

Mehul S. Raval

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<https://ahduni.edu.in/academics/schools-centres/school-of-engineering-and-applied-science/people-1/mehul-s-raval/>

## EDUCATION

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

## AWARDS, FELLOWSHIPS & HONOURS

- Session Chair, First International Conference on Smart and Sustainable Development in Engineering and Technology, Indrashil University, India, 16th December 2025
- Session Chair - Wearables and Data Management, International Sports Analytics Conference and Exhibition (ISACE) series, 2025, Shanghai, China 27th September 2025
- 2024 Top Scholar by ScholarGPS (within the top 0.5% of all scholars worldwide in Brain Tumor Segmentation)
- Member, Technical Advisory Committee, Robofest Gujarat 3.0 and 4.0, Gujarat Council on Science and Technology, Government of Gujarat
- International Travel Grant by IEEE Computational Intelligence Society to attend [IEEE IJCNN 2025](#), Rome, Italy.
- Outstanding Associate Editor, IEEE Access - 2018, 2019, 2020, 2021, 2022, 2023
- Senior Editor, IEEE Access, January 2024
- Member [The Asia-Pacific Signal and Information Processing Association \(APSIPA\)](#)
- 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
- 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

- [Guest Associate Editor, Frontiers in Artificial Intelligence Section: Machine Learning and Artificial Intelligence](#)
- 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
- [Review editor - Frontiers in Artificial Intelligence Section: Machine Learning and Artificial Intelligence](#) - May 2022 -
- [Review editor - Frontiers in Imaging Section: Image coding](#)- April 2022 -
- 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
- Member Association of Computing Machinery (ACM) - September 2021
- Chair, IEEE Computational Intelligence Society – Gujarat Section Chapter, Jan 2021 -
- Member, Multimedia Security and Forensics (MSF), Technical Committee, Asia-Pacific Signal and Information Processing Association (APSIPA), Feb. 2020 -
- Editorial Board Member, Azerbaijan Journal of High-Performance Computing, Azerbaijan State Oil and Industry University (Baku, Azerbaijan), Jan 2020 – July 2021
- 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.
- 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.
- Session Chair, Security in personal communication (SPC), 20th IEEE International Symposium on Wireless Personal Multimedia Communications (WPMC 2017), 18th Dec. 2017
- Joined as an Associate Editor, IEEE Access, 2017 - 2020
- NVIDIA Corporation GPU grant 2017 for Quadro K5200 GPU (8 GB), September 2017
- 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.
- Fellowship under Sakura Exchange Program in Science for Collaborative Research Activity Course B at Okayama University, Japan, July - August 2016
- Appreciation Award as Guide under Gandhian Young Technological Award (GYTI) - 2016 to CheckIT: A Low cost mobile OMR system.
- Distinguished Speaker, Computer Society of India, 2015
- Appreciation Certificate for "Dedicated leadership and support of the activities for SPS Chapter", IEEE Signal Processing society (SPS), 2014
- Elected Senior Member, Institute of Electrical and Electronics Engineers (IEEE), USA, 2013.
- IEEE Region-10 (Asia Pacific) Outstanding Student Branch Counselor award for 2012.
- Elected Senior Member Computer Society of India (CSI), 2009.
- Sardar Patel University and Hari Om Ashram Prerit Best Computer Science and Engineering Paper award, 2008.

- Elected Fellow for Institution of Electronics and Telecommunication Engineers, New Delhi, 2008.
- Appreciation certificate from Sarvajanic College of Engineering and Technology for exemplary service, 2008.
- Indian Society for Technical Education (ISTE) Best Engineering College Teacher award for the State of Gujarat, 2005.
- Young Scientist Fellowship by Department of Science and Technology, GUJCOST, Govt. of Gujarat, 2005.
- Securing Best Chapter award for CSI Surat chapter for Category III, 2004-05.
- Best Paper award at National Conference on Image Processing (NCIP) Bangalore, 2005.
- First Rank, Master of Engineering-Electronics (Digital Systems), University of Pune, Dec. 2002

### **EXPERIENCE Full Time**

July 2020 -	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: 28 years

#### FIELDS OF INTEREST

Computer Vision, Medical Image Processing, Sports Data Analytics, and Engineering Education

#### RESEARCH PROJECTS

##### Current Projects

1. **Focal tracking and re-identification of mugger crocodiles for conservation monitoring (2026 - 2028)**

Sponsoring Agency: Ahmedabad University Post-Doctoral Fellowship

Grant Amount: Rs 24 Lacs

Research Team: Principal Investigators

Ratna Ghosal, Associate Professor, School of Arts and Sciences, Ahmedabad University

Mehul S. Raval, Professor, School of Engineering and Applied Science

Jayendra Bhalodiya, Assistant Professor, School of Engineering and Applied Science

**Project Description:** Exciting wildlife conservation project—developing an animal identification pipeline from drone video of mugger crocodiles using deep learning, and deploying it on mobile devices.

2. Title: **AI tool for tumour segmentation, characterisation and diagnosis (2025 - 2028)**

Sponsoring Agency: Ahmedabad University Challenge Grant

Grant Amount: Rs 24.90 Lacs

##### Research Team:

Principal Investigator - Jayendra Bhalodiya, Assistant Professor, Ahmedabad University

Co Principal Investigator - Mehul S Raval, Professor, Ahmedabad University Co

Principal Investigator - Kaumudi Joshipura, Ahmedabad University

**Project details:** Tumours are malignancies of tissues. Understanding the tumor microenvironment remains crucial for determining tumor grade and selecting appropriate treatment. In current practice, biopsies are the gold standard for tumour diagnosis. However, biopsies pose several challenges in practice due to their invasive nature and the minimal information they reveal about tumours. Often, intraoperative biopsies are inconclusive and subjective. Such cases may require another surgery.

Therefore, we aim to develop a robust, technology-based assessment procedure to comprehensively and non-invasively examine tumor tissues.

## **2. 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)

SRF: Jay Chaudhari, Ahmedabad University

Project Details: Due to the large number of CCTV deployments in the city, it is difficult for a human operator to monitor the minutest details. It can even be more tedious and time-consuming when looking for a particular person in the video. The human describable features can be used to retrieve a person from the recorded surveillance video automatically

## **3. 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

Project Details: Specifically, this proposal would focus on analytical modeling of the coexistence between C-V2X and Wi-Fi 6, which is not well documented in the existing literature. This proposal would also compute the activity statistics of Wi-Fi users, such as on-off period duration, duty cycle, and distributions of on-off period duration, using a machine learning/deep learning approach, and exploit them to achieve fair spectrum sharing with C-V2X users.

