ELECTRONICA

NEWS-LETTER

OF

ELECTRONICS ENGINEERING DEPARTMENT

VOLUME 4, ISSUE 2, (1 January 2020-1 June 2020)

DISCOVERING
ELECTRONICS
ENGINEERING

Contents

List of Faculty/Staff Members in the Department

Faculty Members

1. Prof. Girish G. Bhide (Associate Professor)

2. Prof. Vrishali V. Nimbalkar(Assistant Professor)

3. Prof. Amol R. Sutar (Assistant Professor)

4. Prof. Sandeep R. Nalage(Assistant Professor)

5. Prof. Mahesh A. Jadhav (Assistant Professor)

6. Prof. Rahulkumar P. Tivarekar (Assistant Professor)

7. Prof. Ashish B. Vartak (Assistant Professor)

8. Prof. Rupesh B. Ingle (Assistant Professor)

9. Prof. Suraj A. Shete (Assistant Professor)

Staff Members

10. *Mr. Bharat M. Biradar*

11. *Mr. Paresh S. Sambare*

Vision

- To become a leading center of knowledge and produce graduates who can adapt to ever growing field of electronics and integrated technology.

Mission

- M1: To strengthen teaching-learning process and provide state of the art resources to help the students acquire global competency.
- M2: To offer technical skills, creativity, and integration to help the students to solve real life problems.
- M3: To provide value addition training programs such as soft skills, social and ethical values for all around development of the students to become successful in competitive career.

Program Specific Outcomes (PSOs)

- Students shall acquire knowledge in analog circuit design, digital system design, microcontroller programming, instrumentation, and VLSI chip design.

- Students shall utilize Electronics Engineering knowledge to create and design innovative products and solutions for real life problems.

About The Department

Department of Electronics Engineering was established as the first Engineering department of FAMT in 1996. Department has 09 faculty members experienced and post graduates from renowned institutes like IISc, COEP, VJTI, etc. Faculty has several

publications, books and industry projects to their credit. Department encourages faculty to attend conferences, seminars and workshops so that they can enhance their knowledge and remain updated with the current changes in engineering field, which will help them to carry out their research and development activity. Also all of the faculties undertake NPTEL on-line courses which are conducted by IIT's and IISc and have secured top 1%, top 5% ranking score and Elite scores for the courses undertaken by them. Department has a separate Departmental library, well-equipped 8 laboratories, wi-fi facility, ICT enabled class-room and a study friendly environment. Along with regular curricular teaching, department organizes workshops, course-enrichments, seminars and add-on courses on regular basis to impart additional knowledge to students, enhance their technical skills so that they can adapt to current industry requirement. Industrial training and Industrial visits are highly encouraged by the Department. A technical event named "Electrofocus" is organized by department students committee (Electronics Student Technical Association-ESTA) every year so that along with technical skill development they learn management skills also. Over the span of 20 years, 1132 students have been graduated and our graduated students have occupied key positions in industry, academics and have taken up ME and MS programs in India and abroad.. Department has its own annual e-newsletter published on college website informing about the activities carried out by the department.

Scope and Opportunities in Electronics Engineering

Electronics Engineering has a major role to play in virtually every industry. Electronics Engineers are involved in designing, creating, developing, fabricating, testing and supervising an extensive variety of technologies required for computers, mobile phones, robotics, automated systems, integrated circuits (IC's), television, radio, as well as various other electronic gadgets and appliances, tracking devices, electric motors and power generators. The field of electronics covers a wide range of applications and devices which make our life easier and enjoyable by helping to collect, distribute, control & transmit information. Electronics Engineering is crucial in increasing productivity in the industrial sectors like oil, energy, agriculture, steel, petroleum, and chemical. These

industries depend on electronic systems for daily processes and functions. The health-care sector relies heavily on Electronics Engineering. It also has major contribution in ensuring safety in transportation, industries and houses. Job opportunities for Electronics Engineers in government and public sector are listed as follows DRDO, HAL, ISRO, BEL, IOC, BSNL, MTNL, Indian Railways, All India Radio, etc.

