



# Newsletter

Volume 5, Issue 1, December 2017

Department of Electronics & Instrumentation Engineering  
(Accredited by NBA, New Delhi)

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE**

Warangal-506 015, Telangana, INDIA (An Autonomous Institute under Kakatiya University, Warangal)

काकतीय प्रौद्योगिकी एवं विज्ञान संस्थान वरंगल - ५०६०१५.

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

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## E&I Association II Semester activity calendar

Date	Activity
11.01.2018	Express to Impress
18.01.2018	Guest Lecture on GRE-Scholarship Test- Deliverables
25.01.2018	Brain Storming
01.02.2018	A Brief study on Industries [Slide show]
08.02.2018	GATE Preparation Tips
15.02.2018	Debate and JAM
22.02.2018	Role Play
03.03.2018	Puzzles

*Two new laboratories named VIRTUAL INSTRUMENTATION and BIO-MEDICAL INSTRUMENTATION established in the department with an approximate cost of 7 Lakhs. The main objectives of the labs are to introduce state of the art technologies to the students.*





Dept. of E&IE, KITSW 2013 - 2017 Batch

## List of Major Projects for the academic year 2017-18

Mini Sonar Using MC-8051 with Wireless Communication
Implementation of Fast Radix-10 Parallel Decimal Multiplier in FPGA
Effective ways to use Internet of Things in the Field of Medical and Smart Health Care
Steganography
Hand Gesture to Voice Conversion using Flex Sensor
Room Ventilation Control by Self Sensing Fan
Design and Development of Flow Control system using LabVIEW
FPGA Implementation of AES Algorithm using VHDL
Optical Character Recognition based Speech Synthesis system using LabVIEW
IoT based Garbage Monitoring system
Monitoring of Patient parameters using LabVIEW & Wireless LAN
An Improved DCM-Based Tunable Random Number Generator for Xilinx FPGA
An Efficient Attendance Management System based on Face Recognition using Matlab and Raspberry Pi 2
IoT Based Raspberry Pi Home Automation
Design of an LSSD Cell for VLSI Testing

## 02 HISTORY OF THE HARD DRIVE

Hard drives have increased 50-million-fold in the density of information they can hold since their introduction in 1956:

	<b>1956</b>	IBM 305 RAMAC – the first hard drive.
	HOLDS <b>5 MB</b> OF DATA	WEIGHS <b>1 TON</b>
SIZE OF TWO REFRIGERATORS		
»	<b>1963</b>	IBM 1311 – the first removable hard drive.
»	<b>1980</b>	IBM 3380 – the first gigabyte hard drive.
	HOLDS <b>1 GB</b> OF DATA	COSTS <b>\$40,000</b>
	<b>1992</b>	Hewlett-Packard C3013A Kitty Hawk – the first to break 2 GB barrier.
	HOLDS <b>2.1 GB</b> OF DATA	
»	<b>1997</b>	IBM Deskstar 16GP Titan – the first drive to use GMR (giant magnetoresistive) heads.
	HOLDS <b>16.8 GB</b> OF DATA	
»	<b>1998</b>	IBM Microdrive – the smallest-sized hard drive to date.
	HOLDS <b>340 MB</b> OF DATA	
»	<b>2004</b>	Toshiba MK2001MTN – the first 0.85-inch hard drive.
	HOLDS <b>2 GB</b> OF DATA	<b>2006</b>
		Seagate Barracuda 7200.10
		HOLDS <b>750 GB</b> OF DATA
»	<b>2007</b>	Hitachi GST Deskstar 7K1000 – the first hard drive to break the 1 TB capacity mark.
		HOLDS <b>1 TB</b> OF DATA
	<b>2011-2012</b>	All three major hard drive makers – Seagate, Western Digital, and Toshiba – start shipping 4 TB hard drives.
	<b>2013</b>	Seagate Ultra Mobile HDD – 500 GB for tablets
	HOLDS <b>500 GB</b>	SIZE <b>2.5 INCHES</b>
»	<b>2013</b>	ADATA DashDrive Air AE800 – a 500 GB wireless hard drive/hotspot/power bank for multiple mobile devices.
	HOLDS <b>500 GB</b> OF DATA	



### SUMSHODHINI'17:

A NATIONAL LEVEL STUDENT TECHNICAL SYMPOSIUM was organized successfully during 16<sup>th</sup> & 17<sup>th</sup> Feb. 2017.

