



4th International Training School on

“Convective and volcanic clouds detection, monitoring and modeling”

Nicolosi, Italy, 28 September –6 October, 2018

<p>Keynote lecturers</p> <p><i>Fred Prata</i> (AIRES Ltd, UK) <i>Frank S. Marzano</i> (Univ. of Rome “La Sapienza”, Italy) <i>Michael Pavolonis</i> (NOAA, USA) <i>Dorinel Visoiu</i> (ROMATSA, Romania) <i>Marcello Miglietta</i> (ISAC-CNR, Italy)</p>	<p>Lecturers</p> <p><i>Riccardo Biondi</i> (INGV, Italy) <i>Tatjana Bolic</i> (Univ. of Trieste, Italy) <i>Hugues Brenot</i> (BIRA, Belgium) <i>Elisa Carboni</i> (Univ. of Oxford, UK) <i>Stefano Corradini</i> (INGV, Italy) <i>Guergana Guerova</i> (Univ. of Sofia, Bulgaria) <i>Nina Kristiansen</i> (MetOffice, UK) <i>Lorenzo Labrador</i> (WMO) <i>Mario Montopoli</i> (ISAC-CNR, Italy) <i>Giuseppe Salerno</i> (INGV, Italy) <i>Simona Scollo</i> (INGV, Italy) <i>Mark Woodhouse</i> (Univ. of Bristol, UK)</p>
<p>Local organizing committee</p> <p>Riccardo Biondi (INGV, Italy) Stefano Corradini (INGV, Italy) Giuseppe Salerno (INGV, Italy) Simona Scollo (INGV, Italy)</p>	<p>Local Organization</p> <p>Island Of Meetings by ER srls Phone: +39 3931302769 Email: info@islandofmeetings.com www.islandofmeetings.com</p> 



Program

	Friday 28	Saturday 29	Sunday 30	Monday 1	Tuesday 2
Early morning		jogging		jogging	
8.50-9.40	M. Miglietta (1)	M. Miglietta (5)	H. Brenot (9)	Visoiu (11)	Excursion (+)
09.50-10.40	M. Miglietta (1)	M. Miglietta (5)	H. Brenot (9)	Visoiu (11)	
	Coffee break	Coffee break	Coffee break	Coffee break	
11.00-11.50	M. Miglietta (2)	M. Montopoli (6)	Lab GNSS (10)	Bolic (12)	
12.00-12.50	M. Miglietta (2)	M. Montopoli (6)	Lab. GNSS (10)	Bolic (12)	
Lunch					
14.30-15.20	M. Miglietta (3)	G. Guerova (7)	Students pres. (*)	Visoiu (13)	
15.30-16.20	M. Miglietta (3)	G. Guerova (7)	Students pres. (*)	Visoiu (13)	
	Coffee break	Coffee break	Coffee break	Coffee break	
16.40-17.30	Lab convection (4)	R. Biondi (8)	Students pres. (*)	Lab meteo. (14)	
17.40-18.30	Lab convection (4)	R. Biondi (8)	Students pres. (*)	Lab meteo. (14)	
Dinner					

	Wednesday 3	Thursday 4	Friday 5	Saturday 6
Early morning		jogging		
8.50-9.40	F. Prata (15)	N. Kristiansen (19)	G. Salerno (22)	M. Pavolonis (26)
09.50-10.40	F. Prata (15)	N. Kristiansen (19)	G. Salerno (22)	M. Pavolonis (26)
	Coffee break	Coffee break	Coffee break	Coffee break
11.00-11.50	F. Prata (16)	M. Woodhouse(20)	S. Scollo (23)	Lab satellite (27)
12.00-12.50	F. Prata (16)	M. Woodhouse(20)	S. Scollo (23)	Lab satellite (27)
Lunch				
14.30-15.20	F. Marzano (17)	Lab modeling (21)	E. Carboni (24)	Students pres. (°)
15.30-16.20	F. Marzano (17)	Lab modeling (21)	E. Carboni (24)	Students pres. (°)
	Coffee break	Coffee break	Coffee break	Coffee break
16.40-17.30	F. Marzano (18)	Lab modeling (21)	Lab satellite (25)	Poster session (°°)
17.40-18.30	F. Marzano (18)	Lab modeling (21)	Lab satellite (25)	Poster session (°°)



Dinner				
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Free time	Student's time	Labs
Keynotes	Lectures	Meals

CONVECTIVE MODULE: from Friday 28 at 8:50 to Monday 1 at 18:30 – Lectures 1-14

Excursion to the 2002-2003 Etna craters (3000 m) and Valle del Bove

VOLCANIC MODULE: from Wednesday 3 at 08:50 to Saturday 6 at 18:30 – Lectures 15-27

- (1) Theory and atmospheric soundings (*M. Miglietta*)
- (2) Convective systems and orography (*M. Miglietta*)
- (3) Convective systems, large scale circulation and overshooting (*M. Miglietta*)
- (4) Atmospheric soundings Lab. (*M. Miglietta*)
- (5) Convection and cyclones (*M. Miglietta*)
- (6) Convection from the ground – Radar (*M. Montopoli*)
- (7) Convection detection and monitoring from ground based GNSS receivers (*G. Guerova*)
- (8) The use of GNSS Radio Occultations for sounding the atmosphere and extreme atmospheric events (*R. Biondi*)
- (9) GNSS tomography and its impact on nowcasting (*H. Brenot*)
- (10) The use of ground based and satellite GNSS measurements – practice (*R. Biondi and G. Guerova*)
- (*) *Mircheva, Hristov, Garcia, Kreitemeyer, Solazzo, Barindelli, Popov*
- (11) Provision of early warnings on severe convection for aviation – current practices and future challenges (*D. Visoiu*)
- (12) Convective weather decision support tools for ATM (*T. Bolic*)
- (13) Forecasting thermal convection in Planetary Boundary Layer (*D. Visoiu*)
- (14) TBD (*D. Visoiu*)

(+) Excursion to the 2002-2003 Etna craters (3000 m) and Valle del Bove with INGV guides

- (15) Hazardous volcanic clouds: challenges, techniques and future (*F. Prata*)
- (16) Volcanic clouds from and hyper-spectral satellite instruments (*F. Prata*)
- (17) Light and ash (*F. Marzano*)
- (18) Volcanic cloud detection and monitoring from ground based radars (*F. Marzano*)
- (19) Volcanic clouds transport and inverse modeling (*N. Kristiansen*)
- (20) Volcanic plumes modeling (*M. Woodhouse*)
- (21) Volcanic clouds modeling Lab (*M. Woodhouse and N. Kristiansen*)



- (22) Volcanic degassing and monitoring (*G. Salerno*)
- (23) Volcanic ash emission and monitoring (*S. Scollo*)
- (24) Retrieval theory and applications with satellite spectrometers (*E. Carboni*)
- (25) Satellite volcanic clouds Lab (*S. Corradini and E. Carboni*)
- (26) TBD (*M. Pavlonis*)
- (27) Satellite volcanic clouds Lab (*S. Corradini and E. Carboni*)
- (°) Hervo, Richardson, Buckland, Piontek, Snee, Urlea
- (°) Sandvik, Fries, Rossi, Hornby, Aubert, Jarvis, Lemus, Fratila, Barnie, Dioguardi