



# AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY VINAYAKA MISSIONS RESEARCH FOUNDATION

Vinayaka Nagar, Old Mahabalipuram Road, Paiyanoor- 603104, Tamil Nadu, India

[www.avit.ac.in](http://www.avit.ac.in)



THE OFFICIAL NEWSLETTER OF

## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

December 2017

# KALEIDOSCOPE

### MESSAGE FROM PROVOST:



*I feel glad in releasing this Newsletter Kaleidoscope from Electronics and Communication Engineering Department.*

*I wish that this newsletter should be used for the publication of research contributions by the staff and students and other creative ideas.*

*Today's students are intelligent and have innovative ideas in their area of studies. I wish that this should be reflected in the newsletter.*

*I wish the news letter from the Department of Electronics and Communication Engineering a great success and serve the academic community to promote innovative ideas in Electronics & Communication Engineering.*

**- Prof. Dr. M.Ponnavaiko,**  
PROVOST, VMU

### MESSAGE FROM PRINCIPAL:



*Technology is revolutionizing the progress of the world. The Big Earth is becoming a Global village due to the rapid development in the field of Internet based communication system. The technology is increasing the human comfort Index and safe living of the people.*

*In these aspects the field of Electronics and Communication Engineering plays a major role. The development in the form of Internet of Things (IOT), Cloud Computing, Big data analysis and mobile applications are leading the growth platform in this current century.*

*By recognizing these trends of development I understand the Electronics and Communication Engineering of AVIT is conducting the International Conference and releasing the Newsletter containing various innovative, developmental and research articles for the knowledge enlightenment of the student community.*

*My Hearty Congratulations for the Head of the Department and the editorial board of this Newsletter for bringing out the events and talents of the department.*

**- Dr. P.Sankar,**  
Principal

## MESSAGES

**VICE PRINCIPAL CUM HOD MESSAGE:**

I am pleased to share some of the exciting news in the Department of Electronics and Communication Engineering happened during the academic year 2017-18 through our newsletter KALEIDOSCOPE.

Newsletter is believed to be a focus of the inside activities i.e. academics, achievement of students and faculty as well as innovation occurring in the department. In the era of engineering and technology, this newsletter will motivate the teachers and students of sharing their creativity and new ideas with the world and will help in their overall development.

During this year, the staffs and students involved in various academic, co-curricular, extra-curricular as well as research & developments activities. As you read through the pages you will realize, that the Department had a successful academic year. I would like to thank all my colleagues for their tireless efforts for the progress of the department at a very steady pace.

As the saying goes by "Coming together is a beginning, keeping together is progress and working together is success", I congratulate the entire editorial team for their solidarity in bringing out successfully the first edition of KALEIDOSCOPE, a Department newsletter for the academic year 2017-18.

We are very grateful to our Chancellor, Director, other Management committee members, Principal and Vice Principal for their constant support and encouragement.

**- D.Vijendra Babu**  
Vice Principal &  
Head, Dept. of ECE

**From the Editor Desk**

It is a great pleasure to bring you the fifth issue of newsletter after a gap. The current newsletter highlights the activities and achievements of faculty, staff and students for the past one semester. It also features visits by eminent scholars from leading institutes to our Department. The intent of this newsletter is to disseminate information about our Department, and we hope that the readers find the issues informative and useful. I am thankful to the faculty staff and students for their valuable inputs, and welcome suggestions and feedback.