### **Past Projects**

## **4. Title: New Initiatives on Two Wheelers Safety (2023 - 2024)**

Sponsoring Agency: 2023 IEEE Intelligent Transportation Systems Society Grant

- \$19715 Team:

- Hrishikesh Venkataraman – IIIT Sricity, Andhra Pradesh

- Maryam Kaveshgar – Ahmedabad University
- Mehul S Raval – Ahmedabad University

**5. 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 a specific set of soft biometric attributes from a surveillance video without prior registration. The project will integrate and minimize the semantic gap between human descriptions and soft biometric traits. Moreover, it aims to extract soft biometric features from an input image or a video frame and then use 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.

**6. 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:

Geospatial data is very important for developing flexible, versatile, multidisciplinary applications that help plan, manage, and utilize natural resources efficiently through spatial analysis. We need common standards for data integration and an effective analytical infrastructure, and we aim to use OGC standards for big-data processing of spatial data.

## **7. 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 inference
- Generation of information regarding accessibility, interoperability, and utility of the shareable Soil and Forest data infrastructure
- Conceptual models for Soil and Forest data
- Identification of relevant use cases

## **8. 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 of person identification. This has been a prime research focus since the introduction of digital technology. In machine vision, face recognition poses significant challenges due to the dynamic conditions under which face images are captured. One of the most challenging tasks is recognizing the face under varying poses. Research proposes more robust face recognition systems, especially under pose variations. Another challenge is face recognition from partial information or when the face has changed. The present project aims to improve the face recognition system to handle pose variations and face recognition from partial information. Most current face recognition systems extract global face features and then use them for

recognition. Here, a system that captures global and local features would be built to make more accurate decisions. The present system would also take up a modular approach that would enable recognition from vital areas such as the eye region, the lip region and so on. This could be an answer to recognise faces even under disguise.

### **9. 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

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 to enhance the security and authentication mechanisms of biometric systems by leveraging 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. [Sports Data Analytics: Techniques, Applications, and Innovations](#), Editors: Mehul S Raval, Tolga Kaya, N. Sertac Artan, Christopher Taber. Book series: Studies in Big Data (SBD, volume 121), Springer Nature, ISBN 978-981-95-5131-6 <https://doi.org/10.1007/978-981-95-5132-3>
2. [Harnessing Data Science for Sustainable Agriculture and Natural Resource Management](#), Editors: Mehul S Raval, Sanjay Chaudhary, J. Adinarayana, Wei Guo. Book series: Studies in Big Data (SBD, volume 121), Springer Nature, ISBN 978-981-977761-7.
3. [Digitales Ökosystem für Innovationen in der Landwirtschaft](#), Editors: Sanjay Chaudhary, Chandrashekhar M. Biradar, Srikrishnan Divakaran, Mehul S Raval, Springer Vieweg Singapore, ISBN 978-981-97-2497-0
4. [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.
5. [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

6. [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: 978981-16-5846-4 DOI 10.1007/978-981-16-5847-1, Vol. 96, October 2021.
7. 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 978-148222822-9 eBook ISBN: 978-1-4822-2823-6

## Journal

- 1) Shah, D., Raval, H., Taber, C., Kaya, T., Maddox, E., Raval, M. S. [Single-Camera Barbell Trajectory Analysis for the Snatch Lift](#). *SN COMPUT. SCI.* 7, 297 (2026). <https://doi.org/10.1007/s42979-026-04875-z>
- 2) Sharma, S., Raval, H., Barot, V., Divakaran S., Kaya, T., Taber, C., Raval, M. S. [Data-Driven Imputation for Cohort Studies Using Collegiate Basketball Data](#). *SN COMPUT. SCI.* 7, 288 (2026). <https://doi.org/10.1007/s42979-026-04882-0>
- 3) Y. M. Bhavsar, M. S. Zaveri, M. S. Raval, K. R. Patel and S. B. Zaveri, "[Descriptor: Drone Nadir-view Annotated Images of Vehicles Detection Dataset for India with Heading-angle Oriented Bounding Box \(DRASHTI-HaOBB\)](#)," in *IEEE Data Descriptions*, pp. 1 - 12, March 2026. doi: 10.1109/IEEEDATA.2026.3670752.
- 3) Ganguli, A. A., Deshpande, S. S., & Raval, M. S. (2025). Hydrodynamics in a Both-Side-Heated Square Enclosure in Laminar Regime Under Constant Heat Flux Using Computational Fluid Dynamics and Deep Learning Methodology. *Fluids*, 10(12), 309. <https://doi.org/10.3390/fluids10120309>
- 4) Maitrik Shah, Mehul S Raval & Srikrishnan Divakaran. [A Systematic Review on Deep Learning for Atmospheric Correction of Satellite Images](#). *Arch Computat Methods Eng* (2025). <https://doi.org/10.1007/s11831-025-10424-3>
- 5) K. D. Shah, D. K. Patel, B. Soni, S. Govindasamy, M. S. Raval and M. Zaveri, "Dynamic Spectrum Coexistence of NR-V2X and Wi-Fi 6E Using Deep Reinforcement Learning," in *IEEE Open Journal of the Computer Society*, vol. 6, pp. 1133-1145, 2025, doi: 10.1109/OJCS.2025.3586664.
- 6) Yagnik M Bhavsar, Mazad S Zaveri, Mehul S Raval, Shaheriar B Zaveri, "[Evaluating Defensive Driving Behaviour Based on Safe Distance Between Vehicles: A Case Study Using Computer Vision on UAV Videos at Urban Roundabout](#)," *Multimodal Transportation*, 100227, 2025, <https://doi.org/10.1016/j.multra.2025.100227>
- 7) Samah Senbel, N Sertac Artan, Julie Nolan, Christopher Taber, S Alexander Long, Srishti Sharma, Mirbalaj Rishi, Mahmud Kandawala, Mehul S Raval, Srikrishnan Divakaran, Tolga Kaya, "[Underpinning Performance Metrics Between a Winning and Losing Season in](#)

[Division 1 Women's Basketball," Springer Nature Computer Science](https://doi.org/10.1007/s42979-025-03841-5), Vol. 6, No. 3, 293, 2025, [dhttps://doi.org/10.1007/s42979-025-03841-5](https://doi.org/10.1007/s42979-025-03841-5)

8) Srishti Sharma, Srikrishnan Divakaran, Tolga Kaya, Mehul S Raval, "[Self-explaining Hierarchical Model for Fatigue Monitoring and Prediction in Basketball](https://doi.org/10.1007/s42979-02503667-1)," [Springer Nature Computer Science](https://doi.org/10.1007/s42979-02503667-1), Vol. 6, No. 2, pp. 1-14, 2025, doi:<https://doi.org/10.1007/s42979-02503667-1>

