Giovanni Macedonio

List of Publications by Year
in descending order

107 papers	5,214 citations	66315 42 h-index	91828 69 g-index
128 all docs	128 docs citations	128 times ranked	2573 citing authors

#	Article	IF	Citations
1	A three-dimensional Eulerian model for transport and deposition of volcanic ashes. Earth and Planetary Science Letters, 2006, 241, 634-647.	1.8	196
2	Developing an Event Tree for probabilistic hazard and risk assessment at Vesuvius. Journal of Volcanology and Geothermal Research, 2008, 178, 397-415.	0.8	179
3	Numerical simulation of collapsing volcanic columns. Journal of Geophysical Research, 1993, 98, 4231-4259.	3.3	170
4	Magma degassing as a trigger of bradyseismic events: The case of Phlegrean Fields (Italy). Geophysical Research Letters, 2003, 30, .	1.5	161
5	Multiparticle simulation of collapsing volcanic columns and pyroclastic flow. Journal of Geophysical Research, 2003, 108, .	3.3	153
6	FALL3D: A computational model for transport and deposition of volcanic ash. Computers and Geosciences, 2009, 35, 1334-1342.	2.0	153
7	A model for the numerical simulation of tephra fall deposits. Journal of Volcanology and Geothermal Research, 2005, 140, 273-294.	0.8	144
8	A numerical model for simulation of tephra transport and deposition: Applications to May 18, 1980, Mount St. Helens eruption. Journal of Geophysical Research, 1988, 93, 6463-6476.	3.3	140
9	Quantifying volcanic ash dispersal and impact of the Campanian Ignimbrite superâ€eruption. Geophysical Research Letters, 2012, 39, .	1.5	125
10	The role of magma composition and water content in explosive eruptions. Journal of Volcanology and Geothermal Research, 1998, 87, 75-93.	0.8	119
11	Tephra fallout hazard assessment at the Campi Flegrei caldera (Italy). Bulletin of Volcanology, 2009, 71, 259-273.	1.1	117
12	Magma injection beneath the urban area of Naples: a new mechanism for the 2012â€“2013 volcanic unrest at Campi Flegrei caldera. Scientific Reports, 2015, 5, 13100.	1.6	115
13	Results of the eruptive column model inter-comparison study. Journal of Volcanology and Geothermal Research, 2016, 326, 2-25.	0.8	114
14	Transient dynamics of vulcanian explosions and column collapse. Nature, 2002, 415, 897-901.	13.7	113
15	A computer model for volcanic ash fallout and assessment of subsequent hazard. Computers and Geosciences, 2005, 31, 837-845.	2.0	112
16	Erosion processes in volcanic conduits and application to the AD 79 eruption of Vesuvius. Earth and Planetary Science Letters, 1994, 121, 137-152.	1.8	109
17	Mapping the tephra fallout risk: an example from Vesuvius, Italy. Nature, 1990, 344, 142-144.	13.7	107
18	Assessing pyroclastic fall hazard through field data and numerical simulations: Example from Vesuvius. Journal of Geophysical Research, 2003, 108, .	3.3	107