Highlights of the Department

- Workshops, course enrichment, add-on courses and project based learning is conducted on regular basis to enhance employability of student.
- Emphasis on Industrial training and industry visits for industry-institute interaction.
- Motivation for industry based (sponsored) projects.
- Outreach & extension activities for all round personality development of students.
- Spacious 08 laboratories with ample equipment, instruments, components & consumables.
- A technical event named "Electrofocus2K20" was organized by students' association.
- Well qualified Teaching faculty (09) and experienced Lab Assistants (02) with a good retentation ratio.
- 52 PC's with good configuration
- ICT enabled Classrooms
- Departmental Library with approximately 317 titles
- Regular conduction of Workshops, course enrichment's, Add-On courses and various Competitions.
- Alumni placed worldwide in renowned companies like INTEL, IBM, Nvidia, Siemens, Analog Devices India, TCS, Cognizant, Accenture, Capgemini, Vodafone, Finolex Cabel Goa, Qspiders, Yashsawi Group Pune, SEED Infotech, CEM Electromech, Infotech, Flex, etc,.

Programs organized by the Department

1] Department Advisory Board Meeting

The Department Advisory Board Meeting is held annually and it gives guidelines to the department to progress academically and remain up to date with the current requirements of the industry. The third meeting of the Department Advisory Board was conducted on 05th March 2020. The following are the members of DAB Committee.

Sr.No.	Name of the Person	Designation/Role	Organization
1.	Prof. G. G. Bhide	Associate professor & HOD	FAMT, Ratnagiri
2.	/Prof. V. V. Nimbalkar	Assistant Professor	FAMT, Ratnagiri
3.	Prof. S. R. Nalage	Assistant Professor	FAMT, Ratnagiri
4.	Dr. Mahesh Chavan	Academician	Associate Professor & Dean Academics, KIT Kolhapur
5.	Mr. Shreyash Sawant	Entrepreneur	Surekh Motors, Ratnagiri
6.	Mr. Tejas Nachankar	Alumni of Electronics	FAMT, Ratnagiri
7.	Mrs. Deepti V. Pandit	Industry Person	BSNL, Ratnagiri
8.	Mr. Rajendra Sawaratkar	Parent	FAMT, Ratnagiri
9.	Ms. Samiksha Dhangade	Student – BE Electronics	FAMT, Ratnagiri
10.	Mr. Suyog Gokhale	Student – TE Electronics	FAMT, Ratnagiri

Ms. Samiksha Dhangade introduced and welcomed all Departmental Advisory Board (DAB) members present for the meeting. All the members were felicitated by Prof. S. R Nalage and Mr. Suyog Gokhale. The meeting was conducted in EN-1/13 from 11.00 am to 1.30 pm. Prof. G.G. Bhide gave a presentation on departmental labs, result analysis, and research carried out by the students and faculty, workshops, seminars, course enrichments carried out by the department for students.

Action taken report of the previous DAB meeting held during the academic year 2018-19 was shared with the DAB members. The presentation was then followed by a discussion in which DAB members gave additional suggestions for the betterment and improvement of the department. The suggestions given by Dr. Mahesh Chavan and Mr. Tejas Nachankar were mainly focused on the industry-institute interaction, skill enhancement, its

possibilities, and advantages for becoming an entrepreneur. Dr. Mahesh Chavan also made aware of the forthcoming job opportunities for students in foreign countries and preparing the students for the same.