**Mr. R.Suresh Kumar**  
Associate Professor,  
Dept. of ECE



**Mr. A.Subbiah**  
Asst. Prof. Grade-II  
Dept. of ECE





## SEMINARS & GUEST LECTURES

### Seminar on “Embedded Processors for IoT”

Department of Electronics & Communication Engineering, Aarupadai Veedu Institute of Technology organized a **Seminar on “Embedded Processors for IoT”** on **2<sup>nd</sup> August 2017**. Dr. A. Sivagami, HOD/ECE delivered the Welcome address and introduced the chief guests of the function. Dr. Vemuri Lakshminarayana, Principal, AVIT has delivered the Presidential address. Prof. D. Vijendra Babu, Vice Principal has given a special address. The Chief guest Mr. R. Yuvaraj, Corporate Trainer, Eyeopen Technologies has delivered the lecture with the present trends in Embedded programming and the necessity of IoT in present scenario. Mrs. Ponmalar, Center Head, Eyeopen Technologies briefed about Mobile Application Development. Student participants are III and Final year of ECE department. They gained the knowledge about embedded programming for IoT. Dr. L.K.Hema, Associate Professor, organizing member of this event has proposed the vote of thanks. Ms. R. Mohanapriya, Asst Prof. Gr-II, coordinated in the event.



### Technical Seminar on “Recent Trends in IT- Open Source & Cloud Technology”

Department of Electronics & Communication Engineering, Aarupadai Veedu Institute of Technology organized a **Technical Seminar on “Recent Trends in IT- Open Source & Cloud Technology”** on **22<sup>nd</sup> August 2017**. Dr. L.K.Hema, Associate Professor/ECE delivered the Welcome address and introduced the chief guests of the function. Dr. Vemuri Lakshminarayana, Principal, AVIT has delivered the Presidential address. The Chief guest Mr. Ranjitsen Gupta, Director & COO, Vectra Technosoft Pvt. Ltd., delivered the lecture on Open Source and Cloud Technology. Mrs. Shameera Sha, RHCI, RedHat India Pvt., Ltd., explained about REDHAT Linux operating system and the certification courses on that. Student participants are III year ECE, III year CSE and Final year of ECE department. They interacted about the technicalities of Redhat Linux OS & open source softwares. Dr. L.K.Hema, Associate Professor, organizing member of this event has proposed the vote of thanks. Ms. K. Sasirekha, Asst Prof. Gr II,/ ECE and Mrs. Srividya Asst. Prof. Gr. II/CSE coordinated in the event.



### Guest Lecture on “Career Guidance”

Department of Electronics & Communication Engineering, Aarupadai Veedu Institute of Technology organized a Guest Lecture on “Career Guidance” on 30<sup>th</sup> August 2017. Ms. R.Indumathi, Assistant Professor (Gr-II)/ECE delivered the Welcome address and introduced the chief guests of the function. The Chief Guest Mr. K.Vasanth Kumar, Academic Head, Tambaram Branch, TIME Institute. Student participants are III year ECE and III year BME. The chief guest delivered the lecture about importance of higher studies. Mr.R.Pathamuthu, Asst. Professor(Gr-II) Proposed the Vote of thanks.





## WORKSHOPS

**Workshop on IoT for Agriculture**

The IEEE Student Branch Chapter, AVIT and Department of Electronics and Communication Engineering jointly organized a One Day Workshop on IoT for Agriculture on August 18, 2017.

The workshop was conducted with funding of \$250 from IEEE Region 10 Educational Activities Funding.

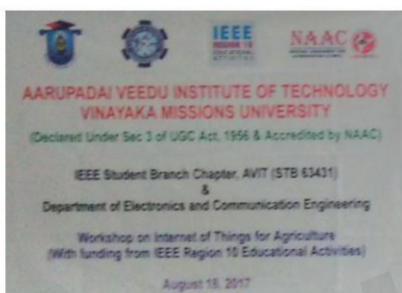
The workshop included hands on training in Raspberry Kits connected with Cloud. 45 students from AVIT and other Colleges attended the Workshop.

Prof. P Subramanian, IEEE SB Counselor welcomed the gathering.

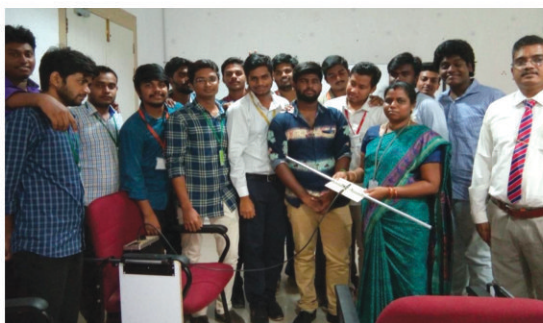
Dr. Vemuri Lakshminarayana, Principal, AVIT presided.

