

ELECTRONEWS

A Departmental Newsletter from

SMVITM

Department of Electronics and Communication
Engineering.

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ESTD 2010



SMVITM

The background of the lower half of the page is a vibrant, abstract geometric pattern composed of numerous overlapping triangles in various shades of red, orange, yellow, blue, and purple, creating a dynamic and modern aesthetic.

ELECTRONEWS

From the editor's desk...

I hope you all are in the best of your health.

In this chaotic time of COVID-19 relapse, it is a primary concern to be at the safest. The situation where everything around appears to be stagnant and low in productivity, we are very much in the need to gear up and be the best at the situation. Not to forget the other terms which we familiarly hear every now and then: global warming, climate change etc. besides the pandemic, challenging our very existence and productivity. We find that everything is in a state of flux: history, science, technology and even imagination. While wisdom remains elusive, it is indeed a fine opportunity to unleash our true strengths mentally and physically with the resources we have at the moment. Towards this approach, at SMVITM the teaching and learning process never came into a halt. Both students and teachers have put tremendous amount of effort and cooperation with a lot of calmness about the situation ensuring learning in the midst of this great crises. Not only the teaching. Research continued, papers hit the reputed journals, students won prizes in different levels, conferences conducted, workshops and webinars continued to instill new insights, various student activities took place along with the regular academic classes. This has proved that education at SMVITM is unstoppable. Hence, we are excited to bring to you of some glimpses that happened during the semester in this Vol. 6, Issue 1 of this newsletter.

Hoping the rest of the academic year will be with even more of the achievements.

Ranjith Bhat

DEPARTMENTAL ACTIVITIES

Lecture series and Webinars:

1. Webinar on the series “Advances in Electronics by Dr. T. Laxminidhi

The department of E&C Engineering, SMVITM Bantakal, organized its second webinar on the series “**Advances in Electronics**” on Saturday, 19 September 2020. Dr. T. Laxminidhi, Professor and Head of the department of E&C Engineering at NITK Surathkal was the resource person. The topic was “R&D opportunities in analog and mixed-signal VLSI design.” A total of 33 faculty members and researchers from various engineering colleges participated in the webinar and enhanced their knowledge.

SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY AND MANAGEMENT
(A Unit of Shri Sode Vadiraja Mutt Education Trust®, Udupi)
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SMVITM

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

WEBINAR SERIES ON ADVANCES IN ELECTRONICS

Webinar-2
R & D Opportunities in Analog and Mixed Signal VLSI Design

By

Date:
Saturday, 19 Sep 2020

Time:
10:00 - 11:00 am

G-Meet Link:
<https://meet.google.com/zhu-tpmz-jyi>

Dr. T. Laxminidhi
Professor & Head
Dept. of E&C Engineering, NITK, Surathkal
All are Welcome

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Dr. Laxminidhi, possessing a vast research experience, said that the era of analog

circuit design will never end. In particular, he took the example of power management block, and explained the importance of power efficiency and power delivery. He also took the example of 5G mobile architecture and explained the opportunities and challenges involved in low-power analog system design at giga hertz frequencies. Finally, he motivated the faculty to take up research in analog design by saying that today's electronic gadgets are not only the products of advances in digital design, but also the revolutions in analog design.

Earlier Dr. Balachandra Achar, HOD of E&C Department, SMVITM Bantakal, introduced Dr. Laxminidhi to the audience and welcomed him. Towards the end of the webinar, the participants asked questions to the resource person and cleared their doubts. Assistant Professors Mr. Arun Upadhyaya and Mr. Krishna Kumar helped with feedback and certificate generation

2. Deep Convolutional Neural Network under the lecture series “Advances in Electronics” by Dr. Sachin Bhat

The department of E&C Engineering organized a lecture by Dr. Sachin S Bhat on the topic of Deep Convolutional Neural Network in the lecture series “**Advances in Electronics**”, on 25 Sep 2020. The faculty members of various departments of the

college attended the lecture and enhanced their understanding of the topic.

Dr. Bhat began his talk by narrating an interesting history on the evolution of Artificial Intelligence. Later he introduced the concept of a simple neural network model, its disadvantages and the outline of convolutional neural networks (CNN). He also covered the full cycle information on Deep Convolutional Neural Network (DCNN), right from the categories of DCNN, design parameters, optimization, hyper-parameters to optimization and performance-evaluation parameters.



He concluded by mentioning the various applications and areas of research related to CNN and DCNN. Earlier, HOD Dr. HVB Achar welcomed the participants to the Talk. Asst. Professor Ms. Laxmi Shetty proposed the vote of thanks.