Several students across the Nation have participated in various events and exhibited their talent and also won fabulous prizes.

**EVENTS:** IOT Cloud Botics Workshop  
Technical Paper Presentations,  
SIMAN,  
EIE DEN,  
E-HUNT,  
RE-HASH,  
Spot Events.



IOT Cloud Botics Workshop



IOT Cloud Botics Workshop



EIE DEN



E-HUNT

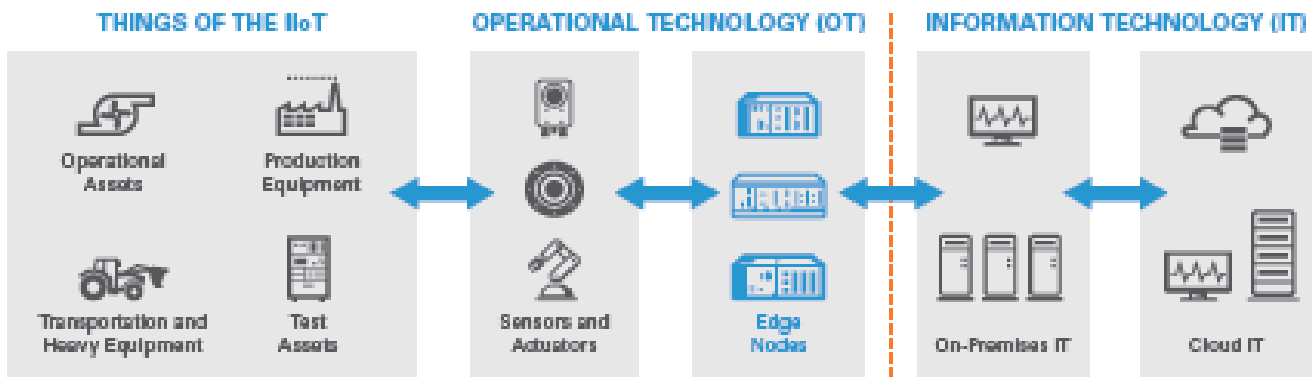


RE- HASH



SIMAN

# Optimize the Things That Matter Most With INDUSTRIAL IoT SYSTEMS



INCREASE UPTIME WITH PREDICTIVE MAINTENANCE

**39,000**  
OPERATIONAL PASSENGER HOURS ADDED PER YEAR  
**LONDON UNDERGROUND**



BY 2019 at least **40 PERCENT** of IoT-created data will be stored, processed, analyzed, and acted upon **AT THE EDGE.**<sup>1</sup>

BOOST PERFORMANCE WITH CONNECTED CONTROL AT THE EDGE

**20%**  
FASTER HARVESTING SPEED  
**FIREFLY EQUIPMENT**

DRIVE INNOVATION WITH CONNECTED, REAL-WORLD DATA

**95%**  
OF DATA IS NOW CENTRALIZED, ORGANIZED, AND ANALYZED  
**JAGUAR LAND ROVER**

## THE NI EDGE NODE ADVANTAGE

- N** **Nanosecond Analysis and Control**  
Assess and respond to inputs 880X faster than the average human with FPGA-enabled hardware.
- O** **Open, Connected Software**  
Leverage technology from the 4 MILLION IoT developers expected to be working by 2020.<sup>2</sup>
- D** **Data Acquisition From Any Sensor**  
Acquire and manage any of the 78 EXABYTES of industrial data expected by 2020.<sup>3</sup>
- E** **Edge-Ready Hardware**  
Deploy hardware certified to withstand extreme environments since 0% of OT assets are in an environmentally controlled data center.
- S** **Synchronization**  
Synchronize edge nodes to within 100 NANoseconds of each other from anywhere in the world with Time Sensitive Networking.

For more information, visit [ni.com/iiot](http://ni.com/iiot).

