



## MeMoVolc summer school 2012



### *“Volcanic ash: from magma to aviation”*

25-29 June 2012, Nicolosi (Catania), Italy  
Organisers: M. Coltelli, A. Neri (main convener), & T. Druitt

---

## Summary

The first summer school of the *MeMoVolc* Research Networking Programme took place on the 25 to 29 June 2012 in Nicolosi (Sicily), on the slopes of Mount Etna. It involved a series of 8 lectures on state-of-the-art issues associated with volcanic ash, and was attended by 28 PhD students, postdoctoral fellows and Masters students, who presented their research in the form of posters. A day was taken for a field course on volcanic processes and products on the summit region of Mount Etna. Two booklets, Program & Abstracts and Lecture Presentations, were also produced and distributed to the participants before the school.

---

## Description of the event and assessment of the results

The summer school was organised principally by Drs. Augusto Neri (main convener) and Mauro Coltelli of the INGV and Tim Druitt of the University of Clermont Ferrand. Logistic aspects were organised very ably by the company 'Etna Tourism'.

Eight lecturers took part: T. Druitt (France), U. Kueppers (Germany), M. Polacci (Italy), M. Gudmundsson (Iceland), M. Gouhier (France), A. Neri (Italy), C. Bonadonna (Switzerland), and M. Coltelli (Italy).

The lectures were spread over four days. Each lecture took 3 hours with a 20 min break, and synthesized one aspect of ash production, dispersal or hazards. Some lecturers included short exercises. The booklets of Program & Abstracts and Lectures Presentations will be posted in pdf form on the MeMoVolc website.

On the third day, Dr. Mauro Coltelli led a field excursion on the summit of Mount Etna, during which the group visited the Montagnola monitoring station, the 2001 eruptive centre, and a number of sites related to the 1763, 2001 and 2002 activity. This day was particularly important for students with non-geological backgrounds, as it enabled them to better understand the processes and products involved in ash production.

Twenty-eight students at Masters, PhD and postdoctoral level from 7 countries (France, Germany, Iceland, Italy, Spain, Switzerland, UK) attended the school. All presented their research work in the form of posters, which were on display for two days and discussed in two separate Poster Sessions. Preparation and presentation of a poster was a condition of acceptance at the school. In each case, the student presented the work orally over 5 minutes in front of the poster, before free discussion. All the posters were of very high quality.

The school was very fruitful and many interesting discussions took place. It was very satisfying to see the high level of interaction between the students, who greatly impressed the lecturers by their penetrating questions, and by their level of knowledge, intellectual maturity and motivation.

A major issue that surfaced several times during the week was the need for greater integration of measurements of near-vent plumes as input into models of proximal- and far-field dispersal. More generally the school highlighted again the motivations that led to Memovolc, i.e. the need for a closer integration and collaboration between observational, experimental and theoretical research groups. Some of the students were also interested in proposing exchange visits and organising workshops on these issues and submitting them to the network for funding, and they were strongly encouraged in this respect.

Overall, this first **MeMoVolc** summer school was a great success.

## Meeting programme

Sunday June 24 (afternoon): Arrival to Nicolosi

Monday June 25

- 09.00-12.00 Generation and dispersal of volcanic ash: an overview (T. Druitt)
- 14.00-17.00 Fragmentation and ash generation (U. Kueppers)

Tuesday June 26

- 09.00-12.00 Characterization of volcanic ash (M. Polacci)
- 14.00-17.00 Ground-based observation of ash plumes (M. Gudmundsson)
- 17.30-18.00 Field trip presentation (M. Coltelli)
- 18.00-19.30 Poster session A

Wednesday June 27

- 09.00-18.00 Field trip to Mt. Etna (M. Coltelli)

Thursday June 28

- 09.00-12.00 Satellite-based observation of ash plumes (M. Gouhier)
- 14.00-17.00 Numerical modelling of volcanic columns and ash clouds (A. Neri)
- 17.30-19.00 Poster session B

Friday June 29

- 09.00-12.00 Volcanic ash hazard assessment (C. Bonadonna)
- 14.00-17.00 Vulnerability to ash impact on the environment and aviation (M. Coltelli)

