediction in Basketball](#)," 2022 International Joint Conference on Neural Networks (IJCNN), 2022, pp. 01-08, doi: 10.1109/IJCNN55064.2022.9892583.
14. Abhi Lad, Mehul S Raval, "[Improving Wheat Head Detection: A Data-Centric Approach by Domain Variance Reduction](#)", [The 37th ACM/SIGAPP Symposium On Applied Computing Virtual Conference](#), pp. 1140 - 1143, April 25 - April 29, 2022, DOI: <https://doi.org/10.1145/3477314.3507190>
15. M. Shah, M. S. Raval and S. Divakaran, "[A Deep Learning Perspective to Atmospheric Correction of Satellite Images](#)," IGARSS 2022 - 2022 IEEE International Geoscience and Remote Sensing Symposium, 2022, pp. 346-349, doi: 10.1109/IGARSS46834.2022.9884900.
9. Abhi Lad, Mehul S Raval, "[Resolving Issues with Wheat Head Detection: A Use Case of XAI in Agriculture Scenario](#)", [5th Virtual workshop on Data Science for Agriculture and Natural Resource Management \(DSANRM 2021\)](#) Colocated with [9th International Conference on Big Data Analytics - 2021](#), 15th Dec. 2021
10. Pragnesh Patel, Maitrik Shah, Hasit Parmar, Mehul S Raval, "Impact of Vegetation Indices on Wheat Yield Prediction", [5th Virtual workshop on Data Science for Agriculture and Natural Resource Management \(DSANRM 2021\)](#) Colocated with [9th International Conference on Big Data Analytics - 2021](#), 15th Dec. 2021.
11. Maitrik Shah, Mehul S Raval, Srikrishnan Divakaran, Deep Learning-based Emulator for 6S Atmospheric Correction Model, [International India Geoscience and Remote Sensing Symposium \(InGARSS 2021\)](#), December 6-10, 2021
12. Hiren Galiyawala, Mehul S Raval, Dhyey Savalia, DSA-PR: Discrete Soft Biometric Attribute-Based Person Retrieval in Surveillance Video, The 17th IEEE International Conference on Advanced Video and Signal-based Surveillance (AVSS 2021) - Virtual, November 16 - 19, 2021
13. Sanket Shah, Harin Khakhi, Param Raval, Mehul S Raval, "Frequency Centric Defense Mechanisms against Adversarial Examples", 1st International Workshop on Adversarial Learning for Multimedia, [ACM Multimedia 2021](#), 24th Oct. 2021, Chendu, China
14. Rupal Agravat, Mehul S Raval, "3D Semantic Segmentation of Brain Tumor for Overall Survival Prediction", In: Crimi A., Bakas S. (eds) Brainlesion: Glioma, Multiple Sclerosis, Stroke and Traumatic Brain Injuries. BrainLes 2020. Lecture Notes in Computer Science, vol 12659.

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15. Snehal Rajput, Mohendra Roy, Mehul S Raval, Rupal Agravat, "Glioblastoma Multiforme Patient Survival Prediction", 2021 International Conference on Medical Imaging and Computer-Aided Diagnosis (MICAD 2021), 25-26 March 2021, Birmingham, UK
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4. Rupal Agravat, Mehul S Raval, "Brain Tumor Segmentation and Survival Prediction", arXiv Preprints <http://arxiv.org/abs/1909.09399>, Sept. 2019.
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COURSES TAUGHT

Winter 2024

CSE 523 Machine Learning

CSE 541 Computer Vision

Monsoon 2023

ECE 210 Signals and Systems

Winter 2023

CSE 523 Machine Learning

CSE 541 Computer Vision

Monsoon 22

ECE 210 Signals and Systems

Winter 2022

CSE 523 Machine Learning

CSE 502 Computer Vision

Monsoon 2021-22
CSE 518 Artificial Intelligence

Winter 2020-21
CSE 523 Machine Learning
CSE 502 Computer Vision

Monsoon 2020-21
CSE 518 Artificial Intelligence

Spring 2019-20
18CP311T Artificial Intelligence, BTech ICT, Sem VI
18CP315T Data Warehousing and Data Mining

Autumn 2019-20
19CP402T Machine Learning, BTech ICT and Computer Engineering, Sem VII

Spring 2018 - 19
18CP311T Artificial Intelligence, BTech ICT and Computer Engineering, Sem VI

Monsoon 2018-19
CSP 200 Signals and Systems, B.Tech, ICT, Semester III
CSP 502 Computer Vision, B.Tech, ICT, Semester VII

Winter 2017-18
CSC 523 Machine Learning, M.Tech (Data Science and Analytics) Open elective to B.Tech ICT,
Sem VI and VIII

Monsoon 2017-18
Signals and Systems, B. Tech, ICT, Semester III
Computer Vision, B.Tech, ICT, Semester VII

Winter 2017
Digital Signal Processing, B.Tech (ICT), Sem VI
Machine Learning, M.Tech (Data Science and Analytics) Open elective to B.Tech ICT, Sem VI and
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Fall 2016
Quantitative Engineering Analysis, Sem. III, Bachelor of Science Program, Olin College of
Engineering, Needham, Massachusetts, US, (Co-teaching)

Summer 2016

Machine Learning, PhD Program, SEAS

Winter 2016

Machine Learning, M.Tech (Data Science and Analytics) Open elective to B.Tech ICT, Sem VI and VIII

Monsoon 2015 - 16

Probability and Statistical Inference, M. Tech (Data Science and Analytics) / PhD Signals and Systems, B. Tech, ICT, Semester III

Winter 2014 - 15

Machine Learning, M. Tech (Data Science and Analytics)

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Probability and Statistical Inference, M. Tech (Data Science and Analytics) / PhD Signals and Systems, B. Tech, ICT, Semester III

Winter 2013 - 14

Probability and Random Processes, B. Tech ICT, Semester IV

Monsoon 2013-14

Course on Computer Organization, B. Tech ICT, Semester III

Winter 2012-13

IT 518, Fuzzy Neural systems, M. Tech Machine Intelligence, Semester II.

Autumn 2012-13

IT 209, Computer Organization, B. Tech ICT, Semester II

THESIS SUPERVISION AND EVALUATION

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2. Pooja Patel, "Pattern classification of Protein sequences", Ahmedabad University, 2015-16 3. Dhara Sangani, "Pansharpening in Remotely sensed images", L.D. College of Engineering. Ahmedabad, 2014 - 15
4. Dhruv Gupta, "Study of Fuzzy Clustering Algorithms and Enhanced Fuzzy Reasoning Applications to Texture Based Image Segmentation", DA-IICT, 2013-14.
5. Ronak Kostil,"Estimating Depth in a Single Image by Learning through Neural Network", DAIICT.
6. Harikumar V, "Compressive sensing based multi resolution image fusion", DA-IICT 2011-12.
7. Mr. Sandeep Juneja, "Collusion Resistive Watermarking techniques", DA-IICT, 2010- 11
8. Mr. Akshay Gupta, "SVD based Robust Watermarking techniques" DA-IICT, 2008 9. Ms Arpita Parmar, "Reversible Watermarking techniques", CIT Changa, Gujarat University, 2008.
10. Mr. Chirag Paunwala, "Robust watermarking techniques", SGSITS Indore, 2006

11. Ms Hiral Desai, “Correlation based watermarking technique”, M S University Baroda. 2005.

BTech Students

2022 – 23 Dev Manish Jani-AU1940045, Optimizing Multi-Stage Continuous Manufacturing Process, MVJ Soft Pvt. Ltd.

2022-23 Shail Nimish Patel, Real-Time fuel prediction of a fishing boat, One Force

2022 – 23 Sameep Nilesh Vani, Multimodal fusion based Hateful Meme Classification, Sculptsoft Private Ltd

2022 – 23, Vraj Parikh, Angel Protocol, Pedals Up

2022 – 23, Deepang Gaurang Desai, Simulating Algorithmic Trading Strategies using Angular, Flask and Python, Bosleo

2022 – 23, Varun Viral Deliwala, Real time Automatic Number plate Recognition System, Tusker AI

2021-22 Arpitsinh Vaghela, Exploring Generalization capabilities of Dynamic Neural Expansion

2021 – 22, Harin Khakhi, Improving defense mechanisms in adversarial examples

2021 – 22, Jeet Shah, Intelligent Trade Financing Platform, Mettis Intellisystems Private Limited

2021 – 22, Sanket Shah, Agristack: AI Applications, NCDEX e Markets Ltd (NeML)

2020 - 21 Arpitkumar Patel, Developing Artificial Intelligence Extensions for Educational Programming Platform for Kids for mobile devices, sponsored by - Agilo Research Private

2020 - 21 Vaishwi Patel, AI based smart camera system, sponsored by - Teksun Microsys Private Limited

2020 - 21 Jeet Shah, Water Treatment Plant Automation Optimization, sponsored by - Infocusp innovations private limited

2020 - 21 Krinali Shah, Fleet Management, sponsored by - Evolutionary System Private Limited

2020 - 21 Bhargav Patel, Online Continuous Assessment and Proctoring System, sponsored by - Truminds Software Systems Private Limited

2020-21 Dhyey Savalia, "Linear Filtering approach for soft attribute based person recognition', CE Department, LD College of Engineering, Ahmedabad

2020-21 Meet Patel, "One shot attribute extraction and recognition", CE Department, LD College of Engineering, Ahmedabad.

