



Shri Madhwa Vadiraja Institute of Technology and Management  
Bantakal

*A Newsletter by the Dept. of ECE*

# CRYPTEX

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# SHRI MADHWA VADIRAJA INSTITUTE OF TECHNOLOGY & MANAGEMENT

## CRYPTEX

Newsletter of the Department of Electronics & Communication Engineering, Vol. 3, Issue 1, Jan 2018

### EDITORIAL

A thought that has been enduring in mind when it becomes real; is truly an interesting and exciting experience. This newsletter is one such cherished work that has its roots in the persuasion. It would be a snapshot of the various activities and advancements for all associated with the department of ECE, SMVITM. This newsletter will serve to reinforce and allow increased awareness, improved interaction and integration among all of us.

The exuberant success made by the students and faculties of the department would always be a hallmark for the batches to come. The venerable and inimitable placements acquired by students spreads plethora of optimism. Numerous seminars and workshops conducted by the department delivered behemoth the exposure. Participation of students in cultural activities organized in and outside the college delivered the essence of college life and the required exposure to the students that is must in corporate world.

Usually we fail to appreciate the good deeds of many people and activities that happen around us. It could all change if we just pause to think of what is our contribution to the society from which we have been gifted with this blessed life. The progress of the department mainly depends on many people who are working behind the scenes, overtime round the clock planning things to the smallest. This newsletter is a medium to provide proper acknowledgement and respect all of these efforts and its results.

It is a matter of pride as well as pleasure to present before our readers next issue 'CRYPTEX', a journey of excellence and a compilation of the immense effort put forward by the invincible SMVITians. This is the first issue of our newsletter for academic year 2017-18. We have started this as a way of keeping in touch with teachers and students who have been an integral part of our journey. This is not the outcome of the effort put in by an individual, but is the immense effort put forward by our Editorial Board, all faculties, students, all near and dear ones.

We have put wholehearted endeavors to give a complete and kaleidoscopic view of laudable achievements of ECE departments of our college. We hope you will welcome this effort of ours to connect with you

Editorially Yours  
*Sachin S Bhat*

### CONTENTS

1. Departmental Activities	Page 2
2. Faculty Accomplishments	Page 5
3. Student Accomplishments	Page 7
4. Department Vision & Mission	Page 9

## DEPARTMENTAL ACTIVITIES

### Interactive Session with Mr. C R Kuthyar

The department of ECE organized an interactive session with Mr. Chandrashekhar Rao Kuthyar, a Lead Consultant of SangamOne Connected Services Pvt Ltd and ApnaKhata Labs Pvt Ltd, on 24 August 2017. The students of 7th semester participated in the session and interacted with the speaker on innovative project ideas.



Mr. Kuthyar, who is also an Adjunct Faculty in the institute, discussed various projects which can be implemented by the students as their final year project work, and also can be sold to the end user or can be manufactured commercially. He said that, mere implementation of the work in hardware or software is not enough, but one should plan in such a way that the end product can be mass produced and possibly be patented.

Earlier, the HoD of ECE Dr. Balachandra Achar welcomed the guest speaker and thanked him for sparing his valuable time for discussion with the students.



### Guest Lecture on the Principles of LASER



The department of ECE, in association with ISTE Student Chapter, organized a guest lecture on the topic “The Principles of LASER”, by Dr. K Satyanarayana Rao, on 18 Aug 2017. The students of 5th semester ECE and the members of the faculty attended the lecture and enhanced their knowledge.

Dr. Rao, who has over 45 years of industrial and academic experience, explained the working principle of Laser, with suitable animations. He discussed about the different types of Lasers, and the materials used for making the same. He also touched upon the applications of Laser in different fields.

Earlier, Dr. HVB Achar, HoD of ECE, welcomed the guest speaker. Ms. Kusuma Prabhu coordinated the workshop, which was compered by Ms. Shikha M.

### Technical Talk on Connecting Engineering and Innovations



The department of ECE, in association with ISTE Student Chapter, organized a Talk on the topic “Process involved in innovation – Connecting Engineering and innovations”, by Mr. Johnson Tellis, on 7 Sep 2017. The students of 5th and 7th

semester ECE and the members of faculty attended the talk.