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19	Monitoring and modelling hydrothermal fluid emission at La Solfatara (Phlegrean Fields, Italy). An interdisciplinary approach to the study of diffuse degassing. Journal of Volcanology and Geothermal Research, 2003, 125, 57-79.	0.8	100
20	Ash fallout scenarios at Vesuvius: Numerical simulations and implications for hazard assessment. Journal of Volcanology and Geothermal Research, 2008, 178, 366-377.	0.8	93
21	A model for wet aggregation of ash particles in volcanic plumes and clouds: 1. Theoretical formulation. Journal of Geophysical Research, 2010, 115, .	3.3	92
22	A model for wet aggregation of ash particles in volcanic plumes and clouds: 2. Model application. Journal of Geophysical Research, 2010, 115, .	3.3	84
23	Viscous heating in fluids with temperature-dependent viscosity: implications for magma flows. Nonlinear Processes in Geophysics, 2003, 10, 545-555.	0.6	83
24	Densityâ€driven transport in the umbrella region of volcanic clouds: Implications for tephra dispersion models. Geophysical Research Letters, 2013, 40, 4823-4827.	1.5	79
25	A numerical simulation of the Plinian Fall Phase of 79 A.D. eruption of Vesuvius. Journal of Geophysical Research, 1988, 93, 14817-14827.	3.3	77
26	Pyroclastic flow hazard assessment at Vesuvius (Italy) by using numerical modeling. I. Large-scale dynamics. Bulletin of Volcanology, 2002, 64, 155-177.	1.1	72
27	Pressure evolution during explosive caldera-forming eruptions. Earth and Planetary Science Letters, 2000, 175, 275-287.	1.8	69
28	The magnitude and impact of the Youngest Toba Tuff super-eruption. Frontiers in Earth Science, 2014, 2, .	0.8	68
29	Numerical simulation of collapsing volcanic columns with particles of two sizes. Journal of Geophysical Research, 1996, 101, 8153-8174.	3.3	67
30	FPLUME-1.0: An integral volcanic plume model accounting for ash aggregation. Geoscientific Model Development, 2016, 9, 431-450.	1.3	67
31	Pyroclastic flow hazard assessment at Vesuvius (Italy) by using numerical modeling. II. Analysis of flow variables. Bulletin of Volcanology, 2002, 64, 178-191.	1.1	65
32	The 21 August 2017 Ischia (Italy) Earthquake Source Model Inferred From Seismological, GPS, and DInSAR Measurements. Geophysical Research Letters, 2018, 45, 2193-2202.	1.5	59
33	Viscous heating effects in fluids with temperature-dependent viscosity: triggering of secondary flows. Journal of Fluid Mechanics, 2005, 540, 21.	1.4	58
34	Nonlinear phenomena in fluids with temperature-dependent viscosity: An hysteresis model for magma flow in conduits. Geophysical Research Letters, 2002, 29, 40-1-40-4.	1.5	56
35	First muography of Stromboli volcano. Scientific Reports, 2019, 9, 6695.	1.6	56
36	Numerical simulation of lava flows based on depth-averaged equations. Geophysical Research Letters, 2005, 32, .	1.5	54

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37	Numerical modelling of tephra fallout associated with dome collapses and Vulcanian explosions: application to hazard assessment on Montserrat. Geological Society Memoir, 2002, 21, 517-537.	0.9	53
38	Geophysical precursors of the July-August 2019 paroxysmal eruptive phase and their implications for Stromboli volcano (Italy) monitoring. Scientific Reports, 2020, 10, 10296.	1.6	50
39	Effects of wall-rock elasticity on magma flow in dykes during explosive eruptions. Earth and Planetary Science Letters, 2009, 288, 455-462.	1.8	47
40	Beyond eruptive scenarios: assessing tephra fallout hazard from Neapolitan volcanoes. Scientific Reports, 2016, 6, 24271.	1.6	47
41	The MU-RAY project: detector technology and first data from Mt. Vesuvius. Journal of Instrumentation, 2014, 9, C02029-C02029.	0.5	46
42	Sill intrusion as a source mechanism of unrest at volcanic calderas. Journal of Geophysical Research: Solid Earth, 2014, 119, 3986-4000.	1.4	45
43	The role of magma composition and water content in explosive eruptions: 2. Pyroclastic dispersion dynamics. Journal of Volcanology and Geothermal Research, 1998, 87, 95-115.	0.8	44
44	Probabilistic shortâ€term volcanic hazard in phases of unrest: A case study for tephra fallout. Journal of Geophysical Research: Solid Earth, 2014, 119, 8805-8826.	1.4	42
45	An algorithm for the triangulation of arbitrarily distributed points: Applications to volume estimate and terrain fitting. Computers and Geosciences, 1991, 17, 859-874.	2.0	40
46	FALL3D-8.0: a computational model for atmospheric transport and deposition of particles, aerosols and radionuclides â€“ Part 1: Model physics and numerics. Geoscientific Model Development, 2020, 13, 1431-1458.	1.3	38
47	Renewal of explosive activity at Vesuvius: models for the expected tephra fallout. Journal of Volcanology and Geothermal Research, 1990, 40, 327-342.	0.8	37
48	Brief Communication "Rain effect on the load of tephra deposits". Natural Hazards and Earth System Sciences, 2012, 12, 1229-1233.	1.5	37
49	An automatic procedure to forecast tephra fallout. Journal of Volcanology and Geothermal Research, 2008, 177, 767-777.	0.8	36
50	Tephra fallout hazard assessment for a Plinian eruption scenario at VolcÃ¡n de Colima (Mexico). Journal of Volcanology and Geothermal Research, 2011, 203, 12-22.	0.8	36
51	Numerical inversion and analysis of tephra fallout deposits from the 472AD sub-Plinian eruption at Vesuvius (Italy) through a new best-fit procedure. Journal of Volcanology and Geothermal Research, 2010, 189, 238-246.	0.8	34
52	Numerical simulation of some lahars from Mount St. Helens. Journal of Volcanology and Geothermal Research, 1992, 54, 65-80.	0.8	32
53	Computational modelling of the transient dynamics of the August 1997 Vulcanian explosions at SoufriÃ¨re Hills Volcano, Montserrat: influence of initial conduit conditions on near-vent pyroclastic dispersal. Geological Society Memoir, 2002, 21, 319-348.	0.9	32
54	Continuous radon monitoring during seven years of volcanic unrest at Campi Flegrei caldera (Italy). Scientific Reports, 2020, 10, 9551.	1.6	32

