

HYPER SPECTRA-2013

Lecture Schedule

	09.00 -	10.15 -	11.30 -	11.45 -	13.00 -	14.00 -	16.00 -	16.15 -
	10.15	11.30	11.45	13.00	14.00	16.00	16.15	17.30
DAY-1	Registration	Inaug.	Tea	Lec-1	Lunch	Lab-1	Tea	Lab-2
DAY-2	Lec-2	Lec-3	Break	Lec-4	Break	Lab-3	Break	Lab-4
DAY-3	Lec-5	Lec-6		Lec-7		Field		
DAY-4	Lec-8	Lec-9		Lec-10		Lab-5		
DAY-5	Lec-11	Lec-12		Lec-13		Lab-7		

- Lecture 1:** Hyperspectral Remote Sensing (VNIR through TIR): Overview (D.R)
- Lecture 2:** Pre-processing of Hyperspectral data-I- Calibration and Correction (Radiometric and Atmospheric) Procedures (P.S.)
- Lecture 3:** Pre-processing of Hyperspectral data-II- Reflectance Calibration, Temperature-Emissivity separation and S/Noise estimation and reduction (P.S.)
- Lecture 4:** Hyperspectral Remote Sensing & Retrieval of Atmospheric components (PKT)
- Lecture 5:** Reflectance & Emission Spectroscopy: Theory & Practice (D.R)
- Lecture 6:** Algorithms in Hyperspectral Image Processing & Classification (Linear Techniques) (B.K.M)
- Lecture 7:** Algorithms in Hyperspectral Image Processing & Classification (Non-linear Techniques) (B.K.M)
- Lecture 8:** Field Spectroscopy and Planetary Analogues (RB, DR)
- Lecture 9:** Hyperspectral Remote Sensing & Geological applications-1- Application of Linear techniques (KNK, D.R)
- Lecture 10:** Hyperspectral Remote Sensing & Geological applications-II- Application of non-linear techniques (KDS, D.R)
- Lecture 11:** Hyperspectral Remote Sensing in Lunar Exploration (P.C)
- Lecture 12:** Hyperspectral Remote Sensing in Snow, Ice and Glacier Studies (HSN)
- Lecture 13:** Spectroscopy of Soils and Regoliths (RNS)
- Lab-1 & 2:** Demonstration of “ENVI + IDL” Software with special reference to Hyper spectral Image Analysis Tools (RB, MN, KDS)
- Lab-3 & 4:** Pre-processing of Hyperspectral Signature and Satellite data (RB, MN, KDS).
Field Spectral Signature Collection using field Spectroradiometers (DR, RB, MN, KDS)
- Lab-5** Spectral characterisation and library generation (DR, RB, MN, KDS)
- Lab-6 & 7** Digital Image Processing and Image Analysis (DR, RB, MN, KDS)

List of Faculties/ Instructors

1. D.R. Dr. D.Ramakrishnan, Dept. Of Earth Sciences, IITB
2. P.S. Dr.P.Srinivas, ADRIN, Hyderabad
- 3.PKT Dr.P.K.Thapliyal, SAC, Ahmedabad
- 4.B.K.M Dr.B.K.Mohan, CSRE, IITB
5. P.C Dr.Prakash Chauhan, SAC, Ahmedabad
- 6.H.S.N. Dr.H.S.Negi, SASE, Chandigarh
- 7.R.N.S. Dr.Rabi N. Sahoo, IARI, New Delhi
- 8.K.N.K Dr.K.N.Kusuma, Pondicherry Univ.
- 9.RB Mr.Rishikesh Bharti, Dept. Of Earth Sciences, IITB
- 10.MN Mrs.M.Nithya, Dept. Of Earth Sciences,IITB
- 11.KDS Mr.Keshav Dev Singh, Dept. Of Earth Sciences, IITB