



IIT Tirupati
Navavishkār
I-Hub Foundation



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY

सत्यमेव जयते

भारतीय प्रौद्योगिकी संस्थान तिरुपति

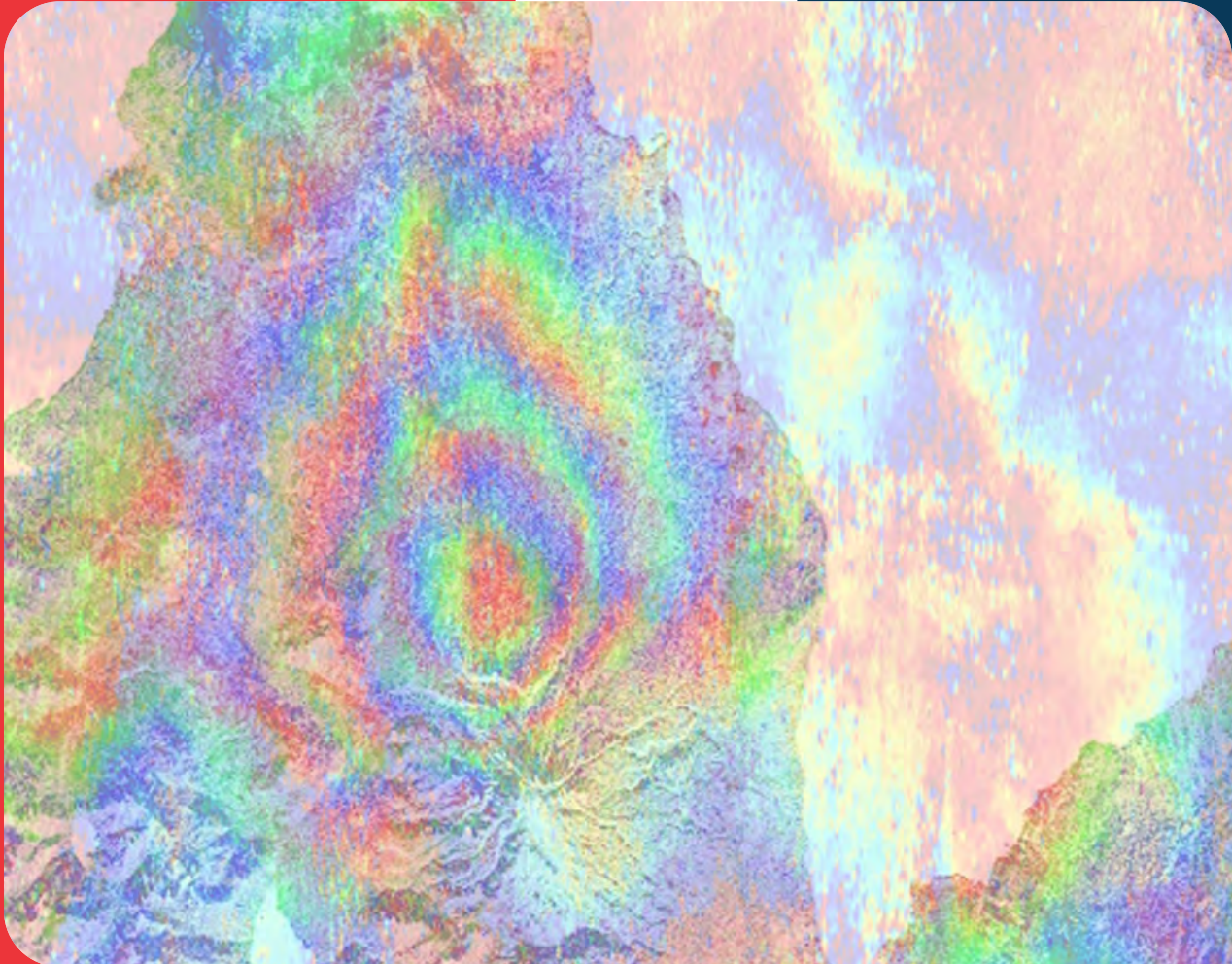


Short-Term Course on **SAR Interferometry**

Organised by IIT Tirupati Navavishkar I-Hub Foundation (IITTNiF)

In association with National Centre for Geodesy (NCG), IIT Kanpur.

17th - 19th June 2022



Objective:

Synthetic Aperture Radar (SAR) Interferometry is one of the major research areas of Satellite Radar Remote Sensing, which is used for the geodetic study of the Earth by mapping its shape and changes. Postgraduates and Ph.D. scholars who want to pursue their research in Satellite Radar Remote Sensing have great opportunities. Recently, NASA and ISRO are jointly working on NASA - ISRO - SAR (NISAR) mission. Similarly, the European Space Agency (ESA) is working on the BIOMASS project expected to be launched in August 2023. The objective of the course is to introduce young researchers to SAR Interferometry.

Date	Lecture (10:00hrs - 10:45hrs)	Lecture (11:00hrs - 11:45hrs)	Labs (12:30hrs - 14:00hrs)
17 Jun 2022	InSAR Trends	DInSAR	DInSAR
18 Jun 2022	MT-InSAR	PS-InSAR	PSInSAR
19 Jun 2022	SBAS	SBAS	SBAS

Course Content

- Introduction to SAR Imaging.
- Interferogram generation.
- Digital Elevation Models (DEM): Estimation of ellipsoidal height.
- Differential Interferometric Synthetic Aperture Radar (DInSAR): Estimation of Deformation.
- Multi-Temporal InSAR (MT-InSAR): Philosophy.
- Persistent Scatter InSAR(PS-InSAR): Deformation monitoring in urban region 7. Small Baseline Subset (SBAS): Deformation monitoring in urban/non-urban region

Topics for Lab exercise:

- Interferogram generation
- DInSAR (SNAP)
- PSInSAR (StaMPS)
- SBAS (StaMPS)

Mode of Meeting : Online

Application Deadline : 10th June 2022

Registration and Course fee : Participants need to register using the following URL: <https://forms.gle/fVtHZgVvqJnTsZ52A>. There is NO registration fee for selected participants.

Award of E-certificate : Participants who attend all the lectures, labs and assessments will be awarded participation certificates.

Course study material : Lecture Slides, videos, and Open-Source Software will be shared with the participants.

Hardware/Software Requirements for the lab : i) Computer with a minimum of 8 GB RAM. ii) Linux OS (for MT-InSAR lab).

Target Audience: It is a tailored course for the students, researchers, scientists, faculty members, and professionals (both sectors) working on geospatial technology.

Course Co-ordinators



Dr. Ashutosh Tiwari
Research Establishment Officer
NCG, IIT Kanpur



Dr. A. B. Narayan
Asst. Professor
Dept. of Civil Engg., IIT Tirupati



Prof. Y. S. Rao
Professor
CSRE, IIT Bombay

Invited Speaker

In case of any queries, Contact us:

Email : programmes@iittnif.com

IITTNiF Website: <https://iittnif.com/>

IIT Tirupati Navavishkar I-Hub Foundation

