

# **Dr Mrs Shweta Shah**

Assistant Professor, Department of Electronics Engineering,  
S. V. National Institute of Technology, Surat, Gujarat -395007, India

Email: [snshah@eced.svnit.ac.in](mailto:snshah@eced.svnit.ac.in), [shahshweta13@gmail.com](mailto:shahshweta13@gmail.com)

Cell No: 9925458497, Office: 91-261-2204170

## **Qualification:**

- **PhD , M. Tech. (Communication System), B.E. (Electronics Engineering)**

## **Area of Research:**

- **Wireless Communication**
- **Mobile Communication and Standards**
- **Digital Video Broadcast and Standards .**
- **Cognitive Radio**
- **NavIC/IRNSS**
- **Software Defined Radio**

## **Teaching Experience:**

- Served as a visiting lecturer at Electronics Engineering Department, **S.V.M.I.T., BHARUCH** from **21<sup>st</sup> August - 03 to 7<sup>th</sup> February -04.**
- Served as visiting lecturer at Electronics Engineering Department, **S.V.N.I.T., SURAT** from **9<sup>th</sup> February -04 to 9<sup>th</sup> November - 04.**
- Served as Teaching Assistant at Electronics Engineering Department, **S.V.N.I.T., SURAT** from **10<sup>th</sup> January - 05 to 16<sup>th</sup> June - 06.**
- Served as Teaching Assistant at Electronics Engineering Department, **S.V.N.I.T., SURAT** from **28<sup>th</sup> July - 08 to 9<sup>th</sup> March – 09.**
- Working as an Assistant Professor at Electronics Engineering Department, **SVNIT** from **12<sup>th</sup> March – 09 till date.**

## **Academic Performance:**

- Achieved PhD degree 9<sup>th</sup> July 2015, from S.V. National Institute of Technology, Surat
  - Thesis : **A NOVEL MODIFIED HIERARCHICAL MODULATION FOR VIDEO STREAMING IN DVB-H UNDER CHANNEL IMPAIRMENTS**
- Completed M.Tech. (Communication System) in 2008 from S.V. National Institute of Technology, Surat
  - Dissertation: **PRACTICAL ASPECTS OF MICROSTRIP FILTER DESIGN AND REALIZATION**
- Completed BE in Electronics Engineering in 2003 From Sarvajanic College of Engineering and Technology, Surat

### **Membership of Scientific and Professional Societies:**

- Life Membership of IETE-Membership No. AM – 209785
- Life Membership of ISTE -Membership No. LM – 88042
- IEEE Membership : 90807348
- ACM Membership: 7730394
- Member of Indian Solidarity Council
- Member of International Institute of Education & Management

### **External Links**

- <https://www.scopus.com/authid/detail.uri?authorId=55460942100>
- <https://orcid.org/0000-0002-7779-7156>
- [https://www.researchgate.net/profile/Dr\\_Mrs\\_Shweta\\_Shah](https://www.researchgate.net/profile/Dr_Mrs_Shweta_Shah)
- <https://www.linkedin.com/in/dr-mrs-shweta-shah-0444a78/>
- <https://scholar.google.co.in/citations?user=vELpV7MAAAA&hl=en>
- <https://publons.com/dashboard/activity/notification/>

### **Patent Publication:**

- Jayshri pariyal, shweta shah,
  1. Patent title: ITERATIVE THRESHOLDING METHODOLOGY FOR ENERGY DETECTION"
  2. Application No.2423/MUM/2015 A ,
  3. Publication Date : 03/07/2015

### **BOOK chapter:**

- Mac and Data Link layer challenges for IoT, Chapter #03 for CRC Press Book on "The Internet of Things: Foundation for Smart Cities, eHealth and Ubiquitous Computing"
- Priyanka Lineswala, Dr. Shweta Shah, Designing of SDR Based Malicious Act: IRNSS Jammer", 1st EAI International Conference on Future Internet Technologies and Trend (ICFITT-2017), Electronics Engineering Department, SVNIT, 31-August – 2 September 2017.
- Mehul Desai, Dr. Shweta Shah," Analysis of Ionospheric Correction Approach For IRNSS/NavIC System Based On IoT Platform", 1st EAI International Conference on Future Internet Technologies and Trend (ICFITT-2017), Electronics Engineering Department, SVNIT, 31-August – 2 September 2017.
- Srijeeth R., Dr. Shweta Shah, "FFT Averaging Ratio Algorithm for IRNSS", 1st EAI International Conference on Future Internet Technologies and Trend (ICFITT-2017), Electronics Engineering Department, SVNIT, 31-August – 2 September 2017.

### **PhD Guided:**

1. Design, Optimization and Fabrication of Leaky Mode Plasma Antenna for Wideband Application at 2.45 GHz , Hirani Rasila Rameshbhai, (D12EC002), November 2019

2. Collateral Advanced Processing for Interference Perception and Reduction (IPR) in NavIC Receiver, Darshna D. Jagiwala (DS14EC003), JUNE 2020
3. Development of Robust Jammer Mitigation Algorithm - Strengthening the NavIC Receiver by International Interference Rectification (SNRIIR), Priyanka L. Lineswala (DS14EC005) (Thesis under Review)
4. Development and Analysis of Ionospheric Correction Model for Position Estimation with NavIC Receiver Position Emendation Using Dilution of Precision and Ionodelay, Mr. Mehulkumar Vijaysinh Desai, (D15EC001) (Defence is left)

#### **Ongoing PhD:**

- analysis of GTEM Cell for Bandwidth optimization, Hetal Pathak
- channel estimation complexity, Krupali umaria
- solar cell for optical communication, kalinda sinde
- GNSS/IRNSS tracking, virenda

