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 fellowships on contract
Physical modelling and numerical simulation 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

2018: Fellow of the Geological Society of America (GSA);
2017: Honorary Fellow of the Geological Society of America (GSA);
2017: Winner of the 2017 Sergey Soloviev Medal of European Geosciences Union (EGU);
2014: National scientific qualification (Abilitazione Scientifica Nazionale, ASN) as Full Professor (*professore di prima fascia*) in the scientific sector 04/A1 (*Geochimica, mineralogia, petrologia, vulcanologia, georisorse e applicazioni*) (2014-2020);
2014: National scientific qualification (Abilitazione Scientifica Nazionale, ASN) as Full Professor (*professore di prima fascia*) in the scientific sector 02/C1 (*Astronomia, astrofisica, fisica della Terra e dei pianeti*) (2014-2020);
1996: Honor diploma, with medal, for the contributions provided during the eruption "*Etna 1991-92*", Presidenza del Consiglio dei Ministri, Rome, Italy;
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, University of Pisa.

Community service and other activities:

- Member of the Scientific Committee of the *Laboratoire d'Excellence UnivEarthS*, Université de Paris (2019-2024);
- Associate Editor of *Geoscineces*, MDPI Publisher (2018-present);
- 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, 2018); 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, 2019), Agence Nationale de la Recherche (2019), 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, 2018), Stromboli (2003, 2017-2018), Montserrat (2007), Redoubt (2009), Eyjafjallajokull (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 communication, outreach and dissemination activities.

Publications

According to the records of the ***Web of Science - ISI Thompson***, AN has published about 96 scientific journal papers obtaining 2,538 citations (based on 75 papers with citation data), an **h-index of 28**, and an average citations per article of 33.4 (updated on June 21st, 2019). According to the record of ***Google Scholar*** AN has published about 195 scientific papers, book chapters, proceedings and scientific reports obtaining 3,985 citations and an **h-index of 35** (updated on June 21st, 2019). About 300 presentations (including about 50 keynote and invited talks) at international and national conferences and workshops (1990-2019).

Publications list (past 5 years):

Aravena, A., M.de' Michieli Vitturi, R. Cioni, A. Neri (2018). Physical constraints for effective magma-water interaction along volcanic conduits during silicic explosive eruptions. *Geology* 46 (10), 867-870.

Aravena, A., R. Cioni, M. de' Michieli Vitturi, M. Pistolesi, M. Ripepe, A. Neri (2018). Evolution of conduit geometry and eruptive parameters during effusive events. *Geophysical Research Letters* 45 (15), 7471-7480

Bevilacqua, A., E.B. Pitman, A.K. Patra, A. Neri (2018). A doubly stochastic enhancement of the Failure Forecast Method using a noisy mean-reverting process. *arXiv* preprint arXiv:1805.11654

Aravena Ponce A. M.de'Michieli Vitturi, R.Cioni, A.Neri (2018). Conduit stability effects on intensity and steadiness of explosive eruptions. *Scientific Reports, Nature Publishing Group*, 8(1), 4125.

Polacci M., et al. including A.Neri (2017). From magma ascent to ash generation: investigating volcanic conduit processes by integrating experiments numerical modelling and observations. *Annals of Geophysics*, 60, SO666.

Bevilacqua A., A.Neri, M.Bisson, T.Esposti Ongaro, F.Flandoli, R.Isaia, M.Rosi and S.Vitale (2017). The effect of vent location, event scale and time forecast on pyroclastic density current hazard maps at Campi Flegrei caldera (Italy). *Front. Earth Sci.,* 5:72, doi.org/10.3389/feart.2017.00072.

Aravena Ponce A. M.de'Michieli Vitturi, R.Cioni, A.Neri (2017). Stability of volcanic conduits during explosive eruptions. *Journal of Volcanology and Geothermal Research*, 339, 52-62.

Tadini A., M.Bisson, A.Neri, R.Cioni, A.Bevilacqua, W.P.Aspinall (2017). Assessing future vent opening location at the Somma-Vesuvio volcanic complex: 1. A new information geo-database with uncertainty information. *Journal of Geophysical Research*, 122, doi:10.1002/2016JB013858.

Tadini A., A.Bevilacqua, A.Neri, R.Cioni, W.P.Aspinall, M.Bisson, R.Isaia, F.Mazzarini, G.A.Valentine, S.Vitale, P.J.Baxter, A.Bertagnini, M.Cerminara, M.de'Michieli Vitturi, A.Di Roberto, S.Engwell, T.Esposti Ongaro, F.Flandoli, M.Pistolesi (2017). Assessing future vent opening location at the Somma-Vesuvio volcanic complex: 2. Probability maps of Somma-Vesuvio caldera with uncertainty information. *Journal of Geophysical Research,* 122, doi:10.1002/2016JB013860.

Vougioukalakis G. and A.Neri (2017). Tectonic Hazards: Volcanoes, in: *Environmental Hazards: Methodologies for Risk Assessment and Management*, Editor: N.Dalezios, IWA Publishing, 411-446.

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, *Bullettin 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. Sigurddsson, 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.

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

Pisa 22 giugno 2019