2019 – 20 Jhanvi Arora, "Person identification using textual query", PDPU, ICT department.

2019 – 20 Prayushi Faldu and Nevil Vekariya, "Contextualising text", Embibe Bangalore, PDPU, ICT department.

2018 – 19 Kenil Shah, "Person identification using height, cloth color and gender", EC Department, LD College of Engineering, Ahmedabad

2019 – 19 Shivansh K Dave, "Person identification using GAIT", Computer Engineering Department, LD College of Engineering, Ahmedabad

2018-19 Prachal Patel, "Person identification using GAIT", Information Technology Department, LD College of Engineering, Ahmedabad

2017 -18 Aashima Yuthika, "Autonomous vehicle navigation", Ahmedabad University

2016-17, Sachi Turakhia, "Brain Tumor Segmentation", Ahmedabad University

2016-17, Priyansh Shah, "Person Identification from Surveillance videos: Use of Colours", Ahmedabad University

2016-17, Sharvil Shah, "Person Identification from Surveillance videos: Use of material accessory", Ahmedabad University

2014-15, Anuradha Chaudhary, "Development of Steganography and steganalysis framework", Dharmsinh Desai University, Nadiad.

2015 - 16, Aditya Parikh, "Pest and Disease identification in cotton crop of North Gujarat", Ahmedabad University

2015 - 16, Anmol Anubhai, Rahul Patel, Shashwat Sanghavi, Kahinee - A Voice Aided Service for Rural Healthcare, Ahmedabad University

PhD Thesis Referee

1. Savitribai Phule Pune University, Pune, India – 2019, 2020, 2021, 2022, 2023
2. Anna University Chennai, India – 2020, 2021, 2022
3. Reva University, Bangalore, India - 2021
4. Charotar University of Science and Technology, Changa, India – 2018, 2019, 2020

5. MS University of Baroda, Vadodara - 2011
6. Shivaji University, Kohlapur - 2011
7. Sardar Patel University, Vallabh Vidya Nagar, Anand, India - 2011
8. Gujarat Technological University, Ahmedabad - 2012

Doctoral Progress Committee member

1. Gujarat Technological, University, Ahmedabad
2. Veer Narmad South Gujarat University, Surat
3. Dharmsinh Desai University, Nadiad

M.Tech Thesis Evaluation

1. Gujarat Technological University, Ahmedabad
2. SVNIT, Surat
3. Nirma University, Ahmedabad
4. College of Engineering, Pune

HONORARY SERVICES 2023

Conference Paper Review

International Joint Conference on Neural Networks (5) , June 18th - June 23, Queensland, Australia

Journal Paper Review

Frontiers in Big Data (4), Frontiers in Imaging (1), Taylor and Francis: Cybernetics and Systems (1), IEEE Access (2), International Journal of Image and Graphics (1), Expert Systems with Applications (2)

Invited Talks

1. Two powerful tools in machine learning: Logistic Regression and Support Vector Machines, SERB - Hands on Training on Design, Fabrication and Testing of 5G antenna using Machine Learning, Sardar Vallabhbhai National Institute of Technology, Surat, 17th May 2023
2. U-Net and other models for image segmentation, Short Term Training Program on Reconfigurable chip design, Image and video analysis using Vivado, LTSpice, Python and OpenCV, Parul University, Vadodara, India, 3rd May 2023.
3. Deep Learning in Agriculture, Image Dehazing and Adversarial Learning, Navrachana University, Vadodara, 08.04.2023
4. [Technology Vision 2047](#) - A Brainstorming Workshop, Technology Information, Forecasting and Assessment Council (TIFAC) and Gujarat Council on Science and Technology (GUJCOST), Science City, Ahmedabad, 27.03.2023.

5. Open & Sharing Data @Ahmedabad University, Open and Sharing Data Working Group (OSDWG) meeting at 55th Meeting of the Asia-Pacific Advanced Network (APAN55), March 15, 2023, Kathmandu, Nepal.
6. Person Retrieval from surveillance video using textual query, Research Seminar, Islamic University of Science & Technology, Kashmir, India, March 8, 2023
7. Fake News detection and Impact Analysis, Research Seminar Series, Ahmedabad University, February 8, 2023
8. Deep Learning approaches for atmospheric corrections, CoE-AIML, IITRAM, Ahmedabad, February 7, 2023
9. Deep Learning Approaches for Atmospheric Corrections, GUJCOST Short Term Training Program on Concept of Artificial Intelligence and Machine Learning towards Research Applications, L D College of Engineering, 19th January 2023

2022

Conference Committee

1. Track Chair & Reviewer, 2022 Asia Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC), Chiang Mai, Thailand, Nov. 7th - 10th 2022
2. Special Session - Adversarial attacks and Defense, Organizers - Minoru Kuribayashi, Mehul S. Raval, Mohendra Roy, APSIPA ASC 2022, Chiang Mai, Thailand, Nov. 7th - 10th 2022
3. Program committee member, 2nd International Workshop on "Blockchain Technologies (IWBT2022), in conjunction with 27th International Conference on "Database Systems for Advanced Applications" DASFAA 2022, April 11-14, 2022, Hyderabad, India.
4. Reviewer - IEEE International Conference on Signal Processing and Communications (SPCOM), July 11 - 15, 2022, Indian Institute of Science Bangalore.
5. Reviewer - IEEE World Congress on Computational Intelligence, July 18 - 23, 2022, Padua, Italy
6. Reviewer - IEEE Region 10 Symposium TENSYP 2022, July 1 - 3, 2022, Mumbai, India
7. Reviewer - IEEE Global Humanitarian Technology Conference 2022, September 8 - 11, 2022 Santa Clara, USA
8. Reviewer - 18th IEEE International Conference on Advanced Video and Signal-Based Surveillance (AVSS 2022), Nov. 29th - Dec. 2nd 2022.

Journal Review

SADHANA - Academy Proceedings in Engineering Sciences, Frontiers in Bioengineering and Biotechnology, section Preclinical Cell and Gene Therapy, Geotechnical and Geological Engineering, Journal of Ambient Intelligence and Humanized Computing, Frontiers Nutrition, Alexandria Engineering Journal, SPIE Journal of Applied Remote Sensing, Frontiers in Genetics section Computational Genomics, Frontiers in Neuroscience section: Brain Imaging Methods, Frontiers in Oncology, Peer J Computer Science, Frontiers in Artificial Intelligence AI

in Business, Frontiers in Big Data Machine Learning and Artificial Intelligence, Elsevier - Expert Systems with Applications, Elsevier - Knowledge Based Systems, Frontiers in Neurorobotics, Frontiers in Big Data, section Data Mining and Management, Frontiers in Artificial Intelligence, section AI in Food, Agriculture and Water, Frontiers in AI - Pattern Recognition Section, Frontiers in Public Health, Frontiers in Remote sensing - section Microwave Remote Sensing, Elsevier - Computational and Biotechnology journal, Hindawi - Scientific Programming

PhD Thesis Review

Anna University - Chennai, Nirma University - Ahmedabad, Savitribai Phule Pune University, Pune, University of Madras, Chennai

Invited Talks

1. [Deep Learning - State of the art applications in computer vision](#), IEEE Gujarat Section - STEP talk, Ganpat University, 31st December 2022.
2. Tutorial on Fake News Detection and Impact Analysis, Organizers - Minoru Kuribayashi, Mehul S. Raval, Mohendra Roy, APSIPA ASC 2022, Chiang Mai, Thailand, 7th November 2022.
3. Advances in Deep Learning, GUJCOST sponsored One Week STTP on "Recent Advancement in Deep Learning", Dharmsinh Desai University (DDU), Nadiad, 28th March 2022.
4. AI and Smart Cities - An overview, Online workshop titled "Artificial Intelligence in Smart City Development: Recent Trends and Future Prospective", 4th March 2022 (Friday), Funded by Royal Academy of Engineering, UK.
5. Deep learning in agriculture, adversarial example, and image dehazing, GUJCOST Sponsored online Faculty Development Program: Recent Trends & Advancements in ANN: Deep Learning, CHARUSAT University, Changa, 25th February 2022.

