

## Department of Civil Engineering

### A Report on Guest Lecture "Introduction to Remote Sensing"

Date: 03/11/2018

The department of civil Engineering arranged guest lecture on "Introduction to Remote Sensing" on 29<sup>th</sup> Oct. 2018 at 11.00 a.m.

Dr. G. Subba Rao HOD invited the guest Prof. M. Gopal Naik. Inaugural function held in the morning under the chairmanship of Dr. CV Krishna Reddy Director NNRG.

Guest started the session by introducing about remote sensing process by taking human eyes as an example. Then he explained on history of remote sensing and how gradually developed from 19<sup>th</sup> century to 20<sup>th</sup> century. i.e. it is started with capturing the earth surface photograph with the help of bird at starting days and now by using the aircrafts and satellites.

Later, he came to the topic starting with definition of remote sensing, necessity, Remote sensing is the science and art of obtaining information about an object, area or phenomenon through an analysis of the data acquired by a device which is not in contact with the object, area or phenomenon under investigation. Remote sensing of earth's environment comprises measuring and recording of electromagnetic energy reflected from or emitted by the planet's surface and atmosphere from a vantage point above the surface, and relating of such measurements to the nature and distribution of surface materials and atmospheric conditions. Sensors mounted on aircraft or satellite platforms measure the amounts of energy reflected from or emitted by the earth's surface.

Remote sensing process includes two types of sensing system one is active system and other one is passive system. Active sensing system generates and uses its own energy to illuminate the target and records the reflected energy and passive system mainly depending on the solar radiation operates in visible and infrared region of electromagnetic spectrum. Electromagnetic radiation, radiation that is coming to earth from sun, it consists of different waves from shortest waves like cosmic rays to highest radio waves. In that range for remote sensing process visible light, infrared rays, microwaves and radio waves are used. The visible light consists of bands of different colours, when it passed through the prism it will appear as VIBGYOR. This phenomenon called as spectrum.

Then, applications of remote sensing process and about Indian remote sensing system, how it is technically improving quickly along with other developed countries and location of ISRO stations in Hyderabad.

At the end, he concluded that, now a days it has wide range of scope in all the fields so it is helpful for someone interested to do research in this sector.

HoD, thanked the hosts and explained the students again regarding the program and advised to take part in the session.

  
HOD-CE

**Head of the Department  
Civil Engineering**

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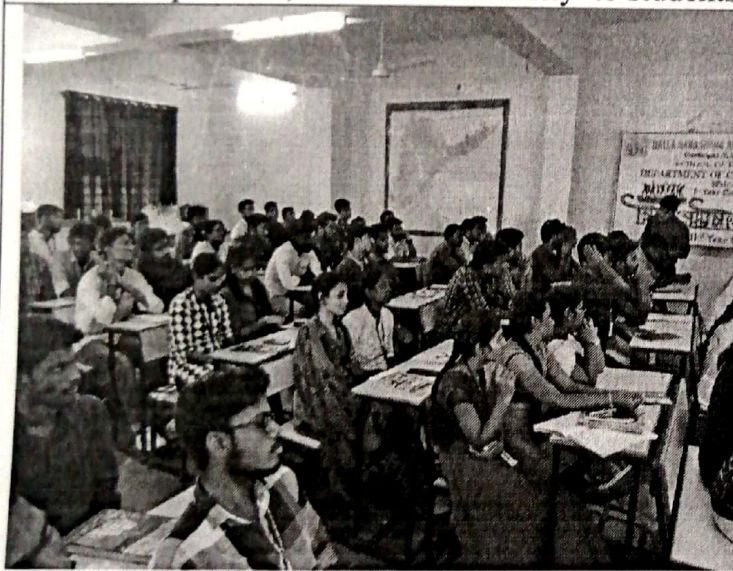
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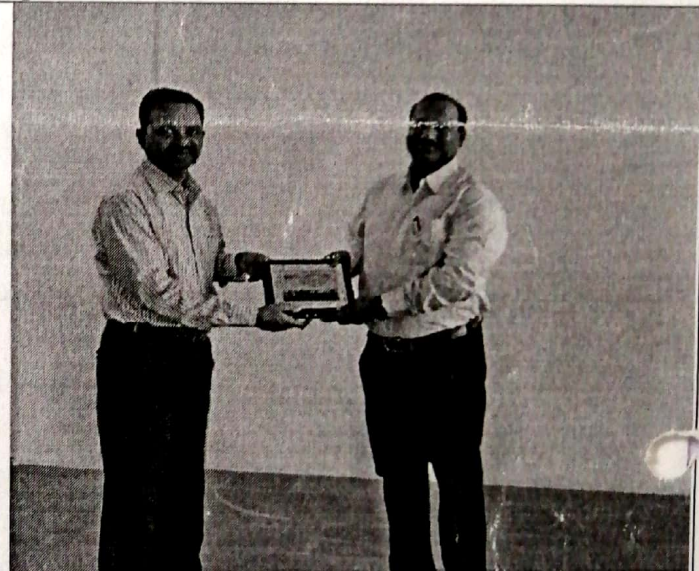
Civil HoD, Dr. G.S.Rao introducing the guest Prof.M. Gopal Naik, Osmania University to students



B. Tech Civil Engg. Students listening the guest speech



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Director C.V.Krishna Reddy honouring the guest