Saturday June 30 (morning): Departure from Nicolosi

## Participant list

Lastname	First Name	Position	Affiliation	e-mail
Aranzulla	Massimo	PhD student	Dipartimento di Fisica Università di Catania - Italia	<a href="mailto:aranzulla@ct.ingv.it">aranzulla@ct.ingv.it</a>
Bagheri	Gholamhossain	PhD student	Université de Genève - Département de minéralogie Section des Sciences de la Terre et de l'environnement - CH	<a href="mailto:Gholamhossein.BAGHERI@unige.ch">Gholamhossein.BAGHERI@unige.ch</a> (CANCELLED)
Brogi	Federico	PhD student	Université de Genève - Département de minéralogie Section des Sciences de la Terre et de l'environnement - CH	<a href="mailto:Federico.Brogi@unige.ch">Federico.Brogi@unige.ch</a>
Calabrese	Sergio	Post-doc Researcher	Università degli studi di Palermo - Italia	<a href="mailto:Sergio.calabrese@gmail.com">Sergio.calabrese@gmail.com</a>
Capponi	Antonio	PhD student	Depth. Hearth Science - Univ Roma "La Sapienza" - Italia	<a href="mailto:antonio.capponi@uniroma1.it">antonio.capponi@uniroma1.it</a>
Cerminara	Matteo	PhD student	Scuola Normale Superiore Pisa - Italia	<a href="mailto:matteo.cerminara@sns.it">matteo.cerminara@sns.it</a>
Dominguez Barragan	Lucia	Masters student	Université de Genève - Département de minéralogie Section des Sciences de la Terre et de l'environnement - CH	<a href="mailto:domingl0@etu.unige.ch">domingl0@etu.unige.ch</a>
Fabbro	Gareth	PhD student	Laboratoire Magmas et Volcans, Université Blaise Pascal, Clermont-Ferrand, France	<a href="mailto:g.fabbro@opgc.univ-bpclermont.fr">g.fabbro@opgc.univ-bpclermont.fr</a>
Ganci	Gaetana	Post-doc Researcher	Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Catania - Italia	<a href="mailto:gaetana.ganci@ct.ingv.it">gaetana.ganci@ct.ingv.it</a>
Gattuso	Alessandro	Research Fellowship	University of Roma Tre, Dipartimento di Scienze Geologiche	<a href="mailto:alessandro.gattuso@alice.it">alessandro.gattuso@alice.it</a>
Guðjónsdóttir	Sylvía Rakel	Masters student	Institute of Earth Sciences, University of Iceland, Reykjavík	<a href="mailto:srg12@hi.is">srg12@hi.is</a>
Guðnason	Jónas	PhD student	Institute of Earth Sciences, Building of Natural Sciences, Askja - University of Iceland	<a href="mailto:jog4@hi.is">jog4@hi.is</a>
Guehenneux	Yannick	PhD student	Clermont Université, Université Blaise Pascal, Laboratoire Magmas et Volcans, CLERMONT- FERRAND - France	<a href="mailto:Y.Guehenneux@opgc.univ-bpclermont.fr">Y.Guehenneux@opgc.univ-bpclermont.fr</a>
Hoshyaripour	Golam Ali	PhD student	Institute of Geophysics - University of Hamburg - Germany	<a href="mailto:gholamali.hoshyaripour@zmaw.de">gholamali.hoshyaripour@zmaw.de</a>
La Spina	Giuseppe	PhD student	Dipartimento di Matematica Università di Pisa - Italia	<a href="mailto:glaspinga@mail.dm.unipi.it">glaspinga@mail.dm.unipi.it</a>
Nattrass	Claire	PhD Student	Department of Earth	<a href="mailto:claire.nattrass@durham.ac.uk">claire.nattrass@durham.ac.uk</a>

			Sciences,Durham University - UK	<a href="#">uk</a>
Piedra Vilches	Juan	Visiting post-doc	Remote Sensing Unit - INGV Rome	<a href="mailto:stein911@gmail.com">stein911@gmail.com</a>
Re	Giuseppe	Master Student	Dipartimento di Scienze della Terra, Università di Pisa - Italia	<a href="mailto:ilpeppere@hotmail.com">ilpeppere@hotmail.com</a>
Sandri	Laura	Researcher	Istituto Nazionale di Geofisica e Vulcanologia - Sezione di Bologna - Italia	<a href="mailto:laura.sandri@bo.ingv.it">laura.sandri@bo.ingv.it</a>
Scaini	Chiara	PhD student	Application for Science and Engineering (CASE)Department of the Barcelona Supercomputing Centre BSC	<a href="mailto:chiara.scaini@bsc.es">chiara.scaini@bsc.es</a>
Sciotto	Mariangela	PhD student	University of Catania and Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Catania - Italia	<a href="mailto:sciotto@ct.ingv.it">sciotto@ct.ingv.it</a>
Sigurdardottir	Gudmunda	Master student	Institute of Earth Sciences, University of Iceland, Sturlugata 7, 101 Reykjavík, Iceland	<a href="mailto:gms2@hi.is">gms2@hi.is</a>
Sivia	Sandra	PhD student	Equipe 03P Ozone et Precurseurs Laboratoire d'Aerologie O.M.P. Observatoire Midi-Pyrenees - Toulouse - France	<a href="mailto:Sandra.Sivia@aero.obs-mip.fr">Sandra.Sivia@aero.obs-mip.fr</a>
Spanu	Antonio	PhD student	Scuola Normale Superiore Pisa - Italia	<a href="mailto:antonio.spanu@pi.ingv.it">antonio.spanu@pi.ingv.it</a>
Speirs	Peter	PhD student	University of St. Andrews - Fie, Scotland - UK	<a href="mailto:pjs27@st-andrews.ac.uk">pjs27@st-andrews.ac.uk</a>
Spina	Laura	PhD student	Università di Catania, Dipartimento di Scienze biologiche - Italia	<a href="mailto:spina@ct.ingv.it">spina@ct.ingv.it</a>
Valade	Sébastien	Post-doc Researcher	Laboratoire Magmas et Volcans (UMR 6524)Université Blaise Pascal - OPGC - CNRS - CLERMONT FERRAND - France	<a href="mailto:S.Valade@opgc.univ-bpclermont.fr">S.Valade@opgc.univ-bpclermont.fr</a>
Zaccarelli	Lucia	Researcher on contract	Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Bologna - Italia.	<a href="mailto:lucia.zaccarelli@bo.ingv.it">lucia.zaccarelli@bo.ingv.it</a>
Zaksek	Klemen	Post-doc	University of Hamburg Institute of Geophysics Hamburg , Germany	<a href="mailto:klemen.zaksek@zmaw.de">klemen.zaksek@zmaw.de</a>