#### **Journal Publication:**

- **2010**
  1. Mrs. Shweta shah, Dr. Mrs. Upena Dalal, " Survey on Commercial Digital Video Streaming Systems", International Journal of Recent Trends in Engineering and Technology (IJRTET), ACEEE, Vol. 4, No. 4, pp. 120-124, Nov 2010. DOI: 01.IJRTET.4.4.29
- **2011**
  2. Mrs. Shweta shah, Dr. Mrs. Upena Dalal, "A Review on Terrestrial Multimedia Communication Using OFDM Technology", Journal-article by World Academy of Science, Engineering and Technology, (WASET 2011), Vol., 55, pp. 759-763, Paris, France, July 27 – 29, 2011. (Presented)
- **2012**
  3. 3. Mitul Prajapti, Prof. Shweta Shah, Dr. Mrs. Upena Dalal, " Performance Analysis of Video Frame Transmission on DVB-H 4K Mode System for Different Code Rates ", *International Journal of Electronics and Computer Science Engineering (IJECS)*, Vol. 1, No. 2, pp. 364-369, Feb. 2012.
  4. 4. Shweta Shah and U D Dalal, "Characteristic Analysis of Hierarchical and Non-Hierarchical Modulation for DVB-H", *International Journal of Computer Applications*, Vol. 59, No. 1, December 2012. **DOI: 10.5120/9513-3905**
  5. 5. Darshna D.Jagiwala, Prof. S. N. Shah, "Analysis of Block Matching Algorithms for Motion Estimation in H.264 Video CODEC", *IJERA*, VOL. 2, ISSUE 6, NOV-Dec. 2012, PP. 1396-1401, ISSN:2248-9622
- **2013**
  6. Kajal H. Tailor<sup>1</sup>, Prof. Shweta N. Shah, "A Review On Various Interference Effects In A MIMO-OFDM System", *International Journal of Engineering Research & Technology (IJERT)*, Vol. 2 Issue 1, January- 2013, ISSN: 2278-0181
  7. Rashmi hadson, Prof. N.B. kainrkar, Prof. S.N.Shah, "Error Recognition Analysis of Wireless STBC MIMO OFDM System using Maximum Likelihood Channel Estimation", *International Journal of Computer Applications (IJCA)*, Volume 71 - No. 21, ISSN: 0975 – 8887, pp. 1-4, June 2013.

8. Darshna Jagiwala, Prof. S.N.Shah, "A Novel QDS Search Algorithm for Block Matching Motion Estimation in H.264 Video CODEC", International Journal of Scientific & Engineering research, Volume 4, Issue 7, pp- 1466-1471, July 2013.
- **2014**
    9. Shah, Shweta, and Dr. Upena Dalal. "Enhancing Capability of DVB-H by Three Layer Hierarchical Mapping." IETE Technical Review published by Taylor & Francis, Vol. 31, No. 2, pp.162-167, April 2014.  
<http://dx.doi.org/10.1080/02564602.2014.892757>
    10. Shweta Shah, Upena Dalal, "Two Level HM with Dual Constellation Mapping Level 2 for DVB-H", Journal of Multimedia Technology & Recent Advancements, Vol. 1, Issue 1, PP. 23-29, 2014.
    11. Bhavin gamit, Shweta shah, "Performance Analysis of 2x2 MIMO for OFDM-DSSS Based Wireless System", International Journal of Innovative Research in Advanced Engineering (IJIRAE), Volume 1 Issue 5, pp. 143-147, June 2014.
  - **2015**
    12. Mehul V. Desai, Dr. Shweta N. Shah, "Ionodelay models for Satellite Based Navigation System", IEEE African Journal of Computing & ICT, Vol 8. No. 2 Issue 2, pp: 25- 32, August, 2015
  - **2017**
    13. Rasila R. Hirani, Surya K. Pathak, Shweta N. Shah, Dushyant K. Sharma, Dispersion Characteristics of Dielectric Tube Waveguide Loaded with Plasma for Leaky Wave Antenna Application, AEU - International Journal of Electronics and Communications, 2017, ISSN 1434-8411, [doi: 10.1016/j.aeue.2017.08.019](https://doi.org/10.1016/j.aeue.2017.08.019)
  - **2018**
    14. Hirani, R.R., Pathak, S.K., Shah, S.N., Sharma, D.K., "Dispersion characteristics of dielectric tube waveguide loaded with plasma for leaky wave antenna application ", AEU - International Journal of Electronics and Communications, Volume 83, January 2018, Pages 123-130. DOI: 10.1016/j.aeue.2017.08.019
    15. Desai, M.V., Shah, S.N., Impacts of intense geomagnetic storm on NAVIC/IRNSS system,, Annals of Geophysics, Volume 61, Issue 5, 2018, Article number GE557, DOI: 10.4401/ag-7856
    16. Desai, M.V., Shah, S.N., "The GIVE ionospheric delay correction approach to improve positional accuracy of NavIC/IRNSS single-frequency receiver", Current Science Volume 114, Issue 8, 25 April 2018, Pages 1665-1676, DOI: 10.18520/cs/v114/i08/1665-1676
    17. Jagiwala, D.D., Shah, S.N., "Impact of Wi-Fi interference on NavIC signal", Current Science, Volume 114, Issue 11, 10 June 2018, Pages 2273-2280, DOI: 10.18520/cs/v114/i11/2273-2280
    18. M. V. Desai, and Dr.(Mrs.) S. N. Shah, Impacts of Intense Geomagnetic Storm On NavIC/IRNSS System, "Annals of Geophysics", vol. 61, no.5, 2018, pp-1-15, DOI: <https://doi.org/10.4401/ag-7856>, SCI indexing journal
    19. Rasila Hirani, Shweta Shah, Surya Pathak, "Mathematical and Computational Modelling of Dispersion Characterization for Dielectric Tube Waveguide Filled with Plasma", International Research Journal of Engineering and Technology (IRJET), 2018
  - **2019**