2021

Journal Review

Journal of Ambient Intelligence and Humanized Computing - Springer, Journal of Applied Remote Sensing - SPIE, Computer Journal - Oxford University Press, SADHANA - Academy Proceedings in Engineering Sciences, Frontiers in oncology, International Journal of Computing and Digital Systems, IEEE Access, Computer Applications in Engineering Education - Wiley, Machine Learning with Applications - Elsevier, International Journal of Image and Graphics, Knowledge-Based Systems - Elsevier, Energy - Elsevier, International Journal of Computational Vision and Robotics (IJCVR) - Inderscience

Conference Committee

1. Member - Program Committee, 2021 International Joint Conference on Neural Networks (IJCNN 2021), July 18-22, 2021, Shenzhen, China

2. Member - Program Committee, 2021 International Conference on Acoustics, Speech, & Signal Processing (ICASSP), 6 - 11 June 2021, Toronto, Canada.
3. Technical Program Chair, 1st International Conference on Artificial Intelligence & Machine Vision, 24th - 26th September 2021, Gandhinagar
4. IEEE Global Humanitarian Technology Conference, Oct 19 - 23, 2021, Virtual
5. 4th Smart Cities Symposium, 21 - 23 November 2021
6. Advisory Committee Member, Data Science for Agriculture and Natural Resource Management (DSANRM2021), Co-located with 9th Big Data Analytics Conference (BDA2021), Dec. 15th 2021.

Invited Talks

1. CNN – Feature Visualization and Saliency Maps, Short Term Training Program, Deep learning and its applications, 24th Feb. 2021, CHARUSAT University, Changa
2. Glioblastoma Multiforme Tumor segmentation and overall survival prediction, AICTE FDP on "Artificial Intelligence Techniques with Machine Learning and Deep Learning for Engineering Applications" on 26th February, 2021.
3. Fundamentals of Machine Learning, STEP Program, IEEE Gujarat Section, 06th Mar. 2021, DDU Nadiad, India
4. Brain Tumor Segmentation and Overall survival prediction - The ML - CV way, 16th Mar. 2021, GUJCOST workshop on "Recent Trends in Artificial Intelligence, Machine Learning, and Computer Vision", CHARUSAT University, Changa, India
5. Reimagine Feedback and Assessment - Thematic Breakout session (with Dr Dhaval Patel), 14th May 2021, Ahmedabad Learning Dialogues: A Conference on Teaching and Learning, Ahmedabad University, India
6. Adversarial examples in Deep Learning - Attack and Defence, June 28, 2021, Ahmedabad University
7. Adversarial Examples in DNN - Proponent and Opponent Views, 03 Oct. 2021, Emerging Research Trends in Engineering - 2021, IEEE Gujarat Section.
8. Artificial Intelligence and Internet of Things in Era of Smart Manufacturing, 4th Nov. 2021, Corporate Technology and Engineering Academy, Larsen & Toubro, Madh, Mumbai
9. AI in Materials Engineering, 20th Nov. 2021, International Symposium on Materials of the Millennium: Emerging Trends and Future Prospects, PDEU, Gandhinagar.
10. AI and IOT for the Manufacturing Industry, 16th Dec. 2021, AICTE-ISTE Sponsored Refresher program on Deep Learning & its Applications (13th - 18th Dec. 2021), K. J. Somaiya Institute of Engineering & Information Technology (KJSIEIT). Sion. Mumbai, Maharashtra, India

2020

Program Organization

- Workshop Co-Chair, Data Science for Agriculture and Natural Resource Management (DSANRM2020), Co-located with 8th Big Data Analytics Conference (BDA2020), Dec. 16th 2020.

- Program Co-Chair, One day Virtual National Workshop on AI for Fight Against CoVID-19 (AIAC19), IEEE Ahmedabad University Student Branch, 24th Oct. 2020.
- Program Chair, National Seminar on Computer Vision & Image Processing (NaSCoVIP 2020), IEEE Gujarat Section, 9th - 11th Oct. 2020.

Journal Reviewer

SPIE Journal of Applied Remote Sensing (JARS), IEEE Access, IET Image Processing, Journal of Ambient Intelligence and Humanized Computing, International Journal of Computing and Digital Systems (IJCDS), SADHANA - Academy Proceedings in Engineering Sciences

Technical Programme committee member

1. 26th National Conference on Communications, 21 – 23rd Feb. 2020, IIT Kharagpur.
2. 2020 International Joint Conference on Neural Networks (IJCNN 2020), 19th – 24th July 2020, Glasgow, UK
3. 13th International Conference on Signal Processing and Communications, July 20-23, 2020, IISC Bangalore.
4. 23rd International Conference on Medical Image Computing and Computer Assisted Intervention, Oct 4th to 8th 2020, Lima, Peru

Talks

- Diagnosing COVID19 using Medical Image Analysis, Short Term Training Programme (STTP) on "Leveraging Artificial Intelligence and Data Analytics for Healthcare, under AICTE-AQIS 2019-20, K. J. Somaiya Institute of Engineering and Information Technology, Mumbai, India, 19.12.2020
- Challenges and Research Opportunities in Medical Image Analysis - Brain Segmentation Case Study, Short Term Training Programme (STTP) on "Leveraging Artificial Intelligence and Data Analytics for Healthcare, under AICTE-AQIS 2019-20, K. J. Somaiya Institute of Engineering and Information Technology, Mumbai, India, 18.12.2020
- Emerging Technologies - Tech 2020 and Beyond, IC3 Virtual Residence Week, Ahmedabad University, 18.12.2020
- Computer Vision and Artificial Intelligence for Agricultural Automation, Virtual International Workshop on Data Science in Agriculture and Natural Resource Management (DSANRM 2020), Colocated with 8th International Big Data Analytics Conference, Ashoka University, India, 16.12.2020
- Examination during Pandemic: Challenges and Solution, AICTE and GTU sponsored Online Faculty Development Program (FDP) Rethinking and Restructuring an Examination System by Effective Technology, Ahmedabad, India 14.12.2020
- Robust Brain Tumor Segmentation and Overall Survival Prediction, AICTE sponsored International E- Conference on Data Analytics, Intelligent Systems and Information Security (ICDIIS '20), Dr.Mahalingam College of Engineering & Technology, Pollachi, India, 11.12.2020

- Regression and Regularisation, GUJCOST sponsored National Shortterm training program, Ahmedabad Institute of Technology, Ahmedabad, 07.11.2020
- Personal Retrieval using Softbiometrics, Short term learning program - Advance Image Processing Research, Manipal University, Jaipur, 29.10.2020.
- 3D brain tumor segmentation, Short term learning program - Advance Image Processing Research, Manipal University, Jaipur, 27.10.2020.
- Introduction to the Reinforcement Learning, GUJCOST Sponsored **Machine Learning: The Key Driver of Digital Transformation**, DEPSTAR, CHARUSAT University, 16.10.2020.
- Diagnosing COVID19 using Medical Image Analysis, National Workshop on AI for Fight Against COVID-19 (AIAC-19), Ahmedabad University, 14.10.2020
- Challenges in medical image analysis, Research Wave, Silver Jubilee Foundation Day, Nirma University. 29.09.2020.
- Image Segmentation Techniques, Fractional Talk / Expert Talk series, Nirma University. 19.09.2020, 26.09.2020, 3.10.2020
- 3D Brain tumor segmentation, Under Section Technical Expert Program (STEP) of IEEE Gujarat Section, CHARUSAT, Changa, 12th September 2020. Video File
- Brain Tumour segmentation and Survival Prediction, AICTE STTP on Advances in Biomedical Signal Processing with Handson, MKSSS Cummins College of Engineering for Women, Pune, Maharastra, 10th September 2020. Link to Video File
- Robust Brain Tumor Segmentation for overall Survival Prediction, FDP on Algorithms and Techniques for Signal Processing, College of Engineering Pune, Pune, 18th July 2020.
- Digital Transformation through Data Science and Cyber Security, Webinar, Pandit Deendayal Petroleum University, Gandhinagar, Gujarat, 3rd June 2020.

