REGISTRATION FORM

(Please mail to reach before 6th February 2015)

Name:...

Office Address:...

Permanent Address:...

E Mail: ....

Tele (+ STD Code): Fax (+ STD code):

Date of Birth:...

Gender : Male / Female

Highest Academic Qualification and subject (with proof)

Professional Experience: ....

Teaching / Research Interest: ....

Registration fee

Rs. 4000/- for participants from Academia and Rs. 8000/- from

Industry/institutions.

Demand Draft No:....................................... Rs...

Dated:..Bank..

Place   Signature

                                         Name

NERCI

NERSC

ADVANCED TRAINING COURSE ON
SATELLITE DATA MANAGEMENT AND APPLICATION OF CLOUD COMPUTING USING **PYTHON**

Organisers: Nansen Environmental Research Centre (India) with the technical support of Nansen Environmental and Remote Sensing Centre, Norway.

NERCI

Nansen Environmental Research Centre (India), Kochi
6A Oxford Business Centre
Sreekandath Road, Kochi-682016, India.
Ph: 0484 2383351
Email: nansencentre.india@gmail.com
www.nerci.in

Venue- Nansen Environmental Research Centre (India), Kochi
Date: February 9-13, 2015

Satellite data processing and management is a great challenge to modern day Information and communication technologists particularly the space application doctoral students and scientists due to the time span taken for downloading, sharing, large processing load on local servers, requirement of large storage space etc.. it is in this context, the proposed training course will be conducted by NERCI a DSIR accredited Environmental and Climate research Centre, in Cochin with the technical support of Nansen Environmental Remote Sensing Centre, Bergen, Norway (www.nersc.no) from February 9-13, 2015 to train the early career scientists, engineering graduates and doctoral students to manage large satellite data in Cloud storage of a centralised data repository utilising a simple data mining and accessing via a sequential data base. A demonstration and hands on training of a prototype system using Python, Nansat and Django web framework would equip the participants to meet the challenges of Big data management which is an emerging field in Scientific research.

NANSAT - a scientist friendly toolbox for satellite data processing. NANSAT is a stand-alone open source Python package based on GDAL, Numpy, Scipy, Matplotlib, and other open source libraries. The main goal of NANSAT is to facilitate easy development and testing of scientific algorithms, easy analysis of geospatial data, and efficient operational processing. The main features of Nansat include:

- Interactive selection of points for querying data for transect plots
- Ability to make several consecutive operations on the geometry of Nansat objects (e.g. cropping, resizing and re-projection of input satellite image)
- Enhanced visualisation capabilities, including production of maps with raster and vector overlays, new color palettes, flexible legend generation, etc.
- Ability to read remote data via OpenDAP protocol

The NANSAT code is under GIT version control, and the code is hosted online at https://github.com/nansencenter/nansat . This simplifies code sharing and provides a platform for publishing of documentation.

Nansen-Cloud

The Nansen-Cloud is a data management and processing system to encompass the development of geophysical algorithms based on common data archives and tools for search, data mining and visualization in the form of a cloud-based service. The Nansen-Cloud will solve three major problems for scientists working with satellite data:

1) it is difficult to find and download
2) it is expensive to keep and process
3) it is complicated to develop algorithms

The objective of the Nansen-Cloud is therefore to serve as a Scientific Platform as a Service (SPaaS) which provides a user (and machine) friendly data search interface, free (or cheap) storage and processing facilities, and easily extendable software for processing. The Nansen-Cloud SPaaS is your private configurable online server, on which to deploy algorithms, access EO data and provide new products.
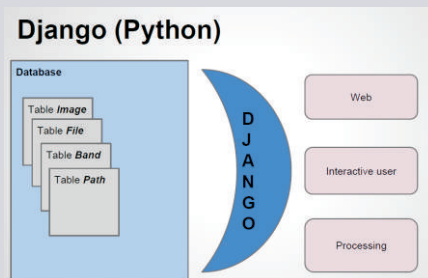
The five day training will be provided by Dr.Anton Korosov and Dr. Morten Wergeland Hansen from Nansen Environmental and Remote Sensing Center, Bergen, Norway at NERCI, Kochi from February 9-13, 2015.

Resource Faculty
Dr. Anton Korosov

Researcher at NERSC, Norway. Ph.D. in Oceanography, 2007, Russian State Hydro Meteorological University, Saint-Petersburg, Russia. He was instrumental in the Development of the NANSAT software package (https://github.com/nansencenter/nansat) for processing 2D satellite Earth observation data for easy development and testing of scientific algorithms, analysis and visualization of geospatial data and efficient operational processing.

He was also associated in developing BOREALI algorithm (C++ and Python) for the retrieval of water quality parameters from the optical remote sensing data using the Levenberg – Marquardt multivariate optimization procedure and neural networks for retrieving the concentrations of chlorophyll–a, suspended minerals, dissolved organic carbon, coccoliths or other water constituents from input values of water leaving reflectance and development of a near real time water quality monitoring system for a number of areas including the Nordic Seas, Waters of Central America, Black and Caspian Seas (http://hab.nersc.no). The system automatically downloads satellite data from ESA or NASA rolling archives. The obtained raw satellite images are reprojected; processed with the developed retrieval algorithms and visualized as PNG and through WMS protocol.

His main research interest is in the application of remote sensing - optical (MODIS) and passive microwave (SMOS) satellite data on ocean color and sea surface salinity and modeling for identification of main driving physical factors and influence on higher trophic levels: zoo-plankton and fish larvae.

Dr. Morten Wergeland Hansen

Dr.Hansen is a researcher at Nansen Environmental and Remote Sensing Center, Bergen, Norway, since 2007. He received the Cand. Scient. degree in astrophysics from the University of Oslo, Norway, in 2004, the M.Sc. degree in space studies from the International Space University, Strasbourg, France, in 2006, and the PhD in satellite oceanography from the University of Bergen, Norway, in 2011.

His main research interest is in the retrieval of wind, waves and current from remote sensing data,in particular Synthetic Aperture Radar.

COURSE STRUCTURE

NANSAT and NANSEN-CLOUD training covering Python basics, programming with Python, Numerical operations, Satellite data processing and management, plotting and mapping and cloud computing.

Registration

Interested participants are required to send the duly filled in registration form with the registration fee by demand draft drawn in favor of " Director, Nansen Environmental Research Centre (India), Kochi on or before 6 February, 2015.

Terms and Conditions

Maximum intake of participants- 15.
Participants have to bring in lap tops and arrange their own accommodation and travel.
Course timing- 10AM to 5.30PM.