20. Jagiwala, D.D., Shah, S.N., "Perception and reduction of Wi-Fi interference on NavIC signals", IET Radar, Sonar and Navigation, Volume 13, Issue 3, 1 March 2019, Pages 352-356, DOI: 10.1049/iet-rsn.2018.5291
  21. Priyanka L. Lineswala, , Shweta N. Shah, "Jamming: The probable menace to NavIC", IET Radar, Sonar and Navigation, doi: 10.1049/iet-rsn.2018.5429
  22. Priyanka L. Lineswala, Darshna D. Jagiwala and Shweta N. Shah, "Hypothesis Test-based Detection of Wi-Fi Interference on NavIC/IRNSS S-band Signal", THE JOURNAL OF NAVIGATION, Page 1 of 17, 2019. doi:10.1017/S037346331900002X
  23. M. V. Desai, and Dr.(Mrs.) S. N. Shah, Estimation of Ionospheric Delay of NavIC/IRNSS Signals using the Taylor Series Expansion, Journal of Space Weather and Space Climate, 9 (2019): A23.
  24. Rasila hirani, K N Pathak, S N Shah, "Full Wave Analysis and Computation of Radiation Characteristics for Reconfigurable Plasma Antennas," IEEE Transactions on Antennas and Propagation, pg: 1-3, 2019. (DOI: 10.1109/TAP.2019.2911640)
  25. Priyanka Lineswala, Shweta Shah, "Performance Analysis of Different Interference detection Techniques for NavIC", IET Radar, Sonar & Navigation, 13 (8), 1207-1213, 2019
- **2020**
    26. Desai, Mehul V., and Shweta N. Shah. "Case Study: Performance Observation of NavIC Iono delay and Positioning Accuracy." IETE Technical Review (2020): 1-11.
    27. Desai, Mehul V., and Shweta N. Shah. "An observational review on influence of intense geomagnetic storm on positional accuracy of NavIC/IRNSS system." IETE Technical Review, 37 (3), 281-295, 2020
    28. Mehul V. Desai, Shweta N. Shah, "A local Multivariate Polynomial Regression approach for ionospheric delay estimation of single-frequency NavIC receiver, Journal of SN Applied Sciences, 1503 (2020), August 2020

#### Conference Publication:

- **2008**
  1. Prof. B. R. Taunk, "Practical Aspects of Microstrip Filter Design, " National Conference on Advance Communication, pp: 1123-1126, March – 2008 DDU, Nadiad
- **2009**
  2. Ms Shweta shah, "Influence of the Human Motion on Wide Band Characteristics of the 60 GHz IRC", 2nd international conference on emerging trends in engineering and technology, ICETET, Nagpur, 2009. **DOI:ieeecomputersociety.org/10.1109/ICETET.2009.131**
- **2011**
  3. Prof. S. N. Shah, Dr. Mrs. U. D. Dalal, "Evaluation of H.264 Suitability for DVB-H", *2<sup>nd</sup> International Conference on Innovative Computing and Communication and 2011 Asia-Pacific Conference on Information Technology and Ocean Engineering (CICC-ITOE 2011)*, pp. 335-338, Macao, China, March 5 – 6, 2011.
- **2012**
  4. Richa bhatt, Prof. Shweta Shah, "Impact of Sampling Theorem on Pilot Aided Channel Estimation for OFDM Based Multi-Carrier System", International Conference on Advances

in Electronics and Electrical Engineering, Vol. 1, Issue 2, pp. 95-99, 2012. **DOI: 10.3850/978-981-07-2683-6 AEEE-104**

5. Prof. S. N. Shah, Dr. Mrs. U. D. Dalal, " Simulation Analysis of Image Transmission using Hierarchical Modulation based DVB-H System", *16<sup>th</sup> WSEAS International Conference on Recent Researches in Communication and Computers*, pp. 125-129, Kos Island, Greece, July 14-17, 2012.

- **2014**

6. Shweta shah, U. D. Dalal, "Quality improvement in DVB-H receiver based on median filter", 2nd IEEE International Conference on Emerging Technology Trends in Electronics, Communication and Networking (ET2ECN), Dec 2014 , **DOI: 10.1109/ET2ECN.2014.7044950**

- **2015**

7. Vandita hingu, Dr. Mrs. Shweta Shah, "Block Wise Eigenvalue Based Spectrum Sensing Algorithm In Cognitive Radio Network", Asia Modelling Symposium 2015 (AMS-2015), Ninth Asia International Conference on Mathematical Modelling and Computer Simulation, Kuala Lumpur, 7 - 9 September 2015
8. Ms. Sheetal M. Ruparelia, Ms. Priyanka L. Lineswala, Ms. Darshna D. Jagiwala, Mr. Mehul V. Desai, Dr. Shweta N. Shah, Dr. Upena D. Dalal, "Study of L5 Band Interferences on IRNSS", GNSS- IRNSS User meet, ISRO Bangalore Proceedings, 8<sup>th</sup> October 2015

- **2016**

9. Mehul Desai, Dr. Mrs. Shweta Shah, "Impact of Dilution Of Precision for Position Computation in Indian Regional Navigation Satellite System", 5<sup>th</sup> International Conference on Advances in Computing, Communications and Informatics (ICACCI), Page(s):980- 986, September 21- 24, 2016 LNMIIT Jaipur, India.