Mr. Johnson Tellis is the Director of DTLabz, which provides Technical guidance, support and resources to help the enthusiasts realize their dreams through technology. The speaker addressed the students on how the engineers should look at the problems in the society and come up with solutions. He gave valuable information about project group formation, applying for sponsorships, and execution of the project. He highlighted the importance of applying for patent if the project is unique. The speaker also shared some of the good projects with students, and motivated the students to come up with better ideas. The talk was followed by an interactive session, reflecting the interest from the audience.

Earlier, Ms. Vidyashree introduced the speaker and welcomed him to the program. HoD of ECE Dr. HVB Achar thanked the speaker for sparing his valuable time and spending fruitfully with the students. ISTE office bearers Mr. Vinay Kumar and Ms. Kusuma Prabhu, coordinated the program.

## Talk on Innovation and Mini Projects



The department of ECE, in association with ISTE Student Chapter, organized a Guest Talk on the topic Innovation, by Mr. Sunil Shambhatnavar, General Manager of Advanced Electronics Systems Bengaluru, on 14 Sep 2017. The 3rd and 5th semester students of ECE attended the Talk and interacted with the resource person.

Mr. Sunil, who is associated with SMVITM for the last six years, spent fruitful two hours with the budding electronic engineers and motivated them to conduct mini projects in every semester. In his interaction, he said that students should cultivate a habit of reading the datasheet for every component that they use in the laboratory. He said, mere connecting the circuit and getting the output in the lab period does not serve any purpose; instead, students should have a clear understanding of the design and analysis of the circuit, before conducting the experiments. He advised the students to study from the standard textbooks written by renowned authors, and also to read journals and magazines on electronics.

Earlier Ms. Vaishnavi Pai introduced the speaker and welcomed him to the program. HoD of ECE Dr. HVB Achar presented a memento and thanked the speaker. ISTE faculty coordinators Mr. Vinay Kumar and Ms. Kusuma Prabhu, along with Mr. VK Radheya, arranged the program.

## Workshop on LabView



The department of ECE, in association with ISTE student chapter, organized a 3-day workshop on the topic “Introduction to LabVIEW”, during 14–16 Sep 2017. Dr. Santhosh KV and Ms. Bhagya Navada, faculty members with the department of Instrumentation and Control Engineering at MIT

Manipal were the resource persons. The students of 7th semester participated in the workshop and enriched their skills.

During the workshop, the resource persons introduced the tools of LabVIEW and trained the students on modular programming, arrays, clusters, structures, strings, file input-output, data generation and data acquisition using ELVIS board. The first two days of the workshop was conducted in the software lab of ECE department at SMVITM, whereas the last day of the workshop was conducted in the department of ICE at MIT Manipal.

The program began with the invocation by Ms. N Shriraksha Acharya. Inaugurating the program on the first day, the Principal in-charge Dr. B Radheshyam appreciated the efforts of ECE department in providing hands-on experience to its students by way of such workshops. The convener Mr. Sachin Prabhu gave a preamble of the workshop and welcomed the resource persons. Ms. Disha Shetty introduced the resource persons, and Ms. Meghana compered the inaugural session.

On the second day, the HoD of ECE department Dr. Achar presented mementos to the resource persons and thanked them for sparing their time to train the students. ISTE faculty coordinators Mr. Vinay Kumar and Ms. Kusuma Prabhu, along with Mr. Krishna Kumar, coordinated the workshop. SMVITM wishes to thank the HoD of Instrumentation & Control Engineering at MIT Manipal for permitting its students to work in their laboratory for one day.

### Guest Lecture on Video Analytics

The department of ECE, in association with ISTE Student Chapter, organized a guest lecture on the topic “Trends in Video Analytics”, on 10

November 2017, in the institution premises. Dr. U C Niranjan, who is an Adjunct Professor at SMVITM and the Director of Research at Manipal Dot Net, was the guest speaker. Faculty members and the final year students of ECE department attended the lecture, and enhanced their knowledge.

Dr. Niranjan, who has over 30 years of industry and teaching experience, gave very valuable information about video analytical algorithms that are used to detect a human being in real time video stream. He illustrated by showing a few results after applying the algorithm to CCTV footage. He also explained the concept of Neural Networks for feature extraction and identifying the person in the video, which could be used for security purpose and also for taking attendance in classrooms and offices.