The department faculty members Prof. V. V. Nimbalkar, Prof. R. P. Tiverekar, Prof. A. R. Sutar, Prof. R. B. Ingale, Prof. A. B. Vartak, Prof. S. R. Nalage, and Prof. M. A. Jadhav were felicitated for their contribution towards department as well as for securing 1% and 2% topper and Elite certification in various NPTEL exams and for carrying various research activities in the department. Notable mention of Prof. S. S. Shete for achieving the "Young Researcher Award" in Signal Processing andalso for receiving the "Bright Engineer Award" during the 4th International Convention on Interdisciplinary Research for Sustainable Development 2020,in the Confederation of Indian Industry Chandigarh on 10th of January 2020.
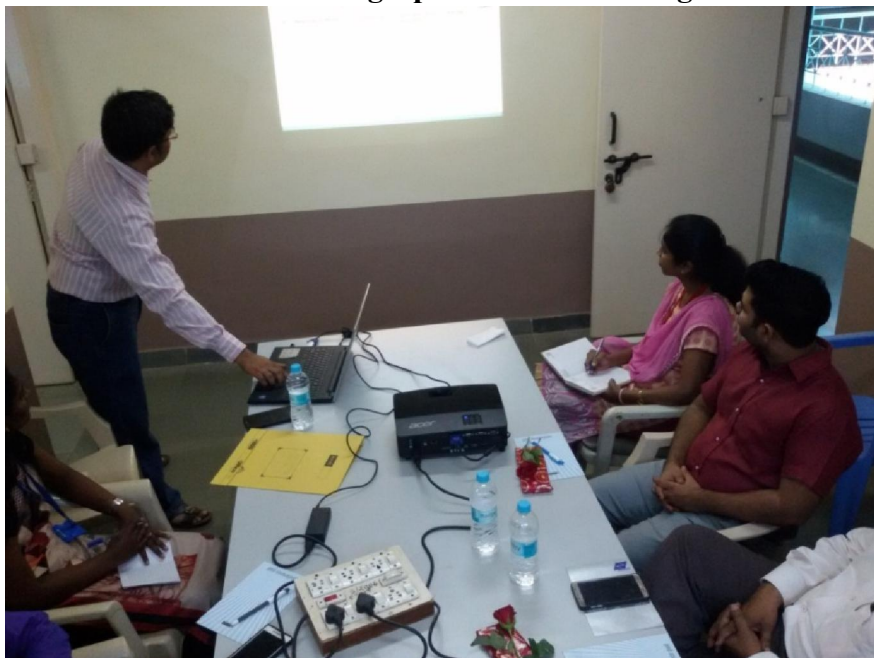
The suggestions given by the students, parents, faculty, and other DAB members were noted by Prof. V. V. Nimbalkar. The meeting ended with a vote of thanks given by Prof. S. R. Nalage.
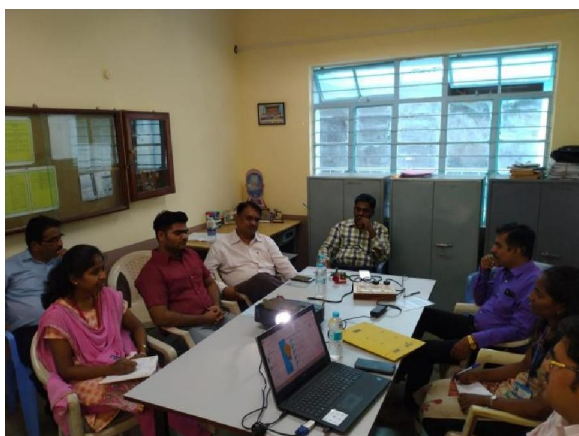
Photographs of DAB Meeting

Mr. Suyog Gokhale felicitating Mr. Tejas Nachankar

Photographs of DAB Meeting

HoD, Prof. G. G. Bhide giving Department Presentation to DAB members

Discussion Session during the DAB meeting

Prof. Mahesh Jadhav felicitated by Prof. Girish G. Bhide (HoD Electronics Engg.)

2] National Level Quiz on Computer Communication

During lockdown due to pandemic COVID-19, National level Computer Communication Network quiz activity was conducted by the Department of Electronics Engineering in order to brush up basic knowledge and understanding in the field of Computer Communication Network.

National Level Quiz on Computer Communication Network

The lockdown is good time to stay updated on various technological areas. In view of this, the primary objective of this test was to improve knowledge in the field of computer communication network. This Google quiz based test consisting of 20 MCQs was conducted between 21th June, 2020 to 29th June, 2020. The registration and certification