Prof. D Vijendra Babu, Vice Principal and Dr A Sivagami, Head, ECE Department felicitated.

Mr. R.Sureshkumar, Associate Professor Proposed the Vote of thanks.

**Workshop on "Antenna Design"**

Department of Electronics & Communication Engineering, Aarupadai Veedu Institute of Technology organized a **One day hands on training on "Antenna Design" on 20th September 2017**. Dr. L.K.Hema, Associate Professor, organizing member of this event welcomed the gathering and introduced the chief guest of the function. Prof. D. Vijendra Babu, Vice Principal, AVIT had delivered the Presidential address. Mr. P. Subramanian, Associate Professor/ECE presided. The Chief guest Mr. K. Sriram Sastry, Proprietor, Allied Electronics Co., had given the hands on training on different types of antennas. Student participants were III and Final year of ECE department. They gained the knowledge about 40 different types of antennas and their applications. Ms. Rizwana, III year student proposed the vote of thanks. Ms. R. Indumathi, Asst Prof. Gr II, and Ms. K. Sasirekha, Asst Prof. Gr II, coordinated for the smooth conduct of the programme.





## INDUSTRIAL VISITS

### Industrial Visit to MAPS, Kalpakkam

Madras Atomic Power Station (MAPS) located at Kalpakkam about 80 kilometres south of Chennai, India, is a comprehensive nuclear power production, fuel reprocessing, and waste treatment facility that includes plutonium fuel fabrication for fast breeder reactors (FBRs). It is also India's first fully indigenously constructed nuclear power station, with two units each generating 220 MW of electricity. The station has reactors housed in a reactor building with double shell containment improving protection also in the case of a loss-of-coolant accident. An Interim Storage Facility (ISF) is also located in Kalpakkam.

Students Visited Madras Atomic Power Station (MAPS) on 08-09-2017 .The industrial visit has been arranged for the IV Year ECE & IV Year BME Students. Students visited Waste treatment facility, fast breeder reactor(FBR),Heavy Water Separation, Control Unit, Generation unit, Transmission Unit. Mr. R.Sureshkumar, Associate professor, ECE arranged the industrial visit. R.Sureshkumar, Associate Prof., Mr. A.Subbiah, Asst. Prof.(Gr-II), Mr. R.Pathamuthu (Gr-II), Mrs. K.Sasirekha, Asst. Prof. accompanied the students.



### Hospital Visit to Global Hospital, Chennai

An Industrial visit was arranged for the students of the II Year /III Year BME students to the Global Hospitals, Chennai, on 31.08.2017. The students visited the following labs in Global Hospitals & Health-City, Perumbakkam. Histo Pathology Lab, Dialyser Unit, Endoscopic Unit, Multi parameter Patient Monitoring System, Ventilator, Medical ICU Unit, Micro Biology Lab-Automatic Blood, Urine Testing Machines & Unit, X-Ray Unit, MRI scanning, Live CT Scanning, Electro Cardiogram(ECE). Mr. R.Sureshkumar, Associate Professor, ECE arranged and accompanied the students.



### Industrial Visit to RETECH SOLUTIONS

RETECH Solutions Pvt. Ltd., is one of the Service provider of mechanical design and analysis of innovative fabrication projects, embedded projects, MAT LAB simulations and image processing. Industrial Visit to RETECH Solutions has been arranged by Mr. R.Sureshkumar, Associate professor, ECE for II Year ECE & III Year ECE Students on 19-09-2017. Mrs. R.Indhumathi Asst.Pro(Grade-II)/ECE, accompanied the Students .

The Students have visited and learnt how the 3-Dimensional Printers are working and a 2-Dimensional plotter .





## FACULTY AWARDS

Prof. D.Vijendrababu Vice Principal & HOD, ECE Participated in Confederation of Indian Industry (CII) 3<sup>rd</sup> Edition of National Higher Education Conclave 2017 on 01/12/17 & 02/12/17 at Coimbatore.

