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Newsletter by the Department of
Electronics & Communication Engineering

Vol 5, Issue 1, January 2020



**SHRI MADHWA VADIRAJA
INSTITUTE OF TECHNOLOGY AND MANAGEMENT**

(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)

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Newsletter of the Department of

ELECTRONICS & COMMUNICATION ENGINEERING

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY & MANAGEMENT

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Education as a profession is challenging and hence interesting. Here one works to meet the needs of future. A student taking admission in an engineering college at an age of 18 or 19 years is most likely to work in the domain and retire at the age of 60. Considering the rate at which the technology is changing, it is difficult to even predict the state of the technology in the next 5 years. Thus in technical education we are actually preparing the students for something that is continuously changing and to a greater extent unpredictable.

Understanding this, I feel that one of the most important skills that a student is required to meet these changing and unpredictable needs is creativity. It is the ability to think differently, unconventionally and with a new perspective. As per Sir Kenneth Robinson, one of the leading educationalists of current times, creativity is as important now in education as literacy itself. All humans have inherent potential and ability to be creative. Picasso, the legendary artist, once said that all children are born artist, the problem is to remain an artist as one grows up. Thus what is important is to properly nurture this skill.

Like many other human talents, creativity is also buried within and it requires creating proper environment for it to show up and flourish. In education system the conventional way of judging students just on their abilities to score marks in examinations, which almost follows a standard pattern, and thereby encouraging them or compelling them for this does not help to develop their creative talents; in fact this crumples it.

Any industrial process can be standardized because the raw material as input and product as output of the process are not diverse. However, students have their own pockets of strengths and diverse thinking pattern, thus education can never be standardized and any effort towards this will kill the sole purpose of education. Education has to be personalized. Educators have to play a proactive role in ensuring the right environment for creative talents to flourish. Classrooms should be more lively and interesting. This can be achieved through the use of different teaching aids, projects, workshops, value added courses etc. Students should be encouraged to work across the departments that may help them to broaden their outlook and develop skill of lateral thinking.

This newsletter is to highlight all those approaches and achievements of the family members of ECE department during the last six months, both within and beyond academics which kept the campus life abuzz with enthusiasm.

Editorially yours,
Sachin S Bhat

DEPARTMENTAL ACTIVITIES

Faculty Development Programme on VLSI Chip Design and Verification using Mentor Graphics EDA Tool



The department of Electronics & Communication Engineering (ECE), in association with CoreEL Technologies Bengaluru and ISTE Faculty Chapter SMVITM, organized a 2-day workshop for faculty members on the topic "VLSI Chip Design and Verification using Mentor Graphics EDA tool", on 22 & 23 July 2019. Faculty members of E&C Engineering from SMVITM and neighbouring

institutes participated in the workshop and enhanced their knowledge and skill. Mr. Vijendra V, Application Engineer from CoreEL was the resource person.

During the workshop, the participants acquired hands-on skills on the usage of latest Mentor Graphics software tools such as Questa-Sim, Leonardo, Pyxis, and Calibre, which are used in the Application Specific Integrated Circuit (ASIC) design.

Distributing the certificates to the participants, Principal of SMVITM Dr. Thirumaleshwara Bhat said that learning, re-learning and acquiring skills in latest topics should become a lifelong habit of all the faculty members. He congratulated and thanked all the external and internal participants of the workshop. Convener Dr. Balachandra Achar, coordinators Mr. Chetan R and Ms. Sowmya Bhat were present on the occasion

Robotics Design Workshop using TI RSLK

The department of ECE, in association with ISTE Student Chapter and EdGate Technologies Pvt. Ltd. Bengaluru, organized a three days hands-on workshop on "Robotic design using TI RSLK" from 3 to 5 October 2019 in the institute premises. Sixty eight students participated in this Texas Instruments University certified workshop and enriched their knowledge and skills. Senior Application Engineer Mr. T. S. Balaji and Embedded Systems Engineer Mr. R. Bharath from EdGate conducted the workshop.

The workshop was designed for students who want to sharpen their design and development

skills on MSP tools and was based on the advanced development tools from Texas Instruments such as TI-RSLK kit and TI Energia software.

During the workshop, the students designed and implemented many applications the robotic kits such as controlling a robotic vehicle using Bluetooth technology, mobile phone, voice commands, neuro senz band, and detection of obstacles using ultrasonic sensor.



