

Background

The Remote Sensing based measurement with integration of geospatial pathways bridged the earth surface data and science to unfold the complex geo-environmental processes and their causalities. The efficiency of data processing, analyzing and visualizing platforms are getting more optimized and sophisticated to handle a large volume (big data) of data over planetary and long temporal scale. The focus of this training program is to strengthen the bridge between the utility of microwave remote sensing for proving the insights of the SAR data processing and its application in different field of study. A demonstration will be provided on theoretical aspects on microwave datasets, its processing and analysis as well as its application in urban, agricultural, forestry and ocean-based studies using open-source software like SNAP, PolSARpro and QGIS. The motive of the training program was to make the students and research scholar familiar with the upcoming techniques and datasets that can be utilized for their future research purposes.

Geospatial SAR data also enables to image analysts for monitoring, measuring, assessing and modeling geospatial resources and disaster management. This program is designed to meet the requirements of various target/user groups, such as graduate students, PhD scholars, researchers, academia, early career professionals, and decision makers. The outcomes of this training might benefit the policymakers to bring an appropriate strategy in policymaking and implementation in respective domains.

Organizing Committee

Chief Patron –Prof. Sarang Medhekar, Honorable Vice Chancellor, CUJ

Patron –Prof. Manoj Kumar, Dean SNRM, CUJ

Chairman– Prof. A.C. Pandey, Chairman ISG Ranchi Chapter

Convener– Dr. Bikash Ranjan Parida, Head, Department of Geoinformatics/Secretary ISG Ranchi Chapter

Organizing Secretary– Dr. Chandra Shekhar Dwivedi, Department of Geoinformatic / Treasurer ISG Ranchi Chapter

Core Committee– Dr. Kanhaiya Lal, Dr. Kiran Jalem, Dr. S.S. Mahto

Working modality for the Training Program

The 2 Day training is an opportunity to enhance participant skills on recent development of SAR data for Natural Resource Applications using open source tools (SNAP). The motive of the training session is learn various SAR algorithms along with use of Dual-pol and Full-pol data for Natural Resources Mapping and managing for the benefit of society.

Themes

- **Overview on Microwave Remote Sensing**
- **Open-source SAR data/processing software**
- **Understanding Dual-pol/Full-pol SAR data and its processing**
- **Dual-pol/Full-pol backscatter Analysis**
- **Polarimetric decompositions**
- **Applications: Agriculture, Forestry, Mining, etc.**

Participants & Eligibility

The 2-Day training program expects to bring around 50 mostly PG students and research scholars working in the field of a Remote Sensing and GIS.

Venue of the Program: Department of Geoinformatics, Central University of Jharkhand (CUJ)

SPOT Registration Fees: ₹ 250 /- (students/scholars)

Contact & Queries: Dr. Bikash Ranjan Parida
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2-Day Training Program on Introduction to SAR Data Processing & Applications



**20-21 February
2026**

Organized Jointly by:

**Department of Geoinformatics, Central
University of Jharkhand, Ranchi**

&

**Indian Society of Geomatics (ISG)-Ranchi
Chapter**