3. Silicon nano porous membranes for biomolecular separation in the lecture series “Advances in Electronics” by Dr. H. V Balachandra Achar

The department of EC Engineering organized a lecture by Dr. H. V Balachandra Achar on the topic of Silicon nano porous membranes for biomolecular separation as the fourth instalment in the lecture series “Advances in Electronics”, on 07 October 2020.

The faculty members of various departments of the college attended the lecture and enhanced their understanding of the topic.



Separation of biomolecules based on their size and charge is an important procedure employed in biomolecular analysis. Nanosieve comprising of a semi-permeable membrane with nanometre-sized pores is used for this purpose. Dr. Achar described the fabrication of ultra-thin nano porous silicon membrane, which can be used as nanosieve, making use of standard microelectronics fabrication techniques. He also talked about the formation of the pores by transmission and

scanning electron microscope images and controlled nucleation of silicon nanocrystals so as to get pores at desired locations.

Asst. Professor Ms. Laxmi Shetty welcomed the participants to the talk. Principal Dr. Thirumaleshwara Bhat and Vice Principal Dr. Ganesh Aithal thanked Dr. Achar for sharing his knowledge and introducing the research avenues in the field of nanoparticles.

4. Block chain technology overview and its applications by Prof. Tanzila Nargis

Department of Electronics and Communication Engineering in association with ISTE faculty chapter of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi had organized online Lecture series-5 on “**Block chain technology overview and its application**” held on 5th Nov 2020 from 3:00pm to 4:00pm. The resource person for the webinar was Prof. Tanzila Nargis of NMAMIT, Nitte.

Prof. Nargis started the session with explaining about how to use crypto currency for secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership. Speaker continued with application in the block chain Metamask addon in the chrome platform to create and manage their own

identities for secure interface to review the transaction.

She also mentioned about exploring the application in the blockchain using Smart Contract computer programs.

Speaker concluded by saying one can focus in the core architecture part for the research challenges in block chain technologies. Sachin Bhat, Associate professor coordinated the event on behalf of ECE dept. and 100 plus participants were present in the webinar and interacted with the resource person. Ms. Shashikala R thanked the resource person and participants.

5. IEEE-EUREKA 2020

IEEE Pune section organized an event called “**IEEE-EUREKA 2020**” for the students of engineering colleges. The event was conducted on 17, 18 and 19 November 2020 in ONLINE mode. These were purely knowledge sharing sessions where engineering students had taken the sessions to high school students in the areas of Agriculture, Healthcare, Education, Sports, Women Empowerment and Disaster management etc via the ONLINE mode. The main aim of this program was to raise the National High school literacy level by using College youth as ‘Ambassadors of Education’.

The major objectives of the event were:
To expose high school students to advanced state of art technologies.
Motivate high school students to pursue higher studies in Science and Technology.
Provide an opportunity for college students to interact with high school students at urban and rural schools and share their knowledge in advanced technologies.
Encourage girl students in high schools for higher education thus promoting gender equality.



A total of 12 teams from the college had participated in this program. The team consisting of One IEEE Student member, one girl student, and the remaining non-IEEE students. A total of 965 high school students from 50 different high schools (Both rural and urban) of the Udupi district participated in this useful program. Due to this program the school students and teachers were exposed to advanced state-of-the-art technologies and also were able to establish contact with IEEE for future technological activities.

6. Printed Circuit Board (PCB)- A Vital Element of Electronics Circuit by Mr. Guruprasad S

Department of ECE in association with ISTE had organized a lecture Webinar Series. The sixth episode of the series held on Friday 18 December, from 2:00 to 3:30pm, Mr. Guruprasad S, Manager- Field Application Engineering TTM Technologies Inc. was the resource person and gave a talk on **“Printed Circuit Board (PCB)- A Vital Element of Electronics Circuit”**. From the ECE Department faculty and students of 2nd and 3rd year around 70+ participated and interacted with the speaker.

Speaker highlighted the three broad areas of PCBs and they are, first area is PCB design in which here it requires the thorough knowledge in the software's like Altium, Cadence, PCAD, KiCad, Mentor etc. Second area is PCB fabrication, since speaker has got rich experience in the fabrication, he elucidated all the stages in detail with all chemical process involved in the different stages and finally the last area is PCB assembly in which here, he also explained about THT and SMT. He concluded with the job opportunities and companies working in this domain for the aspiring students.

