



Aeronautica Militare
Comando Squadra Aerea
Stato Maggiore
Reparto per la Meteorologia

A: ELENCO INDIRIZZI ALLEGATO

ALLEGATI: 2 (due)

OGGETTO: *International Summer School on Applications with the Newest Multi-spectral Environmental Satellites* (Bracciano – Roma, dal 11 al 20 giugno 2018).

L'Aeronautica Militare in collaborazione con il *Cooperative Institute for Meteorological Satellite Studies* (CIMSS) e l' *European Organisation for the Exploitation of Meteorological Satellites* (EUMETSAT), organizza, come negli scorsi anni, l' "*International Summer School on Applications with Newest Multi-spectral Environmental Satellites*" (brochure in allegato "B").

In tale contesto, si comunica che è aperta la selezione dei frequentatori riservata a studenti, ricercatori e personale che svolge attività di meteorologia operativa. Il numero di posti assegnato all'Italia è limitato a cinque, eventualmente elevabili qualora i posti dedicati ai frequentatori stranieri non fossero totalmente coperti. Il corso, in lingua inglese, si terrà a Bracciano (Roma) dal 11 al 20 giugno 2018, secondo il calendario delle lezioni riportare nell'allegata brochure. Ai partecipanti è chiesto il possesso di una laurea triennale o magistrale in una delle seguenti discipline: Matematica, Fisica, Meteorologia, Astronomia, Scienze Nautiche, Scienze Ambientali o Ingegneria Ambientale. Per partecipare al corso i candidati devono inviare la richiesta (lettera di presentazione del proprio responsabile di ricerca, professore di riferimento o altro, allegando il proprio *curriculum vitae*) al Reparto per la Meteorologia (ReMet), via posta elettronica, ai seguenti indirizzi e-mail: francesco.montanaro@aeronautica.difesa.it e paolo.capizzi@aeronautica.difesa.it, **entro e non oltre il 10 maggio 2018**. I candidati saranno selezionati sulla base del proprio CV, con un criterio di rotazione tra tutte le organizzazioni che in passato hanno visto accolte le domande di partecipazione di propri frequentatori. Non è previsto alcun rimborso di spese da parte degli Enti organizzatori. I candidati selezionati riceveranno da parte del ReMet una comunicazione via e-mail per il perfezionamento dell'iscrizione, con registrazione sul sito dell'EUMETSAT secondo modalità che saranno comunicate direttamente agli interessati e che deve avvenire improrogabilmente **entro il 14 maggio p.v.**

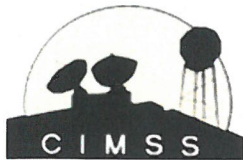
d'ordine

IL CAPO REPARTO PER LA METEOROLOGIA f.f.

Col. Silvio CAU

ELENCO DI DISTRIBUZIONE

DIPARTIMENTO PROTEZIONE CIVILE	<u>ROMA</u>
ASI	<u>ROMA</u>
IST. SUP. PER LA PROTEZIONE E LA RICERCA AMBIENTALE (con richiesta di estendere l'invito alle Agenzie Regionali interessate)	<u>ROMA</u>
CNR IBIMET	<u>FIRENZE</u>
CNR ISAC	<u>BOLOGNA</u>
ENEA	<u>ROMA</u>
INGV	<u>ROMA</u>
CINFAI	<u>ROMA</u>
CIRA	<u>CAPUA</u>
CMCC	<u>LECCE</u>
ENAV	<u>ROMA</u>
COMANDO 9° B.A. ISTAR/EW	<u>PRATICA DI MARE</u>
COMET	<u>PRATICA DI MARE</u>
CNMCA	<u>PRATICA DI MARE</u>
CTM	<u>VIGNA DI VALLE</u>
CAMM	<u>SESTOLA</u>
COA	<u>POGGIO RENATICO</u>
CNR ISMAR	<u>VENEZIA</u>



EUMETSAT - Postfach 10 05 55 - 64205 Darmstadt

To the Heads of Delegation of
Member States of EUMETSAT

Your reference
Votre référence

Your letter dated
Votre lettre du

Our reference
Notre référence

Darmstadt

EUM/OPS/LET/18/982672 23 March 2018

Subject: Invitation letter for the International Summer School in Bracciano, Italy 2018

Dear Sir or Madam,

EUMETSAT and the Cooperative Institute for Meteorological Satellite Studies (CIMSS) are pleased to invite your institute to nominate a candidate to participate at the “*International Summer School on Applications with the Newest Multi-spectral Environmental Satellites*”, to be held in Bracciano, Italy from 11 to 20 June 2018.

In case you are not able to nominate a candidate, please forward this invitation to suitable students (post graduate level) from other institutes or universities in your country. More information about the course and the draft agenda of the programme of the course are attached as *Annex I*.

The course will be conducted in English. The participants must have an academic degree either in Meteorology, Physics, Environmental Sciences or Environmental Engineering. Candidates will be selected on the basis of their proven experiences in environmental remote sensing. EUMETSAT will provide financial support to a limited number of the selected candidates upon their request to cover their travel expenses.



All participants are strongly advised to take out personal travel and medical insurance. No responsibility for any incident during the course can be accepted by EUMETSAT or the local organisers.