9) J. N. Chaudhari, H. Galiyawala, P. Sharma, P. Shukla and M. S. Raval, "[Onboard Person Retrieval System With Model Compression: A Case Study on Nvidia Jetson Orin AGX](https://doi.org/10.1109/ACCESS.2025.3527134)," [IEEE Access](https://doi.org/10.1109/ACCESS.2025.3527134), vol. 13, pp. 8257-8269, 2025, doi: 10.1109/ACCESS.2025.3527134

10) Maitrik Shah, Mehul S. Raval, Srikrishnan Divakaran, Debjyoti Dhar & Hasit Parmar, "[A spatio-temporal deep learning model for enhanced atmospheric correction](https://doi.org/10.1007/s40808-024-021750)," [Modeling Earth Systems and Environment](https://doi.org/10.1007/s40808-024-021750), Vol. 11, No. 3 (2025). <https://doi.org/10.1007/s40808-024-021750>

11) Ganguli, Arijit A., Tabib, Mandar V., Deshpande, Sagar S. and Raval, Mehul S.. "[Deep learning based hybrid POD-LSTM framework for laminar natural convection flow in a rectangular enclosure](https://doi.org/10.1515/cppm-2023-0102)" [Chemical Product and Process Modeling](https://doi.org/10.1515/cppm-2023-0102), 2024. <https://doi.org/10.1515/cppm-2023-0102>

12) Sharma, S., Divakaran, S., Kaya, T., Raval M. S., [Athletic signature: predicting the next game lineup in collegiate basketball](https://doi.org/10.1007/s00521-024-10383-z). [Neural Computing & Application](https://doi.org/10.1007/s00521-024-10383-z), Volume 36, pages 21761– 21780, (2024). <https://doi.org/10.1007/s00521-024-10383-z>

13) Rajput, Snehal, Rupal A. Kapdi, Mehul S. Raval, Mohendra Roy, and Jayendra M. Bhalodiya. "[Deriving and interpreting robust features for survival prediction of brain tumor patients](https://doi.org/10.1002/ima.23105)." [International Journal of Imaging Systems and Technology](https://doi.org/10.1002/ima.23105) 34, no. 3 (2024): e23105. DOI: <https://doi.org/10.1002/ima.23105>

14) Nolan, J. K., Taber, C., Senbel, S., Raval, M. S., Artan, N. S., & Kaya, T. (2024). [Effect of COVID-19 on performance and recovery of division I women's basketball players: A case study](https://doi.org/10.24018/ejsport.2024.3.2.105). [European Journal of Sport Sciences](https://doi.org/10.24018/ejsport.2024.3.2.105), 3(2), 1–8. Doi: 10.24018/ejsport.2024.3.2.105

15) Snehal Rajput, Rupal Kapdi, Mohendra Roy, Mehul S Raval, "[A triplanar ensemble model for brain tumor segmentation with volumetric multiparametric magnetic resonance images](https://doi.org/10.1016/j.health.2024.100307)," [Healthcare Analytics](https://doi.org/10.1016/j.health.2024.100307), Vol. 5, June 2024, DOI:<https://doi.org/10.1016/j.health.2024.100307>

16) Taber, C.B., Sharma, S., Raval, M.S. et al. [A holistic approach to performance prediction in collegiate athletics: player, team, and conference perspectives](https://doi.org/10.1038/s41598-024-51162-0). [Sci Rep](https://doi.org/10.1038/s41598-024-51162-0) 14, 1162 (2024).

<https://doi.org/10.1038/s41598-024-51658-8>

17) Maitrik Shah, Mehul S Raval, Srikrishnan Divakaran, Debajyoti Dhar & Harsit 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

18) 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.

19) 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/10.55730/13000632.4026>

20) 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 Engineering \(2023\)](#): Vol. 14,100207.  
<https://doi.org/10.1016/j.treng.2023.100207>

21) 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.

22) 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

23) 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

24) 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](#), Vol. 10, pp. 15516-15527, 2022. IF: 3.367 doi: 10.1109/ACCESS.2022.3145368

25) 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>

- 26) 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>
- 27) 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
- 28) 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.
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- 80) Raval Mehul S, Rege Priti P, "A Private watermarking scheme robust to JPEG 2000 and JPEG compression standards", Proc. of National Systems Conference (NSC), 2003, Indian Institute of Technology, Kharagpur, India, December 2003.
- 81) Raval Mehul S and Joshi Maulin, "Issues with Ethernet in next generation broad band network", Proc. IETE zonal Seminar on Emerging Trends Information and Communication Engineering, Vadodara, India, pp: 31-35, 5th -6th July 2003.
- 82) Raval Mehul S, "An Ownership Verification & Content Authentication Technique without Embedding Watermark", Proc. National Conference on Emerging Trends and Application(ETA) 2003, Saurashtra University, pp: 83-87, Rajkot, India, July 2003.

- 84) Raval Mehul S, Rege Priti P, "A robust DC coefficients based watermarking scheme", Proc. National Conference on Communication NCC-2003, Indian Institute of Technology, IIT Madras, Chennai, India, pp: 179-183, January 2003.

