

**Indian Institute of Remote Sensing  
Geospatial Technology & Outreach Programme Group  
Geo-web Services, IT and Distance Learning Department**

Date: 30/04/2025

Online course on

**“The Method of Space Science Research”**

**May 05-09, 2025**

**(Timings: 04:00pm- 05:30pm)**

<b>S. No.</b>	<b>Date</b>	<b>Course topics</b>	<b>Topics to be covered</b>	<b>Resource</b>
1.	05 May, 2025	L-1 Method of Space Science Research: An Introduction	Techniques of space science studies; Modelling, Simulation and Observation- their interconnectedness; space-based observations; broad guideline for science mission design; Panorama of techniques and payloads for space-based observation and the platforms;	Dr. Tirtha Pratim Das, Director, SPO
2.	06 May, 2025	L-2 Remote Sensing Techniques for space exploration	Importance of remote sensing observations; comparison with in-situ techniques; case study for a remote sensing technique in planetary exploration; role of inversion and data processing techniques; A broad overview of the remote sensing techniques	Dr. Neeraj Srivastava, PRL
3.	07 May, 2025	L-3 In-situ techniques for space exploration	Importance of in-situ observations; comparison with remote sensing techniques; case study for an in situ technique in planetary exploration; role of data processing techniques; A broad overview of the in-situ techniques	Dr. Smitha V. Thampi, SPL-VSSC
4.	08 May, 2025	L-4 Methods in Astronomy Research	Telescopes, observatories; role of the electromagnetic wave to carry information about astronomical objects and processes; multi-messenger astronomy	Dr. Debiprasad Duari Former Director, Research & Academic, Birla Institute of Fundamental Research
5.	09 May, 2025	L-5 Ground-based Studies of the Outer Space	History of sky observations; how atmosphere, dust and aerosol play roles to smear the astronomical information; despite that why ground-based observations are so important; types of observations conducted from ground; a few international ground-based observatories; Indian ground-based observatories; How do ground-based observations complement and supplement space-based observations	Prof. Divya Oberoi, Senior Professor, TIFR