

PERSONAL INFORMATION

AUGUSTO NERI



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 <http://www.pi.ingv.it/chisiamo/paginepersonali/neriEV.html>

Sex M | Date of birth 10/11/1963 | Nationality ITALIAN | Married with two Children

WORK EXPERIENCE

01/08/2016-today

Istituto Nazionale di Geofisica e Vulcanologia

www.ingv.it

Government

Research Director

Director of the INGV Volcanoes Department

01/09/2013-31/07/2016

Istituto Nazionale di Geofisica e Vulcanologia

www.ingv.it

Government

Research Director

Responsible of the Research Group "Eruption dynamics and scenarios", INGV - Sezione di Pisa

01/11/2005-31/08/2013

Istituto Nazionale di Geofisica e Vulcanologia

www.ingv.it

Government

Research Director

Director of the INGV - Sezione di Pisa

01/11/2003-present

Istituto Nazionale di Geofisica e Vulcanologia

www.ingv.it

Government

Research Director

Physics of volcanic processes

16/10/1998-31/10/2003

Consiglio Nazionale delle Ricerche – Istituto di Geoscienze e Georisorse

www.cnr.it

Government

Senior Researcher

Volcanology and geothermal sciences

16/10/1996-15/10/1998

Consiglio Nazionale delle Ricerche – Cento di Studio per la Geologia Strutturale e Dinamica dell'Appennino

www.cnr.it
 Government
 Researcher on contract
 Physical modelling of volcanic processes

01/09/1990-15/10/1996 **Università di Pisa, Istituto Nazionale di Geofisica, Consiglio Nazionale delle Ricerche**
 Government
 Research fellow
 Physical modelling of volcanic processes

Mother tongue(s) ITALIAN

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
ENGLISH	C1	C1	C1	C1	C1

EDUCATION AND TRAINING

- 1995-1998 PhD in Chemical Engineering, Illinois Institute of Technology, Chicago, Illinois, USA.
- 1982-1990 Master Degree in Chemical Engineering, University of Pisa, Pisa, Italy (*cum laude*)

Honours and awards

- 2016: Winner of the EGU 2017 Sergey Soloviev Medal;
- 1996: Honor diploma, with medal, for the contributions provided during the eruption "Etna 1991-92", Presidenza del Consiglio dei Ministri, Rome;
- 1991: Placed first and winner of a permanent position in the ENEL Research Center, Pisa;
- 1991: Dow Chemical Italia Award for the best master thesis of 1990, Pisa.

Community service and other activities:

- Associate Editor of *Frontiers in Geohazards and Georisks*, Nature Publishing Group (2016-present);
- Member of Management Board of the International G-EVER Consortium (2014-present);
- Member of VASAG (*Volcanic Ash Scientific Advisory Group*) of WMO-IUGG (2010-present);
- Member of Advisory Board of the EU-funded WEZARD project (2011-2013);
- Chair International Conference "Modeling Earth Dynamics: Complexity, Uncertainty and Validation (2010);
- Member of Scientific Committee of Dipartimento della Protezione Civile, Italy, for the assessment of volcanic hazard at Campi Flegrei caldera (2009-2012);
- Guest Editor of *JVGR Special Volume Evaluating explosive eruption risk at European volcanoes* (2006-2008);
- Member of Editorial Board, *Journal of Volcanology and Geothermal Research* (2005-2011);
- IAVCEI representative of IUGG Committee of Mathematical Geophysics (2002-2010);
- Convener/co-convener of scientific sessions at the following international conferences: EGU (2004, 2005, 2006, 2010, 2011), IAVCEI (2004, 2013), IUGG (2003, 2007, 2011), COV (2007); CMG (2010);
- Expert evaluator and referee of the following organizations: European Union (2001-present); National Science Foundation (2001-present); American Geophysical Union (2010-present), Royal Society of New Zealand (2008-present), Nanyang Technological University (2015), Ministero dell'Istruzione, Università e Ricerca (Italy) (2002-present), Consiglio Nazionale delle Ricerche (2012-2014);
- Participation to the hazard assessment of the following eruptive events and crises: Etna (1991-1993, 2002-2003, 2006-2012), Stromboli (2003), Montserrat (2007), Redoubt (2009), Eyjafjallajökull (2010), Merapi (2010), Grimsvotn (2011), Santorini (2012).

