

समन्वयक:

EDUSAT कार्यक्रम,
भारतीय सुदूर संवेदन संस्थान (IIRS),
ISRO

मोबाइल: 8948332533

ई-मेल: satyamgeog@gmail.com



डॉ. सत्यम् मिश्र

सहायक आचार्य

भूगोल विभाग,
सिद्धार्थ विश्वविद्यालय, कपिलवस्तु
सिद्धार्थनगर – 272 202

पत्रांक: 006/SM-GEOG/SUK/2026

दिनांक: 23-07-2026

ई मेल द्वारा

सूचना

भारत में रिमोट सेंसिंग के प्रतिष्ठित संस्थान भारतीय सुदूर संवेदन संस्थान (IIRS), इसरो (ISRO), देहरादून द्वारा दिनांक 27-28 जुलाई 2026 को दो दिवसीय कार्यशाला – '**Aerosols: measurement, retrieval and impacts**' का आयोजन किया रहा है। यह कार्यशाला पूर्णतः निःशुल्क है और ऑनलाइन माध्यम से आयोजित की जा रही है।

सिद्धार्थ विश्वविद्यालय (परिसर) के समस्त इच्छुक विद्यार्थी, शोधार्थी एवं शिक्षकगण इस कार्यशाला में सहभागिता के आमंत्रित हैं।

ऑनलाइन रजिस्ट्रेशन की प्रक्रिया, कार्यशाला की विवरणिका (brochure) एवं समय-सारणी (schedule) इस सूचना के साथ संलग्न है।

सधन्यवाद,

[डॉ. सत्यम् मिश्र]

सहायक आचार्य, भूगोल विभाग

कोऑर्डिनेटर, एजुसैट (EDUSAT) प्रोग्राम

संलग्नक:

1. कार्यशाला की विवरणिका (ब्रोशर) (pdf),
2. समय सारणी (शेड्यूल) (pdf), एवं
3. पंजीकरण मार्गदर्शिका (रजिस्ट्रेशन गाइड) (pdf)

About the Workshop

Understanding atmospheric aerosols has become increasingly vital as they influence climate, air quality, radiation balance, and human health. Over the past few decades, remarkable progress in ground-based and satellite remote sensing – supported by modern retrieval algorithms and advanced data analysis techniques – has significantly enhanced our ability to monitor, characterize and model aerosol properties. The wealth of multi-platform observations has opened new avenues to explore aerosol sources, transformations, and their regional and global impacts. This two-day online workshop focuses on the measurement techniques, retrieval approaches, and scientific insights related to aerosols, highlighting recent advances and emerging research opportunities. We invite you to join us for the workshop on “**AEROSOLS: MEASUREMENT, RETRIEVAL AND IMPACTS**” to be held on 27–28 July, 2026.

Workshop Content and Outline

This online workshop will cover the following topics:

- Aerosol Physics and Optics
- Aerosol Forcing & Boundary Layer Dynamics
- Aerosol Chemistry
- Health Impacts of Aerosols
- Ground Based Aerosol Instrumentation
- Remote Sensing of Aerosols: Physics and Retrieval
- Modelling of Aerosols
- Hands-on Training

Who can attend the workshop

The workshop is designed for professionals from Central / State Govt. / Private Organisations / NGOs, students and researchers; who are aligned to undertake research in atmospheric and environmental science.



Course Registration

Course updates and other details will be available on URL- <http://www.iirs.gov.in/Edusat-News/>

- Registered through Nodal centres. The participant's registration must be approved by the coordinator of nodal centers.
- The participants can register and see their application status through URL- <https://elearning.iirs.gov.in/edusatregistration/>. In case, the application is pending for approval then participants are advised to contact the coordinator of respective nodal center.

Registered as “Individual registrations”–The participants with individual registration will be automatically approved. All the registered participants will get their login credentials for ISRO Learning Management System (LMS)– <https://isrolms.iirs.gov.in>



Award of Certificate

Registered through Nodal centres : Based on 70% attendance, students will be awarded a “Courses Participation Certificate.”

Individual Registration: A “Course Participation” certificate will be given to everyone who devotes at least 70% of each session's hours to the course. The course participation certificate will be available for download in ISRO LMS.



