# International School on Deep Learning in SAR and Hyperspectral Remote Sensing (DL-SHyRS)

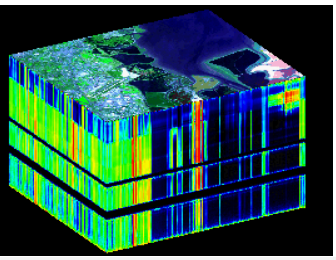
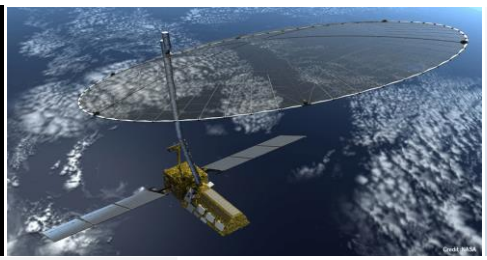
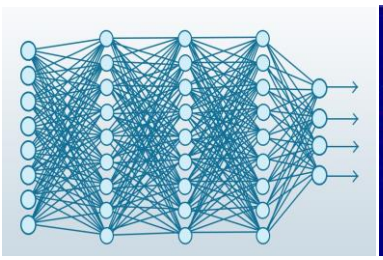
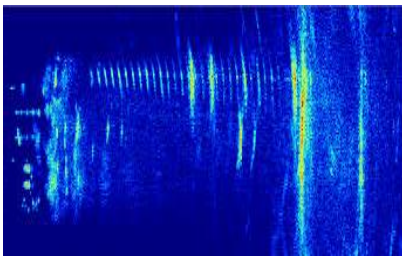
## Geoscience and Remote Sensing Society, Kolkata Chapter

In association with

Center for Soft Computing Research (An Associate Institution of ISI)

Indian Statistical Institute, Kolkata

## October 29-November 2, 2018

## Important Information

- Number of seats is limited to 50.
- Last date of receipt of application is ~~10 September 2018.~~ 15 October 2018 (Extended Deadline).
- Last date of receipt of application fee is 20 October 2018.
- Tentative list of selected participants will be displayed on the website from 23 October, 2018.
- Applicants are requested to visit the website for regular updates about the workshop.

## Website:

**http://sites.ieee.org/kolkata-grss/**

## Venue

Seminar Room,
Center for Soft Computing Research,
1st Floor, R. A. Fisher Bhawan,
Indian Statistical Institute,
203 B. T. Road, Kolkata 700 108, India.

| Category | Fees |
|---|---|
| **Student (Masters, Ph.D., Post-doc)** | |
| Indian Participants | Rs. 7000/- |
| Foreign Participants | US$ 700 |
| **Faculty** | |
| Indian Participants | Rs. 10000/- |
| Foreign Participants | US$ 1000 |

*(Registration fee includes Kits, learning materials, Snacks and lunch)*

## For further details contact:


**Prof. Ashish Ghosh,**
Indian Statistical Institute,
203 B. T. Road, Kolkata 700 108, India.

**Dr. Saurabh Das,**
Center of Astronomy,
IIT Indore, Khandwa Road, Simrol
Indore 453552
India
**Email:** grss.kolkata@gmail.com; scc@isical.ac.in
**Tel :** +91 33 2575 2040


## CALL FOR PARTICIPATIONS

In recent times, machine learning techniques are used in varieties of problem in science and engineering where typical statistical or physics oriented approaches are inefficient to handle complex and large data. The 'Big data' issue in remote sensing is not only limited to the enormous sizes of data generated by hyperspectral or SAR techniques, but also due to increased number of features (or bands). Moreover, the analysis of images obtained through such techniques is challenging due to the presence of noise, shadow and multiple scattering effects.

Polarimetric SAR and hyperspectral remote sensing are increasingly becoming popular due to improved resolution and wide applications. It is imperative to increase trained manpower on this topic to address the potential problems. India is one of the leading countries in gathering remote sensing data from its own space program under the aegis of ISRO. The volume and variety of remote sensing data increased exponentially with the launch of varied sensors from ISRO, NASA, ESA etc. This makes remote sensing data an ideal candidate for Big data applications due to its sheer volume and varieties in terms of temporal, spatial and spectral resolution, continuous collection of data (velocity) and necessity of ground validation (veracity). Many scientists in India are actively involved with remote sensing data analysis ranging from SAR data to microwave to optical. Through this school, we envision to expand the outreach of the ongoing activities with eminent scientists from other parts of the globe.

## WHY TO ATTEND?

The aim of this school is to gather experts in Remote sensing, Data Science and Machine Learning, and facilitate the participants to get both theoretical and hands-on experience on different aspects of this subject. The school will provide a forum for exchanging ideas and information on current research studies, challenges, system developments, and practical experiences in the emerging field of Data Science and Machine Learning dedicated for remotely sensed data.

During this 1-week long school, a few small groups of participants will be formed under the mentorship of an expert. Each group will contribute to solve a specific problem in this domain.

## WHO SHOULD ATTEND

Target participants are PhD students and early career researchers from all over the world. Limited support to students for travel and accommodation will be provided.

## FACULTY AND TOPIC

- Mark Bentum, Eindhoven University of Technology, Nederlands : Astronomical Image Processing
- Emmett Ientilucci, Rochester Institute of Technology, USA : Hyperspectral remote Sensing
- Veraldo Liesenberg, Santa Catarina State University, Brazil :SAR Image Processing
- Avik Bhattacharya, IIT Bombay :SAR Image Processing
- Naresh Mallenahalli, NRSC, ISRO, Hyderabad :Hyper-Spectral Image Processing
- Ashish Ghosh, ISI, Kolkata :Hyper-spectral Image Processing
- Saurabh Das, IIT Indore :Microwave remote sensing

## Special Lecture

**Prof. William Blackwell, MIT Lincoln Lab :Overview of the NASA TROPICS CubeSat Constellation Mission**

## How to Apply

**Online application form can be accessed from the website. Short listed candidate will be notified via email as well as the list will be displayed on the website.**