Research Topics

AN's scientific career has been almost equally split between the development of pure scientific research and its application to real problems, often including issues of major societal impact. In particular, AN main scientific interests and experiences have been focused on the following themes: physics and chemistry of volcanic and magmatic processes; physical volcanology; physical and mathematical modelling of volcano eruption dynamics; modelling and numerical simulation of volcanic and magmatic processes and phenomena; dynamics of volcanic plumes, dispersal of volcanic ash and gasses, dynamics of collapsing columns and pyroclastic density currents, magma ascent in volcanic conduits and dykes, magma chambers evolution, lava flows; multiphase flow systems, particulate flows and transport processes in volcanology and geophysics; numerical modelling and simulation of geological processes; verification and validation of mathematical and physical models by comparisons with laboratory experiments and field geological observations; application of mathematical models to the reconstruction and interpretation of volcanic deposits and observations. In terms of applied science, AN has significant experience in quantitative assessment of short- and long-term volcanic hazards and risks; assessment of volcanic hazards at Italian (e.g. Vesuvio, Etna, Campi Flegrei) and foreign active volcanoes (e.g. Mt. St. Helens, USA; Soufriere Hills, Montserrat; Mt. Pinatubo, Philippines; Mt. Redoubt, USA; La Soufriere of Guadeloupe, French Antilles; Eyjafjallajökull and Grimsvotn, Iceland; Merapi, Indonesia; Santorini, Greece); identification and quantification of aleatoric and epistemic uncertainties in volcanological and geophysical systems; relationships between science and decision-making in the assessment of natural risks; participation to national and international volcanic crises and emergencies and scientific committees; contribution to outreach and dissemination activities.

Publications According to the records of the **Web of Science - ISI Thompson**, AN has published about 86 scientific journal papers obtaining 1,865 citations (based on 63 papers with citation data), an **h-index of 27**, and an average citations per article of 29.6 (updated on December 21st, 2016). According to the record of **Google Scholar** AN has published about 164 scientific papers, book chapters, proceedings and scientific reports obtaining 2,995 citations and an **h-index of 31** (updated on December 21st, 2016). About 270 presentations (including about 30 keynote and invited talks) at international and national conferences and workshops (1991-2016).

Publications list for the past 3 years:

Bevilacqua A., F.Flandoli, A.Neri, R.Isaia, S.Vitale (2016). Temporal models for the episodic volcanism of Campi Flegrei caldera (Italy) with uncertainty quantification, *Journal of Geophysical Research*, 121, doi:10.1002/2016JB013171.

Bonadonna C., et al. including A.Neri (2016). Memovolc report on classification and dynamics of volcanic explosive eruptions. *Bulletin of Volcanology*, 78, 84.

Cerminara M., T. Esposti Ongaro, A. Neri (2016). Large-eddy simulation of kinematic gas-particle decoupling and turbulent entrainment in volcanic plumes. *Journal of Volcanology and Geothermal Research*, 326, 143-171.

Engwell S., M. de'Michieli Vitturi, T. Esposti Ongaro, A. Neri (2016). Insights into the formation and dynamics of co-ignimbrite plumes from numerical models. *Journal of Geophysical Research*, 121, doi:10.1002/2016JB012793.

de'Michieli Vitturi M., S. Engwell, A. Neri and S. Barsotti (2016). Uncertainty quantification and sensitivity analysis of volcanic column models: results from the integral model PLUME-MoM. *Journal of Volcanology and Geothermal Research*, doi:10.1016/j.jvolgeores.2016.03.014.

Macedonio, G., A. Costa, S. Scollo, A. Neri (2016). Effects of eruption source parameter variation and meteorological dataset on tephra fallout hazard assessment: example from Vesuvius (Italy). *Journal of Applied Volcanology*, 5:5, doi:10.1186/s13617-016-0045-2.