2019

Program Organisation

1. Organising Chair (Jointly), 7th International Conference on Big Data Analytics 2019, (BDA 2019), Ahmedabad, India, Dec. 17th - 20th, 2019.
2. Track Chair and Member TPC, Signal & Image Processing, IEEE Indicon 2019, Rajkot, Gujarat, Dec. 13th - 15th, 2019.
3. Organiser, Workshop on Machine Learning using Python (Tensorflow and Keras), Ingenium 2019, 19th - 20th Jan. 2019, Ahmedabad University, India
4. Joint Secretary, IEEE Gujarat Section

Journal Reviewer

International Journal of Electrical Engineering Education, SPIE Journal of Applied Remote Sensing(JARS International Journal of Computing and Digital Systems (IJCDs),Wiley Journal of Software: Practice and Experience

Technical Programme committee member

1. 25th National Conference on Communications (NCC) 2019, 20 - 23 February 2019, IISC Bengaluru, India.

2. Twelfth International Conference on Contemporary Computing (IC3), 8th - 10th Aug. 2019, India.
3. The 2019 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT 2019), September 22-23, 2019 - Bahrain
4. 22nd International Conference on Medical Image Computing and Computer Assisted Intervention, October 13th to 17th, 2019 in Shenzhen, China.
5. The Global Humanitarian Technology Conference (GHTC), Seattle, Washington, USA, October 17– 20th 2019
6. IEEE TENCON 2019, Kochi, India, October 17th to 21st 2019.
7. The 14th International Conference on Bio-Inspired Computing: Theories and Application (BIC-TA 2019) , Zhengzhou, China, November 22 – 25, 2019.
8. IEEE Indicon, Rajkot, India, December 13th - 15th, 2019

Talks

1. Video Analytics, Workshop on Big Data: Algorithms, Frameworks and Machine Learning Techniques for Problems in Evolving Networks and Computer Vision, The Seventh International Conference on Big Data Analytics (BDA 2019), Ahmedabad University, 17th Dec. 2019.
2. Compressible Privacy Preserving System for Digital Images, Workshop on Information and Cyber Security Trends (ICST2019) Under Atal Scheme, IIIT Vadodara, Gandhinagar, 13th Dec. 2019.
3. Shallow ANN with Keras and Tensorflow, AICTE sponsored two week FDP Programme on "DeepVision: Deep Learning for Visual Computing, CHARUSAT University, 19th Nov. 2019.
4. Person Retrieval in Surveillance Videos using Deep Soft Biometrics, IEEE All India Computer Society Students and Young Professionals Congress (AICSSYC'19), AD Patel Institute of Technology, V V Nagar, 12.10.2019.
5. Insider Threat Detection: Machine Learning Way, The International Conference on Smart Data, Smart Cities and Smart Governance, CEPT University, Ahmedabad, 4th Oct. 2019.
6. Soft Biometrics for Person Retrieval in Unconstrained Surveillance Videos, SHU Engineering talk series, Sacred Heart University, Connecticut, USA, 30th July 2019.
7. Our experiments with Project Based Learning (Jointly with Professor Tolga Kaya, Director Engineering Programme, SHU Engineering talk series, Sacred Heart University, Connecticut, USA, 26th July 2019.
8. How does Artificial Intelligence impact you, SHU Engineering talk series, Sacred Heart University, Connecticut, USA, 11th July 2019.
9. Soft biometrics for person retrieval in unconstrained surveillance videos, The 2nd International Conference "Parul University International Conference on Engineering & Technology, Vadodara, Gujarat, 25th May 2019
10. Soft biometrics for person retrieval in unconstrained surveillance videos, UGC-SAP National seminar on Digital Image Processing and Computer Vision, Veer Narmad South Gujarat University, Surat, 2nd April 2019.

11. Convolutional Neural Networks: Fundamentals and Applications, GUJCOST Seminar on Machine Learning and Deep Learning in Image Processing, Sankalchand Patel University, Visnagar, Gujarat, 8th March 2019.
12. Basics of Deep Learning: Convolutional Neural Network, Workshop on Machine Learning using Python (Tensorflow and Keras), Ahmedabad University, 19th January 2019.

2018

Program Organisation

1. Program Chair, IEEE CICS 2018 Special Session on Computational Intelligence for Digital Data Hiding (CIDDH), Nov. 18th - 21st 2018, Bengaluru, India
2. Co-chair, Organizing Committee, 38th IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science, December 10–14, 2018, Ahmedabad University, India,
3. Member, Programme committee, IWBT18: International Workshop on Blockchain Technologies, Colocated with 6th conference on Big Data Analytics, NIT Warangal, 18th December, 2018.
4. Member, Programme Committee, Second Workshop on ‘Data Science for Agriculture and Natural Resource Management (DSANRM2018), Colocated with 6th conference on Big Data Analytics, NIT Warangal, 18th December, 2018.

Journal Reviewer

Hindawi Mathematical Problems in Engineering, SPIE Journal of Applied Remote Sensing(JARS), International Journal on Document Analysis and Recognition (IJ DAR), Wiley Journal of Software: Practice and Experience, IEEE Transactions on Image Processing, International Journal of Information Security and Privacy (IJISP)

Book Review

1. Signals and Systems, CRC Press, Taylor and Francis group
2. Signal Processing and Data Analysis, CRC Press, Taylor and Francis group

Technical Programme committee member

1. Signal 2018, May 20, 2018 to May 24, 2018 - Nice, France
2. 2018 SYMPOSIUM Series on Computational Intelligence, 18 - 21 November 2018, Bengaluru, India
3. International Workshop on Block Chain Technology (IWBT 2018), Colocated with 6th conference on Big Data Analytics, NIT Warangal, 18th December, 2018.
4. Kaizen B.E, M.E Final Year Project Review, L. D. College of Engineering, Ahmedabad, 12th April 2018

Talks

1. Brain Tumor Segmentation using Convolution Neural Network, Seminar on Machine Intelligence in Image Processing, DA-IICT, Gandhinagar, 17th February 2018.
2. Introduction to MTech CSE (Data Science and Analytics) at School of Engineering and Applied Science, Sarvajanik College of Engineering and Technology (SCET), Surat, 3rd April 2018.
3. Brain Tumor Segmentation: Data Science Perspectives, Sarvajanik College of Engineering and Technology (SCET), Surat, 3rd April 2018.
4. Introduction to Machine Learning and Applications, STTP on Machine Learning: Tools, Techniques and Applications, LDRP Institute of Technology and Research, Gandhinagar, 30th April 201
5. Deep Learning : Introduction, Applications and Practical Issues, Dharmsinh Desai University, Nadiad, 3rd May 2018
6. Deep Learning: Preliminaries and Applications, Workshop on "Recent Trends in Data Science", CGPIT, Uka Tarsadia University, 11th May 2018.
7. Reversible Data Hiding for Security and Privacy, ISEAP - II Sponsored Five-Days FDP on Research Topics in Information Security and Privacy (RTIS&P 2018), Department of Computer Engineering, SVNIT, Surat, June 19, 2018.
8. ML and 5G, DST-ASEAN and DST-UKIERI Project FDP on Advanced 5G Wireless Communications: Performance Analysis and Monte-Carlo Simulations; Ahmedabad University, Ahmedabad, 21st June 2018.
9. Machine learning using Python, Machine Learning & Big Data Analytics through R & Python Programming, U & P U. Patel Department of Computer Engineering, CSPIT, CHARUSAT, Changa June 23, 2018.
10. Nuts and bolts of Deep Learning, Introduction to Deep Learning and its applications, Devang Patel Institute of Advance Technology and Research, CHARUSAT University, Sept. 1st, 2018.
11. Regression and Regularisation, Faculty Development Programme on Applied Machine Learning: A Practical based approach, VGEC Chandkheda, Oct. 15th 2018
12. Person retrieval using soft biometrics, GUJCOST Workshop Deep Learning for Visual Computing, CHARUSAT University, 18th December 2018.
13. Deep learning and Building Keras Model, GUJCOST Workshop Data Science: Application and Practices in Python, Parul University, Vadodara, 22nd Dec. 2018.
14. Regression and Regularisation, SAMVAAD 2018, GUJCOST Workshop on Artificial Intelligence, Silver Oak College of Engineering and Technology, Ahmedabad, 24th Dec. 2018

