Application Form

Name:.....

Designation (if any): .....

Organization:.....

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Postal Address: .....

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Details of Fee Payment: (DD no., Bank, Date of Issue)

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Phone: .....Mobile: .....

E-mail:.....

Educational qualification: .....

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Professional Experience: .....

Purpose of joining this course:.....

Signature of applicant

CERTIFICATE

Mr./Ms.....working in this organization is nominated and/or sponsored by.....to attend the Course on *UAV Remote Sensing – Technological Advances and Applications*, to be held at North Eastern Space Applications Centre, Shillong during Nov 06-17, 2017.

Place: ..... Signature:.....

Date: .....

Name & Seal of
Sponsoring Organization

UAV Applications for NER

The UAVs could be deployed in the inaccessible areas of the north east to get the high-resolution map of the area. Further, these can be quickly deployed for disaster management. The data products from these airborne system could be used for deriving 3D models of the earth surface, which can then be used as input for applications and analysis. Some of the possible applications are :

- Agriculture : Vital information for quick response, field verification and operational efficiency, such as crop damage assessment
- Photogrammetry : Orthomosaics for survey, city modeling, large-scale mapping, cadastral, urban planning and many more
- 3D Model Construction : Show object in 3D on the web, convert UAV imagery into realistic 3D mesh models
- Disaster Management : More Efficient Survey for disaster prone areas, quick damage assessment of landslides, floods and earthquakes for enabling relief measures.

3D Model reconstruction for part of Nongpoh Town, Ribhoi

Second Training Course

UAV Remote Sensing

Technological Advances & Applications

November 06-17, 2017

NESAC
NORTH EASTERN SPACE APPLICATIONS CENTRE

North Eastern Space Applications Centre
Department of Space, Government of India
Umiam, Meghalaya 793103
www.nesac.gov.in

UAV Remote sensing

The unmanned aerial vehicle (UAV) or unmanned aircraft system (UAS), popularly known as drone, is an airborne system or an aircraft operated remotely by a human operator or autonomously by an onboard computer. There are basically two types of UAVs - Fixed Wing and Rotary based. The fixed-wing aircraft can carry bigger sensors as payloads for longer distances. It also has high flight times and can even fly during rough windy conditions. The rotary based UAVs has the ability for takeoff and land vertically, hover and perform agile maneuvering to maintain a visual on a single target for extended periods of time.

UAVs combined with remote sensing technology have been intending to make use of available technologies in order to acquire the spatial data about land cover, resources, and the environment for processing and analyzing remote sensing data. The imagery data obtained from UAV/UAS can immensely help in many applications ranging from large scale building modelling to vegetation structure mapping which can immensely benefit for local planning and development specially in the North Eastern region with very limited connectivity and physical infrastructure.

UAV Facilities at NESAC

The Centre has both fixed wing UAV and multirotor based UAVs - quadcopter and hexacopter and has capability for both manual as well as autonomous flights. The fixed UAV has a flight endurance of about 50-60 mins with a flying range of 4-5 kms. The hexacopter has 1.5-2.0 kg of payload capability and can be customized to carry sensors such as Thermal, Multispectral, Optical, Hyperspectral or LIDAR etc. It can attain maximum altitude upto 2 Kms with scanning radius of 2 Kms. It can fly for about 20 mins and sufficiently covers an approximate area of 1-1.5 SqKms. The quadcopter has fitted optical sensor and can capture high-resolution geotagged aerial photos and high-definition Videos for aerial surveillance.

The Centre is also well equipped with high-end work-stations and image processing software both proprietary and open source for processing high-resolution aerial imagery. To further expand the activity, we are in the process of procuring the necessary UAV components and sensors including fixed winged UAVs, suitable for remote sensing applications .

About the course

NESAC announces a short course on the "UAV Remote Sensing - Technological advances and Applications " during 06-17 Nov, 2017. This course is designed to provide sufficient knowledge and advanced training in the field of UAV and its applications in remote sensing.

Course detail

The course will mainly emphasis on the basic of UAV operations, technologies and modes of data acquisition. The processing of UAV acquired imagery for deriving various products such as ortho-rectified imagery, Digital Surface and Elevation models and 3D reconstruction of surface etc.

- Satellite RS v/s UAV RS
- Technological developments of UAV RS
- UAV data acquisition and processing
- Applications in natural resources/disaster management
- Infrastructure development and disaster management

3D View of Landslide Scar-Umling, Ribhoi District

Who can apply

The course is designed for Government Officials / Academicians/ Researchers/ Students/ NGOs/ Private agencies having desirable experiences in geo-informatics and basic understanding in photogrammetry & remote sensing and have interest in latest developments in high-resolution data acquisition techniques and 3D object modelling. The Candidates are advised to apply early as the seats are limited to 30 only.

Course Fee

The course fee is ₹ 6,000/- which includes registration kit & course materials. The amount should be payed through crossed demand draft drawn on any Nationalized Bank in favour of Director, NESAC and payable at SBI, Barapani Branch (Branch Code 2010).

Accommodation

Accommodation will be arranged within NESAC and at closed vicinity to NESAC. The participants will pay nominal charges towards boarding and lodging.

How to apply

Please register yourself by filling the online application form available at **http://nesac.gov.in.** The confirmation of the shortlisted candidates will be intimated and accordingly payment has to be made on or before 27th Oct, 2017, failing which their candidature will get cancelled and chances will be given to the next candidate as per the waiting list.

Note : The sponsored candidates need to download and fill the application form & upload. The original copy should be sent by post.

For further information please write to:

Course Coordinator

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Course Officer

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