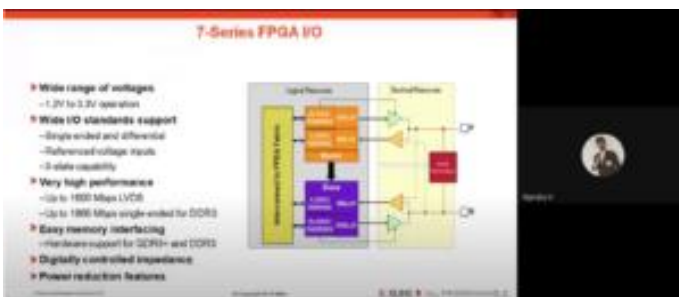
Ms. Preema D'Souza, Final year ECE student introduced the resource person and ISTE student coordinator Mr. Adithya of final

year EC student compeered the program. Mr. Chetan R, ISTE coordinator and Ms. Shashikala R, Sr. Assistant Professor coordinated the event. Dr. Sachin Bhat, Associate professor, ECE Department supported the event.

7. Webinar on “Xilinx Latest Technology on Adaptive Intelligence” by Mr. Vijendra V

Department of Electronics and communication engineering co-curricular cell in association with ISTE student chapter of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi has organized webinar on “Xilinx Latest Technology on Adaptive Intelligence” held on 30th December 2020 from 2:00pm to 3:30pm. The resource person for the webinar was Mr. Vijendra V, Application Engineer, Coreel Technologies.

Mr. Vijendra spoke about the latest 7 series FPGA Plus SOC families design and architecture. He demonstrated the flow to use the Vivado Design Suite- 2020.1 and how to build the FIFO configuration in memory design.



The webinar was concluded by the fruitful interaction with the final year students related to their projects in the VLSI domain.

Ms. Preema D’Souza, Final year ECE student introduced the resource person and ISTE student coordinator Mr. Adithya of final year EC student compeered the program. Mr. Chetan R, ISTE coordinator and Ms. Shashikala R, Sr. Assistant Professor coordinated the event. Dr. Sachin Bhat, Associate professor, ECE Department supported the event.

8. “Orientation program on Social Outreach for Engineering Students” on Thursday, 28 January 2021 by Dr. Babitha

The department of ECE Engineering in association with Agastya International Foundation organized an orientation program on “Social Outreach for Engineering Students on Thursday, 28 January 2021. Dr. Babitha from Agastya, was the resource person.

She has started her presentation by briefing the company profile and demonstrated a small video related to the various activities by Agastya. In her presentation she has explained about Agastya’s mission that is focus on:

- Experiential hands-on science education
- Peer-to-peer learning
- Teacher education
- Scalable learning methods
- sustainable and environment friendly.

She also said that Agastya promotes various learning approaches for the development of underprivileged students and government high school students like Integrated learning approach, 'can-do' attitude & innovation approach, Discovery and project based learning and Hands-on, Interactive & Investigative approaches.



Dr. Babitha highlighted Agastya’s various learning centres like “Agastya Science Centre”, “Agastya Mobile Lab”, “Agastya Lab-on-a-Bike”, Agastya TechLaBike” etc. where they will be nurturing student’s creativity using Hands-on science education. Also, madam motivated our students to take up small outreach programs near to their locality.

A total of 75 students and faculty members participated in the event. Mr. Nagaraja Rao, Associate Professor, Dept. of ECE coordinated the program and proposed vote of thanks.

Value added Course:

1. “Corporate C”- A training on C for the industry

Under the Indian Society for Technical Education (ISTE) club at Shri Madhwa Vadiraja Institute of Technology & Management (SMVITM), Bantakal; a program “Corporate C” was inaugurated on Monday, 02 November 2020, at 11:30 am at the Dept. of Electronics and Communication of SMVITM for the benefit of all the students who will be appearing for the campus placements 2020.

Mr. Girish Aithal, Director and learning Head at 4Edge IT solutions, Mangalore gave a very informative insight on why the programming language is important in relevance to corporate world and how can we tackle problems related to studying C. Mr. Girish who was also a former employ at Infosys Technologies, Mangalore. All the aspirants, seeking a fruitful interview process attended the talk through Zoom; an online platform mode and interacted with the guest speaker, effectively. The subsequent sessions under the same event were held via online mode i.e., Google meet and YouTube for 30 hours from 4 November to 17 December, 2020. The

beneficiaries of the events were the third years of the ECE department. 38 students attended the whole program.



Under the guidance of Prof. Dr. Ganesh Aithal, Vice Principal, SMVITM the program was successfully coordinated by Mr. Krishna Kumar, Mr. Ranjith Bhat and Ms. Rajashree Nambiar, Senior Asst. Professors, Dept. of Electronics & Communication Engineering, SMVITM.

