

VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS & TELECOMMUNICATION ENGINEERING



Departmental Report

(From 1st July 2016 to 31st December 2016)
ACADEMIC YEAR 2016-2017(Odd Semester)

The department's vision is to nurture students to become technocrats with a humane outlook. The department has been accredited for a period of 3 years from 2016 onwards.

The department of EXTC had numerous highlights in the year 2016-2017.

Student Achievements/ Activities/ Projects

▪ Undergraduate:

□ Summer programs/Industrial Visits:

An Industrial visit was organised for EXTC (S.E. & T.E.) students to Hyderabad from 26th June to 30th June 2016. They visited the following places:

1. Radio city 91.1 FM : Radio City is India's first private FM radio station and was started on July 3, 2001. It broadcasts on 91.1(earlier 91.0 in most of cities) megahertz from Mumbai. This industry was started in Mumbai in 2004, Bengaluru in 2001, Lucknow and New Delhi in 2003. It plays Hindi, English and regional songs.
2. Harshini Tele Systems : It is a leading developer of Telecom Infrastructure in India, starting from Telecom Network Planning and Design through Operation & Maintenance. Harshini Tele Systems was started in January 2004, with the aim of providing quality-oriented services to telecom & power sectors in the area of manufacture, supply and erection of Towers. This industry was established with an objective to provide complete range of services from Network Planning and Design through Operation & Maintenance for telecom networks. It offers a complete range of services for telecom networks viz. design, build and maintain on turnkey basis or in specific defined model.



Photo 1. EXTC DEPT, Students at Radio city FM



Photo 2. EXTC DEPT at Harshini Tele Systems

□ Seminars/Workshops/:



Photo 3. Mr. Sudhanshu Ojha, EXTC DEPT.
from D-Link Academy



Photo 4. SEL Activities, EXTC DEPT.

- 1.SEL of Mobile communications for all batches D19A, D19B and D19C of t opic 'Radiation hazards and remedies' by Mr Vikas singh from NESAs on 20th August 2016.
- 2.SEL of Wireless Networks for all batches D19A, D19B and D19C of topic 'DCS Wireless Technology and Certification” by Mr. Sudhanshu Ojha from D-Link Academy on 07th Feb. 2017.

□ Internships:

45 students attended Internship programs in various industries like BARC, Air India, Tata Power Co. Ltd., Reliance Jio, ONGC, Western Railways, Nelco Ltd. etc.

□ **Achievements/ Scholarships:**

Shresthta Award

On 15th October 2016, Tarleen Dand of EXTC D19C was awarded the Shresthta Award for conquering adversities while excelling in various domains and continued to maintain academic grades.



Photo 5. Mr. Tarleen Dand receiving Shresthta Award , EXTC DEPT.

□ **Other news(Important)**

City college students give rural healthcare a push (DNA NEWS PAPER)

Four final year electronics and telecommunication students of Vivekanand Education Society's Institute of Technology (VESIT) Ashni Damaria, Laveena Dulani, Preksha Goyal and Rahul Goswami have gone beyond textbooks to develop a prototype, the remote patient health monitoring system, that will help doctors monitor rural patients' vital signs to facilitate better diagnosis. What started out as a final year project may now turn into something that could boost rural healthcare in the region. The students pooled in resources to come up with the seed money of Rs 7,500, which was reimbursed by the college. The group came up with suggestions to enhance the device's functioning. "A sensor will be attached to a patient's finger to monitor and record vital signs like blood pressure, heart rate and temperature. The data recorded can be accessed by the doctor through the use of a computer or mobile device in another location," said Damaria. The students developed the prototype under the guidance of their professor Dr. Nadir Charniya. Though the four students have graduated, the next batch will take over from them and add features like an ECG to the device. "We can add a camera to the set up, thereby allowing the doctor to see the patient," said Damaria.



Ph.D Project

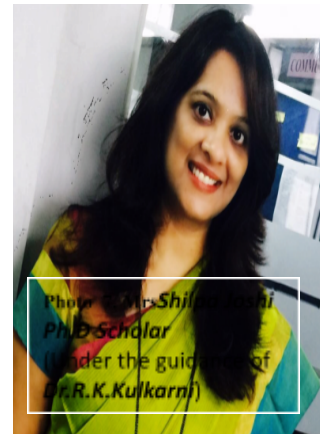
Inter University Research Convention Avishkar
2016-17

Category: 5 Level, Ph.D.Third Prize winner

Title of The paper: Novel Hybrid Filtering Techniques
for Removal of Speckle Noise from Medical Images

Abstract: Medical images are extremely vital for appropriate diagnostic and treatment for patients. However most such medical images (MRI, CT scan, Ultrasound etc.) suffer from quality degradation primarily due to “Speckle Noise”. This proposal suggests different cases of Speckle noise-corrupted and low-resolution images acquired by different imaging modalities. **Multiresolution based** hybrid filtering techniques in spatial domain for the removal of Speckle noise, by topological approach.

