

# THE NEWS LETTER

2015-16

RSET SB



RSET

RAJAGIRI SCHOOL OF  
ENGINEERING & TECHNOLOGY



IEEE

**" DON'T EVER LET SOMEONE TELL YOU THAT  
YOU CAN'T DO SOMETHING. NOT EVEN ME.  
YOU GOT A DREAM, YOU GOTTA PROTECT IT.  
WHEN PEOPLE CAN'T DO SOMETHING  
THEMSELVES, THEY'RE GONNA TELL YOU  
THAT YOU CAN'T DO IT. YOU WANT  
SOMETHING, GO GET IT. PERIOD."**

## EDITORIAL

It is with much respect and humility that we present before you this newsletter, which brings into limelight this edition of expressions galore in the minds of our Rajagirians. Every creator painfully experiences the charm between his inner vision and the ultimate expression, the charm that is never completely bridged. We all have the conviction, perhaps illusory, that we have much more to say than that appears on the paper. Through the pages of this endeavor you can see the breathings of young hearts, as words are little audible links that bring together the great inaudible feelings and purposes. Here we would like to quote Goethe, the great litterateur, "Whatever you can do or dream you can, begin it, boldness has genius, power and magic in it, begin it now!" Yes, definitely for some this may be a humble beginning, but sometimes that may lead to a metaphase and eventually metamorphasizing to a steady walk to the infinite world of imagination and intuitions. Though no great finale happens here but the broadening of the endless horizons with time and space is the reality of this blessed activity. An adult in the 21st century will be called upon to have diverse skills, adaptability, conflict management, etc. IEEE in the college is the right forum where these skills can be nurtured. Here they can learn simple techniques of setting goals, motivating themselves and others, dealing with adversity, developing self confidence, generating enthusiasm at will, counting the blessings and thus organizing one's own life. We congratulate all the budding talents who came out in flying colors to make this venture a reality and invite the reader to these worthy experiences and relish the thoughts, emotions, dreams and fantasies of our youth.

The Rajagirians are trained through a well- balanced synchronization of curricular, co-curricular and extracurricular activities. The greatest discovery, "self-discovery", can be termed as a cliché but it is as relevant today as it was in the past.

This issue of the magazine is truly a forum for our students to manifest their imaginative skills, knowledge of language, literature, general awareness, art, creative writing, etc. Every child is blessed with certain hidden qualities but sometimes it goes unnoticed and untapped by the parents and the college. At RSET, we make a sincere endeavor to channelize their hidden potentials into positive reinforcements.

The true formation of a student is incomplete unless we ensure an integrated upbringing of their personality. I compliment the entire team including the editorial board and the students for their earnest contributions of creativity. The IEEE effort as a TEAM in the past, the indomitable will and zeal to excel in the future proves beyond doubt that

**"WHEN THE GOING GETS TOUGH,  
THE TOUGH GETS GOING".**



## Mentor Speak

**Dr. Deepti Das**

*Asso.Prof, Department of Electronics and  
Communication Engineering  
Counselor*

Our young generation are never in want of talents. All are born with tremendous potentials and possibilities. This reservoir of resources should be channelized in the right direction and in the right manner so that their youth will blossom and bear the fruits of goodness. Education should be designed in such a manner that it helps the students to achieve this goal. I am really contented to note that IEEE SB in RSET caters to the technical and cultural development of the students. It takes special attention to promote the skills of creative thinking and writing. To quote Dr. A. P. J. Abdul Kalam "All of us carry some sort of a super intelligence within us. Let it be stimulated to enable you to examine your deepest thoughts, desires and beliefs." I wish that our students be stimulated to fathom the depths of their desires and dreams.

Discipline doesn't break a child's spirit but lack of it breaks a parent's heart. A good system of education inculcates the principles of humanity. Right education includes development of a caring community, exercising concern and respect for the welfare of others and emphasizing the overriding importance of good human relations based upon sensitivity, tolerance and good will. Education is the progressive discovery of one's ignorance, learning how to learn is the basis of education. Character building, always remain the prime purpose of education.