2. Jnana GATE Training for final years

Department of Electronics and Communication engineering of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal, Udupi had also organized a GATE training for the aspirants from the final year of the department Under the guidance of Prof. Dr. Ganesh Aithal, Vice Principal, SMVITM the program was successfully coordinated by Mr. Avinash N J Senior Asst. Professor Dept. of Electronics & Communication Engineering, SMVITM. The tutors for the training were the faculties of the ECE department, SMVITM.

Alumni talks:

1. Interaction activity of the alumnus Mr. Pawan Shetty (2013-2017 ECE Batch)

The interaction activity of alumnus Mr. Pawan Shetty (2013-2017 ECE Batch) with 3rd year students of ECE branch was organized by Alumni Cell of Electronics and Communication Engineering Department on 5th September 2020 through Google meet.

Mr. Pawan Shetty, Design Verification Engineer Cadence, Bellandur, Bengaluru, started interaction with his experience as a student of Electronics and Communication Engineering branch at SMVITM. He explained how one should plan for their future, whether they want to opt completely software or hardware sector.



He explained about the requirement of qualities other than the academic marks and the need to give importance to technical aspects by exposing themselves to GitHub. Further, he mentioned about the importance of mini projects to boost one's resume and importance of internship. He

concluded by clearing the doubts of current 3rd year students.

Ms. Laxmi Shetty, Asst. Professor (Sr) of ECE department welcomed the gathering and introduced speaker to the audience. Ms. Rajashree Nambiar, Assistant professor, Department of ECE, coordinated the event.

2. Interaction activity of alumna Ms. Nikitha Narendra Shetty (2015-2019 ECE Batch)

The interaction activity of alumna Ms. Nikitha Narendra Shetty (2015-2019 ECE Batch) with 2rd year students of ECE branch was organized by Alumni Cell of ECE Department on 6th September 2020 through Google meet.

Ms. Nikitha Shetty, Silicon Validation Engineer, Tessolve Semiconductor Pvt. Ltd., Bengaluru, started interaction with her experience as a student of Electronics and Communication Engineering branch. Later she introduced her company to the gathering and her journey into Tessolve, and her job requirements. She mentioned the importance of programming languages like Python, Java. She explained about trending technologies like AI, ML, Virtual reality and augmented reality, cybersecurity. She described how to present themselves in a company interview how to impress interviewer. She explained her experience in the internship and its importance. She clarified how one can gain

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knowledge from mini projects and upgrade programming skills through projects. She even mentioned about AMCAT exam and concluded by advising to plan well in advance for the future.

Ms. Laxmi Shetty, Asst. Professor (Sr) of ECE department welcomed the gathering and introduced speaker to the audience. Dr. Balachandra Achar thanked Nikita for her insight on this occasion. Ms. Rajashree Nambiar, Assistant professor, Department of ECE, coordinated the event.

Other Activities:

1. “Beach Cleaning Program at Malpe Beach” on Saturday, 30 January 2021

India has a coastline of more than 7,000 kilometers, but sadly, it's not all pristine beaches and stunning cliffs. The beaches are covered with trash – colorful plastic bags, bottles and food packages are everywhere, often entangled in old fishing nets or rotting fabrics. Most people are outraged by the situation, angry at the city government for not cleaning it up or at those who throw their trash in the streets or even straight onto the beach. This hugely impacts the marine life, particularly the tortoises, and other crustaceans who are habitants of the beach, especially during their breeding season.

Considering all the above problems and to mark the observance of “Martyr’s Day”, Technocrats club of Department of ECE of Shri Madhwa Vadiraja Institute of

Technology and Management (SMVITM), organized Beach Cleaning program at Malpe beach on Saturday, 30 January 2021. A group of 35 student volunteers of 3rd Year ECE students participated in the program. They selected around 800 meters stretch of the beach and collected heap of non- biodegradable items and disposed properly. The authorities of Beach Development Association appreciated the work carried out by the Institution. Students as a group felt content that they could make a small yet impactful contribution towards nature and its inhabitants. They aim to take this initiative further and create awareness among their families and societies so that they all can contribute in keeping our beaches and water bodies clean and not pollute it by throwing plastic and debris into them.

2. "Pulse Polio Awareness Drive & Volunteer work" on Friday, 29 January 2021

To create or to bring the awareness amongst the people about the importance pulse polio, All the students of Third year and Second year students of ECE actively participated in the "Awareness drive on Pulse Polio" on Friday, 29 January 2021 at Bantakal, Shankarapura, Shirva and near to their localities. Also, all the students rendered their volunteered service at Government Primary Health Centre and Anganavadi Kendras during Nationwide Pulse Polio Immunization on Sunday, 31 January 2021. A total of 130 students participated in this program.

