



ISTE STAFF CHAPTER (TN 205) ACADEMIC YEAR 2019-20(ODD SEMESTER)

Staff Seminar Report

The ISTE Staff Chapter, Kings College of Engineering, organized a staff seminar delivered by, **Mr.S.Ramarajan** Assistant Professor/ Department of Electronics and Communication Engineering on **Applications of Wireless Sensor Networks** on 1.8.19 between 3.30pm and 4.00pm for the faculty members of the institution.



Resource Person's Talk Audience listening the seminar

About the Seminar Topic

Wireless sensor network (WSN) refers to a group of spatially dispersed and dedicated sensors for monitoring and recording the physical conditions of the environment and organizing the collected data at a central location. WSNs measure environmental conditions like temperature, sound, pollution levels, humidity, wind, and so on.

These are similar to wireless ad hoc networks in the sense that they rely on wireless connectivity and spontaneous formation of networks so that sensor data can be transported wirelessly. WSNs are spatially distributed autonomous sensors to monitor physical or environmental conditions, such as temperature, sound, pressure, etc. and to cooperatively pass their data through the network to a main location. The more modern networks are bi-directional, also enabling control of sensor activity. The development of wireless sensor networks was motivated by military applications such as battlefield surveillance; today such networks are used in many industrial and consumer applications, such as industrial process monitoring and control, machine health monitoring, and so on.

The WSN is built of "nodes" – from a few to several hundreds or even thousands, where each node is connected to one (or sometimes several) sensors. Each such sensor network node has

typically several parts: a radio transceiver with an internal antenna or connection to an external antenna, a microcontroller, an electronic circuit for interfacing with the sensors and an energy source, usually a battery or an embedded form of energy harvesting. A sensor node might vary in size from that of a shoebox down to the size of a grain of dust, although functioning "motes" of genuine microscopic dimensions have yet to be created. The cost of sensor nodes is similarly variable, ranging from a few to hundreds of dollars, depending on the complexity of the individual sensor nodes. Size and cost constraints on sensor nodes result in corresponding constraints on resources such as energy, memory, computational speed and communications bandwidth. The topology of the WSNs can vary from a simple star network to an advanced multi-hop wireless mesh network. The propagation technique between the hops of the network can be routing or flooding.

The WSN is used to apply different applications like Area monitoring Health care monitoring, Environmental/Earth sensing, Air pollution monitoring, Forest fire detection, Landslide detection, Water quality monitoring, Natural disaster prevention, Industrial monitoring, Machine health monitoring, Data logging, Water/waste water monitoring, Structural health monitoring, Wine production and Threat detection.



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Staff Activity Report

The ISTE Staff Chapter, Kings College of Engineering, organized a competition on **Mono Acting** on 1.08.2019 between 4.00pm and 4.30pm for the faculty members of the institution.



Staff members actively participating in Mono Acting Competition

Prize Winners

POSITION	STAFF NAME WITH DESIGNATION
1	Mr.T.Pasupathi AP/ECE Mr.S.Sivakumar AP/ECE

Coordinator/ISTE Chapter

PRINCIPAL