- **2017**

10. Priyanka lineswala, rutvij shah, Dr. Shweta Shah, "Different Categorization for Jammer: The Enemy of Satellite Navigation", 2nd IEEE International Conference for Convergence in Technology (I2CT 2017)", 7-9 April 2017.
11. R. R. Hirani, S. N. Shah, S.K.Pathak, D. K. Sharma, "Performance Analysis of Plasma Antenna Compared with Metal Antenna", IEEE Indian Antenna Week 2017 (IEEE IAW-2017), 5 - 9 JUNE , PUNE , INDIA

- **2018**

12. Srijeeth R., Dr. Shweta Shah, "FFT Averaging Ratio Algorithm for IRNSS", 1st EAI International Conference on Future Internet Technologies and Trend (ICFITT-2017), Electronics Engineering Department, SVNIT, 31-August – 2 September 2017, Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST 220 LNICST, pp. 184-191, 2018
13. Mehul Desai, Dr. Shweta Shah, " Analysis of Ionospheric Correction Approach For IRNSS/NavIC System Based On IoT Platform", 1st EAI International Conference on Future Internet Technologies and Trend (ICFITT-2017), Electronics Engineering Department, SVNIT, 31-August – 2 September 2017 , Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST 220 LNICST, pp. 174-183, 2018.
14. Priyanka Lineswala, Dr. Shweta Shah, "Designing of SDR Based Malicious Act: IRNSS Jammer", 1st EAI International Conference on Future Internet Technologies and Trend (ICFITT-2017), Electronics Engineering Department, SVNIT, 31-August – 2 September

2017. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST 220 LNICST, pp. 237-246,2018.

- **2019**

15. Surya Gupta, Darshna D. Jagiwala and Shweta N. Shah, "Characterization of Interfering Signal in S band of IRNSS", Lecture Notes in Electrical Engineering, 2nd International Conference on Microelectronics, Computing and Communication Systems, MCCS 2017; Ranchi; India; 13 May 2017 through 14 May 2017; Volume 476, 2019, Pages 211-222 Code 216739

#### **Funded Project:**

1. PI: Announce Opportunity (AO), ISRO project, "Study, Design and Simulation of Ionodelay effect based on Ionospheric Models and their correction techniques using Software Defined Radio" worth, 18,90,000/-.
2. Become a coordinator of EDUSAT programme organized by Indian Institute of Remote Sensing From August 2017
3. Co-PI:RESPOND, ISRO project, "SIRMI: Strengthening IRNSS Receiver by Mitigation of Interference ", worth, 31,00,000/-
4. TEQIP-III sponsored project on "Design an Application for Landsliding observation using IRNSS" worth 80,000/- (with PG student)
5. TEQIP-III sponsored project on "Development of 3D modelling and mapping for indoor navigation" worth 50,000/- (With UG students)
6. EQIP-III sponsored project on "Developing Simultaneous Localization and Mapping for UAVs" worth 50,000/- (With UG students)
7. TEQIP-III sponsored project on "Development of UAV for Delivery Solutions" worth 1,00,000/- (With UG students)

#### **Consultancy Project:**

1. Brain Computer Interface with Cloud Nine Firm. Got the consultancy of 23000/- with tax for month. Project duration: 21<sup>st</sup> June 2016- 21<sup>st</sup> July 2016

#### **Program Organized:**

- **2013-2014**

1. TEQIP-II sponsored One week STTP on "3G & 4G Technologies", ECED, SVNIT, Sept. 30-oct. 4, 02013
2. TEQIP-II sponsored two day workshop in "Curriculum Revision for UG & PG", Guest House, SVNIT, 9-10 January 2014
3. One day Demo cum workshop on SDR by Amitec Pvt. Ltd., 25-2-2014, ESD lab, ECED, SVNIT
4. TEQIP-II sponsored, B.Tech. II (EC), Technical visit at Surat Airport, 18/4/2014

- **2014-2015**

5. TEQIP sponsored Two day workshop on Software Defined Radio, ECED, SVNIT, 28-29 July 2014



6. Student welfare sponsored two days “Robotics Workshop in association with IIT Delhi TRYST” for UG students, New CRC, SVNIT, 30-31 August 2014
- **2015-2016**
    7. TEQIP sponsored Two day workshop on Wireless Sensor Network, 3 -4 September 2015
    8. One Day Finishing School On “Interfacing Of GSM Module With 8051 Microcontroller”, 17 October, ECED, SVNIT, 2015
    9. IEEE Gujarat section, IEEE signal processing society , Two days National seminar, "New Trends in Signal Processing (NeTSiP-2015)", 3- 4 October, SCET & SVNIT, 2015
  - **2017-2018**
    10. National Workshop on Popularization of Remote Sensing Based Maps & Geospatial Information Jointly organized by ISRS & ISRO, ECED, SVNIT, 11 Aug 2017
    11. 23rd IIRS Outreach Program on Basic of RS, GIS & GNSS
      - Module 1: Remote sensing and Digital Image Analysis, 22-8-2017 to 15-09-2017
      - Module 2: Global Navigation Satellite System & geographical Information System, 25-09-2017 to 10-11-2017
      - Module 3: RS & GIS Application, 13-11-2017 to 04-12-2017
    12. 1st EAI International Conference on Future Technologies and Trends, as coordinator, ECED, SVNIT, September 31 to 2 August 2017
    13. Organized and conducted workshop on quadcopter+3 at SVNIT, during Sparsh 2018, 17 – 20 Feb 2018
    14. Recent Advances in Communication networks and systems, 2nd Feb to 6th Feb, 2018
  - **2019-2020**
    15. One week TEQIP-III sponsored STTP on “Global Navigation Satellite Systems”, ECED, SVNIT, 24-28 June 2019
    16. One week TEQIP-III sponsored STTP on “Advanced GNSS”, ECED, SVNIT, 3-7 December 2019
    17. 3rd International Conference on “Emerging Technology Trends in Electronics, Communication and Networking (ET2ECN-2020)”, 7-8 February 2020
  - **2020-2021 (COVID-19, Corona virus Pandemic situation worldwide from March 2020 to December 2020)**
    18. Organized webinar on “Inspiring Engineering Innovation”, by Khushboo Vaidya, Engineer & Founder of Boarding Pass For Success, Canada on 28/7/2020.