FACULTY & STUDENT ACCOMPLISHMENTS

A. Faculty Research Presentations and Publications:

1. Sachin Bhat presented a paper "Building Dataset and Deep Learning based inception model for the Character Classification of Tigalari Script" in Artificial Intelligence and Data Engineering (AIDE 2020), NMAMIT, Nitte, 23-24 Dec 2020.

2. Sachin Bhat presented a paper "Human Body Measurement Extraction from 2D images" in VLSI, Signal Processing, Power Electronics, IoT, Communication and Embedded Systems (VSPICE 2020) NMAMIT, Nitte, 23-24 Dec 2020.

3. Sachin Bhat presented a paper "Palladium Metal Embedded on Mesoporous Graphene Oxide as an efficient Heterogeneous Catalyst for Suzuki Coupling Reaction" in "Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering (SME 2020), NMAMIT, Nitte, 23-24 Dec 2020.

4. Sachin Bhat, Shashikala R and Sandesh Kumar presented a paper "Convolutional Neural Network approach for the Classification and Recognition of Lung Nodules", 4th IEEE International Conference on Electronics, Communication and Aerospace Technology, RVS Technical Campus, Coimbatore, 05-07-Nov 2020.

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5. Sachin Bhat presented a paper "Multilabel Spatial Image Recognition using Deep Convolutional Neural Network", 4th IEEE International Conference on Electronics, Communication and Aerospace Technology, RVS Technical Campus, Coimbatore, 05-07 Nov 2020.

6. Sachin Bhat presented a paper "Parts of Speech Tagging and Extractive Summarization Techniques for Kannada Documents", Springer CISCON, MIT Manipal, 30 Oct -01 Nov 2020.

7. Sachin Bhat, Kannika Priyadarshini published a paper "An app-based Kannada to English Transliteration system for mobile camera images", Solid State Technology, Vol.63, Issue:2, 2020, p: 9112-9119.

8. Avinash N J, Chetan R, Sowmya Bhat and Renita Pinto presented a paper "High Performance EVM ", I-SMAC, SCADA Palladam, 7-9 Oct 2020.

9. Avinash N J and Chetan R presented "Biometric Authentication for Safety Lockers Using Cardiac Vectors" in IEEE 2nd International conference on Power, Energy, Control and Transmission System (ICPECTS 2020), Sri Sai Ram Engineering College, Chennai, 10-11 Dec 2020.

10. Avinash N J and Chetan R presented “A New Automated Electrical System Using Smart Grid Technology” in IEEE 2nd International conference on Power, Energy, Control and Transmission System (ICPECTS 2020), Sri Sai Ram Engg. College, Chennai, 10-11 Dec 2020.

11. Avinash N J, Renita Pinto, Sowmya Bhat, Chetan R presented “Smart Fridge For Global Users Based on IOT using Deep Learning” in IEEE 2nd International conference on Power, Energy, Control and Transmission System (ICPECTS 2020), Sri Sai Ram Engg. College, Chennai, 10-11 Dec 2020.

12. Avinash N J, Renita Pinto, Sowmya Bhat, presented “A Comprehensive Study of Neural Network Using R” in IEEE 2nd International conference on Power, Energy, Control and Transmission System (ICPECTS 2020), Sri Sai Ram Engg. College, Chennai, 10-11 Dec 2020.

13. Avinash N J, Sreenidhi, Hrishikesh, Sowmya Bhat, Renita into presented “Towards Intelligent and rush free errands using an intelligent chariot” in ICOECA 2021, Springer Conference, Githam School of Technology, Bangalore, 18-19 Feb 2021.

14. Avinash N J presented “WSN in defense field: A security overview” in I-SMAC, SCADA Palladam, 7-9 Oct 2020.

15. Dr. Ganesh Aithal published a paper “Key Generation Using Generalized Pell’s Vol. 6, Issue 1, Sep 2020 – Feb 2021.

Equation in Public Key Cryptography Based on the Prime Fake Modulus Principle to Image Encryption and Its Security Analysis” in CIT, Vol. No. 20, Issue -3, 86-101 on September 2020.