# EXECOM 2016-17



**Deepthi Maria**  
Joint Secretary  
S7 CS A



**Riya Ramu**  
WIE Chairperson  
S7 EEE

**Itty Jose**  
Treasurer  
S7 CS A



**Arbite John**  
Secretary  
S7 EEE



**Amogh Jayaraj Rau**  
Communications Lead  
S7 EC A



**Siddharth Mahesh**  
Link Hub Coordinator  
S7 ME



**Sharon Lucas**  
Vice Chairperson  
S5 IT



**K Glen Zachariah**  
Technical Coordinator  
S3 EC B



**Abhinav Thomas**  
Web Master  
S5 CS A



# ALL INDIA STUDENT AND YOUNG PROFESSIONAL CONGRESS, 2015

The All India Student and Young Professional Congress, 2015 was held in our college on 7, 8, and 9th of August 2015. This event was conducted by the IEEE India Council and hosted by the Kerala section, under which the IEEE Student Branch of Rajagiri School of Engineering and Technology played host. It was the first time that an event of such magnitude was conducted at Rajagiri. This event witnessed the coming together of intellectuals and entrepreneurs from all across India. 250 student participants flocked to Rajagiri from places like Sri Lanka, Kharagpur, Kolkata and so on. The three day event started off with a keynote speech by Dr. Prahlad Vadakkepat, Associate Professor at the National University of Singapore. The Guest of Honor was Mr. C. Balagopal, founder of Terumo Penpol, India's largest Blood Bag manufacturer. Other dignitaries included Mr. Deepak Mathur, Chair, India Council and Mr. Satish Babu, Director at ICFOSS. Various breakout sessions were held throughout the conference, which included events like Volunteer training sessions, IEEE Women in Engineering (WIE) sessions and talks on various topics like kick starting your social media and studying abroad, taken by esteemed speakers. Entertainment and cultural programs were also organized where even the participants got an opportunity to showcase their talent in front of the audience. The highlight of the cultural events was the unplugged music concert by Sachin Warriar, play back singer. His performance was a welcome delight for all. Talks by artist-activists like Reshma Valliappan and Bilal Ghalib invoked a sense of duty and responsibility among the participants and provided a fresh insight on the everyday world. Also, a fireside chat was conducted with Mr. Alok Goel, former CEO of FreeCharge, where he talked about the market scene in India and emerging use of technology in day to day life. It was a delight



for the participants when they were taken to Marine Drive and nearby spots for sight-seeing, as they were able to enjoy the beauty of the Queen of the Arabian Sea. This event proved to be not only of technical and entrepreneurial value but also provided a networking opportunity among the many IEEE members from various parts of India. They were able to share their experiences and learn from each other. Volunteers from all over Kerala got a chance to cooperate together on a large scale to make this event a huge success. The efforts of the students of Rajagiri Student Branch blossomed into fruition as all of the events were conducted in perfect harmony and the students were exposed to the various aspects of organizing a professional event of this scale.



# ORIENTATION PROGRAMME FOR JUNIORS

The Rajagiri IEEE SB organized an orientation programme for the 1st, 2nd and 3rd year students on 11th September 2015. The function was held at the Multimedia Hall and witnessed an overwhelming attendance of eager students, wanting to know about the professional society. Majority of the students were 1st years from various branches. The program was conducted to familiarize the students with the activities of IEEE



within and outside Rajagiri and also about the benefits of an IEEE membership. Jairam Shankar, the Vice Chairperson of RSET IEEE Student Branch, started the programme with a brief introduction on what IEEE is and its benefits. It was followed by an enthusiastic speech by Amogh Jairau, S5 EEE, who gave insight towards the fun

side of IEEE events and their value towards the overall growth of a student. Arbite John shared personal experiences about networking among professionals and students from various parts of India. The students present were distributed some IEEE merchandise after the event and they interacted with the executive committee afterwards. Overall, the programme was a huge success in attaining its goal of making the students aware of the benefits of IEEE and the various activities going on. The 1st



year students showed keen interest in becoming IEEE members; especially since the KTU syllabus awards grace points for participating and contributing to events conducted by professional societies like IEEE. This event proved to be a stepping stone in strengthening the IEEE SB of RSET for the coming years.