Training Programs

1. Learning Coalition: Project Based Learning Workshop for Faculty, Ahmedabad University, 7th March & 14th March 2018

2017

Talks and Tutorial

- Probability and Statistics I and II, Summer School on Learning in Data Science, SEASAU, 18.7.2017 and 19.7.2017
- Classification I and II, Summer School on Learning in Data Science, SEAS-AU, 21.7.2017 and 22.7.2017
- SVM and Kernels, DST-UKIERI Faculty Development Program on Advance Wireless Communication, SEAS-AU, 18.8.2017
- Securing biometrics using data hiding techniques I and II, Parul University, 11.10.2017
- Problems in Image processing, Computer vision and Machine Learning, NRDMS-NSDI Service-Oriented Architecture for Spatial Data Integration and Reasoning, SEAS-AU, 17th Nov. 2017.
- Tutorial Data Driven Deep Learning Approach for Image classification, AICTE-COEP FDP on Image processing and pattern recognition applications with hands on, College of Engineering Pune, 30th Nov. - 1st Dec. 2017.
- Deep Learning Driven Image Classification, Short Term Training Program on Machine Learning and its applications, BVM Engineering College, V V Nagar, 23rd Dec. 2017

Reviewer

Journals

IEEE Transaction on Education, SPIE Journal of Applied Remote Sensing(JARS), Royal Society Open Science, Wireless communication and mobile computing, Elsevier Digital Communications and Networks, IEEE Access, International Journal of Computing and Digital Systems (IJCDS), International Journal of Information Security and Privacy (IJISP), Hindawi Mathematical Problems in Engineering, Proceedings of the National Academy of Sciences, Physical Sciences (NASA)

Conferences Technical program committee and Reviewer

1. Member, Technical Program Committee, DSANRM2017: Workshop on 'Data Science for Agriculture and Natural Resource Management (DSANRM), International Institute of Information Technology (IIIT, Hyderabad), Hyderabad, India, December 12, 2017
2. Member, Technical Program Committee, National Seminar on Computer Vision and Image Processing, 8th - 9th September 2017
3. Organizing Committee member, DST-UKIERI Faculty Development Program on Advance Wireless Communication, SEAS-AU, Aug. 16th to Aug. 20, 2017
4. Chair, Program Committee, Summer School on Learning in Data Science, SEAS-AU, 17th July to 22nd July 2017
5. The 12th International Conference on Bio-inspired Computing: Theories and Applications (BIC-TA 2017) 1st -3rd, December, 2017, Harbin, China.
6. The Sixth National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), 16 - 19 December, 2017, Mandi, India
7. Intelligent Systems and Signal Processing, 24th - 25th March 2017, Vidyanagar, India
8. Signal Processing and integrated networks-2017, 2nd - 3rd March 2017, New Delhi, India 9. Signal 2017 May 21 - 25, 2017 - Barcelona, Spain

10. 2nd International Conference on Computer, Communication and Computational Sciences, October 11-12, 2017, Phuket, Thailand
11. The International Conference on Data and Information Sciences (ICDIS-2017), November 3-4, 2017, Amarkantak, India
12. 23rd National Conference on Communications, March 2nd - 4th 2017, IIT Madras, India
13. International Conference on Soft Computing and its Engineering Applications (icSoftComp-2017), 1-2 December 2017, Changa, India 2016

2016

Reviewer Journals

IEEE Transactions on Instrumentation & Measurement, IEEE Transactions on Multimedia, National Academy of Sciences, India Section A: Physical Sciences, SPIE Journal of Applied Remote Sensing, Springer Plus, Journal of the Institution of Engineers (India): Series B, SADHANA - Academy Proceedings in Engineering Sciences

Member Technical Program committee / Reviewer

Conferences

1. National Conference on Communication, NCC 2016, Guwahati, India, 4 - 6 Mar. 2016
2. International Conference on Signal and Information Processing, IConSIP-2016, Shri Guru Gobind Singhji Institute, Nanded, Maharashtra, India, 6 - 8 Oct. 2016
3. Conference on Advances in Signal Processing 2016 , Pune, Maharashtra, India, 9 - 11, June 2016.
4. IEEE International Conference on Computing, Analytics and Security Trends, Pune, Maharashtra, India, 19 - 21, Dec. 2016.

Talks

1. Data hiding techniques for securing biometrics, Security Workshop, Okayama University, Japan, 26th July 2016
2. Reflection on Living Within Olin Eco System, Olin College of Engineering, Needham, MA November 2016
3. Image Processing: International Conference on Research and Innovations in Science, Engineering & Technology ICRISSET-2017, 17-19, February-2017, Vallabh Vidyanagar, Gujarat India
4. Robust Video Segmentation, LD College of Engineering. Ahmedabad April 2017.

2015

Reviewer Journals

Springer Proceedings of National Academy of Sciences, India, Section A: Physical Sciences, Springer Journal of The Institution of Engineers (India): Series B, Journal of Applied Remote Sensing, International Society for optics and photonics (SPIE)

Conference

Member Technical Program committee / Reviewer

1. Workshop Session on Big Data Analytics in Agriculture Co-located with Seventh Workshop on Big Data Benchmarking, India Habitat Centre, New Delhi, India, December 14-15, 2015.
2. Fifth National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), IIT Patna, Patna, India, 16 - 19th Dec. 2015.
3. 7th World Congress on Nature and Biologically Inspired Computing (NaBIC2015), Pietermaritzburg, South Africa, Dec. 01 - 03, 2015
4. International Conference on Computational Aspects of Social Networks (CASoN), Pietermaritzburg, South Africa, Dec. 01 - 03, 2015
5. IEEE International Conference on Systems, Man, and cybernetics (SMC2015) C- 04, Hong Kong, Oct. 9 - 12, 2015.
6. International Symposium on Web of Things and Big Data (WoTBD 2015) , Bahrain, Oct. 2015
7. The 10th International Conference on Bio-inspired computing: Theories and Applications (BIC-TA 2015), Hefei, China, 25th - 28th Sept. 2015.
8. The International Symposium on Ensemble Networks and Software Engineering (SENSE2015) , Kochi, India, 10 - 13th Aug. 2015.
9. 6th International Conference on Pattern Recognition and Machine Intelligence, Warsaw University of Technology, Warsaw, Poland, 2015, June 30 - July 3 2015.
10. IEEE International conference on Computing, Communication and Automation (ICCCA 2015), New Delhi, India, 15th - 16th May 2015
11. Workshop on Industrial Internet during TENSYPMP 2015, IEEE R10 Annual conference, Ahmedabad, India, 13th May 2015.
12. Session Chair, Brainstorming workshop on Applications of ICT in Agriculture, Sardarkrushinagar Dantiwada Agricultural University, Dantiwada, Gujarat, 1 - 2 April, 2015.
13. UGC SAP sponsored 2nd National Seminar on Natural language Processing and Data Mining (NLPDM - 2015), Veer Narmad South Gujarat University, Surat, India, Mar. 3 - 4, 2015.
14. National conference on Communication (NCC 2015), IIT Bombay, Mumbai, India, 27th Feb. 2015 to 1st Mar. 2015.
15. IEEE SPICES 2015, NIT Calicut, Kozhikode, India, 19 - 21 Feb. 2015.

Talks

1. Fourier Transform and its application in pattern recognition, Research Week 2015, Gujarat Technological University, 7th April 2015. Jointly with Prof. Priti P Rege, Dean Academics and Professor, College of Engineering, Pune
2. Talk series on Image Transforms , Nirma University, Ahmedabad
 - a. Part I Mathematical preliminaries, 14th Mar. 2015.
 - b. Part II 2D image transforms, 20th Mar. 2015.
 - c. Part III Image transform and applications, 21st Mar. 2015
3. Image Compression, Nirma University, Ahmedabad, 10th Mar. 2015
4. Image Transforms, Nirma University, Ahmedabad, 27th Feb. 2015

5. Marching towards smart living: ICT as a great enabler, ADIT V.V. Nagar, 24th Jan. 2015
6. W2H of Research Proposal, GUJCOST sponsored research workshop on Research Methodology, CHARUSAT University, Changa, 23rd Jan. 2015.