#### **Training Programs Attended:**

- **2008**
  1. Finishing school program on “Faculty Induction program”, sponsored by MHRD at SVNIT, Surat, 15-19 December 2008
  2. STTP on “Advanced Engineering Optimization Through Intelligent Techniques”, sponsored by AICTE at MED, SVNIT, Surat, 22-26 December 2008
- **2009**
  3. STTP on “Pedagogy and Research Methodology”, sponsored by AICTE jointly organized by MED & CHED, SVNIT, 3-7 August 2009
- **2010**
  4. STTP on “Analysis And Design Of Algorithm”, sponsored by AICTE at COED, SVNIT, Surat, 4 - 8 January 2010



5. STTP on "Training on Mobile Computing", organized by IUCEE at VIT Pune, 21-26 June 2010
  6. Workshop on Signal & Image Processing (WSIP 2010), sponsored by AICTE and organized by VIT, Vellore Tamil Nadu , 10-14 February 2010
  7. Attended two day Workshop on curriculum revision for UG, organized by ECED, SVNIT, 17-18 March 2010
- **2011**
    8. One day workshop on "Wireless Communication and FPGA Debugging", Sponsored by Automation Solutions and the test and measurements with Agilent products at ECED, SVNIT on 16 April 2011
  - **2012**
    9. workshop on "Weekly intensive Hindi training", at Guest House, SVNIT, 23-27 July 2012
    10. One day workshop on "Rajbhasha software prashikshan karyashala", Guest House, SVNIT, 21 April 2012
    11. Two day national seminar on "Computer Vision and Image Processing (NaSCoVIP)", sponsored by IEEE Gujarat section, organized at Marwari Education foundation, Rajkot 21-22 September 2012
  - **2013**
    12. Short term training programme on "Advanced Image Acquisition Processing and Applications", sponsored by ISTE organized by Xavier institute of Engineering, Mahim, Mumbai, 7-11 January 2013
    13. Short term training programme on "Application of Mathematics in Real World Problems" sponsored by ISTE-SRM at SVNIT on 18-22 March 2013
    14. TEQIP-II sponsored Faculty Development Programme on "Research Methodology", SVNIT, 10-14 June 2013
    15. TEQIP-II sponsored Workshop on "Computing for Image Analysis", SVNIT, 6-8 June 2013
    16. TEQIP-II sponsored STTP on "Wireless and Optical Communication", 24-28 June 2013
    17. साप्ताहिक राष्ट्रीय कार्यशाला "हिन्दी अनुवाद एवं प्रशिक्षण", नगर राजभाषा कार्यान्वयन समिति (नराकास) , सूरत, गुजरात, Guest House SVNIT, 1-5 May 2013
    18. "हिन्दी सॉफ्टवेयर प्रशिक्षण कार्यशाला", नगर राजभाषा कार्यान्वयन (नराकास) समिति, at CCC SVNIT, 21-25 October 2013
  - **2014**
    19. TEQIP-II sponsored STTP on "Woman scientist conference", at ESCI Hyderabad, 29 May to 1st June 2014
  - **2015**
    20. STTP on "5G Technologies", organized by IEEE Bangalore section at the capital Hotel, Bangalore , 22-23 may 2015
    21. Two days seminar on "New Trends in Signal Processing ", sponsored by IEEE Signal Processing society organized by DAIICT, Gandhinagar, 3-4 October 2015
    22. TEQIP-II sponsored Three day workshop on "5G Technology" at SVNIT, 23-25 October 2015
    23. STTP on "Coding theory and advanced information theory", at Bharti school of telecom technology and management IIT Delhi, 21-24 December 2015
  - **2016**

24. IETE Gujarat and Team Dharmaj Jointly Organize One day Seminar & Apex Forum Meeting on My Village- Samrt Village, 2nd april 2016
  25. TEQIP-II sponsored STTP on "Wireless network and Mobile Computing (WMC 2016)", at COED SVNIT, 16-20 May 2016
  26. गहन हिंदी कार्यशाला, organized by नगर राजभाषा कार्यान्वयन (नराकास) समिति, at New CRC, SVNIT, 23-25 may 2016
  27. Two days seminar on "New Trends in Signal Processing NETSIP-2016", sponsored by IEEE Signal Processing Surat chapter Jointly organized by SVNIT & SCET, 20-21 October 2016
  28. IETE foundation Day seminar on "Cyber Security" sponsored by IETE Surat Sub Centre at ECED SVNIT, on 12 November 2016
- **2017**
    29. TEQIP-II Sponsored EFY (Electronic For You) conference cum workshop on "IoT and Embedded" India Electronic Week 2017 at BIEC, Bengaluru, 2-4 March 2017
    - i. Workshops :
      1. Building a IOT enabled assistive glove for the Blind
      2. Low power Wireless and Compute Standards Connecting the dots for Make in India
      3. A tutorial to build a Google Weave enabled product
    30. त्रिभाषा मूलभूत इलेक्ट्रॉनिकी शब्दावली (अंग्रेजी –हिंदी-गुजराती) के निर्माण कार्य हेतु 05 दिवसीय ( दिनांक 21.08.2017 से दिनांक 25.08.2017 ) बैठक के संबंध में organized by Department of Modern Indian Languages and Literary Studies, Tutorial Building, University of Delhi, Delhi on 21-25 August 2017
    31. 6th International Small Satellite Mission, CSSTEAP, IIRS Dehradun during 20 November 2017 -1 December 2017.
    32. National Symposium on Industry-Academia Collaboration for Geospatial Technologies at CEPT University, 15-16 December 2017
  - **2018**
    33. International course on Global Navigation satellite System at Asian Institute of Technology, Bangkok, Thailand, 23-26 January 2018
    34. Advanced 5G Communication: Performance analysis and Monte-Carlo Simulation at Ahmedabad University, 18-23 June 2018
    35. International Seminar on Students' Satellites at Indian Technological congress -2018, Bangalore, 05-06 Sept 2018
    36. 10th Multi GNSS Asia Conference at Royal Melbourne Institute of Technology (RMIT), Melbourne, Australia, 23-25 Oct 2018
    37. 2nd International program on 75 student satellites' mission 2022 of Indian Technological congress association, Bangalore, 28-29 Nov 2018
  - **2020**
    38. EICT IIT Roorkee's Online FDP on "Machine Learning and AI using Python" from May 04 - May 13, 2020. (Under COVID-19 Situation)
    39. Participated in Space Science and Technology The Learning Programming conducted by "Indo Science Education Trust, Pune", May 2020 (Under COVID-19 Situation)

