

IRS Outreach Programme

The IIRS outreach programme, which started in 2007 with 12 universities/ institutions has now grown substantially. Currently, about 700 universities / institutions spread across India are networked with IIRS. The beneficiaries of the programme may include:

- Professionals engaged in applications requiring high resolution 3D models
- Central/State/Private Universities & Academic Institutions
- Central & State Government Departments
- Research Institutes
- Geospatial Industry professionals
- NGOs

Feedback Mechanism

IIRS has conducted seven workshops in 2007, 2009, 2010, 2013, 2014, 2015, 2016 and 2017 to take feedback from participating institutions to improve the quality of future courses.



18th outreach programme feedback session during IIRS User Interaction Meet (IUIM)-2017

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>).

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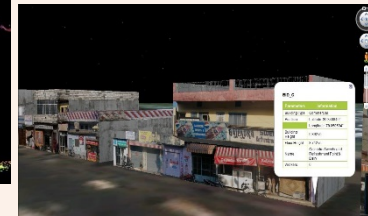
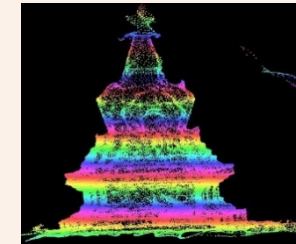
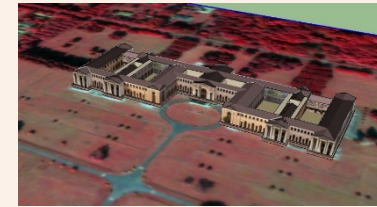
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Twenty Eighth IIRS Outreach Programme



Close Range Photogrammetry and Terrestrial Laser Scanning

January 08-12, 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 recent years it has been possible to collect vast quantities of 3D data using new technology, and to interpret and visualize the data in new ways. The third dimension has become an integral part of geospatial information. Different methods and techniques are adopted to acquire 3D data from space borne, airborne and terrestrial sensors. 3D technology is finding huge utility in resource monitoring, facilities management, urban planning, defense and internal security and has not only revolutionized the surveying and mapping applications but it has emerged as a powerful tool for planning, monitoring and evaluation of developmental activities, informed decision making in governance. Photogrammetry has dealt with the 3D reconstruction of objects from images. It provides low cost, accurate, photo-realistic object models using digital images and allows a virtual first-person experience of the real world. On the other hand, laser scanning technology has emerged as a very promising alternative for many kind of surveying and modeling applications. Laser scanners allow for rapid acquire of a huge amount of 3D data which can be often combined with color high-resolution digital images. This course will introduce the participants to basic concepts of Close range photogrammetry and terrestrial laser scanning in terms of equipment requirements, data capture, processing and output generation. It will attempt to make them aware of the latest trends and challenges in 3D model generation and their applications.

Curriculum

Trends and challenges in ground based 3D modelling

Close Range Photogrammetry

- Close Range Photogrammetry: Principles and Applications
- Data Capture: Issues and challenges
- Data Processing and Analysis
- Case examples
- Demonstration on 3D modelling using image based techniques

Terrestrial Laser Scanning

- Principle and Applications of range based 3D modelling methods
- Data Capture: Methods and Procedures
- Data Registration and Merging
- Dense point cloud generation and surfacing
- Case examples
- Demonstration on TLS data capture and processing

Target Participants

- The course is designed for professionals from Central/ State Govt./Private Organizations/NGO/universities engaged in 3D modelling applications related to Surveying, Urban Planning, Architecture etc.; students and researchers aligned to research in the field.
- 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.