C. FDPs attended:

| Name of the faculty | Title of the FDP | Venue |
|-----------------------|---|--|
| Dr. Balachandra Achar | Applied ML and AI using Python | EduXLabs |
| Dr. Sachin S Bhat | Natural Language Processing and Deep Learning | Jain University |
| Dr. Sachin S Bhat | Computation Biology | No |
| Dr. Sachin S Bhat | Data Mining & Analytics | REVA University |
| Mr. Nagaraja Rao | Basics of Strategic management-its relevance in the present situation | IQAC-SMVITM |
| Mr. Nagaraja Rao | Research Methodology-A detailed research process | Sanathana Research and Training Institute Mysuru |
| Mr. Nagaraja Rao | Control systems and Sensor Technology | AICTE-ATAL |
| Mr. Chetan R. | PCB design using open-source tools | NITK Step, Surathkal |
| Mr. Chetan R. | Research Methodology | Nitte Meenakshi |

| | | |
|-----------------------|---|------------------------------------|
| | | Institute of Technology, Bengaluru |
| Ms. Laxmi Shetty | Emerging Trends in Electronics & Communication Engineering | MITK |
| Mr. Sandesh Kumar | Contemporary research in electronics and communication and computer science | VTU, dept of ECE |
| Mr. Avinash NJ | Recent Trends in Data Science Applications | SMVITM |
| Dr. Balachandra Achar | Recent Trends in Data Science Applications | SMVITM |
| Mr. Ganesh Shetty | Recent Trends in Data Science Applications | SMVITM |
| Mr. Krishna Kumar | Recent Trends in Data Science Applications | SMVITM |
| Ms. Laxmi Shetty | Recent Trends in Data Science Applications | SMVITM |
| Ms. Rajashree Nambiar | Recent Trends in Data Science Applications | SMVITM |
| Mr. Ranjith Bhat | Recent Trends in Data Science Applications | SMVITM |
| Ms. Renita Pinto | Recent Trends in Data Science Applications | SMVITM |
| Mr. Sandesh Kumar | Recent Trends in Data Science Applications | SMVITM |

| | | |
|--------------------|------------------------------------|----------------------|
| Mr. Arun Upadhyaya | Cyber Security | AICTE-ATAL |
| Ms. Shashikala R | PCB design using open-source tools | NITK Step, Surathkal |
| Mr. Sandesh Kumar | PCB design using open-source tools | NITK Step, Surathkal |
| Ms. Renita Pinto | Student Induction Program | NIT, Patna |

D. Faculty Accomplishments:

1. Professors of Shri Madhwa Vadiraja Institute of Technology and Management, Bantakal won the Championship of National Level ISRO-IITB-AICTE Mapathon 2021 Organized by Indian Space Research Organization. Dr. Nagaraj Bhat from the department of Computer Science and Dr. Sachin S Bhat from the department of Electronics and Communication Engineering won this championship award for their outstanding contribution research work titled "Samudraseema: Coastal Karnataka Shoreline Dynamics".



Their work focused on the study of vulnerability along coastal part of Karnataka

in the last 100 years using thematic maps, toposheets and satellite remote sensing data. More than 10,000 teams across the Nation have participated in this event.

Indian Space Research Organization (ISRO) in association with the All-India Council for Technical Education (AICTE) and Indian Institute of Technology - Bombay (IIT-B) have jointly organized this event to produce maps using Indian remote sensing data. The primary objective is to understand the potential of Indian remote sensing data and to make maps for Indian regions using free open-source mapping software. This Mapathon aided in building local capacities for mapping and generating data that can address larger goals. Producing maps for the country using space application moves India towards Atma Nirbhar Bharat and Global GIS hub.

2. Ms Akshatha H Bhat & Dr. H V Balachandra Achar obtained copyright for their work "Dual parametric stabilization of interference and throughput in Wireless Sensor Network-Optical Communication".

3. Dr. H V Balachandra Achar was Guest of Honour in Scientia 2K21 organised by Amrutha Bharathi Vidyalaya, Hebri on 27 February 2021.

4. Dr. H V Balachandra Achar served as session chair in MPCIT 2020 organised by JNNCE-Shivamogga on 11 December 2020.

5. Dr. Sachin S Bhat delivered a talk "Sanskrit and Technology" on 16 March 2021 organised by REVA University and IEEE ComSoc, Bengaluru.

6. Dr. Sachin S Bhat served as a session a chair in IEEE DISCOVER held on 30 October 2020.

7. Dr. Sachin Bhat appointed as Scientific Committee Member in RYMEC, Bellary.

8. Dr. Sachin Bhat appointed as Organizing committee member for International Symposium on Biomedical Engineering and Computational Biology (BECB 2021), organized by Nanchang Hang Kong University, China.

9. Mr. Nagaraja Rao nominated as a member of the evaluation panel of IICDC, project contest organized by Texas Instruments.