#### **Industrial Visits:**

- **2014**
  - Visit to COE at navy, INS Valsura, Jamnagar , 17-20 June 2014
- **2015**
  - Scientech, Head Office, Indore, 28-29 May 2015
  - SAC, ISRO, Ahmedabad, 30<sup>th</sup> May 2015
  - GNSS- IRNSS User meet, ISRO, Bangalore, 8 October 2015
- **2016**
  - Project Proposal Presentation, SAC, ISRO, Ahmedabad, 14<sup>th</sup> Sept. 2016

### **Expert Lectures Delivered:**

- **2008**
  1. Introduction of MATLAB and Simulink
    - Two days “workshop on MATLAB and Simulink” Veer Narmad South Gujarat University & SVNIT, Surat, 21-22 February 2008
- **2008- 2009**
  2. Features of MATLAB & Simulink
    - AICTE sponsored SDP Winter school on “Teaching with MATLAB and Simulink”, SVNIT, Surat, 21<sup>st</sup> February 2009
  3. MATLAB and Simulink Application
    - Two days MATLAB workshop, IETE student forum at ECED SVNIT, Surat on 28<sup>th</sup> & 29<sup>th</sup> March 2009
  4. “Teaching with MATLAB mathematical Toolbox”, 21 June 2009
  5. “ Teaching Cellular Theory with MATLAB”, 23 June 2009
    - AICTE Sponsored national level Winter school on “Teaching with MATLAB and SIMULINK” , ECED, SVNIT, Surat
  6. “Use Of Arbitrary And Conventional Function Generator”
    - One day workshop on electronics Instruments and Devices, IETE student forum at ECED, SVNIT, 21 November 2009
- **2010- 2011**
  7. Introduction to MATLAB and Application (Including practice session)
    - Two day workshop on MATLAB, ISF organized at ECED SVNIT, Surat, 26<sup>th</sup> & 27<sup>th</sup> March 2011
- **2012- 2013**
  8. Digital Video Broadcasting
    - TEQIP-II Sponsored One Week STTP on 3G & 4G Technologies, Seminar hall, ECED, SVNIT, 1<sup>st</sup> October 2013
- **2017- 2016**
  9. 5G: Next Generation Wireless Technology
    - IETE APEX Forum on “Bandwidth Management of 5G”, Laxmi Institute of technology, Sarigam, Vapi, 20 February 2016
  10. Security Issues And Challenges In Wireless Communication
    - IEEE Antenna Propagation society, Marwari Education Foundation and Group of Institution, student chapter & Department of Electronics and Communication Engineering Marwari Education Foundation and Group of Institution, Rajkot, 2 September 2016

11.3 sessions on 30/11/2016 Communication Toolbox and Advanced Wireless Communication with MATLAB

- STTP "Aspects of MATLAB Tools in Communication, Control and Signal Processing with Simulink ", Department of ECT, Jawaharlal Nehru Engineering College, Aurangabad, Maharashtra. 28<sup>th</sup> November 2016- 3<sup>rd</sup> December 2016

• **2018- 2017**

12. Mobile Computing, 10 to 11.30 am , On 6/6/2017

13. Cloud Computing, 11.45 to 1.00 , On 6/6/2017

- STTP on "ICT Tools for Enhancing Teaching Learning Process", ISTE chapter GJ-060-IM-2193, Govt. Polytechnic for Girls, Surat, 5 - 9 June 2017

14. Introduction to Satellite and small Satellite Mission, Chintan Prathisthan chapter at SVNIT, Organized at Seminar Hall, VNSGU, Surat, 27 Dec 2017

• **2019- 2018**

STTP on "Implementation of Internet of Things (IoT) Technology with Python Programming" at Bhagwan Mahavir College of Engineering and Technology, Surat, 9-13 Jan 2018 (3 lectures)

15. Introduction to IoT

16. Challenges and issues in IoT

17. MAC layer Protocol and challenges in IoT

18. FDP on Recent Advances in Communication networks and systems, at ECED, SVNIT, 2nd Feb to 6th Feb, 2018

19. Internet of Things (IoT), Expert talk arranged by government polytechnic for girls, surat, 23rd March 2018

20. Impact of Ockhi cyclone on IRNSS/NavIC GNSS signal due to ionospheric and tropospheric variation, 10th Multi GNSS ASIA Conference RMIT, Melbourne, Australia, 23-25 Oct 2018

• **2020-2019**

21. Impact of International and Unintentional Interference on NavIC, 2nd international conference "Parul University International Conference on Engineering & Technology (PiCET-2019)" Smart Engineering, Parul University, Vadodara, 24 -25 May 2019

• **2020 -2021**

22. "5G Satellite Network", a webinar organized by Parul University, on 12th June 2020 ( Under COVID-19 Situation)

23. "Role of Satellite Systems in 5G", a webinar organized by Depart. of EC& Telecommunication Engineering, Pimpri Chinchwad College of Engineering & Research, RAVET in collaboration with IEEE, on 9th June 2020. (Under COVID-19 Situation)