was absolutely free. All the participants scoring more than 60% score, were able to receive E-certificate. More than 820 participants including students, faculty members, alumi and industry persons from Maharashtra and other states across the India attempted this quiz. Prof. Ashish B. Vartak (Assistant Professor, Electronics Dept.) co-ordinated this quiz.
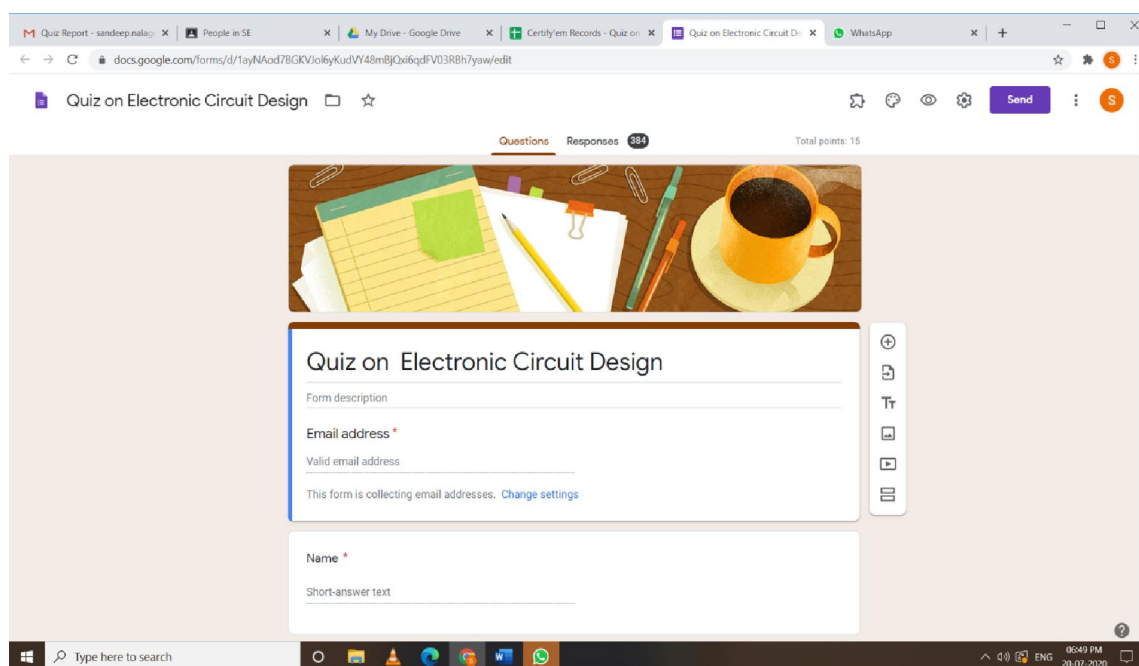
Both of these activities were planned and executed with the motivation and under the guidance of Prof. G.G.Bhide (HOD, Electronics Engg. Dept.).

3]   National Level Quiz on Electronic Circuit Design

Covid-19 pandemic has lead to lockdown so as to keep ourselves safe by staying at home. But learning and gaining knowledge has no boundaries. Lockdown does not stop anyone from learning. In view of this Department of Electronics Engineering, FAMT conducted a National level on-line Quiz on "Electronic Circuit Design" during 15th June, 2020 to 21st June, 2020.

The objective of the Quiz was to refresh the knowledge on Electronic Circuit Design. The Quiz comprised of 15 multiple choice questions. It could be attempted by any Engineering personal since the registration and certification was free of cost. Those who secured more than 60% score in the Quiz received an E-certificate. Total 373 participants attempted the Quiz. The participants were from Industry, teachers and students from various colleges as well as our alumni. We received response from Maharashtra as well as from other states too.

Prof.Sandeep R. Nalage coordinated the above activity under the guidance and motivation of Prof. Girish G Bhide (HoD, Electronics Engineering Department).

Snap-shot of Quiz "Electronic Circuit Design"

4] Electrofocus2K20:

A two days intercollegiate technical / non-technical festival *Electrofocus-2K20* was organized by the Electronics Students Technical Association (ESTA) at Department of Electronics Engineering from 27th February 2020 (Thursday) to 28th February 2020 (Friday).

The theme of event was based on Technical and Non-Technical competitions such as Circuit Building, Arduino Coding, Slow Motorcycling, Stamp Jump, Calci War, Robo Race, PUBG Squad, Tech Quiz with Logo Hunt, Techno Treasure Hunt, Tug of War, Mobile Photography, Mehendi, Sketching, Rubik's Cube Challenge etc. The department was nicely decorated with the theme of Indian Navy, to give tribue to the great warrior-king Chhatrapati Shivaji Maharaj as he was known as the Father of Indian Navy.

Respected Principal of Finolex Academy of Management and Technology Dr. Kaushal K. Prasad (Ph. D. Mechanical), inaugurated the event by unknotting the IoT based automatic inauguration ribbon. Total 394 students had participated in various competitions out of which 54 students were from other colleges in Ratnagiri, Devrukh, Kankavli, Pune etc. which made this event truly intercollegiate. The winners of various competitions were rewarded with cash prize and certificates.

This event was aimed at helping students in exploring their creativity and technical skills. The confidence level in studnets seemed lifted up when they understood how nontechnical events such as Mobile Photography, Rubiks Cube challenge can also have technical bcakground and logical relations.