The objective is to obtain a high-resolution image from a single noisy low-resolution image. In this research, a set of operations such as Intensity correction, Diffusion filtering and Super Resolution (SR) is suggested on the basis of the detailed literature review and analysis of a wide variety of existing nonlinear filters. The resulting enhanced quality of the noisy images is measured by the statistical quantity measures. The filters will be extremely useful in the perfect diagnosis especially in the rural areas where expensive machinery is not available.



The UG Project

1. The students of D19B EXTC final year - Ramanathan Choodamani, Shivesh Hiranandani, Shubham Koyande, Ketan Vaidya, guided by Mrs. Ashwini Sawant, successfully presented project titled 'Road Divider Based Power Generation and Street Light Illumination' which won the 2nd position in University Final Round of AVISHKAR 2016-17 - A Research Convention. They would be representing University of Mumbai in the next Round. The proposed model demonstrates the generation of electricity with the help of wind energy from the vehicular movement on the highways. The light automation helps in efficient use of generated electricity.



2. Mr. Kiran Parte, Piyush, Ajit, and Kedar students from D14 EXTC and Nishit from D7 CMPN received second prize and Award at National Level Project competition at SAINTGITS College of Engineering, Kottayam Kerala. on 14th Feb 2017.



Other activities

Placement activities

1. It's an immense pleasure to announce that 116 students of 2013 -17 batch have got placement offers from various companies like Accenture, CapGemini, L&TIT L, L&T core and NESIT.
2. Placement cell of EXTC department, GRIN (Get Ready For Industries) conducted a Finishing school for Final year students (2013-17 batch) on Digital Electronics and VLSI design on 16th July 2016. This finishing school was conducted by Mr. Mrugendra Vasmatkar and Mrs. Manisha Joshi.
3. Placement cell of EXTC department, GRIN (Get Ready For Industries) conducted a Finishing school for third year students (2014-18 batch) on Electronics Circuits on 20th August 2016. This Finishing school was conducted by Ms. Rasika Naik, Mrs. Anuradha Jadiya, Mr. Pradeep Yadav and Ms Sneha Lonkar.
4. A Mock Aptitude Test (MAT) on Quantitative Techniques was conducted for third year students (2014-18 batch).



Student Publications

International Conference on Recent Innovative Trends in Computer Science and Applications (ICRITCSA 2016) at M.S. RAMAIAH INSTITUTE OF TECHNOLOGY, BANGALORE. International Journal of Advanced Research in Computer and Communication Engineering(IJARCCCE). Group members - Piyush Devikar, Ajit Krishnamoorthy, Aditya Bhanage, Mohit Singh Chauhan published a paper on "IoT Based Biometric Attendance System".

Extra curricular activities

1. Rutuja Mankar from D14B stood second in a Quiz Competition held in KJ Somaiya College Of Engineering, Vidyavihar.
2. Nadar Babitha from D19A took second place in Football match for West Zone held in Gujarat. He also got qualified for All India level in football match which was held in Chennai.

● Faculty Contribution

□ Publications

- Mrs Shoba Krishanan, published a paper titled “Equalized cluster head election routing protocol for WSN”, in the IJAERS,Vol3,Issue6, pp183-188, June 2016, ISSN 2349-6495

- Mrs Shoba Krishanan, published a paper titled “Noise Reduction in ASR using Kalman Filter”, in the IC on Innovation in Information,Embedded and Communication systems[IEEE], March 2016, Xplore-CFP1572Z-ART, ISBN-978-1-4673-8208-3.

- Mrs Shoba Krishanan, published a paper titled “Equalized cluster head election routing protocol for WSN”, in the IJAERS,Vol3,Issue6, pp183-188, June 2016, ISSN 2349-6495.