2014

Honorary Position

1. Vice Chair, IEEE Gujarat Section (2014):<http://ieeegujaratsection.org>.
2. Vice Chair, IEEE Gujarat section Signal Processing Society Chapter (2014)
3. Program Co - Chair, IEEE National seminar on Computer Vision, Image Processing and Graphics (NaSCOVIP) 2014, 19th and 20th Sept. 2014, Surat, Gujarat, <http://ieeegujaratsection.org/nascovip2014/committees/>
4. Organizing Chair, IEEE Emerging Research Trends in Engineering (ERTE 2014), 19th - 20th July 2014, Ahmedabad, Gujarat, <http://ieeegujaratsection.org/erte2014/committees/>

Reviewer

Journals

Journal of The Institution of Engineers (India): Series B: Springer, Image and Vision Computing: Elsevier, IEEE Transactions on Multimedia, Taylor and Francis - International Journal of Computer Mathematics, SEAS - Image Processing, The National Academy of Sciences, Physical Sciences (NASA): Springer, Biomedical Engineering: Applications, Basis and Communications: World Scientific

Conferences Technical Program Committee member

1. Advancement in Information Technology International Conference, Bandung, Indonesia, 29th – 31st December 2014.
2. IEEE International conference on advanced networks and Telecommunication systems (ANTS 2014), 14th - 17th December 2014, New Delhi.
3. IEEE Symposium on Industrial Electronics & Applications (ISIEA2014), Kota Kinabalu, Sabah, Malaysia, September 28 to October 1, 2014.
4. IEEE Symposium on Wireless Technology & Applications, Kota Kinabalu, Malaysia, September 28 to October 1, 2014.
5. 3rd International Conference on Advances in Computing, Communications and Informatics, Noida, 24th - 27th September 2014.
6. International Workshop on Mobile Applications, Barcelona, Spain, 27-29 August 2014.
7. 2014 International Workshop on the Design and Performance of Networks on Chip (DPNoC 2014), Niagara Falls, Ontario, Canada, August 17-20, 2014.
8. 7th International Conference on Contemporary computing IC3 2014, Noida, August 7th - 9th 2014
9. Nature and Biologically Inspired Computing (NaBIC'14), Porto, Portugal, July 30, 31 - August 01, 2014.
10. Computational aspect of Social network, Porto, Portugal, July 30, 31 - August 01, 2014.

11. 10th IEEE Colloquium on Signal Processing and its Applications (CSPA2014) IEEE Malaysia Chapter Control Systems Society, Kuala Lumpur, Malaysia on the 7th to 9th of March 2014.
12. National Conference on Communication (NCC 2014), 28th Feb - 2nd March 2014, IIT Kanpur.

Talks

1. L1 minimization and sparse recovery algorithms, Short term training program on Computer algorithms and its applications (under TEQIP II), Birla Vishwakarma Mahavidyalaya (BVM), V.V. Nagar, Gujarat, 29th Dec. 2014.
2. Image Texture and its analysis, Babaria Institute of Technology, Vadodara, 5th Dec. 2014.
3. Current research trends in steganography and steganalysis, IEEE National workshop on Networks, Network simulation and information security, ISTAR, V.V. Nagar, 28th Nov. 2014.
4. Separable fragile watermarking in Encrypted domain, IEEE National Seminar on Computer Vision and Image Processing (NaSCOVIP 2014), SCET/SVNIT, 19th Sept. 2014.
5. Problems in Image Morphing, IEEE Signal Processing Society organized talk, ADIT, V.V. Nagar, 30th July 2014.
6. L1 Minimization, under TEQIP II, Government Engineering College, Gandhinagar, 27th June 2014
7. Compressed Sensing, Short term training program on Communication, Computing and Networking, G H Patel College of Engineering and Technology (GCET), V V Nagar, 21st May 2014.
8. Datahiding: An alternative in security, Government Engineering College, Rajkot, 16th April 2014.
9. Understanding ill posedness in image deconvolution problems and their solutions, IGNITE, Research Program, Vishvakarma Government Engineering College, Chandkheda, Ahmedabad, 11th April 2014.
10. Inverse illposed problems in image processing, Workshop on image processing, IEEE Gujarat section Signal processing society chapter, Sarvajanic College of Engineering and Technology, Surat, 23rd March 2014.
11. Multiresolution Image fusion: Use of Compressive sensing and Graph cut, Institution of Engineers (India) ADIT Chapter, E&C Dept., ADIT College of Engineering and Technology, V V Nagar, 8th Feb.2014.
12. Image fusion: Pan Sharpening of multispectral imaging, GUJCOST STTP on Emerging Trends in Digital and Image and Signal Processing, E&C Dept., V.V.P Engineering College, Rajkot, 23rd Jan.2014.

2013

Reviewers Journals

The Computer Journal, Oxford Journals, IEEE Transactions on Geoscience and Remote Sensing (TGRS), EURASIP Journal on Advances in Signal Processing, Taylor and Francis - International Journal of Computer Mathematics, IEEE Transactions on Multimedia

Reviewer and Technical Program Committee Member:

1. IEEE Symposium on Computers & Informatics, Langkawi, Malaysia, from 7 - 9 April 2013.

2. IEEE Business Engineering and Industrial Applications Colloquium 2013, Langkawi, Malaysia, 7 – 9 April 2013.
3. 2nd IEEE International Conference on Advances in Computing, Communications and Informatics, Mysore, India, 22nd - 25th August 2013.
4. IEEE Symposium on Wireless Technology & Applications, Malaysia, 22nd - 25th September 2013.
5. IEEE Conference on Wireless Sensors, Kuching, Malaysia, 2nd – 4th, December 2013.
6. IEEE International RF and Microwave Conference (RFM 2013), Penang, Malaysia, 09 – 11, December 2013.
7. Fourth National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), Jodhpur, India, 19 - 21st Dec. 2013.

Talks

1. Fuzzy Neural based copyright protection scheme for super resolution, National Workshop on Computational Intelligence under TEQIP II, SDM College of Engineering and Technology, Dharwad, Karnataka, 23rd Oct. 2013.
2. Image Transforms, TEQIP II, One week STTP on Fuzzy logic, image processing and their application, SVNIT, Surat, 2nd Oct. 2013
3. Computer vision and Image processing application, Chaudhary Technical Institute, Gandhinagar, Gujarat, 7th Sept. 2013.
4. Neurofuzzy applications in Image Processing, Short Term Training Programme Recent Trends in computational Intelligence, A.D. Patel Institute of Technology, Anand. Gujarat, India, 4th July 2013.
5. Neuro fuzzy applications, in IEEE Gujarat Section Soft computing workshop, Sarvajanic Collge of Engineering and Technology, Surat, Gujarat, 15th March 2013.
6. Introduction to Image Processing, University Grant Commission Staff College, Anand, Gujarat, India, 22nd Feb. 2013.

AFFILIATIONS WITH PROFESSIONAL ORGANIZATION

Member Association of Computing Machinery (ACM) - September 2021

Senior Member Institute of Electrical and Electronics Engineers, US

Chair, Membership Development, IEEE Gujarat Section 2008

IEEE DA-IICT Student Branch mentor: 2009

IEEE DA-IICT Student Branch counsellor: 2010-2011

Student Activity Chair, IEEE Gujarat section: 2010-2011

Secretary IEEE Gujarat Section: 2011, 2012

Vice Chair, IEEE Gujarat section 2013, 2014

Joint Secretary, IEEE Gujarat Section 2019, 2020

Fellow Institution of Electronics and Telecommunication Engineers, India

Senior Member Computer Society of India:

Secretary: CSI Surat Chapter: 2003 – 2005

Execom member: CSI Surat Chapter: 2005 – 2007

Vice Chairman: CSI Surat Chapter: 2008

Fellow Institution of Engineers- India, Kolkata

Chartered Engineer (India)

Life member Indian Society for Technical Education: Life member (LM)

CURRENT AFFILIATION WITH ACADEMIC ORGANIZATION

- Board of Studies Member, ICT Department and ECE Department, Pandit Deendayal Energy University- 2021
- Board of Studies: Member, ECE Department, Birla Vishvakarma Mahavidyala, V V Nagar, India: 2018-
- Advisory committee on PG Diploma Programs: Member, 2020, Gujarat Technological University, India
- Advisory committee for PG programs: Member, 2020, Baba Saheb Ambedkar Open University, India

PAST AFFILIATION WITH ACADEMIC ORGANIZATION

- Member Board of Studies in Electronics Including Computer Engineering for Veer Narmad South Gujarat University, Surat, May 2006 – 2009.
- Expert carrying out accreditation for Department of Electronics Accredited Courses (DOEACC), MIT, Govt. of India, New Delhi / Aurangabad, June 2005 – 2012.
- Various duties assigned by Veer Narmad South Gujarat University
 - Member - Local Inquiry committee to various engineering colleges,
 - Subject expert for Electronics and Communication Engineering for interview panel,
 - Exam superintendent and member of vigilance squad.
- Subject Expert to Distance Education Programme, Anna University, Coimbatore.