Contact Details

Dr. Manu Mehta
Workshop Coordinator
Email: manu@iirs.gov.in

Dr. Poonam S Tiwari
Programme Coordinator

IIRS DLP Team

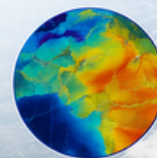
Mr. Janardan Vishwakarma &
Mr. Ashok Ghildiyal
Tel: 0135-2524130
Email- dlp@iirs.gov.in



Online Workshop on

AEROSOLS: MEASUREMENT, RETRIEVAL AND IMPACTS

July 27- 28, 2026



IIRS Outreach Programme

Organised by
Indian Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Govt. of India
4 Kalidas Road, Dehradun 248001

www.iirs.gov.in

INDIAN INSTITUTE OF REMOTE SENSING (IIRS), ISRO

Schedule for Online Workshop on AEROSOLS: MEASUREMENT, RETRIEVAL AND IMPACTS (27-28th July 2026)

Session	Key Subtopics	Duration	Speakers
Briefing of the Course Contents to the participants		10:50 -11:00 am	
DAY 1: UNDERSTANDING AEROSOLS, INTERACTIONS AND IMPACTS			
Aerosols: Physics & Optics	Structure and Composition of the Atmosphere, Sizes, Formation pathways, Particle behaviour, Scattering/absorption, Refractive index, Optical traits like Optical Depth, SSA, Phase function	11:00-11:55 am 40 min Lecture 15 min interaction	Dr. Yogesh Kant (IIRS)
Aerosol Forcing & Boundary Layer Dynamics	Aerosol-Planetary Boundary Layer feedback, Vertical distribution, Direct/Indirect Forcing, and Boundary Layer Height interactions, Case Studies	12:00-12:55 pm 40 min Lecture 15 min interaction	Dr. Narendra Singh (ARIES)
Aerosol Chemistry	Core chemical composition of different aerosol types, Chemical transformation processes, measurement and challenges, Chemical Pathways Shaping Climate and Health Impacts, Case Studies	02:30-03:25 pm 40 min Lecture 15 min interaction	Prof. Neeraj Rastogi, (PRL/ DOS)
Health Impacts of Aerosols	PM2.5 / PM10 exposure studies, Aerosol–health linkages, Air quality monitoring for health, AOD-PM relationships, Health risk assessment using remote sensing, Long-term vs short-term exposure studies	03:30-04:25 pm 40 min Lecture 15 min interaction	Prof. Sagnik Dey (IIT, Delhi)

DAY 2: MEASUREMENT, RETRIEVAL AND MODELLING

Ground Based Aerosol Instrumentation	<i>Sun Photometers, Sky Radiometers, Aethelometer, Mie/ Raman/ MicroPulse Lidars, Nephelometer, Aerosol Spectrometers (OPC), Balloon/Radiosonde etc.</i>	09:30- 10:30 am 40 min Lecture 15 min interaction	Dr. Aditya Vaish (Ahmedabad University)
Remote Sensing of Aerosols : Physics and Retrieval	<i>Remote Sensing Techniques, Role of wavelength, viewing geometry and polarisation, Surface, Columnar and Vertical Distribution, Physics-based and Machine-Learning based retrieval approaches</i>	10:30-11:25 am 40 min Lecture 15 min interaction	Dr. Manu Mehta (IIRS)
Modelling of Aerosols	<i>WRF-Chem, CMAQ, GEOS-Chem frameworks, Emission inventories, Coupled chemistry–meteorology feedbacks, AI/ML based approaches, Case studies</i>	11:30-12:25 pm 40 min Lecture 15 min interaction	Dr. Narendra Ojha, (PRL/ DOS)
Hands-on Training	<i>Downloading, Familiarisation and Visualisation of satellite/AERONET/ Reanalysis data, iAOD software</i>	02:30-03:25 pm 40 min Lecture 15 min interaction	Mr. Akhilesh Kumar (Univ of South Wales Sydney)
Wrap Up and Closing		03:30-3:45 pm	

Registration/Joining Process for EDUSAT Courses

Follow this link: <https://elearning.iirs.gov.in/edusatregistration/>

The screenshot shows the registration page of the Indian Institute of Remote Sensing (IIRS). The page has a blue header with the IIRS logo and name. Below the header is a navigation bar with links: HOME, GENERAL GUIDELINE, and APPLICATION STATUS. On the left is a sidebar with links: Login/Register, Select Course, Personal Details, Educational Details, Professional/Documents, and Preview. The main content area is titled 'Registration' and contains the following fields: Full Name as per Class 10 Certificate, Email, Confirm Email, Password (with a hint 'Enter a strong password'), Password Strength (Strength), Retype password, and Enter displayed code (with a CAPTCHA image '5189p'). At the bottom of the form are two buttons: 'Register' (circled in red) and 'Already Registered' (circled in yellow).