**Programme conducted under Unnat Bharat Abhiyan, Co-Coordinator UBA PI, SVNIT:**

1	21-Jun-19	Celebration of International Day of Yoga
2	13-Jul-19	Workshop on "Jaivik Kheti & Arogya"
3	25-Aug-19	Native Tree Plantation
4	3-Sep-19	Workshop on "Agriculture and Entrepreneurship"
5	19-Sep-19	Workshop on "Khedut Kalyan Karyashala" (Farmer Welfare Workshop)

6	2-Oct-19	Student Solar Ambassador Workshop under "Energy Swaraj Project" by IIT Bombay
7	2-oct -19	Plastic Free Village Campaign, Campaign has been started from 2nd October, 2019
8	14-Oct-19	Organising a general Students Meeting at SVNIT, Surat for preparing and explaining of team wise future activities.
9	9-Nov-19	One day Workshop on "Water Conservation through roof top rain water harvesting" under "Jal Shakti Abhiyan"
10	19-Dec-19	"Student Development Workshop" for Jilla Panchayat Primary School of Rajagari
11	20-Dec-19	Workshop on "Khedut Kalyan Karyashala" (Farmer Welfare Workshop)
12	12-Jan-20	"Unnat Run & Cycling", celebration of National Youth Day on 12th January, 2020
13	26-Jan-20	Participating in celebration of 71th Republic Day of India on 26th January, 2020 and conducting of "Gram Sabha: Suvali Village"
14	29-Jan-20	Workshop on "Swachh Bharat Mission for village cluster: Challenges & measures"
15	1-Feb-20	Workshop on "Women Empowerment"
16	18-Feb-20	one day workshop on Solar Roof Top Gujarat State Government Scheme and knowledge sharing on solar power implementation system at SVNIT, Surat
17	21-Feb-20	Workshop on "Swachh Bharat Mission: Solid Waste Management for Rural India"
18	16th April, 2020	COVID-19: Total Health, FIT India Movement
19	23rd April, 2020	Total Health Through Rhythmic Breathing: COVID-19 , FIT India Movement)
20	30th April, 2020	Total Health Through Rhythmic Breathing: COVID-19 , FIT India Movement
21	1st May, 2020	Health & Fitness by Ayurveda for Immunity Boosting: COVID-19, FIT India Movement
22	7th May, 2020	Total Health Through Rhythmic Breathing: COVID-19 , FIT India Movement
23	8th May, 2020-10 <sup>th</sup> May 2020	Webinar Series: Farm to Pharmacy, Day 1: Organic Farming Webinar Series: Farm to Pharmacy, Day 2: Medicinal & Herbal Farming Webinar Series: Farm to Pharmacy, Day 3: Post Harvest Technology & Value Addition

24	14th May, 2020	Total Health Through Rhythmic Breathing: COVID-19 , FIT India Movement
25	21st May, 2020	Total Health Through Rhythmic Breathing: COVID-19 , Aatma Nirbhar Bharat Abhiyan & FIT India Movement
26	28th May, 2020	Total Health Through Rhythmic Breathing: COVID-19 , Aatma Nirbhar Bharat Abhiyan & FIT India Movement
27	4th June, 2020	Total Health Through Rhythmic Breathing: COVID-19 , Aatma Nirbhar Bharat Abhiyan & FIT India Movement
28	5th June, 2020	Climate Emergency: Threatening Reality Then COVID-19, Native Trees, a Humble Balancing Act
29	11th June, 2020	Total Health Through Rhythmic Breathing: COVID-19 , Aatma Nirbhar Bharat Abhiyan & FIT India Movement
30	18th June, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
31	21st June, 2020	Yoga at Home and Yoga with Family
32	24th June, 2020	I too, am a Corona Warrior
33	2nd July, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
34	9th July, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
35	14th July, 2020	Meeting with Junagam Sarpanch Shri. Bhagubhai Patel regarding lake development and solid waste management at Junagam
36	16th July, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
37	23rd July, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
38	30th July, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
39	4th August, 2020	Women empowerment through social entrepreneurship
40	5th -6th August, 2020	Native Tree Plantation with help of SHG Women groups
41	13th August, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
42	20th August, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
43	27th August, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
44	3rd September, 2020	My Life My Yoga: 3 Step Rhythmic Breathing
45	10th September, 2020	My Life My Yoga: 3 Step Rhythmic Breathing

#### **Prizes / Awards Received:**

- Intra collegiate level L & D events (Fortune Team), 2001, Secured 1st position
- Intra collegiate level cultural event (Dance), April 2003, Secured 3rd position
- Rashtriya Vidya Gaurav Puraskar, from Indian Solidarity Council, 25th July 2016
- National Mahila Rattan Gold Medal Award 25th July 2016

#### **Other Achievements:**

- Attended the workshop on Personality Development at SCET, Surat, October'01
- Participated in Symposium 2001 at SCET, Surat
- Completed 2 months Training Program at IQARA Broadband, September'02
- Workshop on "HAM Radio" held at IIT Bombay, TechFest – 2002
- Presented A Working Model At National Level Techno – Festival, SCET, Surat, KSHITIJ – 2002
- Participated As a Volunteer at Surat Polio Awareness Programme, January 2003
- Presented A Working Model At National Level Techno – Festival, SCET, Surat, KSHITIJ – 2003
- Completed A Course At National InfoTech on "Embedded Programming & Interfacing Using 89c51 Microcontroller" at Surat, July 2004
- Completed a mini project as a part of course in embedded systems for the degree of M. Tech., "Embroidery Sequence Alter Machine Using 8051 Microcontroller", 2006 – 07

