

End of 2017 in Learning
June 2017

Enhancing



Sophia-Meet the first-ever robot citizen

In October 2017, the robot became a Saudi Arabian citizen, the first robot to receive citizenship of any country. Sophia is Hanson Robotics' latest and most advanced robot to date and a cultural icon. She has become a media darling, appearing on major media outlets around the world, igniting the interest of people regardless of age, gender, and culture, even gracing the cover of one of the top fashion magazines. Her press coverage has a potential reach of over ten billion readers in 2017.

Sophia is an evolving genius machine. Her incredible human likeness, expressiveness, and remarkable story as an awakening robot over time makes her a fascinating front-page technology story.

By Ms. Gallowad A.P.

UPCOMING EVENTS

In this semester we are planning for our annual student event TELENT HUNT 2K18

In TELENT HUNT students are going to organize various events like Robo-racing, Paper presentation, Quiz contest and Circuit Sudoku. Winner will awarded with trophies and certificates. Last year 200 students were participated in this events. Through this we got success in front of motivating our student to participated in competitive events, not only for our institute but also national as well as international competitions.

Industrial visit for 2nd and 3rd year students

We are planning industrial visits for our students to Akashwari Satara and Hem Electronics pvt. Ltd. Miraj and Welspun Energy Solapur power generation plant located at Mangalwedha.

Expert Lecture

We plan expert lecture over the syllabus which conducted by industry experts for students.

Student Development

Department conducted short term professional courses in that we take 10 to 15 days workshop for student. Last vacation we conducted workshop for Embedded System and PLC programming. Upcoming vacation we plan for arduino project development and PCB Design.

"Becoming a Electronics Engineer means

Finding new era in world of technology and Communication
with out this world is nothing

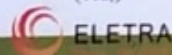
EDITORIAL

It gives us great pleasure to present the 4 volume and second issue of our departmental newsletter "ELETRA", which gives us the opportunity to focus the achievements in our department and new trends in Electronics and Telecommunication field.

I am thankful to all the students and faculties who have contributed during the preparation of this newsletter. We have tried our best and given positive efforts, expecting creative responses from everyone to continue the flow of knowledge through this newsletter.

Mr. P. S. Valate
Student Coordinator
Ms. Korape Vaishnavi S.
(TYEJ)

Mr. M. A. Kumbhar
HOD



Volume 5
ISSUE

02

January
2018

Celebrating 69th
Republic Day

SVERI's College of Engineering (Polytechnic), Pandharpur.

Department of Electronics and
Telecommunication Engineering

ELETRA TIMES

Electronics Trends and Applications

ABOUT DEPARTMENT

Electronics And Telecommunication Engineering Departments had been start in 2008, with intake of 60. Our departments have 6 well-equipped laboratories. We have established the association "Talent Hunt" in which we conduct various activities like Quiz competition, Power point presentation, Robotics, Poster presentation, LAN gaming etc. This departments have organized various expert lectures and workshops like Embedded System, PLC and PCB Designing for the overall development of students. This type of activities are used to get better result in academic and overall development of students.



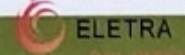
Millimetre-wave technology key to future 5G applications

The availability of new mmWave frequency bands will be key to achieving the ambitious mobile data rate targets associated with 5G. However, research has now shown that those issues can be addressed and overcome. Utilizing these bands will be a key factor in the new 5G radio interface. While the specific frequency bands are yet to be finalized, as an independent design house working with many of the key industry players Plextek RFI has been able to form a picture of the bands where most current design activity is taking place. The likely operating frequencies include the nominal 28GHz and 39GHz bands, all of which are already licensed by the FCC in the USA. In Europe, the Radio Spectrum Policy Group launched a strategic roadmap for 5G in November 2016 in which, in addition to specifying new and existing sub-6GHz bands, it recommended the 26GHz band for the high-bandwidth spectrum that will be needed to provide ultra-high capacity. In the UK Ofcom has said it wants to promote this as the 'pioneer' band for 5G in Europe and as the priority band for global harmonisation. Bands centered at 32GHz and 42GHz have also been highlighted as longer-term options.



Because of the high target data rates for 5G, large chunks of contiguous spectrum will often be required, and as a result mmWave is considered to be a key component in the roll-out of 5G. Until recently, the mmWave bands above 24GHz that are under consideration were considered inappropriate for mobile and non-line-of-sight use.

By Mr. Kumbhar M.A.



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What will be the scope of ECE after 2020 in India?

Year 2017

We have 4G, 5G services. Data rates are going up to 10-100 Gbps. Current generation general purpose microprocessors have quad cores, octa cores. Artificial intelligence and virtual reality has recently developed. Internet of things, gesture controlled home automation, and many more things have evolved uptill now.