CURRENT ADMINISTRATIVE POSITIONS: 2019 -

- Associate Dean – Experiential Learning, Ahmedabad University - 2021
- Head of the Department, Information and Communication Technology, PDPU
- Board of Studies, Information and Communication Technology (Ex-officio): Chair, PDPU
- PG Programs curriculum review committee, PDPU: Member
- BTech Program curriculum review committee, PDPU: Member
- Data Integration Centre, PDPU: Member
- PhD admissions committee, ICT Program, PDPU: Convener

PAST ADMINISTRATIVE POSITIONS

- Department Incharge, Electronics and Communication Engineering, Sarvajanic College of
- Engineering and Technology, Surat. Dec 2003 – July 2008
- Member, Master of Design program restructuring committee, 2008-09
- Program Coordinator, MSc IT, DA-IICT, August 2009 onwards, Member, M.Sc Programs online exam committee, 2010.
- Convener, M.Sc Programs online exam committee, 2011.
- PhD Program Coordinator, DA-IICT 2012
- Member, MSc IT curriculum review committee, 2012
- Member, Post Graduate Committee, August 2009 - 2013
- Member, Continuing Education Program committee, 2010-2013
- Coordinator, PhD program School of Engineering and Applied Science, Ahmedabad University, 2013 – 2015
- Member, Research Committee, School of Engineering and Applied Science, Ahmedabad University 2014 – 2016
- Member: BTech Program curriculum revision committee, School of Engineering and Applied Science, Ahmedabad University, 2017
- Member, PhD admissions committee, School of Engineering and Applied Science, Ahmedabad University 2013 – 2018.

PAST PROGRAM ORGANIZATION

CONTINUOUS EDUCATION

- Program Co - Chair, IEEE National seminar on Computer Vision, Image Processing and Graphics (NaSCOVIP) 2014, 19th and 20th Sept. 2014, Surat, Gujarat, <http://ieeegujaratsection.org/nascovip2014/committees/>
- Organizing Chair, IEEE Emerging Research Trends in Engineering (ERTE 2014), 19th - 20th July 2014, Ahmedabad, Gujarat, <http://ieeegujaratsection.org/erte2014/committees/>
- Conducted Continuing Education Program (CEP) on Image Super resolution for Space Application Centre (SAC) ISRO Ahmedabad during 24th and 25th August 2012 at DAIICT. <http://www.isro.gov.in>. Team members: Prof. M V Joshi, Prof. Mehul S Raval, Dr. Prakash Gajjar, Mr. Kishor Upla, Mr. Nilay Khatri
- Conducted Continuing Education Program (CEP) on Application of Java in Image Processing Application Centre (SAC) ISRO Ahmedabad during July 2011 at DAIICT. <http://www.isro.gov.in>. Team members: Prof. Sanjay Chaudhary, Prof. Mehul S Raval, Prof. P M Jat.
- Organized Special Session on Speech, Audio, Video, and Image Processing using AI at the 5th Indian International Conference on Artificial Intelligence, Bangalore, India, Dec 14th - 16th 2011. Team members: Prof. Suman Mitra, Prof. Hemant Patil

CONFERENCE SESSION ORGANIZATION

- Organized special Session on Speech, Audio, Video and Image (IICAI-11) Processing using AI at The 5th Indian International Conference on December 14 Artificial Intelligence, Tumkur (near Bangalore), India 16, 2011 <http://www.iiconference.org/savi.html>
- Sixth International Conference on Information Systems security (ICISS) DA-IICT, Gandhinagar 15-19 December <http://research.cs.wisc.edu/iciss10/tutorials.html>: As a poster session 2010. Chair and organizing committee member
- IEEE INDICON-2009, 18-20 Dec 2009 (<http://ewh.ieee.org/r10/gujarat/indicon2009/>): As student Activity 2009 Chair

PAST SHORT TERM TRAINING PROGRAMS ORGANIZATION

- Digital Steganography (Sponsored by Gujarat Council on Science June 2004 and Technology), SCET Surat <http://74.54.132.2/~scetac/index.php?page=events-3>
- AICTE/ISTE Information Security, SCET Surat Nov. 2004 <http://74.54.132.2/~scetac/index.php?page=events-3>
- AICTE/ISTE Recent trends in Information and Communication January 2007 Technologies, SCET <http://74.54.132.2/~scetac/index.php?page=events-3>
- AICTE/ISTE VLSI and Embedded System Design: Issues and May 2008 Solution, SCET Surat
- <http://74.54.132.2/~scetac/index.php?page=events-3>
- Training Program for Communication and Networking to Gujarat Gas February 2005 Co. Surat
- AICTE sponsored National Seminar on Emerging trends in January 2007 information and communication technology ETICT Sponsored by Institution of Engineers (India) South Gujarat local centre, Surat. at SCET Surat.
- National Conference on Emerging Trends in Computer Technology June 2008 (ETCT), at SCET Surat: As organizing member from CSI Surat chapter
- IEEE Workshop on Emerging Research Topics in Engineering, DAIICT, Gandhinagar. 25th 2009. <http://ieee.daiict.ac.in/erte>
- NaSCoVIP 2012 Seminar (National Seminar on Computer Vision and 21 - 22 Image Processing) by IEEE Gujarat Section and SMC Chapter of September, IEEE, Associated as Program Chair 2012 (www.marwadieducation.edu.in/nascovip2012/Reg1.aspx)

PROGRAMS ORGANIZATION FOR PROFESSIONAL BODY

State level: Being a secretary for CSI chapter Surat for year 2003-2004, 2004-2005 and Managing committee member 2005-2006, I had organized programmes at Surat, some of them are highlighted as below

1. A Talk on “ERP Implementation in Process Industry- RIL A case study”, By Mr J K Sasmal, Head MIS Dept, RIL Hazira, Sept 2003.

2. Audio Visual Presentation on “Enterprise Document Management”, By Hummingbird/Datamatics/ Handysoft corporation, 27th Jan. 2004
3. Audio Visual Presentation on “Thin Client Server Computing Case study at L&T Hazira”, By Mr Vinay Khargaonkar, AGM IT, L&T, Feb. 8th 2004
4. Presentation on “IBM Infrastructure Management Solutions”, Mr Ananda Bose, IBM software group, April 2004
5. Seminar on “CA Infrastructure management solutions”, Computer Associates (CA), May 22nd, 2004.
6. Audio Visual Presentation on “Linux a Solution for Industries and Educational Institutes”, Dr Prabhat Ranjan, Professor DAIICT, Gandhinagar, June 5th 2004
7. Seminar on “IP-SAN by Intransa and SES Technologies”, Mr B Chandrashekar country manager Intransa”, July 17th 2004.
8. In association with Computer Society of India Surat Chapter organized a “C” Programming competition for the students. The event was organized on 09/09/2004.
9. Computer Society of India Surat Chapter in association with Intel organized a Audio visual presentation on “Business advantage with Intel” on 18/9/2004 at Hotel Holiday Inn. Mr Tejesh Patel delivered an Audio video presentation on E governance during the programme.
10. Association with Surat Municipal Corporation for development of Infrastructural need for Surat Vision 2020.
11. Association with CII and SITA for the Promotion of Communication and Information Technology 2005 at Ahmedabad in Jan 2005
12. Organized the presentation by Prof Bharat Vakharia on Softskills development of the Students
13. Arranging a meeting of Mr Rajiv Vaishnav Regional Director NASSCOMM and Mr V H Buch Additional IT Secretary Govt. of Gujarat during their visit to Vyapar 2005 organized by CII at Surat.
14. CSI Surat Chapter also played a role in supporting panel discussion organized during Vyapar 2005 on “BPO an opportunity in South Gujarat Region”.
15. CSI supported Computer Fair organized by Bhulka Bhavan School during 23rd and 24th February 2005.
16. IT certification and Career by Ajay Verma Director Arrow up computers and Keynote address by Mr Hemant Sonawala, MD Hinditron during 24/1/2006 in association with IEI, SGLC.
17. SCET & CSI has organized “Evolution of Information age in post-Independence India” by Shri. Hemant Sonawala, MD Hinditron on 24th January 2006.
18. CSI Surat Chapter organized a Seminar on Future of IT and Electronics Industry in India for Southern Gujarat Chamber of Commerce and Industries on 24th January 2006 by Shri Hemant Sonawala.
19. CSI Surat Chapter and Institution of Engineers South Gujarat Local centre organized a Talk for Students on IT Career Opportunities by Shri Hemant Sonawala and IT Certification and career by Mr Ajay Verma/Sandeep Agarwal Arrowup computers on 24/1/2006 @ Mahida Bhavan
20. Talk on Linux and Career Opportunities by Mr Prasad Datye, Neosis Ltd Navi Mumbai on 29/1/2006.