## E-Scientia Visit



the students returned to the campus at 02:00 pm



overwhelming. It made them inquisitive to know more about space technology , and India's role in space research.

The students were also involved in a hands on experience , where they assembled various electronic circuits , like LDR , Amplitude modulator ,

Frequency detector , etc. The various aspects of integrating different branches of engineering was

explained by the Director of CSIS , Dr.K.G Nair .The session also included a brief introduction on various communication technologies .

After a photo session ,

The visit to the E-scientia Laboratory , set up at CSIS campus (in Cusat), took place on 19th February , 2016.The bus was boarded at 09:30 am. It was part of

an initiative taken by the Rajagiri IEEE student branch . 57 students of ECE department were part of the event.The students were accompanied by a faculty , Mr.Kiran of the ECE department.

The students were exposed to a theatrical experience , there they understood the various of Space travel , and got an insight into the Mars mission.The experience was truly

## ELLE DÉCHAÎNE

In honor of all women, RSET IEEE SB's Women In Engineering (WIE) affinity group put forth a collage making competition, "Elle Déchaîne" for students of all years. The students were given the topic 'Women in Technology' and were asked to bring cutouts and glue three days before the commencement of the competition. The competition was held on Friday, March 4 th in main block. A3 sheets were distributed and students were asked to transform their thoughts into a collage in one hour. The organizers saw a swooping participation of 144 students 72 teams in groups of 2).. The judging panel decided the winners based on creativity, presentation and depiction of topic.



The winners were awarded cash prizes of 1000 and 500 for the 1 st and 2 nd place respectively. The prizes were handed over on 8 th march by Adv.Parvathy Menon serving in High Court of Kerala during the event "SHE UNLEASHED" conducted in association with women's day as well. From the width of the margins to be drawn to the final touch up there was a lot of planning involved evoking the artist within them. It was truly a colorful sight to see our engineering kids getting their hands messy in an urge to bring out the hidden talents in them.





# IDEA PRESENTATION COMPETITION



An idea presentation competition was held exclusively for semester six students. Students were told to send their mini project ideas in a particular format. The format is as follows:-

**Branch of Project**  
: < Specify Electronics & Communication/ Electrical/ Computer Science/mechanical/ Instrumentation> (if project encompasses more than one, specify each of the branches)

**THE IDEA** < The main idea of the project -

**Intro about your project, why you came up with the idea and describe how it is innovative>**

## WORKING AND IMPLEMENTATION

< Details on basic implementation of project and its feasibility>

## TECHNICAL DETAILS

< Specify the major components and availability, Hardware and Software Specifications >

## SOCIAL IMPACT

< Brief on how your project benefit people/society >

## ESTIMATED COST

< Estimate the cost of implementation of the idea >

## FUTURE ADVANCEMENT (optional)

< Scope and possible future advancements>

A total of 28 ideas were received. The 28 ideas were put through screening and 8 abstracts got selected for being presented in the final round. The final presentation was held on February 20, 2016. The ideas were filtered by Mr Sekhar Rajendran,

DEC, RSET after consulting with faculties of all departments.

The judges for final presentation included Prof Ramavarma and Prof Dominic Mathew. The 8 teams presented their ideas and were interrogated by the judges. The various project ideas included:-

Smart irrigation  
Smart trash system  
Pollution control system  
Smart spectacles for obstacle detection  
Etc

# PAPER PRESENTATION

The event Paper Presentation was conducted as a part of IEEE SB linked with TECHKSHETRA 2016, the national technical fest of RSET.