Prof. D.Vijendrababu Vice Principal & HOD, ECE Presented a Technical Paper titled "Industry 4.0: Developments, Impacts & Requirements" in 3<sup>rd</sup> Summit of ACMA Centre for Technology, 8-9, December, 2017 @Pune.

Prof. D.Vijendrababu Vice Principal & HOD, ECE receiving the "Runner" Award from Shri. Srivats Ram, Chairman, ACT & Managing Director, Wheels India Ltd. & Shri. Dinesh Vedpathak, Head, ACT.

Mr. P.Subramanian Associate Professor, ECE, has been selected as the Chairperson of IEEE Communication Society Madras Chapter for the Year 2016-2017

Mr. P.Subramanian Associate Professor, ECE, has been selected as the Chairperson of Education Committee IEEE Madras for the Year 2016-2017

Mr. P.Subramanian Associate Professor, ECE, has been awarded as the Executive Committee Member of IEEE Madras section for the Year 2016-2017

Dr. L.K. Hema, Assoc. Prof./ECE have won the Overall Achiever and First Prize in the Solo event "CELEBRATING MYSELF" in the International Women's Day celebrations held on 8th March 2017.

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Prof D.Vijendrababu with Rene VAN BERKEL UNIDO Representative, Regional office, India at ACMA Summit

Prof D.Vijendrababu with Dr. Bharatkumar B. Ahuja, Director, College of Engineering, Pune at ACMA Summit



Prof D.Vijendrababu with Dr. Sandhya Chintala, Vice President NASSCOM at National Higher Education Conclave.

With Shrikanth Balasubramanian, CEO, Best In Town Analytics, Bangalore



Prof D. Vijendrababu with Mr. Yasumi Suzuki, General Manager, AOTS Research Institute at ACMA Summit



## ACHIEVEMENTS

### PROJECT PROPOSALS

Sl. no.	Title of the proposal	Principal investigator	Students name	Agency	Cost of the project	Date of submission
1.	IOT Enabled ECG & Pulseoximeter for patient monitoring	Dr. L.K.Hema	Souparnika.K, Blessy Mary John, Rohith Verghese	TNSCST	10,000	30.8.2017
2.	Machine vision for visually impaired	Dr. L.K.Hema	S. Viswanathan, A. Charles William, S. Sathish Kumar	TNSCST	12,000	30.8.2017
3.	Smart Home automation System	R.Suresh kumar	Bijitha Bhanu dass, Anuradha,	TNSCST	10,000	30.8.2017
4.	Wildlife monitoring using IOT	P.Subramanian	Abhishek Kumar	TNSCST	10,000	30.8.2017

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### Awards / recognitions received at the national and international level by Faculty

#### NATIONAL

Sl.no	Name of the faculty	Type of award	Purpose	Period	Awards received from
1.	Mr. D. VijendraBabu, Vice Principal Associate Professor	Runner	Summitt of ACMA	2017-18	ACMA, Centre for Technology, Pune
2.	Dr. L.K.Hema Associate Professor	Overall Achiever	International Women's Day, Women Empowerment Cell, AVIT	2017-18	AVIT
3.	Dr. A. Sivagami, Professor	Reviewer	International Journal	2017-18	International Academy of Science, engineering and technology
4.	Dr. L.K.Hema, Associate Professor	Editorial Board Member	International Journal	2017-18	International Journal of Bio Science & Engineering.
5.	Mr. P. Subramanian, Associate Professor	Reviewer	International Conference	2017-18	IEEE International Symposium on Circuits and Systems , ISCAS 2018, Florence , Italy
6.	Mr. P. Subramanian, Associate Professor	Reviewer	International Journal	2017-18	Imaging Science Journal, Taylor & Francis Group
7.	Mr. P. Subramanian, Associate Professor	Advisory committee & Review Committee Member	International Conference	2017-18	Jeppiaar Engineering College
8.	Mr. P. Subramanian, Associate Professor	Advisory committee & Review Committee Member	International Conference	2017-18	St. Xavier's Catholic College of Engineering
9.	Mr. P. Subramanian, Associate Professor	Advisory committee Member	International Conference	2017-18	Priyadarshini Engineering College,
10.	Mr. P. Subramanian, Associate Professor	Advisory committee Member	International Conference	2017-18	SSN College of Engineering,
11.	Mr. P. Subramanian, Associate Professor	Advisory committee	IEEE International Conference	2017-18	SSN College of Engineering
12.	Dr. A. Sivagami	Invited talk	Seminar	2017-18	Arunai Engineering College
13.	Mr. P. Subramanian, Associate Professor	Runner	Summitt of ACMA	2017-18	ACMA, Centre for Technology, Pune
14.	Mr. R. Karthikeyan, Assistant Professor (G-II)	Runner	Summitt of ACMA	2017-18	ACMA, Centre for Technology, Pune





