6th International Training School on

Convective and Volcanic Clouds (CVC)

detection, monitoring and modelling

6-18 September 2021

The purpose of the School is to train students with primary research interest in:
- techniques to detect, monitor, and model convective and volcanic clouds
- state-of-the-art instruments and satellite missions (present and future)
- early warning systems and aviation safety for supporting policymakers

Modules

CONVECTIVE

Theory of convection
Convection from satellite
Weather prediction
Convection from radar
Convection from GNSS

VOLCANIC

Volcanic clouds detection and retrievals
Volcanic clouds transport and inverse modelling
Volcanic Hazard Monitoring

AVATION

Decision support for ATM
Severe weather and flight trajectories
Provision of early warnings for extreme clouds

Lecturers

G. Guerova (Univ. of Sofia, Bulgaria)
L. Labrador (WMO)
M. Miglietta (ISAC-CNR, Italy)
M. Montopoli (ISAC-CNR, Italy)
A. Parodi (CIMA Foundation, Italy)
N. Kristiansen (MetOffice, UK)
F. S. Marzano (Univ. La Sapienza, Italy)
M. Pavolonis (NOAA, USA)
F. Prata (AIRES Ltd, Australia)
G. Salerno (INGV, Italy)
T. Bolic (Univ. of Westminster, UK)
M. Soler (UC3M, Spain)
D. Visoiu (ROMATSA, Romania)

https://www.facebook.com/islandofmeetings
https://twitter.com/cvc_training

Because of the COVID-19 pandemic the 6th CVC training school will be organized with virtual sessions, live presentations and daily meetings with lecturers.

FINAL CERTIFICATION provided for ECTS points.

The CVC 2021 will offer to students a theoretical introduction to the main issues and challenges of convective and volcanic clouds detection, monitoring and modelling.

Registration fee: 100€ **Deadline: 20/07/2021**
Website: www.cvctrainingschool.org

Contacts
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Moreover...

7th International Training School on

Convective and Volcanic Clouds (CVC)

detection, monitoring and modelling

September 2022

The purpose of the School is to train students with primary research interest in:
- techniques to detect, monitor, and model convective and volcanic clouds
- state-of-the-art instruments and satellite missions (present and future)
- early warning systems and aviation safety for supporting policymakers

Modules

CONVECTIVE   VOLCANIC   AVATION

Ten days with in depth lectures, excursion to the summit craters, field measurements, practice with data analysis. But also, morning fun-run, gastronomical meetings, sun and much more.

The 7th CVC training school will be organized in Nicolosi (Sicily, Italy) on the slopes of the Etna volcano! Nicolosi is a small city located on the slopes of the Etna volcano, known as the gateway to Etna. Nicolosi will fascinate students with its architectural, historical and natural wonders.

10 days in Sicily   *5 ECTS points*

Lecturers

R. Biondi (Univ. of Padua, Italy)

G. Guerova (Univ. of Sofia, Bulgaria)

L. Labrador (WMO)

M. Miglietta (ISAC-CNR, Italy)

M. Montopoli (ISAC-CNR, Italy)

A. Parodi (CIMA Foundation, Italy)

E. Realini (GReD srl, Italy)

H Brenot (BIRA, Belgium)

S. Corradini (INGV, Italy)

E. Carboni (RAL, UK)

G. Grainger (Univ. of Oxford, UK)

N. Kristiansen (MetOffice, UK)

F. S. Marzano (Univ. La Sapienza, Italy)

M. Pavolonis (NOAA, USA)

F. Prata (AIRES Ltd, Australia)

G. Salerno (INGV, Italy)

S. Scollo (INGV, Italy)

M. Woodhouse (Univ. of Bristol, UK)

T. Bolic (Univ. of Westminster, UK)

K. Sievers (Pilot)

M. Soler (UC3M, Spain)

D. Visoiu (ROMATSA, Romania)

….the virtual sessions of the CVC 2021 will be complemented by the in-person CVC 2022 in Sicily, at Mt Etna!

CVC 2021 free taking part to the CVC 2022!! The registration fee of CVC 2021 will be deducted from the registration of the CVC 2022.