Costa A., Y.J. Suzuki, M. Cerminara, B.J. Devenish, T. Esposti Ongaro, M. Herzog, A.R. Van Eaton, L.C. Denby, M. Bursik, M. de' Michieli Vitturi, S. Engwell, A. Neri, S. Barsotti, A. Folch, G. Macedonio, F. Girault, G. Carazzo, S. Tait, E. Kaminski, L.G. Mastin, M.J. Woodhouse, J.C. Phillips, A.J. Hogg, W. Degruyter, C. Bonadonna (2016). Results of the eruption column model inter-comparison study. *Journal of Volcanology and Geothermal Research*, doi:10.1016/j.jvolgeores.2016.01.017.

Pardini, F., A. Spanu, M. de'Michieli Vitturi, M.V. Salvetti, A. Neri (2016). Grain size distribution uncertainty quantification in volcanic ash dispersal and deposition from weak plumes. *Journal of Geophysical Research*, 121, doi:10.1002/2015JB012536.

de' Michieli Vitturi, M., A. Neri, S. Barsotti (2015). PLUME-MoM: a new integral model of volcanic plumes based on the method of moments, *Geosci. Model Dev.*, 8, 2447–2463 doi:10.5194/gmd-8-2447-2015.

Barsotti, S., A. Neri, A. Bertagnini, R. Cioni, M. Mulas, F. Mundula (2015). Dynamics and tephra dispersal of Violent Strombolian eruptions at Vesuvius: insights from field data, wind reconstruction and numerical simulation of the 1906 event, *Bulletin of Volcanology*, doi:10.1007/s00445-015-0939-06.

Bevilacqua, A., R. Isaia, A. Neri, S. Vitale, W.P. Aspinall, M. Bisson, F. Flandoli, P.J. Baxter, A. Bertagnini, T. Esposti Ongaro, E. Iannuzzi, M. Pistolesi, M. Rosi (2015). Quantifying volcanic hazard at Campi Flegrei caldera (Italy) with uncertainty assessment: I. Vent opening maps, *Journal of Geophysical Research*, 120, doi:10.1002/2014JB011775.

Cole P., A. Neri, P.J. Baxter (2015). Pyroclastic density current hazard. Book "Encyclopedia of Volcanoes", Chief Editor H. Sigurdsson, Academic Press Publisher, Chapter 54.

Jenkins, S.F., S. Barsotti, T.K. Hincks, A. Neri, J.C. Phillips, R.S.J. Sparks, T. Sheldrake, G. Vougioukalakis (2015). Rapid emergency assessment of ash and gas hazard for future eruptions at Santorini Volcano, Greece, *Journal of Applied Volcanology*, 4:16, doi:10.1186/s13617-015-0033-y.

Neri, A., A. Bevilacqua, T. Esposti Ongaro, R. Isaia, W.P. Aspinall, M. Bisson, F. Flandoli, P.J. Baxter, A. Bertagnini, E. Iannuzzi, S. Orsucci, M. Pistolesi, M. Rosi, S. Vitale (2015). Quantifying volcanic hazard at Campi Flegrei caldera (Italy) with uncertainty assessment: II. Pyroclastic density current invasion maps, *Journal of Geophysical Research*, 120, doi:10.1002/2014JB011776.

Carcano S. T. Esposti Ongaro, L. Bonaventura, A. Neri (2014). Influence of grain-size distribution on the dynamics of under-expanded volcanic jets, *Journal of Volcanology and Geothermal Research*, 285, 60-80.

Colucci S., M. de' Michieli Vitturi, A. Neri, D. Palladino (2014). An integrated model of magma chamber, conduit, and column for the analysis of sustained magmatic eruptions, *Earth and Planetary Science Letters*, 404, 98-110.

Neri A., T. Esposti Ongaro, B. Voight, C. Widiwijayanti (2014). Pyroclastic density current hazards and risk. Book "Volcanic Hazards, Risks and Disasters", Editors P.Papale, J. Eichelberger, S. Loughlin, S. Nakada, H. Yepes, Elsevier Publisher, 109-140.

Il sottoscritto Augusto Neri, consapevole che le dichiarazioni false comportano l'applicazione delle sanzioni penali previste dell'art. 76 del DPR 445/2000, dichiara che le informazioni riportate nel presente Curriculum Vitae, corrispondono a verità

Pisa 21 dicembre 2016

Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base art. 13 del D. Lgs. 196/2003.