## AWARDS, CERTIFICATION COURSE &amp; IN-PLANT TRAINING

## INTERNATIONAL

Sl. no	Name of the faculty	Type of award	Purpose	Period	Awards received from
1.	Mr. P. Subramanian, Associate Professor	Participant	IEEE Communications Society Asia/Pacific Regional Chapter Chair Congress Meeting , Singapore	2017-18	Representation for Madras ComSoc Chapter

## ONLINE COURSE CERTIFICATIONS BY STAFFS AND STUDENTS

Sl. No	TITLE	CONDUCTED	DURATION	CERTIFICATIONS By
1	Digital Image processing of Remote Sensing data	NPTTEL, IIT, Kharagpur	JULY-AUG, 2017	Mr.P.SUBRAMANIAN, Associate Prof
2	Outcome based Pedagogic Principles for effective Teaching	NPTTEL, IIT, Kharagpur	JULY-AUG, 2017	Mr.P.SUBRAMANIAN, Associate Prof
3	Digital Image processing of Remote Sensing data	NPTTEL, IIT, Kharagpur	JULY-AUG, 2017	Mrs.R.Indumathi, Asst Prof.(Gr-II)
4	Introduction to Internet of Things	NPTTEL, IIT, Kharagpur	JULY-AUG, 2017	Dr.L.K.Hema, Associate Prof
5	Introduction to Internet of Things	NPTTEL, IIT, Kharagpur	JULY-AUG, 2017	Dr.A.Sivagami, Professor & Head
6	Cloud Computing	NPTTEL, IIT, Kharagpur	AUG-OCT, 2017	Mr.P.SUBRAMANIAN, Associate Prof
7	Digital Image processing of Remote Sensing data	NPTTEL, IIT, Kharagpur	JULY-AUG, 2017	Mr.S.Velmurugan, III Year ECE Student

## IN-PLANT TRAINING UNDERGONE

Sl. No.	STUDENT NAME	CLASS/SEM	ORGANISATION VISITED	DURATION
1	MS.ANEES FATHIMA, D.PONNI, MOHAMMED YASEEN, K.SIVAKUMAR	VII SEM/BME	Apollo Hospitals	03-07-17 to 18-07-17
2	K.SIVAKUMAR,R.SOWMIYA	VII SEM/BME	Bio Vision Systems	09-10-17 to 14-10-17
3	III Year BME students	V SEM/BME	Bio Vision Systems	09-10-17 to 14-10-17
4	III Year ECE	V SEM/ ECE	Eye Open Technologies,	31-10-17 to 04-11-17
5	S.RAMKI	VII SEM/ECE	TNEB	10-07-17 to 14-07-17
6	S.VELMURUGAN	III YEAR /ECE	UNIQ TECHNOLOGIES	23-06-17 to 27-06-17
7	RAJNANDAN KUMAR	III YEAR /ECE	BSNL,MOTIHARI	12-06-17 to 24-06-17
8	B.GOPALAKRISHNAN	II YEAR ECE	RGM,Telecom Training Centre, Meenambakkam	12-06-17 to 16-06-17
9	B.R.PRIYAVARSHINI, M.SIVASUJINTHA	VII SEM/BME	HARVEY BIOMEDICAL SYSTEMS, BENGALAURO	19-06-17 to 28-06-17