In order to apply for the course, please follow the following steps:

Step 1. Go to the EUMETSAT Training website:

<http://training.eumetsat.int/mod/questionnaire/view.php?id=10423>

Step 2. In order to apply, you will need to click on the “**Apply for Summer School 2018**” link, fill in the questionnaire with your data and submit it.

Please note that if you do not have an account on this page, **you will need to create one before you can apply**. Click on 'Log in' (top right corner of the page) and register using the 'Create new account'. Next, access the link in Step 1 and fill in your application. Alternatively, you can always access the application in 'Apply for Courses' from the home page. Should you have problems with the online application, please send an e-mail to training@eumetsat.int.

Applications have to be submitted no later than **27 April 2018**. Selected participants will be informed about their acceptance no later than **4 May 2018**.

Yours sincerely,

Alain Ratier
Director-General

*Annex I*

**International School on
Applications with the Newest Multi-spectral Environmental Satellites
11 – 20 June 2018, Bracciano, Italy**

Objectives

An in depth explanation of methods and techniques used to extract information from environmental 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. English is the official language of the School. All provided material will be in English.

Main Topics*A. Lectures:*

- Radiation and the Radiative Transfer Equation
- Spectral signatures from Earth's surface and atmosphere
- High resolution sounding using infrared high resolution spectral data
- Multi-spectral sensors for imaging
- Evolving to the Future Global Observing System

B. Labs:

- Using McIDAS-V (a JAVA based tool) to manipulate multi-spectral data
- Staging, Viewing, Interrogating MODIS, AVHRR, AIRS, AMSU, IASI, AHI/ABI, SEVIRI data
- Group Projects

**Visualization Tools for Lab**

McIDAS-V is used to interrogate and view multispectral data in the labs; it is available for free at <http://www.ssec.wisc.edu/mcidas/software/v/>



Draft Agenda

Monday, 11 June

am	Welcome Opening Quiz Lecture Lab	Introduction of students and teachers plus discussion of agenda (All) ALL Electromagnetic spectrum and radiative transfer – Bennartz Introduction to McIDAS-V (case from 6 November 2005)
pm	Lecture Lab Lab	Satellites, instruments and orbits – Bennartz, Kerkmann Smoke in Botswana (29 August 2008) Discussion of results

Tuesday, 12 June

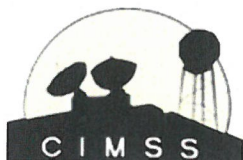
am	Lecture Lab Lab	RGB Products overview – Kerkmann Wildfires in South Africa (1 September 2008) Discussion of results
pm	ALL Lecture Lab Lab	Daily Weather Briefing Infrared soundings (multi-spectral and hyperspectral) – Bennartz Investigate a tropical depression with AIRS Discussion of results

Wednesday, 13 June

am	Lecture Lab Lab	Microwave soundings – Bennartz Investigate a tropical depression with MODIS and AMSR in addition to AIRS Discussion of results
pm	ALL Lecture Lab Lab	Daily Weather Briefing Aerosols 1 (dust, smoke) – Kerkmann Dust / Smoke discrimination (22 October 2007) Discussion of results

Thursday, 14 June

am	Lecture Lab Lab	Aerosols 2 (ash and SO ₂) – Kerkmann a) Thin ash and ice clouds (15 April 2010) b) Volcanic Ash and SO ₂ clouds (6 June 2011) Discussion of results
pm	ALL Lecture Lab Lab	Daily Weather Briefing Looking at clouds (cloud properties, VIS and NIR) – Bennartz Deep convection over Burkina Faso (5 April 2007) Discussion of results

**Friday, 15 June**

am	Lecture	Looking at clouds and precipitation – Bennartz
	Lab	Precipitation case with microwave channels from AMSR-E and an overpass by CloudSat
	Lab	Discussion of results
pm	ALL	Daily Weather Briefing (for weekend)
	Lecture	Climate applications, inter-calibration, long-term stability – Bennartz
	Lab	Looking at Arctic sea ice extent with AMSR-E
	Lab	Discussion of results

Weekend, 16 – 17 June (possible private visit to Rome)**Monday, 18 June**

am	Lecture	How to order data (from EUMETSAT, NOAA etc.) - Gencic
	Lab	Student Lab (with downloading of data)
	Lab	Discussion of results
pm	All	Daily Weather Briefing
	Lecture	Cloud microphysics & Day/Night Microphysics - Kerkmann
		RGB products
	Lab	Exploring different cloud scenes (3 cases)
	Lab	Discussion of results

Tuesday, 19 June

am	Lecture	Latest RGB Developments (tuning, new RGBs) – Kerkmann
	Lab	Looking at low clouds (13 July 2014)
	Lab	Discussion of results
pm	ALL	Daily Weather Briefing
	Lecture	Low-level humidity seen in (VIS and) IR channels - Kerkmann
	Lab	Moisture boundary cases (16 October 2014, 14 July 2006)
	Lab	Discussion of results

Wednesday, 20 June

am	Lecture	Products of the Hydrology SAF – Melfi
	Final Quiz	ALL
	Course Evaluation	ALL
	Summary & Concluding Ceremony (end at 12.30 h)	

AM sessions: 9:00 am – 12:30 pm

PM sessions: 2:00 pm – 5:30 pm