

About IIRS

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Dept. of Space, Govt. of India is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geoinformatics and GNSS Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IPI), founded in 1966, the Institute boasts to be the first of its kind in entire South East Asia. While Nurturing its primary endeavor to build capacity among the user community by training mid-career professionals, the Institute has enhanced its capability and evolved many training and education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

About Course

Currently geospatial domain expert are receiving data from variety of sources which are rich and heterogenous. There is a need to integrate these data sets to carry out simulation and modelling. Currently there is no single software commercially available which provides the functionality of GIS analysis, mathematical modelling and statistical analysis in single package. But there are a few open source projects with community supports are filling these

gap. This course is to make people aware and provide insight of functionality which is useful for custom build requirement of different discipline.

This course can be helpful for the people who want to know the different mathematical and statistical tools to build the different models based on the understanding of area of expertise. The participants will learn how to do data categorise the data filtering, fitting to the statistical models. They will also learn the techniques available for model evaluation. Proper understanding of the how to implement theoretical models of a process. It will cater the to many applications like interpolation of point data pattern analysis, multi geospatial data integration, Agents based modeling.

Participants will learn how to handle geospatial data in R, use these data to build mathematical and statistical models and carry out the evaluation of these models.

Participants are encouraged to use their own data to apply the techniques learnt in workshop.

Fee

There is no course fee

Award of Certificate

- **Students:** Based on 70% attendance and an online examination
- **Professionals:** Based on 80% attendance and submission of assignments.

Target Audience

- Geospatial professional
- Remote Sensing and allied Departments / Training Academies Central/State/ Private Universities/ Research & Academic Institutions

Prerequisite for the Course

Domain knowledge, basic knowledge of statistics, calculus and algebra. The programming knowledge in R will be an added advantage.

Faculty Details

Dr. Sameer Saran

Mr. Ashutosh Kumar Jha

Mr. Shiva Reddy

Mr. Prabhakar Alok Varma

Curriculum

Day 1:

- Introduction to Geospatial Modeling Technique
- Deterministic & Stochastics Modeling techniques
- Lab on Tools Familiarization

Day 2:

- Spatial Markov Modeling
- Agent Based Modeling
- Lab on Markov and Agent Based Modeling

Day 3:

- Spatio-temporal Modeling
- Event based modeling
- Lab based on sat scan



Day 4:

- Point pattern Analysis
- Geostatistical Modeling
- Lab on geostatistical based interpolation

Day 5:

- Model Validation
- Quantifying Model Performance
- Lab on Model Performance Analysis and validation

Important dates

Start Date: July 29, 2018

End Date: August 03, 2018

Course Study Material

Course study materials will be made available through online. Video lectures will also be uploaded on YouTube Channel: (<http://www.youtube.com/user/edusat2004>).

Registration

<https://elearning.iirs.gov.in>

Contact Details

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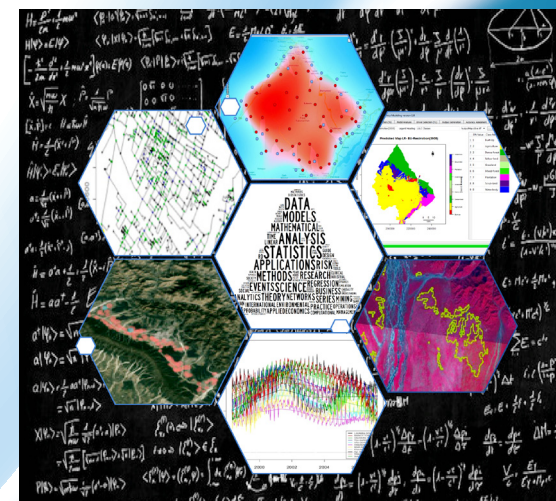
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Advanced Geospatial Modeling Tools and Techniques

July 30- Aug 03, 2018



Organised by,

Geoinformatics Department
Indian Institute of Remote Sensing
Indian Space Research Organisation
Dept. of Space, Govt. of India
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