

IIRS Outreach Programme

The IIRS outreach programme, which started in 2007 with 12 universities/ institutions has now grown substantially. Currently, about 730 universities / institutions spread across India are networked with IIRS. The beneficiaries of the programme may include:

- Professionals working in the field of Natural Resource Monitoring
- Training Academies
- Central/State/Private Universities & Academic Institutions
- Central & State Government Departments
- Research Institutes
- Geospatial Industries
- NGOs
- Individuals

Feedback Mechanism

IIRS has conducted workshops and sessions during IIRS User Interaction Meet to take feedback from participating institutions to improve the quality of future courses.



Feedback session during IIRS User Interaction Meet (IUIIM)-2018 Awards

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1st National Symposium on Excellence in Training conducted during April 11-12, 2015 in New Delhi by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).



About IIRS

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department 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 endeavour 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.

IIRS also conducts e-learning programme on Remote Sensing and Geo-information Science (<http://elearning.iirs.gov.in>).

Contact Details

Dr. Harish Karnatak
Course Director & Head, GIT& DL Dept.
Tel: 0135-2524332
Email: harish@iirs.gov.in

Dr. Poonam S Tiwari
Course Coordinator
Tel: 0135-2524334; email: poonam@iirs.gov.in

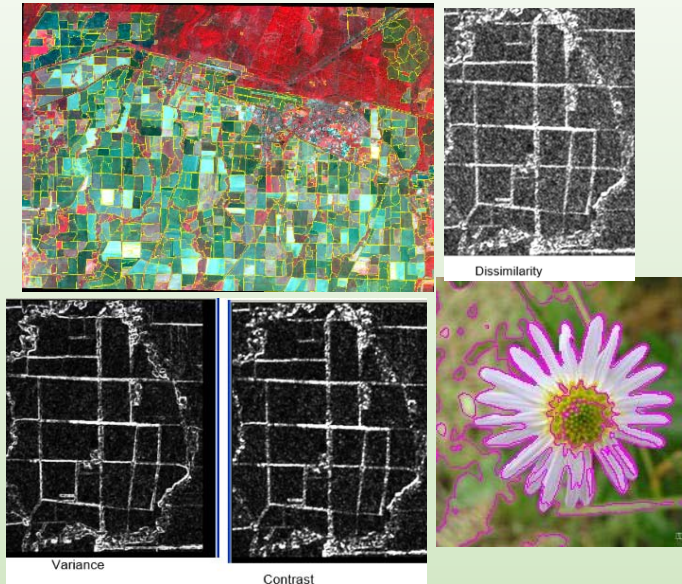
IIRS DLP Team

Mr. Janardan Vishwakarma
Tel: 0135-2524130; email: janardan@iirs.gov.in

Mr. Ashok Ghildiyal
Tel: 0135-2524130; email: ashokg@iirs.gov.in

Indian Institute of Remote Sensing,
Indian Space Research Organisation
Department of Space, Govt. of India,
4-Kalidas Road, Dehradun
Email: dlp@iirs.gov.in

Thirty Third IIRS Outreach Programme



Advanced Image Analysis

June 04-15, 2018



Organised by

Indian Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Govt. of India
Dehradun
www.iirs.gov.in

About the Course

In the last few years, the technologies related to imaging, video processing, computer graphics, 3D modelling and multimedia has witnessed a rapid growth. The continuous development of these technologies leads researchers to propose new methodologies and applications in the field of image analysis. Digital image processing has various applications ranging from remote sensing and entertainment to medical applications. Besides being just two- or three-dimensional arrays containing numbers (pixel intensity values), the images have a number of very interesting properties. These properties are a key to developing efficient and accurate algorithms for a variety of applications. This course will systematically study several such techniques motivated by these interesting properties of remote sensing images. This course explores a few major areas of digital image processing at an advanced level, with primary emphasis on remote sensing applications. Drawing upon the knowledge of recognized experts with years of practical experience, the course will expose the participants to a broad range of modern, state-of-the-art techniques in image processing.

Curriculum

- Advanced Image Processing: Techniques and Applications
- Change Detection: Methods and procedures (Lecture and Demonstration)
- Soft Classifiers for EO data (ANN, Fuzzy etc.)
- Rule based Classifiers for EO data (Decision tree, Random Forest etc.)
- Image texture: Algorithms and Models (Lecture and Demonstration)
- Methods and Algorithms for Image Segmentation, Object based Image Analysis
- Pan Sharpening methods for Remote Sensing data
- Image Processing in Spectral Domain: Fourier and Wavelet transforms
- Automated Feature Extraction, Mathematical Morphology for feature refinement (Lecture and Demonstration)
- Web Based Image Processing and Algorithm development: A case study

Target Participants

- The course is designed for professionals from Central / State Govt. / Private Organizations / NGO engaged in Image Processing Applications; students and researchers aligned to research in Remote Sensing and Image Analysis.
- The course participants have to be duly sponsored by their university / institution and application should be forwarded through coordinators from respective Organisations / centres. Users attending programmes under CEC-UGC / CIET / other networks can also participate. Institutions on high speed National Knowledge Network (NKN) can also participate using A-VIEW software.

Course Study Material

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through IIRS ftp link. Video lectures will also be uploaded on YouTube Channel:
(<http://www.youtube.com/user/edusat2004>).

Course Fee

There is ***no course fee***.

Course Registration

- Course updates and other details will be available on URL- <http://www.iirs.gov.in/Edusat-News/>
- To participate in this programme the interested organizations/ universities/ departments/ Institutes has to identify a coordinator at their end. The identified coordinator will register online his/her Institute as nodal center in IIRS website.
- All the participants has to register online through registration page by selecting his/her organization as nodal center.

Course Funding & Technical Support

The programme is sponsored by National Natural Resources Management System – Standing Committee on Training and Education (SC-T), Indian Space Research Organisation, Department of Space, Government of India and is conducted with due technical support from Amrita Virtual Interactive E-learning World (A-VIEW).

Programme Reception

Programme can be received through Internet connectivity of 2Mbps or better. Following hardware and software set-up is required at user end:

Hardware Requirements :

- High-end Computer/Laptop (Windows OS);
- Good quality web camera ;
- Headphone with Microphone;
- Speakers ;
- Large Display Screen (Projector or TV) .

Software and Internet Requirements:

- Desktop based: A-VIEW software (free to download from www.aview.in or IIRS ftp link: <ftp://ftp.iirs.gov.in>)
- Online live access through <http://live.iirs.gov.in> with free registration.

Connectivity & Other configurations:

- NKN or any other high speed internet facility (preferably without firewall, with minimum of 2 Mbps bandwidth)
- Network requirements: Port 80 and RTMP (port 1935) protocol should be unblocked from user's computer and Firewall.

Note: Institutions/ universities have to bear total expenses for establishment of the classroom facility

Award of Certificate

Working Professionals: Based on 70% attendance and submission of assignments.

Students: Based on 70% attendance and an online examination.