It started at 11:30 am. Mr Shekar Rajendran and Ms Rinju Jolly from DEC, REST coordinated the program along with student volunteers of S6 ECE. There were 8 groups that participated in the competition which included the colleges CET, Muthoot institute, SCMS, Holy Kings (Muvattupuzha), FISAT, ILM (Perumbavoor) and our own college RSET. Each and every one presented for about 20 minutes i.e., 15 minutes presentation along with an extra 5 minutes which was a question answer session. Contestants presented it with eager and enthusiasm. There was a break for about half an hour to have lunch and the event restarted by 1:45 pm. Students from mechanical and civil branches presented in the morning. The mechanical branch students were judged by Mr. Udayashanker and Mr. James Mathew from our mechanical department. There was only 1 contestant present from the civil branch who was judged by Mr. Ouseph and Mrs. Anitha from our civil department. In the afternoon session we had the presentation from the Electronics and Communication and the Applied Electronics and Instrumentation branches. These contestants were judged by Mr. Shekhar and Ms. Rinju. Certificates of the contestants were given by the end of the program which was followed by announcing the winners and declaration of winners. Professor Dominic arrived as the guest of the day who started off with a 5 minute motivational talk to the contestants. The first prize was bagged by Jerin Koduvath from the civil engineering branch of CET who presented on the topic "Carbon Capture and Storage". Amogh Jayraj Rau and Jairam Shankar of ECE, RSET bagged the second place who presented on the topic "smart irrigation system". The first and second prize winners were awarded with Rs 7000 and Rs 3000 respectively along with their certificates. The event as a whole provided us with a lot of information and helped us to see everything in a positive manner. The various other presentation topics were "Water level automation using fuzzy logic", "Bionic arm", "kinetic energy recovery system in bicycle", "Adaptive cruise control", "I-Rapid" and "Recuperative heat exchanges". The students from SCMS, who presented the topic "Bionic Arm" were specially mentioned by the jury. The programme got over by 4 pm.





# RASPBERRY PI WORKSHOP

## INTRODUCTION

RSET IEEE Student Branch have kick started the 2016 SB events with its various technical workshops, one of the most successful being the RASPBERRY



PI workshop which was conducted on 27th and 28th February. The two day event had around 60 participants from the college representing different branches. Workshop primarily focused on training the students with Raspberry pi which is today an inevitable component in most of the engineering projects.

**DAY 1:** Workshop was collectively handled by Mr. Ashwin from BITSFORGE. Morning session dealt with the introductory classes on Raspberry pi. The topics covered were basic hardware information and booting. The participants came up with interesting questions which thoroughly proved that the workshop was storming their brains. The afternoon session covered the introduction and basics of Python which was followed by a coding session on the same.

**DAY 2:** The second day started off with a session on image processing. The hands- on- training with Raspberry board was highly appreciated by the participants. The coding session included chapters on capturing frames from a video sequence, reading and writing images, accessing images and elements, image conversion and scaling and shearing. A brief introduction to Histogram equalization and morphological operations made the afternoon hours more interactive.

The certificates for all the participants were distributed. Soft copies of tutorials on the subject were given for further follow ups.



*" LOGIC WILL  
GET YOU FROM  
A TO Z;  
IMAGINATION  
WILL GET YOU  
EVERYWHERE"*

**- EINSTEIN**

## SHE UNLEASHED

Women In  
Engineering  
affinity  
group of

RSET IEEE SB celebrated the Women's day on March 8th, Tuesday as an ode to all the women members of our society. The day's program, named, "SHE UNLEASHED", was focused on two talks and dance drama performance. The organizers were glad to have an audience of over 200 female students of Rajagiri from all years.



The program started with a prayer song where the dias was blessed with the presence of the Branch Councillor, Dr.Deepthi Das; Principal, Dr.A Unnikrishnan and Director Rev Fr Jose Alex CMI. The winners of the collage competition "Elle Déchaîne" were awarded with cash prizes on the same day.

The first session was on "Women and Law" by Adv.Parvathy Menon, High Court of Kerala. Being a guest lecturer as well as a standing committee member at Kerala Women's commission, Adv. Parvathy Menon was able to grab the undeterred attention of the students by vividly talking about the societal threats faced by women, especially the youth as well as the legal refuge which they can avail. She also shed light on increasing cyber crimes and the legal provisions which we can avail if we faced any such problems.