Earlier, Associate Professor and Coordinator of the program Mr. Nagaraja Rao welcomed the resource persons and briefed about the objectives of the workshop. Vice Principal Dr. Ganesh Aithal advised the students to make the best use of the workshop and come out with

products that are useful to the society. Head of the department Dr. Balachandra Achar proposed the vote of thanks.

Workshop on Introduction to RTL Design and Verification using Verilog



In association with IEEE Student Branch, the department organized a workshop on "Introduction to RTL Design and Verification using Verilog" by Dr. C. P. Ravikumar, Director of Technical Talent Development at Texas Instruments, Bengaluru on 24 Oct 2019. Twenty-two students from 2nd year ECE, including seven from NMAMIT Nitte participated in the workshop and learnt the basics of Verilog.

In the first session, Dr. Ravikumar gave an introduction to Hardware Description Language (HDL) and its application in hardware design. He then introduced the students to the basic concepts of Verilog such as test-bench, simulation, verification, etc. In the second session he wrote programs for digital circuits such as majority detector, Half adder, BCD adder, Serial adder, Flip-Flops, Shift register and Binary counters.

HOD Dr. Balachandra Achar and IEEE branch coordinator Mr. Raghavendra Rao were present on the occasion and thanked the resource person for conducting the workshop.

Guest Talk on Industry Oriented Projects



In association with ISTE student chapter, the department of ECE organized a guest lecture by Mr. Padma Prasad, Sr. Assistant Professor, Dept of ECE, MITE Moodabidri, on 23 Aug 2019. He addressed the per-final and final students of ECE about Industry Oriented Academic Projects leading to job placement. In his session, he stressed the importance of doing project work and explained the students how to choose the right project with high social impact.

He advised them to participate in project competitions organized by various organizations throughout the year, so that the same organizations can later offer internship and job opportunities to the students. Ms. Carol Dsilva of 4th year and Ms. Namana of 3rd year introduced the speaker to the audience and compered the program. HOD ECE, ISTE Office Bearers, Project Coordinator and Faculty members of ECE were present on the occasion.

Talk on Artificial Intelligence and Data Analytics



The department of ECE organized a Talk by Senior Assistant Professor Mr. Sachin Bhat, on the topic "Can Artificial Intelligence and Data Analytics lead to intelligence?", on 28 Aug 2019 in the college campus. The final year students of E&C Engineering attended the talk and increased their knowledge. HOD and other faculty members too were present on the occasion.

Guest Lecture on Integrated Circuit Design

The department of ECE in association with ISTE Student Chapter organized a guest lecture in the topic of "Integrated Circuit Design" on 12 October 2019. Mr. Joseph Brian D'Souza, Design Engineer of NXP Semiconductors, Bengaluru was the resource person. The students of 3rd year ECE attended the lecture and enhanced their knowledge.

Mr. Joseph explained the requirements of electronics core industry. He correlated the subjects which the students study in academics with industry applications. He advised the students to have strong knowledge of

fundamentals of electronics to get placed in core industry.



Third year student Mr. Aditya introduced the resource person to the audience and compered the program. HOD and ISTE office bearers were present during the event.

Guest Lecture on Embedded System Design



In association with ISTE Student Chapter, the department organized a Talk on the topic "Prospects for E&C Engineers in the field of Embedded Systems Design" on 04 November 2019. Mr. Raghavendra Bhat from CloudE, Mysuru was the resource person. Students of third year ECE attended the Talk.

In his talk Mr. Bhat explained the Embedded System Architecture, Components of Embedded Systems, and various types of input/output devices. He said that most of the industries need some kind of artificial intelligence and it can be implemented only using embedded system. No electronic product in the market is without embedded system. He presented a survey of future of embedded systems, and the opportunities it generates for E&C Engineers. Mr. Bhat motivated the students to undergo internship in CloudE and do projects using embedded system.

HOD Dr. Achar thanked the resource person for sharing his thoughts with the students. Department ISTE coordinator Ms. Shashikala coordinated the event.

Orientation Programme about LEAD

The department of ECE organized an orientation program on "LEAD - A comprehensive Leadership Program" for the benefit of 2nd year ECE students, on Tuesday 12 November 2019 in the institute premises. Mr. Pramod Kumar from LEAD was the resource person.

In the orientation program, Mr. Pramod briefed about the importance of LEAD program, which was started by Deshpande Foundation to focus on youth leadership, foster social entrepreneurship and innovation among college students. This is done by exposing students to social issues and encouraging them to put their time and effort into community development. He said that LEAD teaches youth to consider themselves as an active part of their environment and society, by raising civil awareness and commitment to public service.



