



## **Three Weeks IIRS ISRO Outreach Programme on Hyperspectral Remote Sensing and Its Applications** **(Human Resource Development Center, Integral University, Lucknow)** **February 19, 2018 to March 12, 2018**

Human Resource Development Centre (HRDC), Integral University Lucknow is one of the Remote Center of Indian Institute of Remote Sensing (IIRS), Indian Space Research Organization (ISRO), Department of Space, Govt. of India, Dehradun, India. Human Resource Development Centre, Integral University, Lucknow had successfully organized the 29-Outreach Programme on **“Hyperspectral Remote Sensing and Its Applications”** from February 19, 2018 to March 12, 2018 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.

Prime focus of 29-IIRS ISRO programme was Hyperspectral Remote Sensing, its Overview various Platforms and Sensors used, Image Pre – Processing, its Geological Applications and hyperspectral Remote Sensing for Urban Studies. Hyperspectral imaging has applications in seed viability Study, biotechnology, environmental monitoring, pharmaceuticals, medical diagnose, forensic science, oil & gas etc. Participants got benefitted from this course as this is relatively a new technology that is currently being investigated by researchers and scientists with regard to the detection and identification of minerals, terrestrial vegetation, and man-made materials and backgrounds.





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

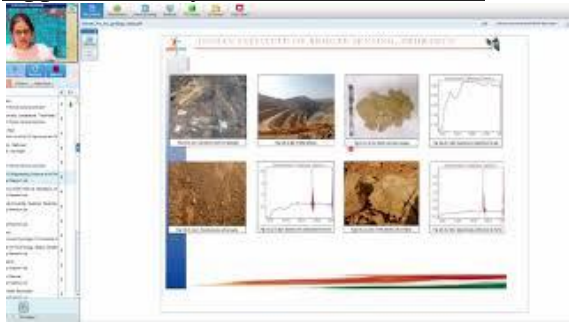
19 Feb 2018	Hyperspectral Remote Sensing and its Overview	Mr. Vinay Kumar
20 Feb 2018	Hyperspectral Remote Sensing Platforms and Sensors	Mr. Vinay Kumar
21 Feb 2018	Hyperspectral Image Pre - Processing	Ms. Manu Mehta
22 Feb 2018	Demonstration on Hyperspectral Data Pre - Processing	Mr. Vinay Kumar
23 Feb 2018	Data Reduction Techniques and End Member Selection	Ms. Richa U Sharma
27 Feb 2018	Demonstration on Spectro Radiometer and Spectral Library Creation	Mr. Vinay Kumar
28 Feb 2018	Optical and Thermal Hyper Spectral Image Classification	Dr. Anil Kumar
06 March 2018	Hyperspectral Remote Sensing for Agriculture and Soil Studies	Mr. Justin George
07 March 2018	An Overview of Hyperspectral Remote Sensing Applications in Forestry	Dr. Anil Kumar
08 March 2018	Hyperspectral Remote Sensing for Geological Applications	Mrs. Richa U Sharma
09 March 2018	Hyperspectral Remote Sensing for Urban Studies	Ms. Asfa Siddiqui
12 March 2018	Hyperspectral Remote Sensing Applications	Mr. Vaibahv Garg

### Link for IIRS ISRO Video Lectures

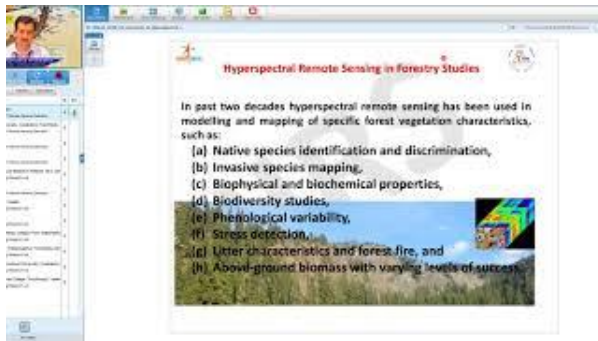
[ftp://ftp.iirs.gov.in/Lecture\\_Video/12%20March%202018\\_Hyperspectral%20remote%20sensing%20for%20water%20and%20snow%20studies\\_Dr.%20Vaibhav%20Garg.wmv](ftp://ftp.iirs.gov.in/Lecture_Video/12%20March%202018_Hyperspectral%20remote%20sensing%20for%20water%20and%20snow%20studies_Dr.%20Vaibhav%20Garg.wmv)  
<https://www.youtube.com/watch?v=dhsZYrqFse8>  
<https://www.youtube.com/watch?v=nL0rH2AfdMU>  
<https://www.youtube.com/watch?v=ddyS-4N5v4o>  
<https://www.youtube.com/watch?v=avvQE1gHj6o>  
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<https://www.youtube.com/watch?v=QPoekMM9tEM>  
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<https://www.youtube.com/watch?v=jiUC-IJbyAc>  
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<https://www.youtube.com/watch?v=9-t7gEderpU>  
<https://www.youtube.com/watch?v=nHMfICoB9IM>  
[https://www.youtube.com/watch?v=\\_r1HEYhm1Ms](https://www.youtube.com/watch?v=_r1HEYhm1Ms)

Overall **forty one participants** (23-Faculty Members & 18-Students) from University attended the program and got benefitted from the much needed and timely insights on **Hyperspectral Remote Sensing and Its Applications**. The program was very well coordinated by Mr. Imran Ullah Khan (Center Coordinator), Dr. Savita Maurya, Mr. Mohd. Javed Khan and Mrs. Saif Ahmad (Department of Electronics and Communication Engineering).