10. Mr. Nagaraja Rao and Mr. Arun Upadhyaya appointed as IIC-Innovation Ambassadors by MoE's Innovation Cell & AICTE, New Delhi.

11. Ms. Laxmi Shetty was a resource person for an ISR activity in St. Marys College Shirva. Topics covered- Logical Reasoning, Date- 7th Dec and 9th Dec 2020.

12. Mr. Krishna Kumar conducted a Session on "Clocks and Calendars" for BCA students

of St. Mary's College Shirva on 8 December, 2020.

13. Dr. Balachandra Achar served as the Program Committee Chair of IEEE DISCOVER held on 30-31 October, 2020.

14. Mr. Chetan R was the Moderator for the conference, 2020 IEEE discover.

15. Mr. Chetan R conducted a workshop for faculties of S. G. Balekundri Institute of Technology Belagavi, to set VLSI lab using open-source Electric software through online platform from 28-30 December, 2020.

16. Mr. Arun Upadhyaya, Senior Assistant Professor of the department of ECE, was appointed as the NISP COORDINATOR of the institute in November 2020.

E. Students' Accomplishments:

1. ANVESHANA KARNATAKA- 2021

The certificate is from Shri Madhwa Vadiraja Institute of Technology & Management (SMVITM), a unit of Shri Sode Vadiraja Mutt Education Trust, Udipi. It is accredited by NAAC with 'A' grade and affiliated to VTU, Belagavi, Karnataka. The address is Vishwothama Nagar, Bantakal, Udipi - 574 115, Karnataka, India. Website: www.sode-edu.in | Mobile: +91 7483031199.

Department of Electronics and Communication Engineering

Logos for SYNOPSYS, Anveshan (BUILDING BRIDGES TO DISCOVER), and AGASTYA are present.

Congratulations to our students for winning Consolation Prize and qualifying in the Finals of the State Level Project Competition.

"AnveshanA Karnataka - 2021"
(Online Science & Engineering Fair)

Project Title : " SWASTHYA "

Student Members : Akshatha A Renjal, Adithi Girish, Shreya Udupa, Rakshith Acharya

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Students of the second year ECE viz. Akshatha Renjal, Adithi Girish, Shreya Udupa, Rakshith Acharya have won the consolation prize and qualified for the finals of ANVESHANA KARNATAKA- 2021 an Online Science and Engineering Fair. For which they had come up with a project titled SWASTHYA.

2. IEEE-EUREKA 2020

The students of the department of ECE have won three runner-up prizes at "IEEE-EUREKA 2020", a national level event organized by the IEEE Pune section.



The event was conducted through ONLINE mode. More than 150 teams from all over India had participated in the event. The winners were:

Stream: "Technologies for Agriculture, Food processing and Rural development".

Team: Ashutosh Kumar, Shamitha Shanbhogue, Nayak Adithya and Naman.

Stream: "Technologies for Education, Sports and Woman Welfare".

Team: Raunak Choudhary, Janvi V Nilekani, Preetham Nayak, Swaliha Sheikh.

Stream: "Technologies for managing National security and disasters including Pandemonium".

Team: Shrivathsa, Chaithra B.R, Ferdinand Castelino, Vikas Rao.



This event was organized with the aim of knowledge sharing wherein, engineering students had to impart knowledge to high school students in the areas of Agriculture, Healthcare, Education, Sports, Women Empowerment and Disaster management.

3. Projects selected for KPIT Sparkle-National innovation challenge 2021

Three Innovative Projects from students of Shri Madhwa Vadiraja Institute of Technology & Management, Bantakal have been selected for "Top 100" position in reputed "National Level Innovative

Competition KPIT Sparkle" which is organized by KPIT Inc, Pune. Students and Faculty from the department of EC, SMVITM, Bantakal, Udipi has claimed that they are the best innovators by proving themselves participating in KPIT Sparkle-National innovation challenge 2021. It is a national level contest and the theme was Mobility and Energy for the future. KPIT Sparkle is one-of-its-kind Design & Development Contest for Science & Engineering students. Students are encouraged to participate, win prizes & get national acclaim. KPIT Sparkle an innovation platform by KPIT technologies, Inviting bright minds from science and engineering students across India. This company is known to provide opportunities to promising ideas to foster entrepreneurship and innovation.

Students of Department of EC, SMVITM have made their ideas sparkle by getting selected to top 100 selections from more than 2500 ideas that were uploaded across different parts of India. The College had uploaded 11 new innovative ideas out of which 3 ideas have been selected to the top 100 projects.

