

International Remote Sensing Seminar 2006
Summer School on
Applications with the Newest Multi-spectral Meteorological and Ocean Color Satellites

Objectives

An in depth explanation of methods and techniques used to extract information from meteorological and ocean satellite data, with emphasis on the latest measuring technologies.

The course will consist of lectures, laboratory sessions, group lab projects, homework and tests. The results from each of the group projects will be presented to the class by the participating students.

Main Topics

A. Lectures:

- Radiation and the Radiative Transfer Equation
- Spectral signatures from Earth's surface and atmosphere
- SST and Ocean color (MODIS)
- Cloud detection and cloud properties (MODIS & SEVIRI)
- Sounding using infrared high resolution spectral data (AIRS)

B. Labs:

- Using HYDRA (a JAVA based freeware tool) to manipulate multi-spectral data
- Staging, Viewing, Interrogating MODIS, AIRS, MSG Data
- Group Projects

Lecturers and Tutors: Paul Menzel, Paolo Antonelli, Luciano Guerriero, Maria Teresa Chiaradia, Raffaella Matarrese, Vito De Pasquale, Nico Cimini (?), Silvia Puca (?)

English is the official language of the School. All provided material will be in English.

Location and timing

The Summer School will take place in Ostuni from 8 to 16 June 2006, using the facilities provided by the Centro di Spiritualità Madonna della Nova, Ostuni.

<http://www.centrospiritualitamn.net/>

The school program is attached.

Who can attend the School

Participants with an academic degree in either Meteorology, Physics, Environmental Sciences or Environmental Engineering and/or actively involved in environmental remote sensing activities.

The maximum number of students is 25. Candidates will be selected on the basis of their *curriculum vitae* and proved experiences in the field objectives of the School.

How to participate

The Application Form can be downloaded from

<http://barrage.ssec.wisc.edu/~paoloa/teaching/Ostuni2006/html/index.html>

People interested in participating in the school must fax the Application Form and Curriculum vitae to +39.080.5443224 before March 20, 2006 and send an email to raffaella.matarrese@ba.infn.it and to paoloa@ssec.wisc.edu. A Selection Committee will examine all applications and decide the list of participants, based on the information provided in the Application Form and the Curriculum vitae.

Admission fees

The admission fee is 400€. This is comprehensive of accommodation (shared room, full board), teaching equipment and secretarial support and *social dinner* at the end of the course.

For further information write an email to the following address:

raffaella.matarrese@ba.infn.it and paoloa@ssec.wisc.edu

Summer School on
APPLICATIONS WITH THE NEWEST MULTI-SPECTRAL METEOROLOGICAL
AND OCEAN COLOR SATELLITES
June, 8th – June, 16th 2006

R pm	<i>Welcome</i>	Discussion of Agenda
	<i>Lecture 1</i>	Radiation and the Radiative Transfer Equation
	<i>Lab</i>	Introduction to the Labs and HYDRA
F am	<i>Lecture 2</i>	Spectral signatures from Earth's surface and atmosphere
	<i>Homework 1</i>	
F pm	<i>Lab 1a</i>	Staging, Viewing, Interrogating Multispectral Data
Sa am	<i>Lecture 3</i>	Remote Sensing Advances with MODIS including SST and ocean color estimation
Sa pm	<i>Lab 1b</i>	Multi-spectral Cloud Mask Properties
Su	<i>free day</i>	
M am	<i>Lecture 4</i>	Detecting moisture, cloud, and aerosol with High Spectral Resolution Sounders
	<i>Homework 2</i>	
M pm	<i>Lab 2a</i>	Staging, Viewing, Interrogating AIRS and SHIS Data
T am	<i>Quiz 1</i>	
	<i>Lab 2b</i>	High Spectral Resolution IR data: Exploring Spectral Properties of clouds and moisture
T pm	<i>Lecture 5</i>	Introducing MSG: Detection of Fog, Fire, Dust,....
	<i>Lab 3a</i>	Organizing Group Projects (Cal/Val, ocean color & SST, cloud clearing, Eco Syst, dust & aerosols)
	<i>Evening Get-Together</i>	
W am	<i>Lab 3b</i>	Continue Group Projects
W pm	<i>Work Time</i>	homework and Labs
R am	<i>Quiz 2</i>	
	<i>Lab 3c</i>	Continue Group Projects
R pm	<i>Lab 3d</i>	Finish Group Lab Projects
F am	<i>Lab 3e</i>	Presentation of Group Lab Projects [Students]
F pm	<i>Lecture 6</i>	Summary of Remote Sensing Lessons
	<i>Quiz 3</i>	
	<i>Concluding Ceremony</i>	

AM sessions: 10:00 am – 12:30 pm – PM sessions: 2:30 pm – 5:00 pm