The second session was handled by Ms Sita Mary Thomas, Head of HR Department of Ruby Seven Studios. She stole us a peep a few years into our future. We could see ourselves as working women. We visualized the challenges faced by married moms as well as problems faced at the workplace, as she talked. She gave us many examples of abuses at workplace and advised us on how to tackle them. The audience were all ears before ending her session for she did not forget to inspire us to follow our dreams.

"She Unleashed" approached the final showdown by a jaw dropping Dance Drama, "INDEPENDENCE PENDING" , by 18 students, on the plight of victims of acid attack as well as female foeticide. It was performed as a tribute to the social figure Laskhmi Saa. The curtains fell with a vote of thanks by the Asst Professor Anitha Varghese and hardwork of all the WIE volunteers were rewarded by the applause of students and staff.



## IAS CHAPTER



Also an introduction to our alumni and mentor, Mr Libin who is a very active member of IAS internationally was also given. Also a sneak peek into our latest assignment

was also given to the students and teachers.

Mr Sunil Paul , CTO of Srishti Robotics and cofounder of Techjeeva , who also is the HOD of the Innovation and Design Lab at Choice School, Thripunithara was the chief guest. He was an assistant professor of ME department at Vimal Jyothi Engineering College. The talk he gave was very inspiring and he also showed a few videos



that inspired everyone to start working on their own projects and make their own startups. He shared his experience with the children at the school and highlighted on how students lose their intuitiveness as they grow. He also showed a sample program to light up LEDs on a Arduino Uno R3 board leaving a

specific time interval. He also introduced the audience to his robot "chitti" and demonstrated the different statures that his robot can take. Ms Aroma Rose Reji and Ms Chandana Elizabeth Peter gave a tech talk. The program concluded with a vote of thanks by Ms Kiran Maria Abraham.

# " Linking Research To Practice"

The official inauguration of the IAS chapter of the RSET IEEE SB was held on the first of September. The event was graced with the presence of Mr Sunil Paul who gave a very inspiring talk on robotics and microcontroller programming. The official website of the IAS chapter was launched by the principal of RSET , Dr A Unnikrishnan.

The event was jointly hosted by ELUXTRA and the IAS chapter. Mr Jebin Francis , the IAS chapter advisor declared the office bearers for the academic year. Ms Arbite John is the chairperson of the chapter and Mr Rohit V is the co-chair. Ms

Kavyasree M is the secretary and Mr Abhinav is the Webmaster and Networking Head. HOD of EEE department, Mrs Shanthi B also declared the office bearers of ELUXTRA for the academic year. Mr Mithun Joy of EEE gave the welcoming address. The principal, Dr A Unnikrishnan gave the presidential address and an overview of the importance of IEEE in improving the overall performance of a student and how it gives greater exposure to a student outside the academic zone. Arbite John talked about the IEEE IAS society and gave an introduction to the students about it. The benefits of being a member was discussed



## IEEE DAY CELEBRATIONS 2016

*As part of the IEEE day celebrations, 2016 several competitions and the PES college-level quiz was conducted.*

*The competitions that were conducted are:*

- 1) Photography contest*
- 2) Technical Blogging competition*

### Photography contest

*Students were asked to send in photos, that they've clicked based on the theme "Empowering Technology for Humanity". This competition saw a lot of students sending in their entries, to bag the top three places.*

*Certificates and goodies were distributed to the winners of the photography contest.*

### Technical Blogging competition

*Students were asked to mail in, their own blog entries on the topic "Empowering Technology for Humanity". The best three entries from the lot were selected and the winners were given certificates and other goodies.*

*The best three entries from both the competitions gets featured in the IEEE RSET SB Newsletter*

*"A SCIENTIST  
CAN DISCOVER  
A NEW STAR  
BUT HE CAN'T  
MAKE ONE. HE  
WOULD HAVE  
TO ASK AN  
ENGINEER TO  
DO IT FOR HIM"*