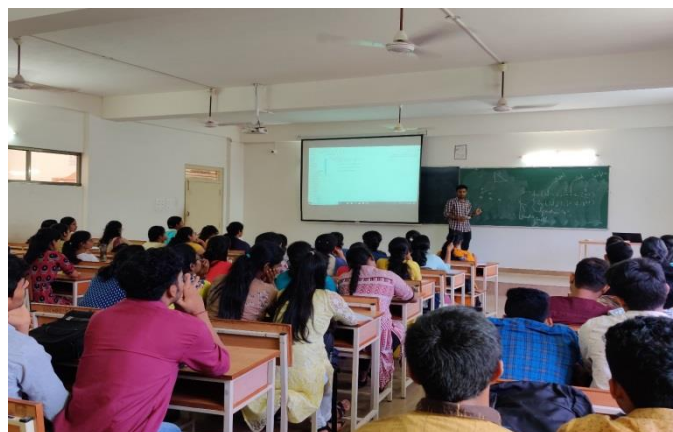
LEAD hosts an annual leadership journey called "LEAD Prayana" and a leadership conference "Yuva Summit" which involves college youth and faculties. It is a platform to share, network, learn from each other and invited speakers. Mr. Pramod motivated the students to participate in this program and get benefitted.

Associate Professor Mr. Nagaraja Rao welcomed the gathering and introduced the resource person. Assistant Professors Mr. Sachin Prabhu and Mr. Ganesh Shetty, were present during the occasion. A total of 50 students participated in the program and got benefitted.

Alumni Talks

1. Mr. V. K. Radheya

In association with Alumni Cell, the department organized alumni interaction by Mr. V K Radheya (2015-2019 ECE Batch) on 03 October 2019. The final year students of ECE department were the beneficiary of this program.



In the view of upcoming placement activities to be held in our college and all the pool-campus drives, Mr. Radheya held around one hour session, and shared his experience and knowledge in the area of C and C++ programming. Mr. Radheya began the session by explaining the pattern of question paper in Wipro. He discussed ten programs, explaining the significance of each, and revealed some short cuts and tricks to solve the problems efficiently. He stressed the importance of in-campus placements compared to off-campus drives. He gave suggestions on how to apply and grab the opportunities wherever possible. He also talked about the etiquette to be followed while appearing for interviews, and answered the queries from the students.

Ms. Pooja Nair welcomed the gathering and introduced speaker to the audience. Dr. Balachandra Achar, HOD, thanked the speaker and presented the memento. Ms. Sowmya Bhat, Assistant professor, Ms. Rajashree Nambiar and Ms. Shareen Noronha, Assistant professors and Department Alumni Coordinators from the Department of ECE coordinated the event

2. Ms. Shilpa Shetty



The department of ECE in association with Alumni Cell organized alumni interaction by Ms. Shilpa Shetty (2010-2014 ECE Batch) on 21 October 2019. The pre-final year students of ECE department were the beneficiaries of this program.

Ms. Shilpa Shetty began the talk with a few jokes to lighten the mood to make it more interactive. Her main focus was regarding the campus placements for the young graduates. She gave a good insight on the current statistics of the areas which needed more attention. Also focusing on the need for good communicational skills Ms. Shetty interacted with the audience to provide solutions for their common doubts in mind.

It was also encouraged that the graduates should not only focus on the IT for the campus placements but also to be interested in all the fields of Engineering. Ms. Shilpa focused on the need for having a good knowledge on Java, C, C++ & aptitude skills prior to attending any interviews.

Ms. Niveditha Hebbar welcomed the gathering and introduced the guest to the audience. Dr. Balachandra Achar, HOD, Department of ECE, thanked and presented the memento to alumna. Ms. Rajashree Nambiar and Ms. Shareen Noronha, Assistant Professors and Department Alumni Coordinators from the Department of ECE coordinated the event

3. Mr. Vaishak Devadiga



In association with Training & Placement Cell, the department organized an Alumni interaction on 31st August 2019 for final year ECE students. Mr. Vaishak from 2015-2019 batch ECE was the resource person for the interaction.

Mr. Vaishak who is currently working as engineer trainee in Accord Systems delivered talk titled "Campus preparation for ECE core companies".

He shared his campus experience appearing in companies like Cadence & Accord, discussed probable technical questions asked by the core companies, conveyed importance of working in product companies. Finally he advised students to keep trying until they succeed and not to quit due to frequent rejection.