This has inspired with true excitement and joy in the young entrepreneurs (students). Team of students Aishwarya, Bhoomika J S, Deepthi Poojary, Niharika Balthillaya of Electronics & communication engineering have developed "Implementation of collision avoidance system for hair pin bends in ghats using proximity sensors". Chaithra Kulal, Dheeraj, K Srinivas Kamath, Neema B Shetty, Meghana R Bhat have developed

“Thermoelectric Air cooling for cars” and Adithi P, Anwitha Rao P, Arun J.K, Harshitha Shetty, Hrishika have developed “Alternative source of energy based on piezoelectric effect”.

The Management, Principal and staff members have complimented all involved in this activity for this wonderful achievement.

4. Project proposals of students approved for scholarships by the Karnataka State Council for Science and Technology (KSCST 2020-2021)

Motivated by the desire to build a strong base for practical problem solving in several engineering colleges as well as to build their R & D potential, KSCST decided to promote student project programmes in a large number through a programme called STUDENT PROJECT PROGRAMME for providing financial and academic support for Bachelor of Engineering projects. The following are the students who have been selected for the same under the guidance of the faculties from SMVITM.

Project name: 1. TOUCHLESS SMART DETOXIFYING UNIT.

Students: Sumanth S.S, Tripti Shetty, Vijetha, Vinutha Bhargavi.

Under the guidance of: Mr. Arun Upadhyaya.

Project name: 2. PROVIDING SUPPORT TO THE KNEE USING METALIC JOINTS.

Students: Adithya K, Gowri M, Namana, Pranav K R.

Under the guidance of: Mr. Chetan R.

Project name: 3. DAIRY MILK FARMING FROM NOW TO NEXT.

Students: B Pradyumna Tantry, Pradyumna P Tantry, Prajwal, Suraj Jayaram.

Under the guidance of: Ms. Rajashree N.

Project name: 4. GRADING OF THE COFFEE DEPENDING ON THE AROMA AND TASE USING SENSORS.

Students: Adarsh A Shetty, Rajath B Kulal, Abhishek M Rao, Nagaraj Kamath.

Under the guidance of: Dr. Ganesh Aithal.

YouTube channels of faculty members

| S.I. | Faculty Name | YouTube Channel Link |
|------|--------------------|---|
| 1 | Ms. Laxmi Shetty | https://www.youtube.com/user/05laxmishetty |
| 2 | Mr. Arun Upadhyaya | https://www.youtube.com/c/ArunUpadhyaya/ |
| 3 | Mr. Nagaraja Rao | https://www.youtube.com/channel/UC68SV57xMPfk7tj1l_2Rjw/ |
| 4 | Ms. Renita Pinto | https://www.youtube.com/channel/UCopBB921K9hK49ZoeLTstDA/ |
| 5 | Ms. Sowmya Bhat | https://www.youtube.com/channel/UCfMfti5ejWCmv7Pvh33lbUw/ |
| 6 | Mr. Ranjith Bhat | https://www.youtube.com/user/Ranjithbhat444 |

PLACEMENTS

| Placed Student Details Batch 2020-2021 | | |
|--|-----------------------|--|
| S.I No | Name of Student | Name of the Company |
| 1 | CHETHANA | Robosoft Technologies Pvt. Ltd., Udupi |
| 2 | SHREERAKSHA | |
| 3 | GOPIKA C B | |
| 4 | NAMANA | Infosys Ltd., Bengaluru |
| 5 | NIDISH M SUVARNA | |
| 6 | SHARANYA | |
| 7 | VINAYAK ANANT HEGDE | |
| 8 | POORVIKA | |
| 9 | SOWJANYA DERANNA RAI | |
| 10 | SRIHARSHA S BHAT | |
| 11 | PRERANA P | Tata Consultancy Services Ltd., Bengaluru |
| 12 | NIVEDITHA NAYAK P | |
| 13 | SHARANYALAXMI K | |
| 14 | SHARATH KARANTH | |
| 15 | SOWBHAGYA DERANNA RAI | |
| 16 | TEJASVINI | |
| 17 | CHETHANA | |
| 18 | ADARSHA HEBBAR | Avo Automation, Bengaluru |
| 19 | KAVANA MAHESH HEGDE | High Peak Software Pvt. Ltd., Bengaluru |
| 20 | PRATHAM S KANCHAN | Cerium Systems (P) Ltd., Bengaluru |
| 21 | NAMANA | |
| 22 | PRATHAM S KANCHAN | |
| 23 | JEEVAN | Tech Mahindra Ltd. |

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING



VISION

To emerge as an excellent technical education centre 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 centre 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 modelling, 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.



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