Earlier, Ms. Phebe Ann Samuel introduced Dr. Niranjan to the audience and welcomed him to the program. Dr. Balachandra Achar, HOD of ECE department, thanked the speaker for sparing his time and enlightening the audience about the topic. ISTE faculty coordinators Mr. Vinay Kumar and Ms. Kusuma Prabhu coordinated the program.



## FACULTY ACCOMPLISHMENTS

### Journal Publications

- Mr. Sachin Bhat, Ms. Vrunda Adkar, Mr. Chetan R and Mr. Krishna Kumar published a paper titled “Tongue driven wireless assistance technology for wheelchair movement”, in IJETT, Vol. 49, Issue 6, July 2017.
- Mr. Sachin Bhat, Mr. Kaushal Shetty and Ms. Reshma D’souza published a paper titled “GSM based automatic meter reading and billing system”, in IJRTI, Vol. 2, Issue 7, August 2017.
- Mr. Sachin Bhat, Ms. Lahari Vaidya, Ms. Lekhana Bhandari and Ms. Harshini, published a paper titled “Human detection using depth sensing camera”, in IJRT, Vol. 2, Issue 10, September 2017.
- Mr. Vinay Kumar, Mr. Sachin Prabhu, Mr. Sandesh Kumar and Mr. Ganesh Shetty published a paper titled “Smart Automated Drip Irrigation System”, in IJCESR, Vol. 4, Issue 9, September 2017.
- Mr. Nagaraja Rao, along with Mr. N Jayakumar & Ms. Shilpa C, published a paper titled “Modeling and analysis of a maximum power point tracking control for double stage solar photo-voltaic grid-connected systems”, in IRJET, Vol. 4, Issue 9, September 2017.

### Conference Presentations

- Mr. Raghavendra Rao, Ms. Laxmi Shetty, Mr. Ranjith Bhat and Ms. Kalavathi Nayak presented their work titled “Advanced Perturb

and Observe MPPT using Boost Converter”, in a 1-day International Conference on Innovation in Electrical and Electronics Engineering, held at Pune, on 27 August 2017.

- Ms. Kusuma Prabhu, Ms. Rajashree Nambiar, Ms. Sowmya Bhat, Mr. Sachin S Bhat and Mr. Avinash NJ presented their work titled “An Efficient Public Distribution system using IOT, GSM and BAN technology”, in a 2-day International Conference on Chip Circuitry, Current, Coding, Combustion & Composites, held at Sri Sairam College of Engineering, Bengaluru, on 16 & 17 November 2017.

### Workshop/FDP Participations

- Ms. Shareen Noronha and Ms. Vrunda Adkar participated in a 5-day workshop titled “Control of Power Electronic Converters”, held at NMAMIT Nitte, during 17–21 July 2017.
- Ms. Rashmi KR participated in a 5-day workshop titled “Cyber Warfare Techniques, Tactics & Tools For Network Security”, held at GSSS Institute of Engineering & Technology, Mysuru, during 24–28 July 2017.
- Mr. Vinay Kumar SR and Mr. Sachin Prabhu K participated in a 3-day workshop titled “Writing Research Proposals, Intellectual Property Rights & Patenting”, held at ACS College of Engineering, Bengaluru, during 31 July to 2 August 2017.
- Mr. Ranjith Bhat participated in a 5-day workshop titled “Analog IC Design and System Design Using Cadence and P-Spice”,

held at NMAMIT Nitte, during 31 July to 4 August 2017.

- Ms. Shashikala and Mr. Sandesh Kumar participated in a 3-day workshop titled “Graphical System Design and Virtual Labs”, held at MIT Manipal, during 17–19 August 2017.
- Mr. Sachin S Bhat participated in a 2-day workshop titled “Research Trends in Signal and Image Processing”, held at MIT Manipal, on 6 & 7 October 2017.
- Ms. Kusuma Prabhu participated in a 3-day workshop titled “Design and Simulation of Network Protocols using QualNet and IoT Applications”, held at MIT Manipal, during 7–9 December 2017.
- Mr. Avinash NJ participated in a 5-day workshop titled “Programming ARM Processor with Hands on using ESA KEIL ARM Cortex-M3 Evaluation Board”, held at BMSIT Bengaluru, during 11–15 December 2017.