HOD Dr. Balachandra Achar felicitated the resource person at the end and the program was organized by placement team of ECE department.

Campus Cleaning by ECE students



The students of 3rd semester E&C Engineering took active part in the community activity by cleaning a part of the campus and near the bus-stop situated outside the campus, on 07

December 2019. Faculty members Mr. Nagaraja Rao and Mr. Sachin Prabhu guided the students in this activity.



Awareness session on plastics followed by cloth bag distribution



SMVITM in association with Women Empowerment Cell headed by Ms. Sowmya Bhat of ECE, and Government Higher Primary School, Bajagoli jointly organized an awareness session on plastics for school children of higher primary school, Bajagoli on 16 November 2019. The main aim of the program was to create awareness on plastic usage amongst children.

Ms. Kavana of 3rd year ECE created awareness amongst children about usage of plastics

highlighting its evolution, health issues and environmental pollution issues. She also made students aware about the fact that India is a country to use more plastics when compared to other countries which need to be taken into consideration by saying no to plastics and reducing its usage.

President of School Development and Monitoring Committee (SDMC) Mr. Ravindra Shetty, Social

Worker Mrs. Gayathri Prabhu, Headmaster Vijaykumar, teachers of Government Higher Primary School and Assistant Professors Ms. Sowmya Bhat and Ms. Kusuma Prabhu were present on the occasion. Headmaster welcomed the gathering. and Ms. Kusuma Prabhu and Ms. Sowmya Bhat coordinated the programme under the guidance of social worker, Mrs. Gayathri Prabhu.

OTHER ACTIVITIES

Ayudha Pooja



Verifying the documents of Teaching-Learning



Picnic to Sakrebail, Kuppalli and Kavale Durga



FACULTY ACCOMPLISHMENTS

Ph.D. Registration

Asst. Professor Mr. Raghavendra Rao registered for full-time Ph.D. in the department of Electrical & Electronics Engineering at NITK Surathkal, under the guidance of Dr. Venkatesh Perumal.

Journal Publications

Mr. Sachin Bhat and Dr. Seshikala G published a technical paper "Inscription Manuscripts and its Performance Evaluation Methods" in IEEE Xplore Sep 2019.

Ms. Akshatha Bhat and **Dr. Balachandra Achar** published a technical paper "Dual Parametric Stabilization of Interference and Throughput in Wireless Sensor Network- Optical Communication" in International Journal of Advanced Trends in Computer Science and Engineering, Vol. 8, Issue 5, pp 1937-1945, Sep-Oct 2019.

NPTEL Swayam Courses completed

Mr. Nagaraja Rao completed an 8-week course on Advanced Linear Continuous Control Systems: Applications with MATLAB and SIMULINK with Elite plus Silver certification.

Mr. Arun Upadhyaya completed a 4-week course on Teaching and Learning in General Programmes, with Elite plus Silver certification.

Mr. Krishna Kumar completed a 4-week course on Python and Data Science, with Elite plus Silver certification.

Mr. Chetan R completed a 12-week course on Internet of Things with Elite certification.

Mr. Sandesh Kumar completed a 4-week course on Teaching and Learning in General Programmes.

Mr. Raghavendra Rao completed an 8-week course on Educational Leadership.

Workshops / FDPs participated

Mr. Arun Upadhyaya and Mr. Sandesh Kumar participated in the 2-week workshop on Entrepreneurship Development held at Manipal University Technology Incubator from 02 to 14 December 2019.

Ms. Laxmi Shetty participated in the 5-day workshop on Outcome based Education and NBA Accreditation held at SJEC Mangaluru from 30 Dec 2019 to 03 Jan 2020.

Mr. Chetan R participated in the FDP on Electronic System Design for Manufacturing using EDA Tools, held at SIT Valachil from 11 to 13 December 2019.

Many faculty members participated in the FDP on VLSI Chip Design and Verification using Mentor Graphics EDA Tool, held in the department on 22 & 23 July 2019.