### Book Chapters

- 1) Mehul S. Raval, Paawan Sharma, and Sanjay Chaudhary (2026). [Assistive Robots in Agriculture](#). In [Assistive Robotics: Perspectives, Challenges, and Firmware](#) (pp. 66 - 88). CRC Press. eBook ISBN 9781003434412 <https://doi.org/10.1201/9781003434412>
- 2) Sharma, S., Divakaran, S., Kaya, T., Taber, C. B., & Raval, M. S. (2026). [Enhancing Basketball Strategy: Optimal Athlete Lineup Recommendations](#). In [Sports Data Analytics: Techniques, Applications, and Innovations](#) (pp. 163-185). Singapore: Springer Nature Singapore.
- 3) Sharma, S., Kaya, T., Raval, M. S., & Divakaran, S. (2026). [An Analytical Framework for Modelling, Analysis and Prediction of Athletes' Game Performance](#). In [Sports Data Analytics: Techniques, Applications, and Innovations](#) (pp. 73-88). Singapore: Springer Nature Singapore.
- 4) Sharma, S., Naik, S., Senbel, S., & Raval, M. S. (2026). [Designing a Data-Driven Athlete Management System for Optimizing Basketball Performance](#). In [Sports Data Analytics: Techniques, Applications, and Innovations](#) (pp. 31-49). Singapore: Springer Nature Singapore.
- 5) Rajput, S., Kapdi, R., Roy, M., Raval, M.S. (2024). [U-Net: A Versatile Deep Learning Architecture for Multi-Disease Detection](#). In: Gogoi, A., Mazumder, N. (eds) [Biomedical Imaging](#). Biological and Medical Physics, Biomedical Engineering. Springer, Singapore, pp 287–305, [https://doi.org/10.1007/978-981-97-5345-1\\_12](https://doi.org/10.1007/978-981-97-5345-1_12)
- 6) Patel, P., Shah, M., Raval, M.S., Chaudhary, S., Parmar, H. (2024). [Auswirkung von Vegetationsindizes auf die Weizenenertragsprognose mithilfe raumzeitlicher Modellierung](#). In: Chaudhary, S., Biradar, C.M., Divakaran, S., Raval, M.S. (eds) [Digitales Ökosystem für Innovationen in der Landwirtschaft](#). Springer Vieweg, Singapore., pp 223–239, [https://doi.org/10.1007/978-981-97-2498-7\\_10](https://doi.org/10.1007/978-981-97-2498-7_10)
- 7) Rupal Kapdi, Snehal Rajput, Mohendra Roy, Mehul S Raval, "[Interpretability of Segmentation and Overall Survival for Brain Tumors](#)," [Explainable AI in Healthcare: Unboxing Machine Learning for Biomedicine](#), Editors: Mehul S Raval, Mohendra Roy, Tolga Kaya, Rupal Kapdi, CRC Press, ISBN 9781003333425
- 8) Srishti Sharma, Mehul S Raval, Tolga Kaya, Srikrishnan Divakaran, "[Interpretable Machine Learning in Athletics for Injury Risk Prediction](#)," [Explainable AI in Healthcare: Unboxing Machine Learning for Biomedicine](#), Editors: Mehul S Raval, Mohendra Roy, Tolga Kaya, Rupal Kapdi, CRC Press, ISBN 9781003333425
- 9) Patel, P., Shah, M., Raval, M.S., Chaudhary, S., Parmar, H. (2023). Impact of Vegetation Indices on Wheat Yield Prediction Using Spatio-Temporal Modeling. In: Chaudhary, S.,
- 10) Biradar, C.M., Divakaran, S., Raval, M.S. (eds) [Digital Ecosystem for Innovation in Agriculture](#). [Studies in Big Data](#), vol 121. Springer, Singapore. [https://doi.org/10.1007/978981-99-0577-5\\_10](https://doi.org/10.1007/978981-99-0577-5_10)
- 11) Raval, Mehul S., Obi Reddy, G. P, Chaudhary, Sanjay and Adinarayana, J. "[Data science, computer vision and machine learning for agriculture and natural resource management: an overview](#)". [Computer Vision: Applications of Visual AI and Image Processing](#), edited by Pancham Shukla, Rajanikanth Aluvalu, Shilpa Gite and Uma Maheswari, Berlin, Boston: De Gruyter, 2023, pp. 23-54. <https://doi.org/10.1515/9783110756722-002>

- 12) Raval, Mehul S., Sanjay Chaudhary, and J. Adinarayana. "Computer Vision and Machine Learning in Agriculture." In *Data Science in Agriculture and Natural Resource Management*, pp. 97-126. Springer, Singapore, 2022.
- 13) Hiren Galiyawala, Mehul S Raval, Anand Laddha, *Person Retrieval in Surveillance Videos using Deep Soft Biometrics*, Deep Biometrics, Editors: Richard Jiang, Weizhi Meng,
- 14) ChangTsun Li, Christophe Rosenberger, Springer, pp: 191-214, Jan. 2020, ISBN 978-3030325831, DOI [https://doi.org/10.1007/978-3-030-32583-1\\_9](https://doi.org/10.1007/978-3-030-32583-1_9)
- 15) Ratnik Gandhi, Mehul S Raval, "Learning Algorithms over Cloud", *Nature-Inspired Computation in Data Mining and Machine Learning (NICDL2018)*, Editors: Xin-She Yang, Springer Cham, pp: 23-46, Sept. 2019. ISBN: 978-3-030-28552-4, DOI [https://doi.org/10.1007/978-3-030-28553-1\\_2](https://doi.org/10.1007/978-3-030-28553-1_2)
- 16) Mehul S Raval, Vaibhav B Joshi, Jignesh Bhatt, Chapter 28, "Securing Biometrics Using
- 17) Data Hiding Techniques", Editor: S Ramakrishnan, *Cryptographic and Information Security Approaches for Images and Videos*, CRC Press, Taylor and Francis Group, pp. 833 - 855, December 2018, ISBN 9781138563841.
- 18) Mehul S Raval, Ratnik Gandhi, Sanjay Chaudhary, "Insider Threat Detection: Machine
- 19) Learning Way", Eds. Mauro Conti, Gaurav Somani, and Radha Poovendran, *Versatile Cybersecurity*, Springer Book series: *Advances in Information Security*, pp. 19 - 53, October 2018, ISBN: 978-3-319-97642-6, DOI: 10.1007/978-3-319-97643-3.
- 20) Mehul S Raval, Chapter 5 "Reversible Data Hiding: An active forensic framework for digital images", Editor Siddhartha Bhattacharyya, *Intelligent Innovations in Multimedia Data Engineering and Management*, IGI Global, pp: 116 - 140, September 2018, ISBN: 9781522571070, DOI: 10.4018/978-1-5225-7107-0.
- 21) Rupal Agravat, Mehul S Raval, Chapter 11 "Deep Learning for Brain Tumor Segmentation", Editors: Nilanjan Dey, Amira S. Ashour, Fuqian Shi, Valentina E. Balas, *Soft Computing*
- 22) *Based Medical Image Analysis*, Academic Press, pp: 183-201, February 2018, Paperback ISBN: 9780128130872, <https://doi.org/10.1016/B978-0-12-813087-2.00010-5>
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## Preprints

1. Hiren Galiyawala, Mehul S Raval, Shivansh Dave, "Visual Appearance Based Person Retrieval in Unconstrained Environment Videos", arXiv Preprints <https://arxiv.org/pdf/1910.14565> arXiv:1910.14565 [cs.CV]
2. Mehul S Raval, Ratnik Gandhi, "Experiments in active learning through Project Across Courses", OSF Preprints: <https://osf.io/fg24x/>, pp:1-27, Sept. 2019, DOI:10.31219/osf.io/fg24x
3. Rupal Agravat, Mehul S Raval, "Prediction of Overall Survival of Brain Tumor Patients", arXiv Preprints <https://arxiv.org/abs/1909.04596>, Sept. 2019.
4. Rupal Agravat, Mehul S Raval, "Brain Tumor Segmentation and Survival Prediction", arXiv Preprints <http://arxiv.org/abs/1909.09399>, Sept. 2019.
5. Vaibhav B Joshi, Mehul S Raval, "Adaptive Threshold for Fingerprint Recognition System Based on Threat Level and System Load", OSF Preprints: <https://osf.io/9usp4/>, pp:1-10, Sept. 2019, DOI:10.31219/osf.io/9usp4
6. Vaibhav B Joshi, Mehul S Raval, "An Improved Commutative Reversible Watermarking and Encryption for Fingerprint Image", OSF Preprints: <https://osf.io/kvxah/>, pp:1-10, Sept. 2019, DOI:10.31219/osf.io/kvxah
7. Dhruv Gupta, Gunvantsinh Gohil, Mehul S. Raval, " Driver Friendly Headlight Controller for Driving in Developing Countries ", arXiv:1509.04636 [cs.SY], 15th Sept. 2015, <http://arxiv.org/abs/1509.04636>

