



Computer Society of India

Institute Membership No:100859

Dr. SIVANTHI ADITANAR COLLEGE OF ENGINEERING

TIRUCHENDUR

DEPARTMENT OF COMPUTER SCIENCE & *ENGINEERING*

UG & PG

DEAR READER,

IT'S A GREAT PLEASURE TO PRESENT BEFORE YOU THE NEWSLETTER OF COMPUTER SOCIETY OF INDIA STUDENTS' CHAPTER WHICH HELPS THE ENTIRE CSI FRATERNITY TO KNOW THE ACTIVITIES OF THE STUDENTS' CHAPTER FROM TIME TO TIME.

Volume 1 No.1-2018

Computer Society of India Students' Chapter

PATRON & SBC : Dr.G.Wiselin Jiji, Principal
CSI Coordinators : Mrs.R.Jensi, AP/CSE
 Mrs.S.Poornima, AP/CSE
Secretary : Mr. K.Hariharan Rathnam, IV CSE 'A'
Joint Secretary : Mr., A.Krishna Kumar@Gokul,III CSE 'A'
Treasurer : Mr.M.Venkat Raman, IV CSE 'B'

S.NO	DATE	EVENT	CHIEF GUEST
1.	19-01-2018	Industry Oriented Workshop on APP Development Using ZOHO Cliq	Mr.Deva Sahayam Team Lead and Ms.Manasa Team Lead ZOHO Corp , Chennai
2.	15-02-2018	Programming Contest PG	Mrs. K.Bergin Shyni,AP/CSE
3.	22-02-2018	Guest Lecture on Neural Networks for UG Students	Mr.P.Johnson Durairaj, JRF/CSE
4.	27-02-2018	Guest Lecture on Feature Extraction for PG Students	Mr.A.Muthuraj, Research Scholar/CSE
5.	08-03-18	Technical Quiz	
6.	16-03-2018	A Motivational Talk on Small Steps to Success	Dr.R.Tamilarasan, HOD/MBA
7.	20-03-2018	Poster Design Contest	Mrs.S.V.Anandhi,AP/CSE Mrs. D.Sindhu,AP/CSE
8.	28-03-2018	One day National Conference on Advanced Trends in Computer Science and Engineering (NCATCSE'2K18)	Dr.D.Dejey, AP/CSE Regional Office, Anna University,Tirunelveli

Events with photo

1. Industry oriented workshop on App Development using ZOHO Cliq was organized

on 19-01-2018 for the students of CSE. Mr.Deva Sahayam Team Lead and Ms.Manasa Team Lead ZOHO Corp , Chennai handled the session.



2. Programming Contest for PG Students of CSE was organized on 15-02-2018



3. Guest Lecture on Neural Networks for UG Students was conducted for the students of CSE on 22-02-2018. Mr.P.Johnson Durairaj, JRF/CSE handled the session.



4. **Guest Lecture on Feature Extraction for PG Students** was conducted for the students of CSE on 27-02-2018.



5. **Technical Quiz** was organized on 08-03-18



6. **Motivational Talk on Small Steps to Success** was organized on 16-03-2018 for the students of II CSE. Dr.R.Tamilarasan, HOD/MBA handled the session.



7. **Poster Design Contest** was conducted on 20-03-2018 for the UG Students of CSE. Mrs. S.V.Anandhi, AP/CSE and Mrs.D.Sindhu, AP/CSE judged the contest.



8. **National Conference on Advanced Trends in Computer Science and Engineering (NCATCSE'2K18)** was organized on 28-03-2018. Dr.Dejey, AP/CSE, Regional Office, Anna University, Tirunelveli Campus acted as jury.



Embedded Systems

Submitted by M.Venkat Raman, IV CSE 'B'

An embedded system is some combination of computer **hardware** and **software**, either fixed in capability or programmable, that is designed for a specific function or for specific functions within a larger system. Industrial machines, agricultural and process industry devices, automobiles, medical equipment, cameras, household appliances, airplanes, vending machines and toys as well as mobile devices are all possible locations for an embedded system. Embedded systems are computing systems, but can range from having no **user interface (UI)**-- for example, on devices in which the embedded system is designed to perform a single task -- to complex **graphical user interfaces (GUI)**, such as in mobile devices. User interfaces can include buttons, LEDs, touchscreen sensing and more. Some systems use remote user interfaces as well. Embedded system hardware (microprocessor-based, microcontroller-based)

Embedded systems can be microprocessor or microcontroller based. In either case, there is an integrated circuit (IC) at the heart of the product that is generally designed to carry out computation for real-time operations. Microprocessors are visually indistinguishable from microcontrollers, but whereas the microprocessor only implements a central processing unit (CPU) and thus requires the addition of other components such as memory chips, microcontrollers are designed as self-contained systems. Microcontrollers include not only a CPU, but also memory and peripherals such as flash memory, RAM or serial communication ports.

Because microcontrollers tend to implement full (if relatively low computer power) systems, they are frequently put to use on more complex tasks. Microcontrollers are used, for

example, in the operations of vehicles, robots, medical devices and home appliances, among others.

The embedded market was estimated to be in excess of \$140 billion in 2013, with many analysts projecting a market larger than \$20 billion by 2020. Manufacturers of chips for embedded systems include many mainstays of the computer world, such as Apple, IBM, Intel and Texas Instruments, but also numerous other companies that are less familiar to those outside the field. One highly influential vendor in this space has been ARM, which began as an outgrowth of Acorn, a U.K. maker of early PCs. The **RISC**-based architecture of the ARM chip, produced under license by other companies, has been widely used in mobile phones and **PDA**s and remains the most widely deployed SoC in the embedded world, with billions of units fielded.

A typical industrial microcontroller is quite unsophisticated compared to a typical enterprise desktop computer and generally depends on a simpler, less-memory-intensive program environment. The simplest devices run on bare metal and are programmed directly using the chip CPU's machine code language. Often, however, embedded systems use operating systems or language platforms tailored to embedded use, particularly where real-time operating environments must be served. At higher levels of chip capability, such as those found in SoCs, designers have increasingly decided that the systems are generally fast enough and tasks tolerant of slight variations in reaction time that "near-real-time" approaches are suitable. In these instances, stripped-down versions of the Linux operating system are commonly deployed, though there are also other operating systems that have been pared down to run on embedded systems, including EmbeddedJava and Windows IoT (formerly Windows Embedded).

