



ISTE STAFF CHAPTER (TN 205)
ACADEMIC YEAR 2023-24(ODD SEMESTER)
Staff Seminar Report

A one day seminar titled “**Indian Satellites**” was organized by ISTE Staff Chapter [TN 205] on **19.10.2023** from 3.00p.m. to 3.45p.m. to the faculty members of Kings College of Engineering with an objective to offer a better understanding of Indian Satellites. Welcome address was delivered by **Mrs.T. Gnanajeya**, Coordinator / ISTE Chapter. The session was handled by the resource person **Mr.W. Newton Davidraj**, Assistant Professor / Department of Electronics and Communication Engineering.

The universe is all of space and time and their contents, including planets, stars, galaxies, and all other forms of matter and energy. it is possible to measure the size of the [observable universe](#), which is approximately 93 billion [light-years](#) in diameter at the present day. A light-year, alternatively spelled light year, is a [unit of length](#) used to express [astronomical distances](#) and is equivalent to about 9.46 [trillion](#) kilometers (9.46×10^{12} [km](#)), A galaxy is a system of stars, stellar remnants, interstellar gas, dust, and dark matter bound together by gravity. The word is derived from the Greek galaxies literally 'milky', a reference to the Milky Way galaxy that contains the Solar System. Galaxies, averaging an estimated 100 million stars, range in size from dwarfs with less than a hundred million stars, to the largest galaxies known – super giants with one hundred trillion stars, each orbiting its galaxy's center of mass. It is estimated that there are between 200 billion (2×10^{11}) to 2 trillion galaxies in the observable universe. Our planetary system is the only one officially called “solar system,” but astronomers have discovered more than 3,200 other stars with planets orbiting them in our galaxy. Astronomers estimate that the universe could contain up to one septillion stars – which in numbers is 1,000,000,000,000,000,000,000,000. Our Milky Way alone contains more than 100 billion, including our most well-studied star, the Sun.

An Electronic device that is sent into space and moves around the earth or another planet for a particular purpose. A Natural object that moves round a bigger object in space. Earth is a satellite because it moves around the sun. It takes a full year or just over 365 days for Earth to orbit, or revolve, around the sun. The moon is a satellite because it moves around Earth. Earth and the moon are called “natural” satellites. Orbit a repeating path that one object in space takes around another. An orbit is the curved path that an object in space. There are many factors that decide which orbit would be best for a satellite to use, depending on what the

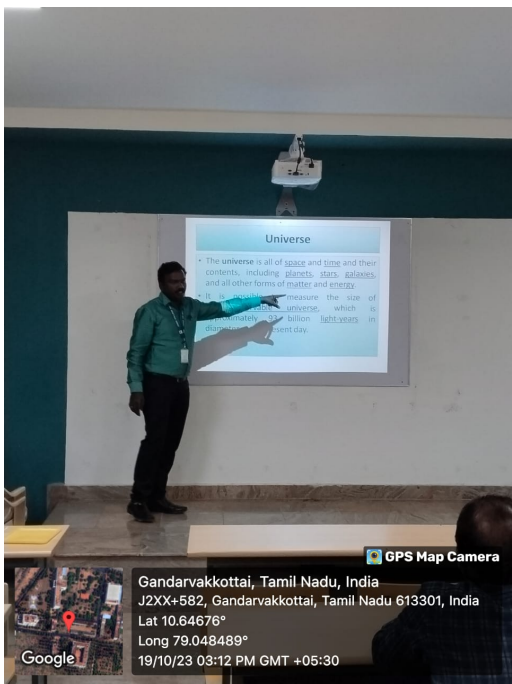
satellite is designed to achieve. The following orbits are essentially types of Earth orbits:

- Geostationary orbit (GEO)
- Low Earth orbit (LEO)
- Medium Earth orbit (MEO)
- Polar orbit and Sun-synchronous orbit (SSO)
- Transfer orbits and geostationary transfer orbit (GTO)

A geostationary orbit, also referred to as a geosynchronous equatorial orbit^{al} (GEO), is a [circular geosynchronous orbit](#) 35,786 km (22,236 mi) in altitude above Earth's [equator](#), 42,164 km (26,199 mi) in radius from Earth's center. This is much farther from Earth's surface compared to many satellites. A low Earth orbit (LEO) is, as the name suggests, an orbit that is relatively close to Earth's surface. It is normally at an altitude of less than 1000 km but could be as low as 160 km above Earth. Medium Earth orbit comprises a wide range of orbits anywhere between LEO and GEO. Satellites in polar orbits usually travel past Earth from north to south rather than from west to east, passing roughly over Earth's poles. Polar orbits are a type of low Earth orbit, as they are at low altitudes between 200 to 1000 km. Sun-synchronous orbit (SSO) is a particular kind of polar orbit. Satellites in SSO, travelling over the polar regions, are synchronous with the Sun. Transfer orbits are a special kind of orbit used to get from one orbit to another. Satellites come in many shapes and sizes.

A group of more than 24 satellites make up the Global Positioning System, or GPS. If you have a GPS receiver, these satellites can help figure out your exact location. But most have at least two parts in common - an antenna and a power source. The antenna sends and receives information, often to and from Earth. The power source can be a solar panel or battery. Solar panels make power by turning sunlight into electricity. Polar Satellite Launch Vehicle (PSLV) is the third generation launch vehicle of India. It is the first Indian launch vehicle to be equipped with liquid stages. Geosynchronous Satellite Launch Vehicle Mark II (GSLV Mk II) is the launch vehicle developed by India, to launch communication satellites in geo transfer orbit using cryogenic third stage. **The Aryabhata spacecraft**, named after the famous Indian astronomer, was India's first satellite.

Totally 17 faculty members actively participated in this session and gained knowledge about Indian Satellites. Vote of thanks was given by Mrs.T. Gnanajeya, Coordinator / ISTE Chapter.




Resource Person's Talk



Audience listening the seminar


 Coordinator / ISTE Chapter 20/10/23


 20/10/2023
 PRINCIPAL

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The ISTE Staff Chapter, Kings College of Engineering, organized a competition on **Mono Acting** on 19.10.2023 between 3.45pm and 4.20pm for the faculty members of the institution.



Staff members actively participating in Mono Acting Competition

P. Lakshmi
Coordinator / ISTE Chapter 20/10/23

J. Manjula
20/10/2023
PRINCIPAL