*- GORDON  
LINDSAY GLEGG.*

## IEEE PES- ENERGY EFFICIENT DREAM HOME CONTEST

Energy efficient dream home contest jointly organized by IEEE PES and EMC Kerala for the Kochi hub level was conducted in RSET Kakkanad on 1st October 2016 from 10.00 am to 4.30 pm. 24 teams had participated from different colleges across Kochi, out of which 6 teams were selected for the state level competition. Two teams from RSET had participated for the



competition. Anika Tomichen, Greeshma Ranjeev and Anushreya Preshob had presented their idea based on the topic of energy efficient switch and water management. Anjali Biju, Aishwarya KP and Akshaya presented their idea on the topic low cost LED Drivers for efficient

lighting. A panel of three judges constantly evaluated the performance of each group and contributed opinions in improving their ideas.

# NCIoT Logo Design Competition

Better interaction between Technical institutions and industry is the need of the hour. This will have great bearing on the Engineering Curriculum, exposure of industrial atmosphere to engineering students and subsequent placement of young graduating engineers in industries across the country. These objectives can only be achieved well by bridging the gap between industry and the academic institute. Rajagiri Institute of Future Technology (RIoFT) is an attempt on behalf of Rajagiri school of Engineering and Technology (RSET) to kick-start the next level of industry-institution interaction, whereby the industry is invited to set up their respective chairs at RSET in order that the industry can incubate their technology for future

employing the creative insights of the academia. NeST Technologies Pvt. Ltd. has come forward to be the first company to establish its Center under RIoFT for close collaborations, and this initiative is tentatively conceived as NeST Centre of Excellence in Internet of Things (NCIoT). The IEEE RSET SB called for a design competition for the Logo for between July 8th and July 15th. A total of 12 entries were received and the best ones were submitted for review. Some of the entries are given below.

The winner receives a cash prize of 5000 INR and a certificate from NEST.



## PES QUIZ COMPETITION

RSET IEEE SB in association with IEEE PES KERALA SECTION organized a quiz contest for first year engineering students as part of IEEE day celebrations on Oct 4th during lunch interval in all the engineering colleges in Kerala. A total of 35 students participated

Winners at hub level will be awarded a prize money of 10K as first prize,



5K for second and 3K for third position.



for the event. Quiz contest carries 40 questions and longed for 20 minutes. Winners & runners up were qualified for the finals at hub level to be conducted on Nov 5th. All participants will be awarded 10 activity point for the college level contest. For hub level more activity points will be awarded.







A workshop on Xamarin was conducted on 20th Saturday, 2016. It was a hands on session on Android app development. The workshop was taken by Xhackers, Kochi. The resource team included Mr.Sreeraj P,R, developer at Fingent Technological Solutions, Ms.Jisha Rajan, Mr Abdul Muhayim, a third year b.tech student at MES

College of Engineering, Mr shamnad and Mr vaikesh. A total of 62 students attended the workshop. The workshop was from 9:30 to 4:30. The class was in two sessions. The first session was an introduction to Xamarin and the installation and familiarization of software. In the

second session, the simple applications. The number of mouse clicks application that used a the students was so were called upon by

## XAMARIN WORKSHOP

where students could share their new found interest in this field of development and feed their existing knowledge, thus the Rajagiri Xhackers group was formed in association with IEEE. The class instilled in the entire congregation of students who attended the workshop a whole new point of view on app development and how it can be implemented in our everyday life as well. The group is currently active and the participants can ask the help of teachers directly for their app development. This ensures that the students are encouraged to continue and research on what they have learned in the workshop. There is also a proposal to conduct a hackathon soon.

The first half of the session comprised of installation of xamarin visual studio , simulator and a basic idea of how it is implemented. Mr Abdul Muhayim gave a detailed structure of how different languages are utilised in creating various operating systems such as iOS, Windows etc. C# is the language that can be used to fabricate all the other programming languages that we are all using till date. Using C# language we were able to formulate languages like JAVA, C++ etc. that form the platform of all other operating systems. Participants got a hands on experience on android app development and a new programming language through this workshop.

students developed 2 first app is to recognise and the second one was an login page. The response of overwhelming that we them to create a group



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