## Magazine

- 1) Maitrik Shah, Mehul S Raval, Srikrishnan Divakaran, "[Atmospheric Correction: Sentinel for data in remote sensing-based climate change analysis](#)," IEEE Potentials, vol. 43, no. 2, pp. 1320, March-April 2024, DOI: 10.1109/MPOT.2024.3424088. Print ISSN: 0278-6648 Online ISSN: 1558-1772
- 2) Ratnik Gandhi, Mehul S Raval, and Sanjay Chaudhary, "Pattern Discovery for Insider Threat", CSI Communications, Vol. 42, No. 2, pp. 31 - 33, May 2018. ISSN 0970-647X
- 3) Rupal Agravat, Mehul S Raval, Brain Tumor Segmentation: Towards a better life, CSI Communications, Vol. 40, No. 9, pp. 31 - 35, Dec. 2016. Available online at [http://www.csiindia.org/Communications/CSIC\\_Dec\\_2016.pdf](http://www.csiindia.org/Communications/CSIC_Dec_2016.pdf)
- 4) Mehul S Raval, Digital Video Forensics: Description Based Person Identification , CSI Communications, Vol. 39, No. 12, pp. 9 - 11, March 2016. Available online at [http://www.csiindia.org/digital\\_magazine/March2016/CSIC\\_March\\_2016.pdf](http://www.csiindia.org/digital_magazine/March2016/CSIC_March_2016.pdf). 5) Mehul S Raval, "Hyperspectral Imaging: A Paradigm in Remote Sensing", CSI 6) Communications, Jan. 2014, pp.7- 9.
- 7) Raval Mehul S, "Watermarks and need for benchmarking watermarking schemes", Computer Society of India - Communication Magazine, pp: 5-8, July 2003.

## **COURSES TAUGHT**

Developed and delivered a comprehensive suite of courses across undergraduate and graduate levels, with a primary focus on core competencies in Artificial Intelligence, Machine Learning, and Computer Vision. Instruction spans foundational topics such as Data Structures, Signals and Systems, and Computer Organization for Bachelor of Technology students, alongside advanced graduate-level curricula in Digital Image Processing, Fuzzy Neural Systems, and Statistical Inference. This teaching portfolio reflects a sustained commitment to bridging theoretical principles with modern applications in data science and engineering within both domestic and international academic environments.

## **THESIS SUPERVISION AND EVALUATION**

### **Current PhD scholars**

Yagnik Bhavsar (2023 - )

Thesis domain: Intelligent Transportation Systems

Dissertation Advisory Committee

- Professor Mazad Zaveri (PhD Supervisor)- Chairman, Associate Professor, School of Engineering and Applied Science, Ahmedabad University
- Professor Mehul S Raval -PhD Co-Supervisor, Professor, School of Engineering and Applied Science, Ahmedabad University
- Professor Jayendra M Bhalodiya-Internal Member, Assistant Professor, School of Engineering and Applied Science, Ahmedabad University
- Professor Kuntal Patel--Internal Member, Assistant Professor, School of Engineering and Applied Science, Ahmedabad University
- Dr. Rajesh S Gujar - External Member, Assistant Professor, PDEU, Gandhinagar **Graduated PhD scholars**

1. Srishti Sharma (2021 - 2025)

Thesis on "Framework for Modeling and Prediction of Athletic Game Performance and Injury Risk"

### **Dissertation Advisory Committee**

- Professor Mehul S Raval, Supervisor (Chairman)
- Professor Srikrishnan Divakaran, Associate Professor, Krea University, IndiaCosupervisor (Member)
- Professor Tolga Kaya, Cosupervisor, Professor of Computer Engineering, Sacred Heart University, USA (Member)
- Professor Keyur Joshi, (Internal Faculty Expert - I)
- Professor Kuntal Patel (Internal Expert - II)

### **PhD Dissertation Exam Committee**

- Professor Anirban Dasgupta, Professor, IIT Gandhinagar (Thesis Examiner)
- Professor Samah Senbel, Associate Professor, Sacred Heart University, CT, USA (Examiner)
- Professor Ratna Ghosal (Chair), Associate Professor, Ahmedabad University, India
- Professor Mehul S Raval, Professor, Ahmedabad University, India
- Professor Tolga Kaya, Professor, Sacred Heart University, CT, USA
- Professor Srikrishnan Divakaran, Associate Professor, Krea University, India
- Professor Keyur Joshi, Assistant Professor, Ahmedabad University, India
- Professor Kuntal Patel, Assistant Professor, Ahmedabad University, India

#### 2. Maitrik K Shah (2021 - 2025)

Thesis on "Surface reflectance retrieval of remote sensing images with dehazing"

### **Dissertation Advisory Committee**

- Professor Mehul S Raval, Supervisor (Chairman)
- Professor Srikrishnan Divakaran - Cosupervisor (Member)
- Professor Keyur Joshi (Internal Faculty Expert - I)
- Professor Jayendra Bhalodiya (Internal Expert - II)
- Shri Debajyoti Dhar, Group Director, Outstanding Scientist & Signal and Image Processing Group, SAC, ISRO (External Expert)

### **PhD Exam Committee**

- Professor Dipti Prasad Mukherjee, Professor, ISI Kolkata (Thesis Examiner)
- Professor Alok Shukla (Chair), Assistant Professor, Ahmedabad University, India
- Professor Mehul S Raval, Professor, Ahmedabad University, India
- Professor Srikrishnan Divakaran, Associate Professor, Krea University, India
- Professor Keyur Joshi, Assistant Professor, Ahmedabad University, India
- Professor Jayendra Bhalodiya, Assistant Professor, Ahmedabad University, India
- Shri Debajyoti Dhar, Group Director, Outstanding Scientist & Signal and Image Processing Group, SAC, ISRO