- Vipin Nair and Dr. Nadir Charniya, published a paper titled “Recent Trends in Fast and Efficient Large Scale Image Search”, in the IEEE conference on Innovations in Information Embedded and Communication Systems, 2016

- Sarita Kukreja and Nadir Charniya, published a paper titled “Smart and Secure Office Intracom Using Wi-Fi”, in the IEEE International Conference on Electronics and Communication Systems, 2016. ISBN:978-1-4673-7832.

- Dr. Saylee Garge, published a paper titled “Satellite Neural Network based Facial Expression Recognition System”, in the Computation and Communication Technologies,De Gruyter, Oct 2016. ISBN (Online) : 9783110450101, DOI : <https://doi.org/10.1515/9783110450101-010>

- Dr. Saylee Gharge, published a paper titled “Satellite image resolution enhancement using DTCWT and DTCWT based Fusion”, in the International conference on Advances in computing, communication and informatics, Sept 2016
- Dr. Saylee Gharge, published a paper titled “Series load resonant convertor for induction heating application”, in the International conference on electrical ,electronics ,engineering ICEEE Pune, December 2016, Published in IEEE explorer.
- Mrs.Monali Chaudhary, published a paper titled “Hardware and software implementation of weather Satellite Imaging Earth Station”, in the International Conference on Advances in computing, communications and informatics(ICACCI'16), August 2016. ISBE978-1-5090-2030-0
- Dr. Nadir Charnia, published a paper titled “Recent Trends in Fast and Efficient Large Scale Image Search”, in the Innovations in Information Embedded and Communication Systems, March 2016. ISBN: 978-1-4673-8208-3
- Dr. Saylee Gharge, published a paper titled “Performance Evaluation of facial expression Recognition system”, in the International conference on electrical ,electronics ,engineering trends ,June 2016
- Dr. Saylee Gharge, published a paper titled “RF Controlled Digital Wireless Camera”, in the International Journal of recent and innovation trends in computing and communication vol.4 issue 4, April 2016, ISSN 2321-8169.
- Dr. Saylee Gharge, published a paper titled “Authentication system using IRIS Recognition”, in the International Journal of Advanced computer Technology ,Vol.5, no.2, April 2016, ISSN 2319-7900.
- Dr. Saylee Gharge, published a paper titled “Performance evaluation of Satellite image resolution enhancement Techniques based on Wavelet Transform”, in the EEECOS, June 2016.
- Mrs.Monali Chaudhary, published a paper titled “Pipelined processor for Image Compression through Burrows -Wheeler Transform”, in the 3rd International Conference on "Computing for Sustainable Global Development" INDIACOM16, March 2016. ISSN0973-7529; ISBN978-93-80554-20-5.
- Mrs.Monali Chaudhary, published a paper titled “Satellite Image Acquisition using SDR”, in the International Journal on "Innovative Research in Computer and Communication Engineering", April 2016. ISSN(online): 2320-9801, ISSN(print): 2320-9798.
- Mr. Shobhit K. Khandare, published a paper titled “Environment Monitoring On Traffic Islands”, in the International Journal of Innovative Research in Computer & Communication Engineering, April 2016. ISSN 2320-9801.
- Mr. Shobhit K. Khandare, published a paper titled “Automated Medicine Dispensing Machine”, in the International Journal Of Technical Research And Applications, June 2016. ISSN 2320-8163

- Mr. Shobhit K. Khandare, published a paper titled “. Indoor Communication Through Li-Fi”, in the International Journal of Innovative Research in Computer & Communication Engineering, March 2016. ISSN 2320-9801.

- Mr. Sanjay Mirchandani, published a paper titled “Speech & Web Based Appliance Control”, in the International Journal of Science, Engineering and Technology Research, April-2016. ISSN: 2278 – 7798.

- Mrs. Neeta Chavan, published a paper titled “Performance Evaluation of Facial Expression Recognition System”, in the 3rd International conference on EEEECOS- June 2016.

- Mrs. Usha.Narayan, published a paper titled “Smart Ambulance Rescue System”, in the Journal of Technological Research in Engineering (IJTRE) March 2016., ISSN-2347-4718.

Research Projects

Research grant

1. Dr. Ramesh Kulkarni got an approval of Research grant by the University of Mumbai for the project titled ”Internet of Things based Energy saving System”.

