भारतीय प्रौद्योगिकी संस्थान भुवनेश्वर
Indian Institute of Technology Bhubaneswar

Press Release

IIT Bhubaneswar celebrates ISRO's Unprecedented Journey to study the Moon and Sun on National Space Day

Bhubaneswar, 23 August 2024: Indian Institute of Technology (IIT) Bhubaneswar has joined the Nation in celebrating the first National Space Day on 23rd August 2024as a commemoration to India's success of Chandrayaan-3 Mission last year. As part of the celebration, the Institute organized an insightful seminar on 'Chandrayaan-3 and Aditya-L1 Mission: ISRO's Unprecedented Journey to study the Moon and Sun'. Dr. Kuldeep Negi from ISRO addressed on this occasion and shared his experience.

Currently serving as a Section Head in the Flight Dynamics Group and Associate Project Director of Chandrayaan-4 at the U. R. Rao Satellite Center (URSC) of the Indian Space Research Organization (ISRO), Bengaluru, Dr. Negi is responsible for designing trajectories for Geo-Spacecraft, interplanetary and lunar missions. In his address, Dr. Negi explained: "Chandrayaan-3, India's third lunar exploration mission took off in fourth operational mission of LVM3 launcher. Chandrayaan-3 is a testament to India's commitment to space exploration. ISRO has set a benchmark by demonstrating soft landing on lunar surface by its lunar module and roving on the lunar terrain. Aditya-L1 Mission is an Indian first solar observatory at Lagrangian point L1. This pioneering venture involves deploying a spacecraft into a non-planar periodic orbit known as a halo orbit around the L1 Lagrangian point of the Sun-Earth system." He further added: "For any spacecraft mission from its cradle to grave, spaceflight trajectory design plays a significant role." He also focused on challenges in Chandrayaan-3 mission and spaceflight trajectory design with respect to the mission.

This seminar explained the target lunar orbit trajectory design for the Composite Module and then the multi-phase powered descent trajectory design for the Lander Module. Dr. Negi also highlighted that Aditya-L1's manifold-based trajectory design is instrumental in planning halo orbits around L1. The seminar concluded with a discussion on ISRO's strategic frontier for space exploration.

Prof. Shreepad Karmalkar, Director, IIT Bhubaneswar felicitated Dr. Negi on the occasion. Dr. Vijayakrishna Kari, Professor-in-Charge (Seminar) coordinated the programme. Faculty members, staff and students of the Institute participated in the programme in a large number.