#### **Laboratory In-charge at Department Level:**

- Communication Research Lab (From 2015)
- Communication Lab (2009 to 2015)
- Faculty Computer Room (2013 to 2017)
- Chairman Department Time Table Committee: since 6/4/2017

#### **Subject Taught:**

- Basics of Communication System
- Basic Electronics
- Modern Communication System
- Telematics
- Fibre Optics Communication
- Mobile Communication
- Cellular Technology
- Digital Image Processing
- Wireless Communication
- Mobile Computing
- Digital Satellite Communication
- Satellite Communication



### **Project Guided (UG+PG):**

- Design of Microstrip Directional Coupler
- RFID identity card system
- Automation using wireless sensor networks (ZIGBEE)
- Design of Microstrip antenna
- Simulation of OFDM technology considering BCH and RCPC channel coding for JPEG compressed image
- Automation Room Power Controller
- Implementation of DVB-T in Different Channel Models Using LSE Channel Estimation
- WiMax Physical Layer Simulation Using MATLAB
- Performance And Simulation Analysis Of Channel Estimation Algorithms For Multi Carrier System
- Analysis and Simulation of DVB-H Physical Layer For Different Channel Estimation Methods
- Removal of various interference effects in a MIMO-OFDM based system by Interference cancellation algorithm
- Speed control of stepper motor using GSM mobile
- Evaluation and performance analysis of DVB-H on SystemVue
- Performance analysis of the STBC MIMO OFDM system using maximum likelihood channel estimation detection
- Implementation and optimization of existing routing protocols in wireless ad Hoc networks
- Performance analysis of 2 x 2 MIMO for OFDM-DSSS Based Wireless System
- RFID based ATM security using the biometric feature
- Wireless data encryption and decryption using RF
- Implementation of block matching motion estimation algorithm for H.264 video CODEC
- Green Energiser
- Routing algorithm: global solution based on local information
- GNU radio based wireless multimedia transmission
- Block wise Eigenvalue based spectrum sensing algorithm
- Iterative Thresholding Methodology for Energy Detection
- LAB automation with respect to attendance device security and energy saving
- Accident detection systems using GSM
- Emergency Monitoring of Heart patient using wireless communication
- First aid treatment for smart village
- Design and implementation of smart notice board
- Electronics brake system

### **Seminar Guided (UG+PG):**

- WiMagic Technology
- A very low voltage, low power and high resolution Sigma-Delta Modulator for CMOS
- The radar type level sensor used in industries
- ZIGBEE and WIBREE technologies
- LEACH algorithm protocol
- Radio network planning and optimization

- LMDS and MMDS technologies
- Designing a user end interface for data transmission by QPSK modulation based on Labview
- Enhanced data rates for global evolution EDGE technology
- Bell laboratory's layered space time (BLAST)
- FEMTO cells
- Challenges in wireless sensor networks
- PLAM VEIN technology
- Enhanced data rates for GSM evolution
- Long term evolution
- Handover in DVB – h
- Development Of Teleoperation System For Agricultural Vehicles
- Border Security Using Wireless Integrated Network Sensors
- Localization Techniques In Wireless Sensor Networks
- High Speed WiFi
- Digital Television Technology And Standards
- Wireless USB
- Evaluation of a channel estimation technique based on OFDM
- Live TV broadcasts on Mobile phones
- Digital video broadcasting-T2
- Satellite communication in DTH
- Electronic warfare
- OFDM in 4G technology
- Study of routing protocols for wireless ad-hoc Networks
- Study of pulse shaping techniques based on OFDM systems
- Wireless regional area network implementation using cognitive radio technique
- Different methods of green wireless communication
- Mobile communication and its generation
- Security issue in 4G network system
- Eye gaze communication system
- Cognitive radio sensor network
- Security in cognitive radio networks
- Low Energy Bluetooth as an Application for IoT
- Study of dilution of precision,
- Study of various interference in IRNSS and detection technique based on pre-correlation methods
- Aircraft communication,
- Touch screen
- Spectrum sensing in cognitive radio networks,
- Network optimization in 99MHZ for 3G services
- Wireless optical communication,
- IoT and data link layer
- Millimeter wave communication for 5G cellular

- Quantum computing
- MIMO for DSSS communication system
- Digital video broadcast for next generation handheld devices

### **Reviewing activity:**

- **2015**
  - 3rd National conference on innovative and emerging technologies is organizing by Smt. S. R. Patel Engineering College, Unjha 17th- 18th April, 2015. (**1 paper reviewed**)
  - The International Conference on Microwave, Optical and Communication Engineering (ICMOCE-2015) at the School of Electrical Sciences, IIT Bhubaneswar in Bhubaneswar, Odisha, India, 18-20 December 2015 (**4 paper reviewed**)
- **2016**
  - Recent Trends in Computer and Communication Technology, RTCCT-2016, SCET April 2016 (**4 paper reviewed**)
  - International Conference on Global Trends in Signal Processing, Information Computing and Communication September 2016 (**6 paper reviewed**)
  - 2nd IEEE International Conference On Recent Advances And Innovations In Engineering 2016, (**3 paper reviewed**)
- **2017**
  - National Conference on "Recent Advances in Circuits, Communication and Computing Technology" (RACCCT - during 2017-03-25 to 2017-03-26) organized by Sarvajani College of Engineering and Technology and technically sponsored by Computer Society of India. (**2 paper reviewed**)
  - IEEE International Conference COMPTLIX-2017 during July 1 - 2, 2017 at Manipal University Jaipur Campus (**2 paper reviewed**)
  - 1st EAI International Conference on Future Internet Technologies and Trends ICFITT2017" at SVNIT, Surat during 30 August – 2 September, 2017 (**12 paper reviewed**)
  - Conference on Information and Communication Technology CICT-2017 (**2 paper reviewed**)
  - Nirma University International Conference on Engineering- NUiCONE 2017. (**1 paper reviewed**)