Year 2020

Our needs and demands will increase. Earlier we were happy with data rates of 10 Gbps, but now we will need be needing more. 6G will arrive in the market. Requirement of faster processing will lead to evolution of 16-32 core processors. Artificial intelligence virtual reality will reach to new heights. Robotics will give us Butler bots, new companions to help us in daily work. There is no end to technology. It will keep on flourishing. There will always be a great score in this field

JOB OPPORTUNITIES FOR ELECTRONICS ENGINEER

Engineering is a popular and specialized industry. As an electronics engineer you could be working with high-level technology in a range of sectors. Electronics engineers design, develop and test components, devices, systems or equipment that use electricity as part of their source of power. These components include capacitors, diodes, resistors and transistors. Work can be found in a variety of areas as electronics are used in many things including:

- acoustics;
- defence;
- medical instruments;
- mobile phones;
- nanotechnology;
- radio and satellite
- communication

By Mr. Valate P. S.



What makes a good electronics and communications engineer?

- First, you should understand what is Electronics. This may sound silly. But try to explain to someone who does not know anything about electronics, without using the terms "Diode", "Transistor", "Circuit", "IC", "Microprocessor", etc.
- Second, Electronics is a branch of Electrical. So try to be strong in Electrical Fundamentals
- Third, Understand the Basic Transistor Circuit.
- Fourth, understand the Digital Circuit thoroughly from AND, OR, NOT gates to Microprocessors.
- Fifth, Understand C language thoroughly. It is a simple set of rules defined by Dennis Richie.

You can master C language with in a shortest time.

- Sixth, Master C programming skill. This is the most essential skill for the ECE students today. Without this skill you will find it difficult to enter into electronics core companies.

- Seventh, Buy a Microcontroller kit and apply the C programming skill to do good electronic projects by yourself without copying a single line of code from net/book/friends.

- These 7 steps will make you to eligible get a job in Electronics industry. Try to understand that in Core Industries Basics is the KING. So always

By Mr. Kumbhar M. A.

"Becoming a electronics engineer means you must actively take the reins in the world of communication"

DEPARTMENTAL ACHIEVEMENTS IN ACADEMIC YEAR 2017-18

STUDENTS

NO.	NAME OF STUDENT	SUBJECT	MARKS
1	FULARE PRATIKSHA VIJAY	AMS	100
2	LOKARE AMRUTA RAJABHAU	AMS	100
3	GEND PAYAL NAVNATH	AMS	100
4	MARAL SAYALI SUDHIR	AMS	100
5	KALE SURAJ DASHRATH	AMS	100
6	FULARE PRATIKSHA VIJAY	EEN	93
7	GEND PAYAL NAVNATH	EDC	90
8	KORAPE VAISHNAVI SANJAY	CHN	46/50
9	PATIL AIMAN AYUB	CHN	46/50
10	MORE VAISHNAVI JAYSING	CHN	46/50
11	SALUNKHE ROHINI AMBADAS	BMS	100
12	PATIL MADHURI DHANANJAY	BMS	100
	MUJAWAR SINRAN LATIF	ENGLISH	92

FACULTY

- Our staffs had gone through the various trainings at prasar bharti pune and IIT Mumbai for short term training and photovoltaic power generation.
- Two staff of our department are pursuing ME & two staff have completed ME in various field.
- All staff are involved in R & D activities and in the verge of completion of several projects sponsored by agencies like

DEPARTMENTAL RESULT FOR A.Y. 2017-18

SR. No.	NAME OF STUDENT	MARKS %	CLASS
1	Ms. SALUNKHE ROHINI AMBADAS	95.29	1 ST YEAR
2	Ms. SONAR SHASHANK RAMAKANT	93.71	1 ST YEAR
3	Ms. PATIL PARVATI TAMANNA	92.46	1 ST YEAR
1	Ms. FULARE PRATIKSHA VIJAY	91.88	2 ND YEAR
2	Ms. GEND PAYAL NAVNATH	90.5	2 ND YEAR
3	MR. KALE SURAJ DASHRATH	87	2 ND YEAR
1	Ms. KUMBHAR SEEMA RAMDAS	91.33	3 RD YEAR
2	Ms. KORAPE VAISHNAVI SANJAY	90.33	3 RD YEAR
3	Ms. RANDIVE ASHWINI BRAMHADEV	90.22	3 RD YEAR

EYE ON IT

TECHNOLOGIES DEVELOPED BY DRDO ELECTRONICS DEPT. GOVT. OF INDIA.

- Battlefield Surveillance Radar
- EO/CM-Class Laser System
- D-CAR
- Revathi
- Weapon Locating Radar
- Sangraha
- Samyukta
- Antenna Systems
- Communication Systems
- Briefcase SATCOM Terminal
- Sectel
- Sujav
- Integrated Weapon System Simulation
- Multi-Detector Tomography System
- Laser Designator PRF Code Recognition Device
- Palmtop Green Microchip Laser Module
- Passive Q-Switching
- Threshold Detector

SOFTWARE USED FOR ELECTRONICS.

- MATLAB
- Xilinx ISE
- Altera Quartus
- Code Composer Studio
- HFSS
- OptSim
- Commsim
- µVision IDE
- Emu8086
- Proteus Design Suite
- PSpice
- Agilent Advanced Design System