2022 CVC School Lectures and Labs
the 7th CVC school will offer labs, training sessions and fieldwork

Applications
The CVC school is open to researchers, pilots, air traffic managers and anybody interested in the topics with priority to graduate students, PhD students and early career researchers. More info about this school and the previous editions are available in the website
http://www.CVCtrainingschool.org

New **The participation to the 2021&2022 CVC schools will allow students to take part into discussion meetings about the new SESAR call with EU meteo agencies, organisations dedicated to supporting European aviation (e.g Eurocontrol) and aerospace companies (e.g Leonardo)**

Extra Activities CVC 2022: Excursions to Etna with a volcanological guide, early morning fun-run and … gastronomical meetings!

Program 2021

	Monday 6 Sept	Wednesday 8 Sept	Friday 10 Sept	
10.00-11.30	F. Prata (1)	F. Marzano (2)	N. Kristiansen (3)	
11.45-13.15		G. Salerno (2)	M. Pavolonis (4)	

	Monday 13 Sept	Tuesday 14 Sept	Thursday 16 Sept	Friday 17 Sept
10.00-11.30	M. Miglietta (5)	L. Labrador (7)	T. Bolic (10)	D. Visoiu (12)
11.45-13.15	A. Parodi (6)	M. Montopoli (8)	M. Soler (11)	CVC 2022 Pres.
14.15-15.45		G. Guerova (9)		

1. Volcanic clouds detection and retrievals from satellite: challenges, techniques and future *(F. Prata) (3 hours)*
2. Volcanic clouds detection and retrievals from ground based systems *(F. Marzano and G. Salerno) (3 hours)*
3. Volcanic clouds transport and inverse modeling *(N. Kristiansen) (1,5 hours)*
4. Volcanic Hazard Monitoring in the "Big Data" Era *(M. Pavolonis) (1,5 hours)*
5. Theory of convection (*M. Miglietta*) *(1,5 hours)*
6. Numerical Weather prediction model (*A. Parodi*) *(1,5 hours)*
7. Convection from satellite (*L. Labrador*) *(1,5 hours)* **To be confirmed**
8. Convection from radar (*M. Montopoli*) *(1,5 hours)*
9. Convection from GNSS *(G. Guerova) (1,5 hours)*
10. Decision support tools for ATM (T. Bolic) (1,5 hours)
11. Severe weather and flight trajectories (M. Soler) (1,5 hours)
12. Provision of early warnings on convective and volcanic clouds for aviation – practices and challenges (D. Visoiu) (1,5 hours)

Provisional Program 2022

<u>Virtual training school (Aviation module)</u>

Decision support tools for ATM (*T. Bolic*)
Severe weather and flight trajectories (*M. Soler*)
Provision of early warnings on convective and volcanic clouds for aviation – practices and challenges *(D. Visoiu)*
SESAR Joint Undertaking programme (*L. Crecco*)

<u>Virtual training school (Convective module)</u>

Theory of convection (*M. Miglietta*)
Convection, Cyclones and orography *(M. Miglietta)*
Atmospheric soundings Lab. (*M. Miglietta*)
Convection from satellite (*L. Labrador*)
Numerical Weather prediction model (*A. Parodi*)
Data merging for severe weather forecasting - Discussion Panel
Convection from radar (*M. Montopoli*)
Convection from GNSS *(G. Guerova)*
GNSS low cost receivers to forecast severe weather (*E. Realini*)
The use of GNSS Radio Occultations for sounding the atmosphere and extreme atmospheric events *(R. Biondi)*
The use of ground based and satellite GNSS measurements – practice (*R. Biondi, G. Guerova and E. Realini*)

<u>Virtual training school (Volcanic module)</u>

Volcanic clouds detection and retrievals from satellite: challenges, techniques and future *(F. Prata)*
Volcanic clouds detection and retrievals from ground based systems *(F. Marzano and G. Salerno)*
Volcanic clouds transport and inverse modeling *(N. Kristiansen)*
Volcanic Hazard Monitoring in the "Big Data" Era *(M. Pavolonis)*
 Volcanic clouds detection and retrievals from hyper-spectral satellite instruments *(L. Clarisse)*
Volcanic clouds detection and retrievals from multispectral satellite instruments *(S. Corradini)*
Volcanic monitoring using UV, VIS and TIR systems *(G. Salerno and S. Scollo)*
Early warning systems *(H. Brenot)*
Satellite volcanic clouds Lab *(S. Corradini)*
Volcanic clouds modeling Lab *(M. Woodhouse and F. Beckett)*
Field measurements using UV cameras *(Salerno, Ricci)*, TIR cameras *(Corradini, Guerrieri)*, and FTIR *(La Spina)*