#### 3. Snehal Rajput, Pandit Deendayal Energy University, Gandhinagar, Gujarat (2019 – 2024)

Thesis on: Robust Brain Tumor Segmentation and Overall Survival Prediction

### **Dissertation Advisory Committee**

- Chair: Shakti Mishra, Head of the Department, CSE Department, PDEU, Gandhinagar
- Supervisor: Dr Mohendra Roy, ICT Department, PDEU, Gandhinagar
- Co Supervisor: Professor Mehul S Raval, Professor Ahmedabad University, Ahmedabad, Gujarat, India

- External Expert: Professor Mukesh Zaveri, Professor, SVNIT, Surat, India.
- Dr. Harmik Vaishnav, DG Nominee, Associate Professor, SLS, PDEU

### **PhD Dissertation Exam Committee**

- Supervisor: Dr Mohendra Roy, ICT Department, PDEU, Gandhinagar
- CoSupervisor: Professor Mehul S Raval, Professor Ahmedabad University, Ahmedabad, Gujarat, India
- External Examiner and Thesis Reviewer: Prof. Jignesh N. Sarvaiya, Head of the Department of Electronics Engineering, Sardar Vallabhbhai National Institute of Technology, Surat
- Thesis Reviewer: Xiao-Zhi Gao, Professor at University of Eastern Finland

Hiren Galiyawala, Ahmedabad University, Ahmedabad, India (2018 - 2022)

Thesis on: Soft Biometrics based Person Retrieval from Unconstrained Surveillance Video

### **Dissertation Advisory Committee**

- Supervisor and Chairman: Professor Mehul S Raval, Ahmedabad University, Ahmedabad, Gujarat, India
- External Expert: Professor Manjunath V Joshi, Professor, DA-IICT, Gujarat, India.
- Internal Expert I: Dr Dhaval Patel, Ahmedabad University, Ahmedabad, Gujarat, India
- Internal Expert II: Dr Keyur Joshi, Ahmedabad University, Ahmedabad, Gujarat, India

### **PhD Dissertation Exam Committee**

- Professor Richard Jiang, Associate Professor, Lancaster University, UK
- Professor Dipti Prasad Mukherjee, Professor, Indian Statistical Institute, Kolkata, India
- Professor Shashi Prabh, Associate Professor, Ahmedabad University, India
- Professor Mehul S Raval, Professor, Ahmedabad University, India
- Professor Dhaval Patel, Associate Professor, Ahmedabad University, India
- Professor M V Joshi, Professor, DAIICT, India
- Professor Keyur Joshi, Assistant Professor, Ahmedabad University, India

Rupal Agravat, Ahmedabad University, Ahmedabad, Gujarat, India (2014 - 2021) - Cosupervised by Professor Sanjay Chaudhary

Thesis on: "Robust Brain Tumor Segmentation for Overall Survival Prediction"

### **Thesis Advisory Committee**

- External Expert: Professor Manjunath V Joshi, Professor, DA-IICT, Gujarat, India.
- Internal Expert: Professor N Padmanabhan, Professor, Ahmedabad University, Ahmedabad, Gujarat, India.

- Supervisor: Professor Mehul S Raval, Professor, Ahmedabad University, Ahmedabad, Gujarat, India.

### **PhD Examination Committee**

- Professor Sumantra Dutta Roy, Professor, EE Department, IIT Delhi
- Dr Spyridon Bakas, Center for Biomedical Image Computing & Analytics (CBICA), Perelman School of Medicine, University of Pennsylvania, USA
- Dr Mazad Zaveri, Associate Professor Ahmedabad University (Chair)
- Professor Sanjay Chaudhary, Interim Dean and Professor, Ahmedabad University □  
Professor Mehul S Raval, Professor, Ahmedabad University □ Professor Manjunath V Joshi, Professor, DA-IICT, Gujarat, India.
- Professor N Padmanabhan, Professor, Ahmedabad University, Ahmedabad, Gujarat, India.

Vaibhav B Joshi, Ahmedabad University, Ahmedabad, Gujarat, India (2014 - 2018)

Thesis on "Securing Biometrics through Data hiding techniques"

### **Thesis Advisory Committee**

- External Expert: Professor Priti P Rege, Professor and Head, Electronics and Telecommunication Engineering Department, College of Engineering Pune, Pune, Maharashtra, India.
- Internal Expert: Professor N Padmanabhan, Professor, Ahmedabad University, Ahmedabad, Gujarat, India.
- Supervisor: Professor Mehul S Raval, Associate Professor, Ahmedabad University, Ahmedabad, Gujarat, India.

### **PhD Exam Committee**

- Professor S N Merchant, Professor Electrical Engineering Department, Indian Institute of Technology Bombay, Mumbai, India
- Professor Arun Somani, Distinguished Professor of Electrical and Computer Engineering, Philip and Virginia Sproul Professor, Iowa State University, Ames, IA, USA

Niteen B Patel, Veer Narmad South Gujarat University, Surat, Gujarat, India, (2009 - 2016)

Thesis on "Target Localization, Improving Tracking Accuracy and Energy Efficiency In Wireless Sensor Network"

### **PhD Exam Committee**

- Dr. Mihir Shah, Professor ECE Department, L.D College of Engineering, Ahmedabad, Gujarat India
- Dr. Vishvjit Thaker, Professor and Head, ECE Department, A.D. Patel Institute of Technology, Vallabh Vidyanagar, Gujarat, India

- Dr. Mehl S Raval, Supervisor and Associate Professor, Ahmedabad University, Ahmedabad, India

### **MTech Students**

1. Maruti Goswami, "Soft biometrics based person identification", Ahmedabad University, 2016-17
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 Kosti, "Estimating Depth in a Single Image by Learning through Neural Network", DA-IICT.
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.

### **Summary of Undergraduate Research Mentorship**

Over the last decade, I have supervised **46 undergraduate research projects**. These projects consistently bridge the gap between fundamental engineering principles and cutting-edge applications in Artificial Intelligence. Your mentorship has guided students through complex implementations in computer vision, deep learning, and signal processing, often resulting in functional prototypes for real-world challenges.