Mr. Hrushikesh B. Juvale (Student Chief Coordinator, ESTA), Ms. Mayuri R. Sawaratkar (Student Assistant Chief Coordinator, ESTA), and Mr. Rahulkumar P. Tivarekar (Faculty In-charge, ESTA) smoothly carried out all the knowledge and fun activities with the support of all teaching and non-teaching staff of Electronics Engineering Department under the guidance and suggestions of Prof. Girish. G. Bhide, HoD.
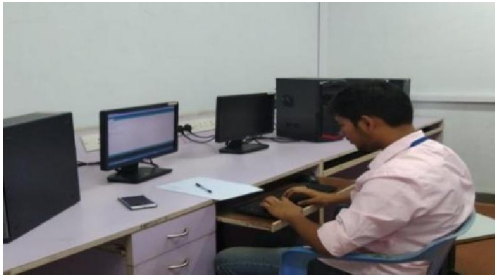
Photographs of A Two days intercollegiate technical / non-technical festival Electrofocus-2K20

Principal Dr. Kaushal Prasad Inaugurated event with IoT based automatic unknotting Ribbon

HOD Prof. G. G. Bhide addresses students at Inauguration Ceremony

Competition: Arduino Coding

Competition: Calci War

Competition: Circuit Building

Competition: Robo Race

Competition: Mehendi

Competition: Mobile Photography

Competition: Rubiks Cube Challenge

Competition: Sketching

Competition: Tug of War

Competition: Techno Quiz

Competition: Techno Treasure Hunt

Competition: Stamp Jump

Photographs of A Two days intercollegiate technical / non-technical festival Electrofocus-2K20

5] Training Program on VLSI & Embedded Systems for Diploma students of Govt. Polytechnic, Ratnagiri.

The Department of Electronics Engineering and Department of Electronics and Telecommunication Engineering in collaboration organized a one-day "**Training program on VLSI and Embedded Systems**" on 15th February 2020 for Final year Diploma students.

Students from Government Polytechnic, Ratnagiri and from Rajendra Mane Polytechnic, Ambav participated in the Training program. There were total 35 participants. Prof.T. N. Hailnalkar accompanied the students. The objective of the training was to expose students to the hardware implementation of VLSI Design using CPLD/FPGA and Embedded System design using the ARM processor. The training program provided the knowledge of simulation and synthesis using Quartus II software in the VLSI domain and Keil4 software for ARM in the Embedded

domain. Along with this, a demonstration of B.E. projects was arranged to explore the real applications of technology.

Dr. Kaushal K. Prasad, Principal, FAMT, addressed students, making them realize the importance of higher education for better career opportunities ahead.

The workshop was conducted in four sessions comprising of project demonstrations, laboratory visits, theory, and hands-on sessions. BE students of both the departments demonstrated their projects to the students, which appeared to be very interactive. Prof. S. S. Goilkar, demonstrated Analog and Digital Communication experiments using communication trainer kits. **Prof. R.R. Kulkarni**, E&Tc department worked as the resource person for the training program on VLSI. She covered the topics as follows, career scope in VLSI domain, Chip Design process, introduction to CPLD MAX3000A Board, and writing and implementing a digital program in VHDL, using Quartus-II software and MAX3000 CPLD board.

The training program on Embedded Systems was conducted by **Prof. V. V. Nimbalkar**, Electronics Department. The session began with overview of ARM processors used in current smart phones, various applications of ARM processors, History of ARM processors, Features of ARM7 processor, ARM architecture, introduction to LPC2148-ARM7 Development Board and Embedded C programming for ARM7 processor. Program for ARM7 was written in Keil-micro-vision4(KeilµV4) software and the program(Hex file) was transferred to ARM7-LPC2148 Development Board.

Students from both the departments, Narendra Warang, Shivam Todankar, Abhishek Lingayat, Ruturaj Joshi, Suyog Gokhale, Tejas Sarpodar and Reefat Solkar, were the coordinators for the training sessions. **Mr. S. R. Pardule** offered very active support for the smooth conduct of the workshop. The program ended with certificate distribution to all the participants.
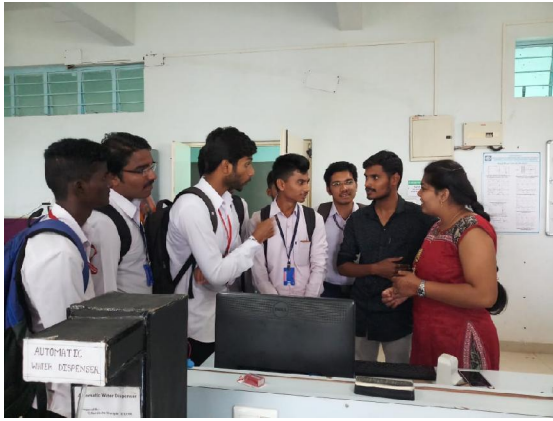
The entire training program was conducted under the valuable guidance of Prof. G. G. Bhide, HOD, Electronics Engineering Department and Prof. S. V. Chougule, HOD, Elecronics and Telecommunication Department.