For New Candidates
(Those who have never attended any EDUSAT Course)

For Already Registered Candidates
(Those who have attended at least one EDUSAT Course previously)

Fill the above form
and continue...

Step-1



The screenshot shows the login page of the Indian Institute of Remote Sensing (IIRS). The page has a blue header with the IIRS logo and name. Below the header is a navigation bar with links: HOME, GENERAL GUIDELINE, and APPLICATION STATUS. On the left is a sidebar with links: Login/Register, Select Course, Personal Details, Educational Details, Professional/Documents, and Preview. The main content area is titled 'Login' and contains the following fields: Username, Password (with a hint 'Enter a strong password'), Enter displayed code (with a CAPTCHA image '5189p'), and a 'Login' button. Below the login button are links for 'Register' and 'Forgot password?'. A green dashed box contains the text 'Just use your previous credentials and go on....!!!'. The 'Step-2' label is also present.

Step – 1: Complete Your Registration

The screenshot shows the registration page of the Indian Institute of Remote Sensing (IIRS) e-learning portal. The browser address bar displays `elearning.iirs.gov.in/edusatregistration/`. The page header includes the Government of India logo, the IIRS logo, and the text "INDIAN INSTITUTE OF REMOTE SENSING" and "Indian Space Research Organisation". The date and time are "Saturday, 9th August 2025 - 9:24pm". The navigation bar has links for "HOME", "GENERAL GUIDELINE", and "APPLICATION STATUS". The left sidebar contains a "Login/Register" button and a list of menu items: "Select Course", "Personal Details", "Educational Details", "Professional/Documents", and "Preview". The main content area is titled "Registration" and contains the following fields and options:

- Full Name as per Class 10 Certificate
- Email
- Confirm Email
- Password (with a hint: "Enter a strong password")
- Password Strength: **Strength** (indicated by a blue bar)
- Retype password
- Enter displayed code (518777) with a refresh button
- Register button
- Already Registered link

Below the registration form, there are two instructions:

Fill the above form with a valid and working email ID

Click on Register button and a link for verification/confirmation will be sent to your email ID.

The screenshot shows the confirmation message on the elearning.iirs.gov.in/edusatregistration/ website. The browser address bar displays `elearning.iirs.gov.in/edusatregistration/`. The page header includes the Government of India logo, the IIRS logo, and the text "INDIAN INSTITUTE OF REMOTE SENSING" and "Indian Space Research Organisation". The date and time are "Saturday, 9th August 2025 - 9:24pm". The navigation bar has links for "HOME", "GENERAL GUIDELINE", and "APPLICATION STATUS". The left sidebar contains a "Login/Register" button and a list of menu items: "Select Course", "Personal Details", "Educational Details", "Professional/Documents", and "Preview". The main content area is titled "Confirm Your Email & Activate Your Account." and contains the following text:

Your application for the course is registered !

Please check your email (including spam) to activate your account.

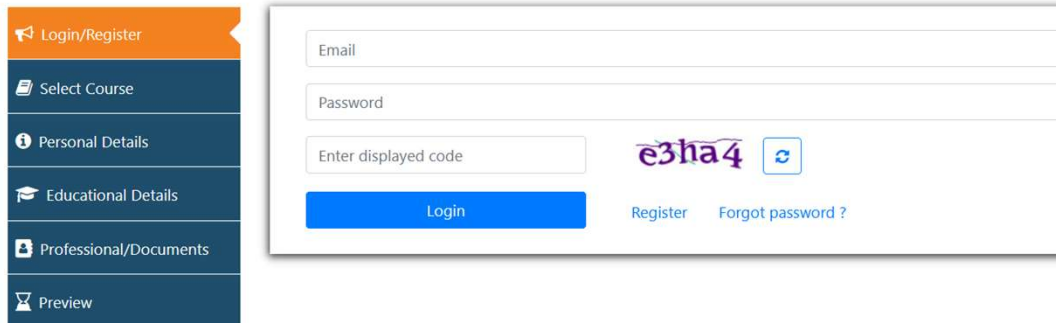
If you did not get email please [click here](#) to resend the activation link

Below the confirmation message, there are two instructions:

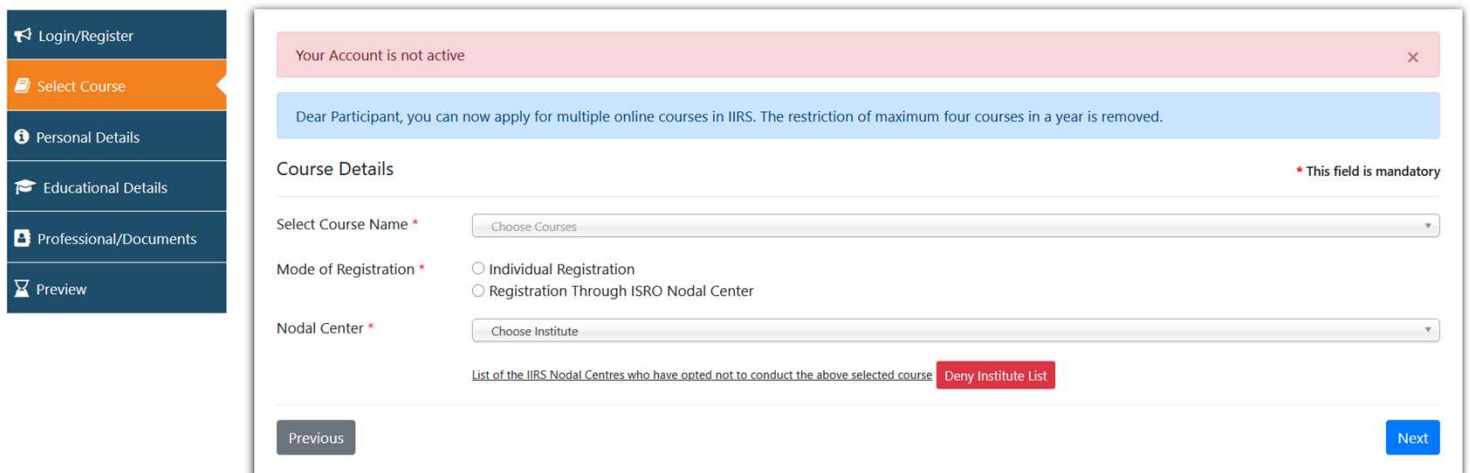
Click that link to verify. You can now move to **Step -2**

STEP – 2: Course and Nodal Center Selection

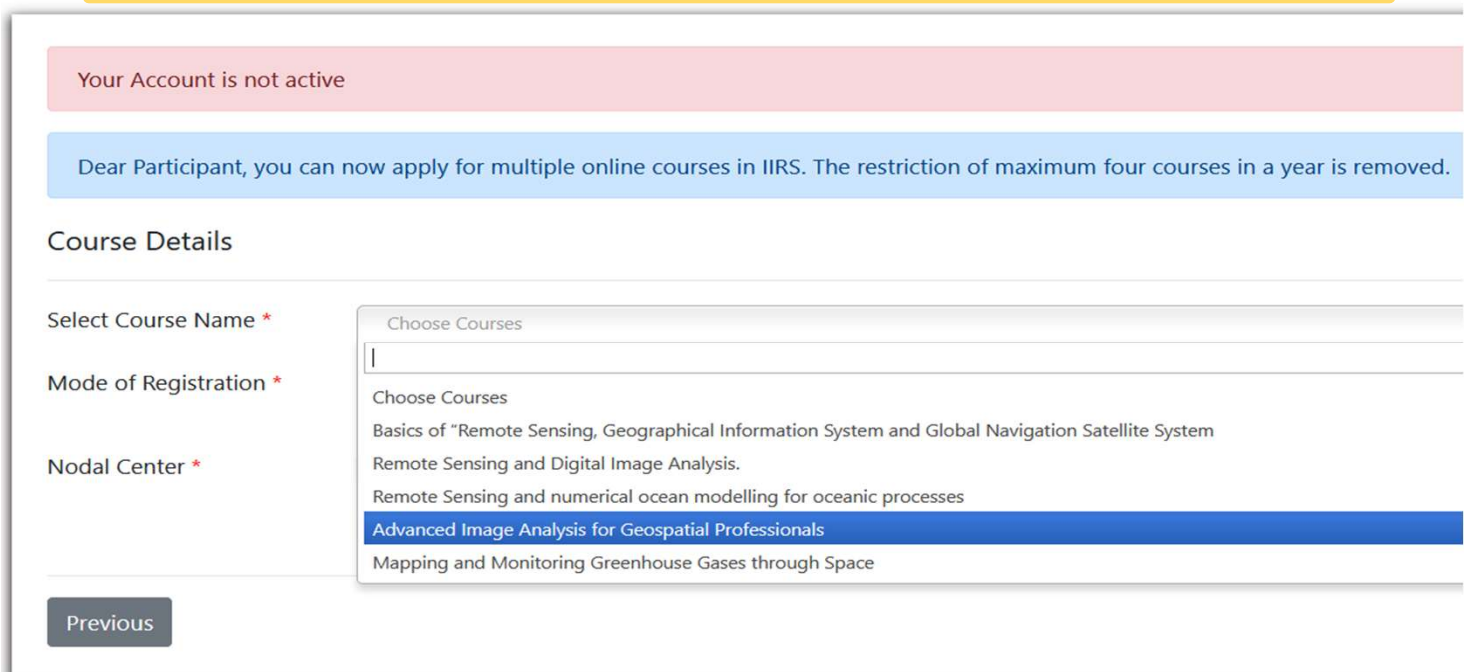
If you are coming following the step one (i.e. New Registration) You may be already Logged In. If you logged out accidentally Please follow this same link <https://elearning.iirs.gov.in/edusatregistration/> and this time click on Already Registered Button as shown in the First page of this Process Documentation. This will lead you to the Login Form shown below:



After login Click on 'Select Course' which will lead you to the following page.



**'Select Course/Workshop Name' for Which You are Applying.
See attached Brochure**



Next, carefully select “**Registration Through ISRO Nodal Centre**”
From the List Choose Your Nodal Center: **SIDDHARTH UNIVERSITY**

Select Course Name *

Advanced Image Analysis for Geospatial Professionals

Mode of Registration *

☐ Individual Registration

☒ Registration Through ISRO Nodal Center

1. If your University/Institute/Organization name is not listed in this list, then please ask your University/Institute/Organization to register with elearning.iirs.gov.in/edusatregistration/coordinator
2. Name of your University/Institute/Organization will be printed in your certificate.
3. You can appear in the online examinations through selected IIRS Nodal Center to get course credit.

Nodal Center *

SIDDHARTH UNIVERSITY, KAPILVASTU, SIDDHARTH NAGAR, INDIA | Coordinator Name: Dr.SATYAM MISHRA

Name of Coordinator at selected Institute- SATYAM MISHRA

Designation: -Assistant Professor

Department: Geography Department

E-mail address: satyamgeog@suksn.edu.in

Please note above information before proceeding further.

Prerequisite For Selected Course

Basic Qualification *

--SELECT--

Basic Knowledge on *

--SELECT--

How the course contents
of this course will be useful
for your professional
career

Previous

Next

Select appropriate things in the above dropdowns and briefly describe how this Course/Workshop is beneficial for you. Proceed by Clicking 'Next'.

Next to this you will be asked to fill Personal, Educational & Professional Details:

For Uploads
Get handy Soft copy of
Passport Size Photo
And **ID Proof**

Fill/Update the Personal Details, Educational Details, Professional Details
and **Upload Photo and ID Proof**

Personal Details

* This field is mandatory

Salutation *	Select Salutation	Full Name *	Full Name
Father's Name *	Father's Name	Date of Birth *	Date of Birth
Gender *	☐ Male ☐ Female ☐ Transgender		
		Nationality *	--SELECT--
Mobile Number *	Phone	City *	City
Country *	--SELECT--		
Pin/Zip code *	Pin/Zip code		

Previous

Save & Continue

Educational Details

* This field is mandatory

Highest Qualification	Major Subjects	Board/Institute/University	Year of passing
Select			Select Year

Previous

Save & Continue

Professional / Documents Details

* This field is mandatory

Employment Status *	☐ Student ☐ Working Professional ☐ Self Employed ☐ Foreign student in Indian university
Upload Photo *	Browse... No file selected. File should not exceed 500 KB (jpeg, .PNG, .jpg)
Identification Proof *	☐ Passport ☐ Voter ID Card ☐ PAN Card ☐ Aadhaar Card ☐ Govt. Employee ID Proof ☐ Other
Identification Proof Document *	Browse... No file selected. File should not exceed 2MB (jpeg, .PNG, .jpg)
Aadhar Number	

Previous

Save & Continue

Finally Click on Apply and Print the Acknowledgment
You are now done!!!

Join WhatsApp Group at
Siddharth university



**Please do message your Name and class in the group
and name of the course for which you have applied.**

COMMUNICATE THE CO-ORDINATOR

After the successful registration, please communicate your details to the course co-ordinator at the Department of Geography, Siddharth University. Contact details are given below:

Co-ordinator: **DR. SATYAM MISHRA**
WhatsApp No: **8948332533**
Email-ID: [**satyamgeog@gmail.com**](mailto:satyamgeog@gmail.com)

Feel free to contact the co-ordinator (office time) if got stuck in any of the above steps, or if you have any other query.

Best Regards
&
Welcome to the Workshop!