STUDENT ACTIVITIES

Association with DA-IICT IEEE Student Branch

DAIICT IEEE Student Branch counsellor, 2009 – 2011. <http://iee.daiict.ac.in>

Some of the laurels brought by the STUDENTS of DA-IICT IEEE SB (Partial list)

- 2010-Best student branch website award by R10 (Region 10 includes Asia / Pacific) \$500.00 Prize money.
- Was nominated by R10 for Best student branch website award for IEEE.
- 2011- Best Women in Engineering (WIE) affinity group award for R10. • More than \$2000 grant or prize money received from IEEE HQ

Program organization as a branch counselor DA-IICT IEEE Student branch

(<http://iee.daiict.ac.in>) Jan. 2010 – Dec. 2011

- “One Day Workshop on Matlab” was conducted on 14 March 2010, which was attended by 110 students.
- “Two day Workshop on embedded systems” along with Gujarat Section on 7-8 August, 2010. We had 122 participants attending the workshop. The workshop participants were also provided with a take away customized hardware kit.
- i.fest 2010 was organized on September 25-26, 2010, 125 participants from all over Gujarat participated in the event. Theme for i.fest was innovation. It had competition on robotics, coding skills, innovative project ideas and finally was followed by Panel Discussion, which had experts from academia and industry. The event was also published in R10 newsletter.
- Hosted IEEE Extreme Programming Contest 3.0 on 23rd October, 2010 for participants of DA-IICT Student Branch and Gujarat Section. We had 25 teams participating in the competition. 25 Conducted all IEEE Member Meet along with Diwali celebration for all IEEE members of DA-IICT. It was a informal event, with lots of sweet and firecrackers!!!.
- Talk on Data Analytics on 22nd October,2010. It was conducted in association with IQR Consulting and TiE Ahmedabad.
- Symposium on Topics in Artificial Intelligence: Event was organized on 3rd April' 2011.
- This event is aimed at making you abreast and an introduction of various topics and fields in Artificial Intelligence. The talks in this symposium won't go into depths of this vast field but rather just introduce the young naive mind to what actually Artificial Intelligence is all about.
- Summer School: Event was a big achievement for IEEE SB DAIICT. It was first event with national participation of more than 50% .It was a 13 days workshop from 13th June 2011 to 25th June 2011.
- One Day Workshop on GIS: Event was organized on 30 July, 2011 to introduce Geographical Information System to the Student. Moreover Discussion to introduce this as a course was also discussed. It was organized in association with Computer chapter Gujarat section.
- SPAC: Student Professional Awareness conference was organized on 7th August 2011. TO make student aware about the Reality of Job and focused to sharpen student's soft skills.

- i.fest 2011: With the motto of Go Green this year also i.fest focused to provided participants the platform to compete with other student. With a participation of 170 we provided with prize worth money of 60,000 Rs. Event was organized on 1st and 2nd October 2011.
- Workshop on LabView: In collaboration with National Instrument and help senior students to plan out there thesis and project we organized a workshop with professionals from National Instrument. It proved helpful to student is deciding their future actions. It was conducted on 5th November 2011.

PAST EXTRA CURRICULAR ACTIVITIES

1. Committee member for Institution of Engineers student chapter at College of Engineering Pune.
2. Convener for Techno cultural festival Kshitij at SCET, Surat 2003 and finance committee member in 2007.
3. Imparted corporate training on Microsoft windows 2000 advance server for Surat Municipal Corporation during Nov. 2006 to Feb. 2007.
4. Faculty convener, Synapse (Techno festival at DAIICT), 2010
5. Co-faculty convener, Synapse, 2009, 2011
6. YES+ workshop: Facilitated Art of living family organized 5 workshops for students for DA-IICT. 300 + students have participated in the workshop.
7. Conducted Microsoft Technology Associate examination at DA-IICT (Oct-Nov. 2010). 150+ students participated in the exams

PAST CONFERENCES AND SHORT TERM TRAINING PROGRAMS

CONFERENCES ATTENDED

1	National Conference on Communications “NCC 2003”	31 st Jan - 2 nd Feb 2003	IIT Madras
2	IEEE Region 10 International Conference “TENCON 2003”	15 th – 17 th Oct 2003	IISC Bangalore
3	6th International conference on Information technology “CIT 2003”.	Dec 22-23 2003	Bhubaneshwar, India
4	National Seminar on “Emerging Technologies & Application ETA 2003”.	11 th -13 th July 2003	Computer Science Department, Saurashtra University, Rajkot.
5	Zonal Seminar on “ICE-Emerging trends”,	5 th -6 th July 2003	IETE Vadodara sub Chapter Vadodara
6	Seminar on Nuclear Energy – 50 year in service of the nation”.	18 th Jan 2004	Kakrapar Atomic Power Station (KAPS), Surat.
7	Satellite based patent awareness workshop	30 th Jan 2004	Gujarat Council on Science and Technology, SCET

8	Trends in Networking and its impact on IT and Business “	8 th Oct-2004	CSI Vadodara Chapter
9	National Conference on Communication NCC 2005 IIT KGP	28 th – 30 th Jan 2005	IIT Kharagpur
10	Communication and Information Technology CIT 2005	4 – 6 th Feb 2005	Ahmedabad
11	ISTE Convention Theme Disaster - Prediction, Prevention & Management	15 th – 17 th December 2005	BIET Davangere, Karnataka
12	Visual Information Engineering (VIE 2006)	September 2006	Bangalore, India
13	National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics NCVPRIPG,	January 11 -13, 2008.	DAIICT Gandhinagar, India,
14	International conference on Advances in Pattern Recognition, ICAPR 09.	January 4 th – 6 th , 2009.	Indian Statistical Institute (ISI) Kolkata,
15	Research Council U.K. International conference on Security and Identity management (SIM 09).	May. 11- 12, 2009.	IIM Ahmedabad
16	All India IEEE Student Branch Counselor Congress.	July 3rd-4th 2009	Bangalore,.
17	National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics NCVPRIPG 2010	Jan. 2010	LNMIT, Jaipur

TUTORIAL/ WORKSHOPS ATTENDED AT CONFERENCES

Sr.No	Tutorial/ Workshop	Dates	Resource Person/Venue
1	Wireless Technologies – GSM/GPRS, cdma2000, corDECT	14 Oct 2003	Dr David Koilpillai, TeNeT group ,IIT Madras, at TENCON 2003, Bangalore
2	Third Generation Wireless Systems	Jan 31 st 2003	Mohammed Imtiyaz, G Venkatesh, R Ashwin, SASKEN, at NCC2003 IIT Madras
3	Ethernet in Fiber Access Network	Jan 31 st 2003	Dr Ashok Jhunjunwala , Dr Hari Ramchandran, R Thirumurthy Banyan Networks Chennai at NCC2003 IIT Madras
4	201M Connections in India by 2010 – Making a business case	Feb 7 2003	Coordinator Prof. Ashok Jhunjunwala, TeNet Group IIT Madras, at NCC 2003 Chennai

5	RFID Technology and Application	28 th Jan 2005	Prof Shridhar Iyer, KreSIT, IIT Bombay , During NCC 2005
6	Wireless LAN Technology 802.16x and Beyond	28 th Jan 2005	Prof R V Rajakumar E&ECE Department, IIT Kharagpur During NCC 05

SHORT TERM TRAINING PROGRAMS ATTENDED

Sr No.	Name of the course	Year	Institution	Weekss
1.	Quality Techniques practiced around the world	Dec 1997	REC Jaipur	One
2.	Personal Communication Systems	Dec 1998	REC Bhopal	Two
3.	Internet Unleashed	Mar 1999	REC Surat	Two
4.	Next Generation Networking and Telecommunication Technology	July 2000	IIT Kharagpur	Two
5.	Object oriented Design and programming	June 2001	BVM VV Nagar	Two
6.	Principles of Image Processing and its application	June 2003	RGPV Technical University Bhopal	Two
7.	Advances in operation research and its application”	July 2004	IIT Bombay	One
8.	Open Inventor 3D Visualization tool kit	27 - 28 June 2005	SVNIT Surat	2 days
9.	E resources and IPR issues	14 th – 16 th June 2006	IIT Bombay	3 days
10.	Object Oriented Analysis and Design using the UML with fundamentals of Rational Rose	12 th -14 th July 2007	IBM	3 days
11.	All India student branch counselor congress	3 rd – 4 th July 2009	Bangalore	2 days
12.	Mission 10 X workshop	24 th Aug. – 28 th Aug. 2009	Nirma University, Ahmedabad	5 days