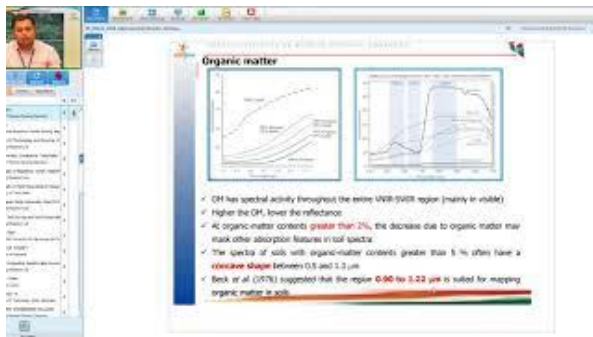
Preview YouTube video 08 March 2018 Hyperspectral Remote Sensing for Geological Applications by Mrs Richa U Sharma



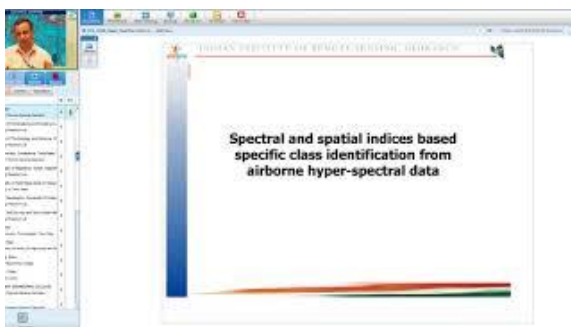
Preview YouTube video 07 Mar 2018 An Overview of Hyperspectral Remote Sensing Applications in Forestry



Preview YouTube video 06 Mar 2018 Hyperspectral Remote Sensing for Agriculture and Soil Studies by Shri Justin George



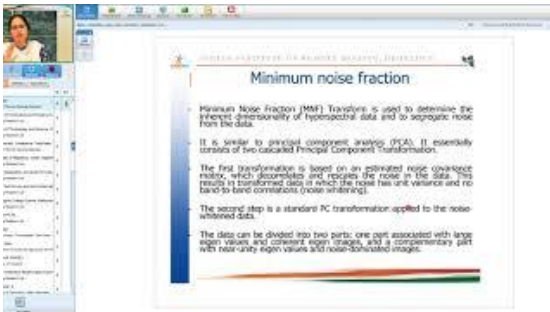
Preview YouTube video 28 Feb 2018 Optical and Thermal Hyper Spectral Image Classification by Dr Anil Kumar



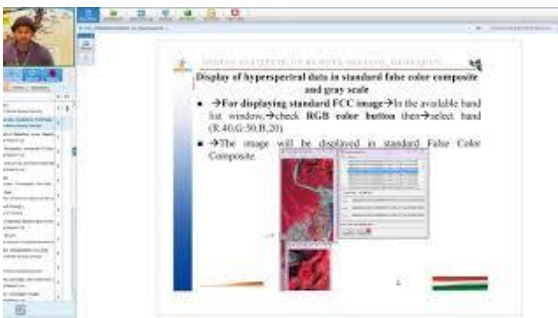
Preview YouTube video 27 Feb 2018 Demonstration on Spectro Radiometer and Spectral Library Creation by Shri Vinay Kumar



Preview YouTube video 23 Feb 2018 Data Reduction Techniques and End Member Selection by Ms. Richa U Sharma



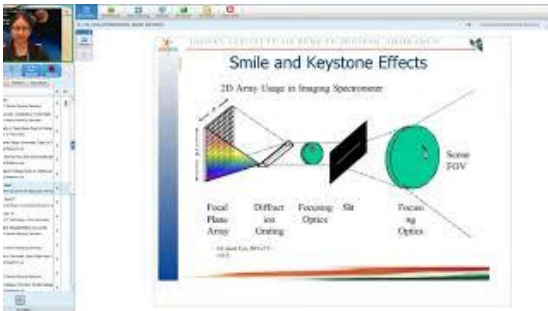
Preview YouTube video 22 Feb 2018 Demonstration on Hyperspectral Data Pre - Processing by Shri Vinay Kumar



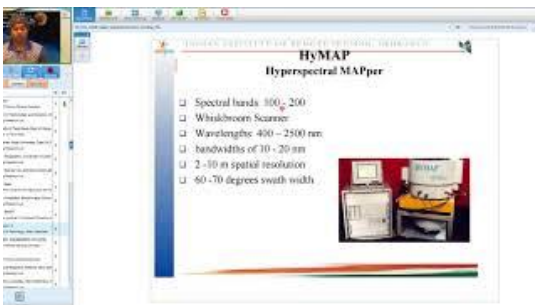
Preview YouTube video 22 Feb 2018 Demonstration on Hyperspectral Data Pre-processing by Shri Vinay Kumar



Preview YouTube video 21 Feb 2018 Hyperspectral Image Pre - Processing by Ms. Manu Mehta



Preview YouTube video 20 Feb 2018 Hyperspectral Remote Sensing Platforms and Sensors By Shri Vinay Kumar



Preview YouTube video 19 Feb 2018 Hyperspectral Remote Sensing and its Overview by Shri Vinay Kumar