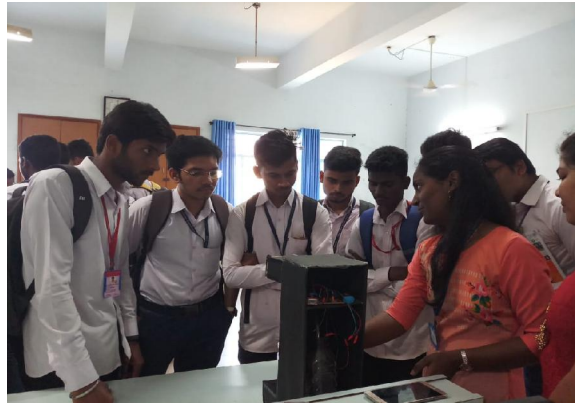**Photograph of "Training Program on VLSI & Embedded Systems"**

Dr.Kaushal Prasad felicitating Prof. T. N. Hailnalkar

Voice Controlled Music System using Raspberry-Pi:Project Demo by BE students

Automatic Water Dispenser: Project Demo by BE students

Prof V. V. Nimbalkar conducting Embedded System Session

Certificate Distribution By Prof. R. R. Kulkarni

Certificate Distribution By Prof. S. V. Chougule (HOD E&Tc Dept,.)

6] Various Other Activities in the Department:

27 students have undertaken Industrial Internship Training program. BE and TE students, Mr Sachin Prabhu, Mr. Hrikesh Juvale, Mr. Akosh Raghuvaram and Mr. Ajinkya Kadam participated in Internal Hakathon a project competition, organized by Department of IT, FAMT for Smart India Hakathon. Third Year Electronics Engineer students welcomed Second Year Electronics engineering students by giving them a welcome party.

Faculty members and students also participated in various workshops, various FDP, webinars, STTPs, etc. The details is as follows:-

Sr. No.	Name of Faculty	FDP/STTP/Workshop/Webinar/Coursera/NPTEL/IITB On-line Spoken Tutorial/Others
1	G. G. Bhide	Workshop-1, FDP-2, Coursera Course-1, STTP-1, Webinar-7.
2	V. V. Nimbalkar	Workshop-2, FDP-3, STTP-1, Coursera courses-2, Webinar-6, On-line Spoken Tutorial-1, One Month Industrial Training.
3	A. R. Sutar	Workshop-1, FDP-1, NPTEL-1, STTP-1, Webinar-1
4	S. R. Nalage	Workshop-2, Webinar-3, One Month Industrial Traning.
5	M. A. Jadhav	FDP-1, Coursera courses-2, STTP-2, Webinar-2, IITB On-line Spoken Tutorial-2, Others-1.
6	R. P. Tiverekar	Workshop-2, FDP-1, Webinar-1, IITB On-line Spoken Tutorial-1.
7	A. B. Vartak	FDP-4, Coursera courses-2, STTP-3, Webinar-2, IITB On-line Spoken Tutorial-1.
8	R. B. Ingale	Workshop-1, Coursera Course-1

Faculty / Students Achievements

1] Students Achievement:

Sr. No.	Name of Students	Details
1	Mr. Omkar Bhave, Mr. Parth Sawant (SE ETRX)	Selected for "e-Yantra Robotics Competition" organized by IIT Bombay.

2] Faculty Achievement:

Sr. No.	Name of Students	Details
1	Mr. Suraj Shete	Bright Engineer Award in the field of Image Processing

3] Journal/Conference Publications

1. Prof. Suraj A. Shete, Prof. V. D. Chavan and Prof. R. P. Tiverekar, "Multi-Wavelet Transform-Video Encoding for Content Protection With Secret Key", Journal of Emerging Technologies and Innovative Research.
2. Prof. Suraj A. Shete is a member of "Associate Member of Institute of Research Engineers and Doctors".

PUBLISHER

Editors

Prof. Girish G. Bhide (HOD)
Prof. Vrishali V. Nimbalkar

Email – hodetx@famt.ac.in