### **Key Research Themes:**

- **Computer Vision & Image Processing:** Significant focus on object detection, document image analysis, and biometric security (e.g., iris and face recognition).
- **Deep Learning Applications:** Projects involving Convolutional Neural Networks (CNNs) for medical imaging, such as brain tumor and skin lesion segmentation.
- **Assistive Technologies:** Development of AI-driven tools, including smart canes for the visually impaired and sign language recognition systems.
- **Hardware-Software Integration:** Guiding students in deploying machine learning models on edge devices like Raspberry Pi and Jetson Nano for smart surveillance and agricultural monitoring.
- **Data Analytics:** Exploring sentiment analysis, financial forecasting, and recommendation engines

### **PhD Thesis Referee**

1. Anna University Chennai, India – 2020, 2021, 2022
2. Charotar University of Science and Technology, Changa, India – 2018, 2019, 2020
3. Gujarat Technological University, Ahmedabad - 2012
4. Lovely Professional University, 2025
5. MS University of Baroda, Vadodara - 2011
6. Reva University, Bangalore, India - 2021

7. Sardar Patel University, Vallabh Vidya Nagar, Anand, India - 2011
8. Savitribai Phule Pune University, Pune, India – 2019, 2020, 2021, 2022, 2023, 2024
9. Shivaji University, Kohlapur - 2011

### **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**

#### **2025**

Member, Technical Advisory Committee, Robofest Gujarat 4.0, Gujarat Council on Science and Technology, Government of Gujarat

### **Journal Review**

Springer Nature Computer Science (5), Wiley - Brain - X (1), Elsevier Computers in Biology and Medicine (2), IEEE Transaction on Consumer Electronics (1), IEEE Transaction on Multimedia (1), IEEE Journal of Biomedical and Health Informatics (1), Springer Nature - Discover Artificial Intelligence (2), Springer Nature Discover Computing (1), Springer - Nature Geotechnical and Geological Engineering (2), Springer - Nature Scientific Reports (3), PLOS ONE (1), IEEE Transactions on Geoscience and Remote Sensing (1), IEEE Transactions on Consumer Electronics (1), Elsevier - SoftwareX (1), Elsevier - Artificial Intelligence in Medicine (1), Elsevier Biomedical Signal Processing & Control (1), Elsevier - Computerized Medical Imaging and Graphics (1), Springer Nature - Signal Video and Image Processing (1)

### **Conference Review**

International Joint Conference on Neural Networks (IJCNN) 2025, Rome, Italy, June 30th - July 5th 2025

### **Talks**

- 1) Open House School of Engineering and Applied Science, Ahmedabad University, Ahmedabad 28th April 2025 - Jointly with Shuja Ahmed, Snigdha Khuntia
- 2) Open House School of Engineering and Applied Science, Ahmedabad University, Hyderabad 12th April 2025 - Jointly with Professor Sanjay Chaudhary
- 3) Master Class - Navigating Data science and AI in 21st Century, 9th - 11th April 2025, Hyderabad, India - Jointly with Professor Sanjay Chaudhary

- 4) Master Class - Navigating Data science and AI in 21st Century, 20th March 2025, Global Indian International School. Ahmedabad, India - Jointly with Professor Sanjay Chaudhary
- 5) Onboard Person Retrieval System with Model Compression, Faculty Development Program on Advances in AI and Quantum Technologies - Symbiosis Institute of Technology - Hyderabad - 19th March 2025 (Online)

## **2024**

### **Conference Paper review**

1. 2025 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP 2025), April 06 - 11, 2025
2. 5th Workshop on Real-World Surveillance: Applications and Challenges, Colocated with WACV 2025, Tucson, AZ, USA, Feb. 28, 2025
3. IEEE International Conference on Vehicular Electronics and Safety (ICVES) 2024, Ahmedabad, India. 17th - 19th December 2024
4. International Conference on Signal Processing and Communications (SPCOM), IISc Bangalore, July 01 - 04, 2024
5. The International Joint Conference on Neural Networks (IJCNN), Yokohama, Japan, June 30 to July 5, 2024

### **Conference Committee**

1. General Chair, IEEE International Conference on Vehicular Electronics and Safety (ICVES) 2024, Ahmedabad, India. 17th - 19th December 2024
2. Organising Chair, INSAIT GeneRative AI for Nurturing Sustainable Agriculture (GRAINS) 2024, Ahmedabad, India, 25th - 26th October 2024
3. Member TPC - 3rd IEEE International Conference on Computer Vision and Machine Intelligence (IEEE CVMI), Prayagraj, India, 19th - 20th October 2024
4. Member-TPC, International Sports Analytics Conference and Exhibition (ISACE), Paris, France, 12th - 13th July 2024

### **Journal Paper Review**

Qeios(1), Heliyon(1), Nature - Scientific Reports(3), Springer - Signal Image and Video processing (2), Springer - Geotechnical and Geological Engineering(2), Archives of Computational Methods in Engineering (3), Frontiers in Big Data, section Medicine and Public Health (1), Frontiers in Big Data, section Machine Learning and Artificial Intelligence (1), Frontiers in Computer Science, section Computer Vision (1), Elsevier - Biomedical Signal Processing & Control (3), Elsevier - Computers in Biology and Medicine (2), IET Image Processing (2), Sage - Therapeutic Advances in Respiratory Disease (1), Elsevier - Expert Systems With Applications (2), Elsevier - Measurement (1), Elsevier - Computer Methods and Programs in Biomedicine (3), Springer - Artificial Intelligence Review (1), Taylor and Francis - International Journal of Computers and Applications (1), IEEE Sensors Letters

(1) Elsevier - Neural Networks (1), Springer - Discover Computing (1), Multimedia University - Journal of Informatics and Web Engineering (1), IEEE Multimedia (1), Springer Nature Computer Science (3), Taylor and Francis - Computer Methods in Biomechanics and Biomedical Engineering (1)

### **Invited Talks**

- Artificial Intelligence Workshop (Facilitators Sanjay Chaudhary, Mehul S Raval, Jay Chaudhari, Yagnik Bhavsar), Gujarat Vishvkosh, Ahmedabad, 1st December 2024
- Brain Tumor Segmentation, Survival Prediction, and Multiomics Analysis, AICTE Atal FDP "AI and Explainable AI in Healthcare: Current Trends and Future Research Possibilities," Sarvajanik University, Surat, 25th November 2024.
- Role of Multiomics in Overall Survival Days Prediction in Glioblastoma, AICTE Training and Learning (ATAL) Online Faculty Development Program on "AI and Digital Technologies for Sustainable Healthcare and Medical Technologies," Nirma University, 25th November 2024
- Maximizing Performance and Reducing Injuries in Basketball, Faculty talk series, University of Edinburgh, 7th November 2024
- Tracing development of Naturalist and Hunter - James Edward Corbett, Faculty Lecture Series, Ahmedabad University, 18th October 2024
- Maximizing performance and reducing injuries in basketball, Data Makers Fest, Porto, Portugal, 24th September 2024
- AI and Computer Vision in Mobile Robotics, STTP on Recent trends on Robotics and AI, Nirma University, 9th July 2024
- Artificial Intelligence in Image Recognition, Workshop on Modern Practices in AI and Data Science, Ahmedabad, 4th June 2024
- Robust Brain Tumor Segmentation, NITTTR - Bhopal, Digital Health Care and AI workshop, Ahmedabad, 10th May 2024
- Role of AI in Intelligent Transportation Systems, IEEE Signal Processing Society, Gujarat Chapter, Sarvajanik University, Surat, 5th April 2024
- Deep dive into dimensionality reduction, IEEE Hands on workshop, LDRP ITR, Gandhinagar, 15th March 2024
- Role of AI in Automation, Panel Discussion, IX Technical Conclave, Larsen and Toubro, Mumbai, 12th March 2024
- Impact of AI on Society, IEEE National Workshop on AI for future, Vallabh Vidyanagar, 24th February 2024
- Anomaly detection and outliers analysis, NITTTR, Bhopal sponsored Short Term Training Program entitled "Data Analytics & Applications, LD College of Engineering, Ahmedabad, 21 Feb. 2024
- Preparing for AI age: Ethics, Guardrails and Guidelines, AI for new rooms, Data Leads, Ahmedabad, 15th February 2024
- Sports Data Analytics: A case study of a Collegiate Women's Basketball Team, Ahmedabad University, 8th Feb. 2024

