



HUMAN RESOURCE DEVELOPMENT CENTER (HRDC)

**Report on
114- IIRS ISRO Outreach Programme
on
“Advances in Remote Sensing Techniques for Geological Applications”
(Human Resource Development Center, Integral University, Lucknow)
March 13-24, 2023**

Human Resource Development Centre (HRDC), Integral University Lucknow is one of the Nodal Center of Indian Institute of Remote Sensing (IIRS), Indian Space Research Organization (ISRO), Department of Space, Govt. of India, Dehradun, India. HRDC has successfully organized the 114-IIRS ISRO Outreach Programme a Two Weeks Online Course on “Advances in Remote Sensing Techniques for Geological Applications” March 13-24, 2023 for working professionals and students in association with Indian Institute of Remote Sensing, Indian Space Research Organization, Department of Space, Govt. of India, Dehradun.

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organization (ISRO) is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geo Informatics 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.

Programme emphasize on Overview of Earth Observation System and recent initiatives for terrestrial and planetary studies & RS and GIS Applications in Geosciences, Advances in

- Thermal and Microwave RS for Geological Applications
- Data Processing Techniques in Geology
- RS Techniques for Glacial Health monitoring and Climate Change
- Hyperspectral RS and spectroscopic analysis for mineral exploration
- RS Techniques for Geological hazards with Emphasis on Landslides

Name of Resource Persons:

Dr. R.P. Singh, Director, IIRS

Faculty Members of Geosciences Division

Dr. R.S. Chatterjee, GD, GDMS

Dr. Shovan L. Chattoraj

Mrs. Richa U. Sharma

Dr. Mamta Chauhan

Dr. Pratima Pandey

Mr. Suresh Kanaujiya

Mrs. Jappji Mehar

The technical sessions constituted of a wide variety of topics taken by a team of expert’s viz.:

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Date	Day	Time	Topic	Speaker
13/03/2023	Monday	15:30-16:00hrs.	Opening Session	Dr. R.P. Singh, Director, IIRS
		16:00-17:30hrs	Overview of Earth Observation System and recent initiatives for terrestrial and planetary studies	
14/03/2023	Tuesday	16:00-17:30hrs	Overview of RS and GIS Applications in Geosciences	Dr. R.S. Chatterjee, GD, GDMS
15/03/2023	Wednesday	16:00-17:30hrs	Advances in Thermal and Microwave RS for Geological Application	Dr. R.S. Chatterjee
16/03/2023	Thursday	16:00-17:30hrs	Advances in Data Processing Techniques in Geology	Mrs. Jappji Mehar
17/03/2023	Friday	16:00-17:30hrs	Advance RS Technique for Glacial Health monitoring and Climate Change	Dr. Pratima Pandey
20/03/2023	Monday	16:00-17:30hrs	Advances in Hyperspectral RS and spectroscopic Analysis for mineral exploration	Mrs. Richa U. Sharma
21/03/2023	Tuesday	16:00-17:30hrs	Advance RS Techniques for Geological hazards with Emphasis on Landslides	Dr. Shovan L. Chattortaj
22/03/2023	Wednesday	16:00-17:30hrs	RS Applications in Engineering Geology: Recent Advances	Dr. Shovan L. Chattortaj
23/03/2023	Thursday	16:00-17:30hrs	Integration of EO data with Geodetic Observations with Emphasis on Crustal Deformation.	Mr. Suresh Kannaujia
24/03/2023	Friday	16:00-17:00hrs	Planetary exploration using RS with emphasis on recent international and ISRO missions	Dr. Mamta Chauhan
		17:00-17:30hrs	Valedictory	

Dr. R.P. Singh appreciated the partisans of Integral University for their active response. Participants learned a lot about Advances in Remote Sensing Techniques for Geological Applications in these program 32 participants attended this outreach program.



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Institute, Coordinator and Participant Certificate by ISRO:

 सत्यमेव जयते	<p>भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA</p>	
बहिः परिसर संचर्क/ विस्तार कार्यक्रम प्रमाण पत्र OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME		COR2023114642
संस्थान की सहभागिता का प्रमाण पत्र CERTIFICATE OF PARTICIPATION OF INSTITUTE		
<p>यह प्रमाणित किया जाता है कि इंटेग्रल विश्वविद्यालय, लखनऊ ने भारतीय सुदूर संवेदन संस्थान, इसरो देहरादून द्वारा संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम उन्नत सुदूर संवेदन तकनीकों के भूवैज्ञानिक अनुप्रयोग में भाग लिया। इस ऑनलाइन पाठ्यक्रम का संचालन दिनांक 13 मार्च, 2023 से 24 मार्च, 2023 तक किया गया।</p> <p>This is to certify that INTEGRAL UNIVERSITY,LUCKNOW- NODAL CENTER, has participated in online training programme conducted by Indian Institute of Remote Sensing, ISRO Dehradun on Advances in Remote Sensing Techniques for Geological Applications. This online programme was conducted during March 13, 2023 to March 24, 2023</p>		
दिनांक/ Date: 18-04-2023 देहरादून/ Dehradun	प्रमुख, खियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग Head, Geoweb Services, IT & Distance Learning Department, IIRS	समूह प्रमुख, भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह Group Head, Geospatial Technologies & Outreach Programme Group, IIRS