- Dr. Balachandra Achar HV participated in a 2-day workshop titled “Internationalization of Higher Education - Role of Research, Innovation, Quality Assurance & Grants”, held at MAHE Manipal, on 20 & 21 December 2017.
- All the members of faculty participated in a 3-day faculty development program titled “Enhancing Teaching Methodology”, held at SMVITM Bantakal, during 13–15 December 2017.

## NPTEL Online Courses

- Mr. Nagaraja Rao, Ms. Shareen Noronha, Mr. Krishna Kumar, Mr. Arun Upadhyaya, Ms. Laxmi Shetty, Mr. Ranjith Bhat and Ms. Kusuma Prabhu successfully completed NPTEL online courses during the current semester, as part of their career advancement and updating the knowledge.

## STUDENT ACCOMPLISHMENTS

### Placements

- Ms. Nidhi P Shetty and Mr. Shubin were selected by iWave Systems Technologies Pvt. Ltd., in the pool campus recruitment drive held at SIT Valachil on 07 October 2017.
- Mr. Yashasvi A Shenoy was selected by SLK Software Services Pvt. Ltd., in the pooled campus recruitment drive held at MITE Moodubidri, on 31 Oct 2017.

- Ms. Vidyashree was selected by Tessolve Semiconductors Pvt Ltd, in the pooled campus recruitment drive held at KVG Engineering College, Sullia, on 13 Oct 2017.

### Other Achievements

- Ms. N Shriraksha Acharya of 7th sem won “outstanding female Rotaractor” award in the District Rotary Assembly “Prerana-2017”, held at City Centre, in Brahmavar, on 23 July 2017.

- Ms. Audry Jenitha Barboza of 7th sem, and Ms. Kavya of 3rd sem won Third Place in the VTU Mangaluru zone inter-collegiate table tennis tournament for girls, held at NMAMIT Nitte, on 28 August 2017.
- Ms. Meghana of 3rd sem, along with her teammates, won second prize in the Kannada nela jala bhashe group song event, and has won third prize in Kannada folk group song event, at Samskrutika Habba, organized by Vishwamanava Yuva Vedike, Government of Karnataka, on 30 & 31 August 2017.
- Mr. Bennet Henry Lobo of 5th sem secured Runner-up position in VTU Mangaluru zone inter-collegiate badminton tournament for boys, organized by NMAMIT Nitte, and held at John's Sports & Cultural Academy in Karkala, on 01 September 2017.
- Ms. Sushmitha N, Ms. Sushma Nayak, Ms. Sridevi Rao and Ms. Sowmya Poojary of 5th sem participated and presented a technical paper in the two-day state level paper presentation competition on "Mechatronics & Humatronics", organized by National Institute of Engineering, Mysuru, on 25 & 26 October 2017.
- Ms. Rashmi of 1st sem won the Best Drill award 2017-18, in Pre Nav-Sainik Camp Phase-II, held at Scouts and Guide Centre, in Manipal, during 16–25 September. She got selected for the Republic Day Parade to be held in New Delhi on 26 January 2018.





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## **CRYPTEX**

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### **DEPARTMENT OF E&C ENGINEERING**

The Department of Electronics and Communication Engineering in SMVITM was established in the year 2010, initially offering an undergraduate program with an intake of 60 students per year. The intake was increased to 120 in the academic year 2012-13. The department has well-qualified 24 faculty members, and 8 lab staff, highly motivated in teaching and guiding the students in exploring newer avenues of E&C. The department regularly organizes seminars, symposiums, workshops and invited talks by eminent faculty from reputed institutions and industry experts, to keep the students abreast of the latest technological developments in related fields. The department has its own library comprising of over 125 text books and technical magazines for quick reference. To nurture creative ideas and provide hands-on training to the students, the department has set up an Innovation/Project laboratory with state-of-the-art equipment and latest versions of software tools, in addition to the regular laboratories.