2. Dr. C.D.Rawat got an approval of Research grant by the University of Mumbai for the project titled ”Speaking Gloves”.

3. Dr. (Mrs.) Ranjan Bala Jain got an approval of Research grant by the University of Mumbai for the project titled ”Video Streaming with Multipath TCP and Enhanced Security”

4. Dr. (Mrs.) Saylee Gharge got an approval of Research grant by the University of Mumbai for the project titled ”Detection of unusual activity in video using unsupervised detection algorithm”.

5. Mrs. Rasika Naik got an approval of Research grant by the University of Mumbai for the project titled ”Automatic Detection & Notification of Potholes and Humps on roads to aid drivers”.

6. Mrs. Manisha Joshi got an approval of Research grant by the University of Mumbai for the project titled ”Automatic Herbicides, Pesticides Sprayer Agricultural Robot”.

7. Mrs. Jyoti Dawkhar Bagate got an approval of Research grant by the University of Mumbai for the project titled ”Portable Heart Attack Detector in early stage”.

Conference / Seminar attended

1. Dr. Ranjan Bala Jain and Dr. Saylee Gharge attended a conference on New initiatives in Apprenticeship Training organized by Board of apprenticeship (Western region) Mumbai on 20th Oct 2016.

□ Workshop conducted / attended

1. Mrs Shoba Krishnan delivered a talk on OBA at Lokmanya Tilak College of Engineering Navi Mumbai



2. Dr. Chandan Singh Rawat delivered a talk on "**Hybrid Image Compression**" on Thursday (29th Sep, 2016) for all the faculties, under Research Forum, on behalf of the EXTC Department, VESIT



3. Dr. C D Rawat, Dr. Ranjan Bala Jain and Mrs. Manisha Chattopadhyay attended one day workshop on ComSol Day on 10th June 2016 organized by ComSol.
4. Dr. Ranjan Bala Jain delivered a Talk on Optical Communication and Networking on 10th October 2016 at Lokmanya Tilak College of Engineering organized by IETE LTCOE chapter.
5. Dr. Ranjan Bala Jain delivered a talk on Outcome based NBA Process and Attainment on 18th Nov.2016 at Lokmanya Tilak College of Engineering Navi Mumbai in the Faculty Development Programme.
6. Dr. Ranjan Bala Jain attended a one day workshop on Assessment, Attainment and Evaluation of POs, PSOs and COs. in MSBTE sponsored FDTP "Outcome Based Education-Innovative Teaching learning Process, Assessment and Evaluation" T VES Polytechnic Mumbai on 3rd January 2017.

Other achievements / awards

Patents

Mrs. Manisha Joshi has filed a patent, the design application number is 286362 and 28664 for HELMET and SOLAR HELMET in classes 02-03 and 13-99.

Commendation

Dr. R.K. Kulkarni has recently been appointed as member, Board of studies of EXTC at Mumbai University. He has been driving the syllabus change process. M.E. syllabus is modified and the undergraduate syllabus is undergoing changes from credit based to choice based system.

Other news/ activities

Participation

1. Dr. (Mrs.) Ranjan Bala Jain worked as Session Chair and Paper review: in International Conference **ICETCC-2016** held at Saraswati College of Engineering, Kharghar, Navi Mumbai on **12th Jan. 2017**

2. Mr. Mrugendra Vasmatkar participated as resource person for short term training program on "Design Aspects in CMOS Analog Circuits, ASIC and MEMS" held from June 27th 2016 to July 1st, 2016 organized by Electronics Dept, SHAH and ANCHOR Eng College. Mrs. Manisha Joshi participated in the same training program.

Staff Industrial Visit

The department of Electronics & Telecommunication Engineering, VESIT organized a Staff visit to the POLICE COMMISSIONERATE OFFICE, Navi Mumbai, Belapur, on 5th January 2017.

Mr. Vinod Kamble (Police Constable, Kharghar) guided the team during the visit.



Mr. Pradip Kannalu, ASP (Technical Dept.) with VESIT staff at the Advance CCTV Setup at CBD Belapur Railway Station

The department of Electronics & Telecommunication Engineering along with Instrumentation Engineering Department, VESIT organized a Staff visit to the Rashtriya Chemical Fertilizers Ltd. (RCF), Trombay, on 9th January 2017.

The Staff visit to the Rashtriya Chemical Fertilizers Ltd. (RCF), Trombay was helpful in understanding the importance of solar panels for energy generation. Such setups must be encouraged as a substitute to our traditional power generation resources. We can encourage such setups in our college premises



Mrs. Shoba Krishnan

HOD, EXTC Dept.