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भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA



ऑनलाइन दूरस्थ अधिगम कार्यक्रम
ONLINE DISTANCE LEARNING PROGRAMME

COR2023114642

समन्वय का प्रमाणपत्र
CERTIFICATE OF COORDINATION

यह प्रमाणित किया जाता है कि **इंटेग्रल विश्वविद्यालय, लखनऊ** कार्यरत **श्री इमरान उल्लाह खान**, ने **उन्नत सुदूर संवेदन तकनीकों के भूवैज्ञानिक अनुप्रयोग** विषय पर इस संस्थान द्वारा दिनांक 13 मार्च, 2023 से 24 मार्च, 2023 तक संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम को समन्वित किया।

This is to certify that **DR. IMRAN ULLAH KHAN**, working with **INTEGRAL UNIVERSITY,LUCKNOW-NODAL CENTER**, has coordinated the online training course on **Advances in Remote Sensing Techniques for Geological Applications** conducted by this institute during March 13, 2023 to March 24, 2023

दिनांक/ Date: 18-04-2023
देहरादून/ Dehradun

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Head, Geoweb Services, IT & Distance Learning Department, IIRS

समूह प्रमुख,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Head, Geospatial Technologies & Outreach Programme Group, IIRS



अंतरिक्ष विभाग /DEPARTMENT OF SPACE
भारत सरकार/GOVERNMENT OF INDIA
भारतीय अंतरिक्ष अनुसंधान संगठन /INDIAN SPACE RESEARCH ORGANISATION
भारतीय सुदूर संवेदन संस्थान, देहरादून / INDIAN INSTITUTE OF REMOTE SENSING, DEHRADUN



नामांकन सं. / Enrolment No.: 20231141830854



CERTIFICATE OF PARTICIPATION IN ONLINE COURSE

यह प्रमाणपत्र
DR. AFREEN KHAN
को "उन्नत सुदूर संवेदन तकनीकों के भूवैज्ञानिक अनुप्रयोग"
में ऑनलाइन पाठ्यक्रम में भाग लेने पर प्रदान किया जाता है।
इस ऑनलाइन पाठ्यक्रम का आयोजन 13 मार्च, 2023 से 24 मार्च, 2023 (कुल पाठ्यक्रम की अवधि = 15 घंटे) के दौरान किया गया।
(संबन्धित आई.आई.आर.एस. नोडल केंद्र- इंटेग्रल विश्वविद्यालय, लखनऊ)

**THIS CERTIFICATE IS
AWARDED TO
DR. AFREEN KHAN**
ON HAVING PARTICIPATED IN THE ONLINE COURSE ON
"Advances in Remote Sensing Techniques for Geological Applications"
THIS ONLINE COURSE WAS CONDUCTED DURING **13-03-2023 to 24-03-2023** (Total course duration was = 15 hours).
(Concerned IIRS Nodal Centre- INTEGRAL UNIVERSITY,LUCKNOW- NODAL CENTER)

Date: 18-04-2023
Place: Dehradun
UID: c5f8896c5abbb6619eb06653c618645 .This Certificate can be validated using URL: https://certificate.iirs.gov.in

समन्वयक, विश्वविद्यालय/संस्थान
Coordinator, University/ Institution

निदेशक/ Director
आई.आई.आर.एस, देहरादून/ IIRS, Dehradun



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भारत सरकार / GOVERNMENT OF INDIA
भारतीय अंतरिक्ष अनुसंधान संगठन / INDIAN SPACE RESEARCH ORGANISATION
भारतीय सुदूर संवेदन संस्थान, देहरादून / INDIAN INSTITUTE OF REMOTE SENSING, DEHRADUN



नामांकन सं. / Enrolment No. : 20231141828679



**CERTIFICATE OF PARTICIPATION IN
ONLINE COURSE**

यह प्रमाणपत्र
MR. SAURABH SINGH
को " उन्नत सुदूर संवेदन तकनीकों के भूवैज्ञानिक अनुप्रयोग " में ऑनलाईन पाठ्यक्रम में भाग लेने पर प्रदान किया जाता है। इस ऑनलाईन पाठ्यक्रम का आयोजन 13 मार्च, 2023 से 24 मार्च, 2023 (कुल पाठ्यक्रम की अवधि = 15 घंटे) के दौरान किया गया। (संबन्धित आई आई आर.एस नोडल केंद्र- इंदियन विज्ञानविद्यालय, लखनऊ)

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Amran Ullah Khan
समन्वयक, विश्वविद्यालय/संस्थान
Coordinator, University/Institution

राजेश्वर सिंह
निदेशक/ Director
आई.आई.आर.एस, देहरादून/ IIRS, Dehradun

Date: 18-04-2023
Place: Dehradun
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