PLACEMENTS

Sl.No.	Name of Student	Name of Company
1	BHAGYASHREE BHAT	Tata Consultancy Services
2	MANISH M.	Tata Consultancy Services
3	RACHANA D SHETTY	Tata Consultancy Services
4	SUMANTH S	Tata Consultancy Services
5	THEJASHREE	Tata Consultancy Services
6	THRISHNA	Tata Consultancy Services
7	CAROL DSILVA	Tata Consultancy Services
8	DARSHAN G. SHETTY	Infosys
9	DIVYA GURUNATH SHET	Infosys
10	MANISHA SUVARNA	Infosys
11	SANDEEP SALVANKAR	Infosys
12	SANJITHA V SHETTY	Infosys
13	SHUBHA H KOTIAN	Infosys
14	Y. SUHAS KUMAR	Infosys
15	KANNIKA PRIYADARSHINI	IBM-India
16	RUSHALI NAIK	IBM-India
17	SURAKSHA	IBM-India
18	RUSHALI NAIK	Robosoft Technologies
19	U. POOJA NAIR	Robosoft Technologies
20	SURAKSHA	Cognizant Technology Solutions
21	VAISHNAVI PAI	Cognizant Technology Solutions
22	CHAITHRA	Accord Global Technology Solutions
23	VISHRUTHI V. KOTIAN	Manipal Technologies
24	VAISHNAVI PAI	Tayana Software Solutions
25	MANISHA S. JOGI	Talentio Solutions
26	PRUTHVIJA U. SHETTY	Talentio Solutions
27	SANJITHA V. SHETTY	Talentio Solutions
28	SWASTHI S. SHETTY	Talentio Solutions
29	TANUSHA C. SHETTY	Talentio Solutions
30	VAISHNAVI PAI	Talentio Solutions
31	VISHRUTHI V. KOTIAN	Talentio Solutions
32	Y. SUHAS KUMAR	Talentio Solutions
33	CAROL DSILVA	Wipro
34	DIVYA GURUNATH SHET	Wipro
35	RAHUL ADIGA C.	Wipro

STUDENT ACCOMPLISHMENTS

Elein Jisha Lewis of 4th year ECE was selected for the University Handball Team (Girls) to represent VTU South Zone Inter-University Championship 2019-20, to be held at the University of Calicut, Kerala, from 10 to 14 Nov 2019.

Sooraj of 4th year ECE was selected from Mangaluru zone for the VTU Cricket Team selection trials to be held at SJGIT Chikkaballapura on 15 & 16 Oct 2019.

Kavya of 4th year ECE and Ms. Shreya S of 1st year ECE won third place in VTU Mangaluru Zone Inter-Collegiate Women's Tennis Tournament held at AJIT Mangaluru on 16 Nov 2019.

Y. Suhas Kumar of 4th year ECE was part of the volleyball team that won first prize in the Inter-District Sports Meet of Rotaract Club Karkala, held on 01 Dec 2019 at Karkala.

Safa Munawar of 4th year ECE won 2nd prize in 100 m and 400 m running race in the Inter-District Sports Meet of Rotaract Club Karkala, held on 01 Dec 2019 at Karkala.

Safa Munawar and Rachana Shetty of 4th year and Meghana of 1st year ECE, along with one CS student, won first prize in 4×100 m relay in the Inter-District Sports Meet of Rotaract Club Karkala, held on 01 Dec 2019.



The department is very happy to welcome Prof. Dr. Ganesh Aithal who has joined the ECE-SMVITM family in August 2019 as Professor and Vice Principal. With his vast teaching and managerial experience, we are sure that he will take the department to greater heights and support in the growth of the institute.



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

VISION

To emerge as an excellent technical education center and be an integral part in the development of advancing technologies and global challenges, in the field of Electronics and Communication Engineering.

MISSION

1. To facilitate an ambience conducive to the excellence in technical education.
2. To provide a platform that will ensure the exchange of ideas and dissemination of knowledge.
3. To establish a research oriented center by having rapport with industries.
4. To foster ethical and value based education with credibility by promoting activities that have societal impact.

PROGRAMME EDUCATIONAL OBJECTIVES

The graduate of Electronics & Communication Engineering should be able to:

1. Exhibit essential knowledge of applied sciences, mathematical modeling, logical interpretation and virtual realization to resolve real-time problems in the field of Electronics and Communication Engineering.
2. Work productively as an Electronics and Communication Engineer, including supportive and leadership roles on multidisciplinary teams.
3. Inculcate effective communication skills to excel in professional growth.
4. Take part in lifelong learning in pace with the advancing technological society.

PROGRAMME SPECIFIC OUTCOMES

Graduates of Electronics & Communication Engineering will be able to:

1. Focus on developing and exposure to alternative/ advanced technologies: Understand the concepts of Electronics & Communication Engineering and its application in the fields of signal processing, control systems, embedded systems, VLSI design, networking, and communication.
2. Extension of knowledge and testing facilities for the society: Apply domain-specific knowledge to design, analyse, synthesise and validate real-time problems in Electronics & Communication Engineering.