Microwave Remote Sensing Applications

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The launch of the first Indian active microwave remote sensing satellite, Radar Imaging Satellite (RISAT-1), has opened up new vistas for operational utilisation of microwave data for management of natural resources and disaster management. RISAT-1 is the first indigenously developed Microwave satellite.

RISAT-1 is a multi-mode C-band (5.35 GHz) Synthetic Aperture Radar (SAR). It provided various beam modes having a number of combinations of linear as well as circular polarization with varying swath in the range of 200-600 km and spatial resolution varying between 3 to 50 m depending on the mode of operation. Also, RISAT-1 provides unique characteristics of compact polarized data in multi incidence angles. Unique application of radar technology and synergy with optical data have tremendous scope for a better understanding in developing applications. Besides RISAT-1; ERS, RADARSAT are available for microwave studies. Microwave data is useful in the fields of Agriculture, Soils, Forestry, Earth Sciences, Snow, Hydrology, Oceanography and Disaster Applications.

Training Focus:
The main objective of this regular course is to enhance the knowledge of the participants towards a better understanding of the interaction of microwaves with the Earth’s surface features when viewed from space platform and utilization for various applications. The course covers Microwave Remote Sensing Technology & Applications addressing:

- Introduction to SAR Technology
- SAR Signal Processing
- Interferometry
- Advanced Polarimetry

Applications, Case studies and Tutorials in Agriculture, Forestry, Earth Sciences, Snow & Hydrology, Oceanography and Disaster Management.

Who Can Apply?
Users working in State Government / Central Government Departments, NGOs, Private Companies, faculty and research scholars from Academia who are planning to utilise the active Microwave Remote Sensing data.

Participant should have minimum Graduation in Engineering or Post Graduate Degree. Knowledge in Remote Sensing Applications using optical multispectral data and experience in using Image Processing software is essential. Right of Admission reserved with NRSC.