- Book Talk on Explainable AI in Healthcare Unboxing Machine Learning for Biomedicine with Editors: Mehul S Raval, Mohendra Roy, Tolga Kaya, Rupal Kapdi, Ahmedabad University, Ahmedabad, 19th January 2024

## 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 (3), International Journal of Image and Graphics (1), Expert Systems with Applications (5), SPIE Journal of Applied Remote Sensing - JARS (1), Oxford Academic - The Computer Journal (1), Springer - Geotechnical and Geological Engineering(1), IET Image Processing (5), Frontiers in Artificial Intelligence: section Medicine and Public Health (1), Frontiers in Artificial Intelligence: section Machine Learning and Artificial Intelligence(1), Frontiers in Physiology, section Striated Muscle Physiology (1), Frontiers in Medicine, section Pathology (1), Frontiers in Pediatrics, section Pediatric Neurology, Scientific Reports (1), Elsevier - Measurement (1), Springer Signal, Image and Video Processing(1), SAGE

-Therapeutic Advances in Respiratory Disease(1), Elsevier - Neural Networks (1)

### Invited Talks

1. AI for the benefit of the society, Bhartiya Vigyan Sammelan 2023, Science City, Ahmedabad, 24th December 2023
2. AI applications and impact in multidisciplinary field, STEP Talk, IEEE Gujarat Section, CHARUSAT University, Changa, 22nd December 2023
3. XAI in overall survival days prediction in brain tumor, ATAL FDP on "Leveraging AI for enhanced healthcare delivery systems," CE Department, LD College of Engineering, Ahmedabad, 21st December 2023
4. New Initiatives on Two Wheelers Safety (2023), IEEE Pune Section's IEEE PuneCon 2023, COEP Technological University, 16th December 2023
5. Panel Discussion - Technological Innovation, IEEE Pune Section's IEEE PuneCon 2023, COEP Technological University, 16th December 2023
6. Next Gen Technologies for Investigating Road Traffic and Rule Violations, IEEE ITSS Winter School on "Computing and IoT technologies for mobility in two-wheelers", at IIIT Sricity, Andhra Pradesh.7th December 2023
7. Intelligent Transportation Systems, Workshop under New Initiatives on Two Wheelers Safety (2023), Ahmedabad University, 3rd November 2023
8. Book Talk on Digital Ecosystem for Innovation in Agriculture, Ahmedabad University, 3rd November 2023
9. Panel discussion on Dimension of Library Collaboration and Networking, Ahmedabad University, 14th October 2023

10. Sports Data Analytics using Computer Vision, MTech Webinar, Ahmedabad University, Ahmedabad, 14th September 2023
11. Sports Data Analytics using Computer Vision, IEEE Signal Processing Society NetSip 2023 - Robotics and Autonomous Systems Using AI-ML, Silver Oak University, Ahmedabad, 26th August 2023
12. CNN and its applications, ISTE-approved two-week STTP on Deep Learning: Concepts to Deployment, Computer Science and Engineering Department, Nirma University, 4th July 2023
13. Regression and Regularization, ISTE-approved two-week STTP on Machine Learning for Electronics Engineers, Electronics and Communication Engineering Department, Nirma University, 5th July 2023.
14. AI and Computer Vision for traffic and rule violation at roundabout, ISTE-approved two-week STTP Artificial Intelligence Application in Civil Engineering, Civil Engineering Department, Nirma University, 6th July 2023
15. Unleashing the Power of AI and Software: Opportunities for Startups in the Indian and Global Market, IT/ITES Conclave 2023, The Southern Gujarat Chamber of Commerce and Industries, Surat, 02nd June 2023.
16. 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
17. 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.
18. Deep Learning in Agriculture, Image Dehazing and Adversarial Learning, Navrachana University, Vadodara, 08.04.2023
19. 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.
20. 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.
21. Person Retrieval from surveillance video using textual query, Research
22. Seminar, Islamic University of Science & Technology, Kashmir, India, March 8, 2023
23. Fake News detection and Impact Analysis, Research Seminar Series, Ahmedabad University, February 8, 2023
24. Deep Learning approaches for atmospheric corrections, CoE-AIML, IITRAM, Ahmedabad, February 7, 2023
25. 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

## 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, KnowledgeBased 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 CoVID19 (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. 26<sup>th</sup> National Conference on Communications, 21 – 23<sup>rd</sup> Feb. 2020, IIT Kharagpur.
2. 2020 International Joint Conference on Neural Networks (IJCNN 2020), 19<sup>th</sup> – 24<sup>th</sup> July 2020, Glasgow, UK
3. 13<sup>th</sup> International Conference on Signal Processing and Communications, July 20-23, 2020, IISC Bangalore.
4. 23<sup>rd</sup> International Conference on Medical Image Computing and Computer Assisted Intervention, Oct 4<sup>th</sup> to 8<sup>th</sup> 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, Maharashtra, 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.

### **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, Sarvajanic College of Engineering and Technology (SCET), Surat, 3rd April 2018.
3. Brain Tumor Segmentation: Data Science Perspectives, Sarvajanic 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 30, 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 (icSoftComp2017), 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)

## **AFFILIATION WITH ACADEMIC ORGANIZATION**

- Academic and Curriculum Committee - ECE Department, Sarvajanik University, Surat
- Member, Faculty of Engineering and Technology, Ganpat University, Mehsana
- Member, Academic Advisory Board, Navrachana University, Vadodara
- Board of Studies - School of Computing Kaushalya: The Skill University

## **PAST 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
- 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
  - o Member - Local Inquiry committee to various engineering colleges,
  - o Subject expert for Electronics and Communication Engineering for interview panel,
  - o 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 to 2024
- 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