#### **DEPARTMENT 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

#### **DEPARTMENT MISSION**

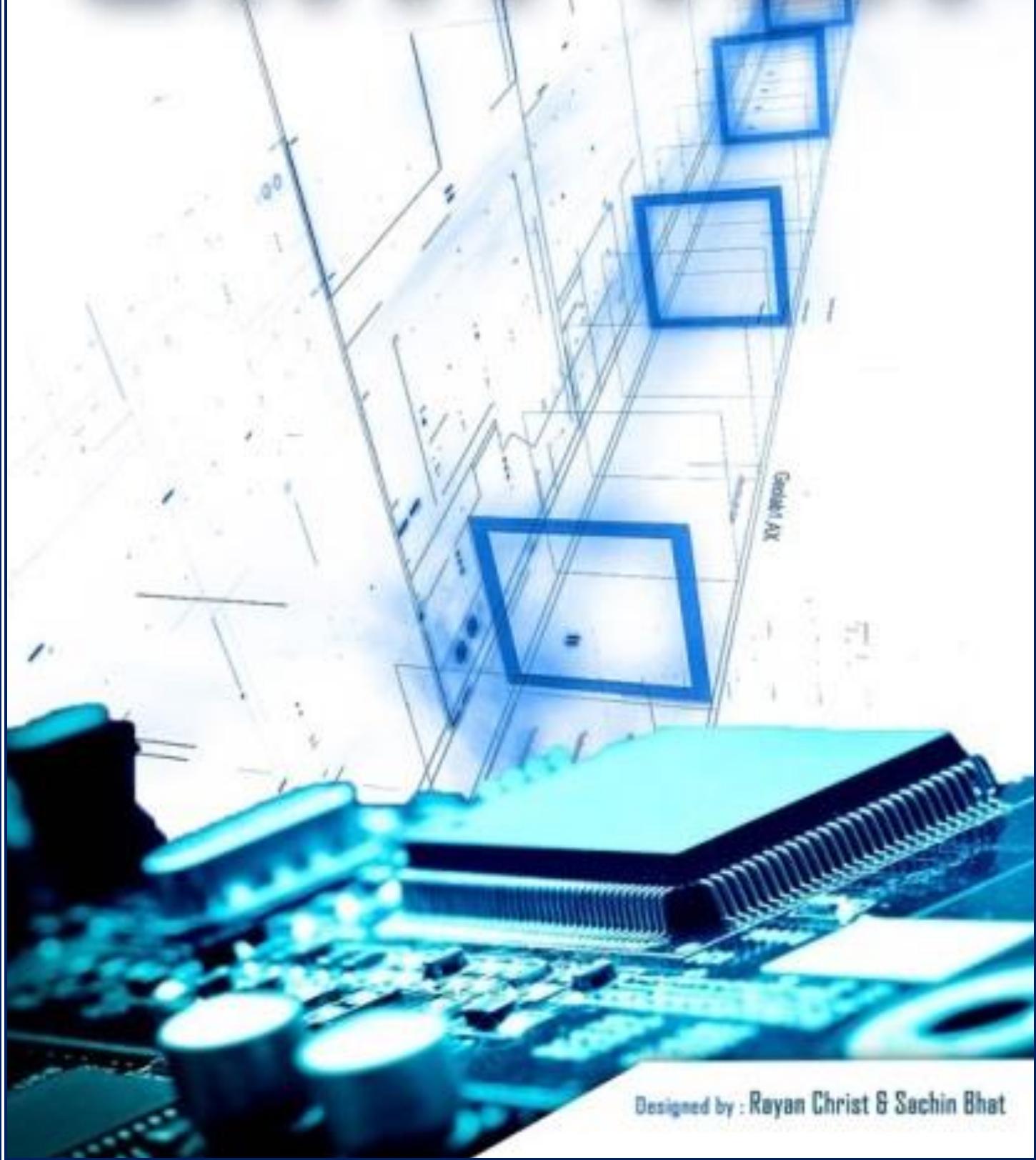
- To facilitate an ambience conducive to the excellence in technical education
- To provide a platform that will ensure the exchange of ideas and dissemination of knowledge.
- To establish a research oriented center by having rapport with industries.
- To foster ethical and value based education with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

#### **PROGRAMME EDUCATIONAL OBJECTIVES**

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

PEO-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.
PEO-2	Work productively as an Electronics and Communication Engineer, including supportive and leadership roles on multidisciplinary teams.
PEO-3	Inculcate effective communication skills to excel in professional growth.
PEO-4	Take part in lifelong learning in pace with the advancing technological society.

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