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55	Volcanic hazard assessment of Guagua Pichincha (Ecuador) based on past behaviour and numerical models. Journal of Volcanology and Geothermal Research, 1992, 49, 53-68.	0.8	31
56	MeMoVolc report on classification and dynamics of volcanic explosive eruptions. Bulletin of Volcanology, 2016, 78, 1.	1.1	31
57	Temporal evolution of flow conditions in sustained magmatic explosive eruptions. Journal of Volcanology and Geothermal Research, 2005, 143, 153-172.	0.8	30
58	Volcanic ash hazard in the Central Mediterranean assessed from geological data. Bulletin of Volcanology, 2014, 76, 1.	1.1	30
59	Effects of eruption source parameter variation and meteorological dataset on tephra fallout hazard assessment: example from Vesuvius (Italy). Journal of Applied Volcanology, 2016, 5, .	0.7	30
60	The MU-RAY detector for muon radiography of volcanoes. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 732, 423-426.	0.7	29
61	Overflows and Pyroclastic Density Currents in March-April 2020 at Stromboli Volcano Detected by Remote Sensing and Seismic Monitoring Data. Remote Sensing, 2020, 12, 3010.	1.8	29
62	Preâ€•and Coâ€Eruptive Analysis of the September 2021 Eruption at Cumbre Vieja Volcano (La Palma, Canary) Tj ETQq0 0 0 rgBT /Overlo 49, .	1.5	27
63	Insight Into Campi Flegrei Caldera Unrest Through Seismic Tremor Measurements at Pisciarelli Fumarolic Field. Geochemistry, Geophysics, Geosystems, 2019, 20, 5544-5555.	1.0	26
64	The MURAVES muon telescope: technology and expected performances. Annals of Geophysics, 2017, 60, .	0.5	26
65	Measurement of Seafloor Deformation in the Marine Sector of the Campi Flegrei Caldera (Italy). Journal of Geophysical Research: Solid Earth, 2018, 123, 66-83.	1.4	25
66	Integration of Ground-Based Remote-Sensing and In Situ Multidisciplinary Monitoring Data to Analyze the Eruptive Activity of Stromboli Volcano in 2017â€“2018. Remote Sensing, 2019, 11, 1813.	1.8	25
67	Sensitivity test and ensemble hazard assessment for tephra fallout at Campi Flegrei, Italy. Journal of Volcanology and Geothermal Research, 2018, 351, 1-28.	0.8	24
68	Microsommite: crystal chemistry, phase transitions, Ising model and Monte Carlo simulations. Physics and Chemistry of Minerals, 2001, 28, 509-522.	0.3	23
69	Numerical simulation of tephra transport and deposition of the 1982 El ChichÃ³n eruption and implications for hazard assessment. Journal of Volcanology and Geothermal Research, 2012, 231-232, 39-49.	0.8	23
70	Carbon dioxide in the urban area of Naples: Contribution and effects of the volcanic source. Journal of Volcanology and Geothermal Research, 2013, 260, 52-61.	0.8	22
71	A Physical Model of Sill Expansion to Explain the Dynamics of Unrest at Calderas with Application to Campi Flegrei. Frontiers in Earth Science, 2017, 5, .	0.8	21
72	Variable Magnitude and Intensity of Strombolian Explosions: Focus on the Eruptive Processes for a First Classification Scheme for Stromboli Volcano (Italy). Remote Sensing, 2021, 13, 944.	1.8	21

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73	FALL3D-8.0: a computational model for atmospheric transport and deposition of particles, aerosols and radionuclides â€“ Part 2: Model validation. Geoscientific Model Development, 2021, 14, 409-436.	1.3	21
74	Muon radiography applied to volcanoes imaging: the MURAVES experiment at Mt. Vesuvius. Journal of Instrumentation, 2020, 15, C03014-C03014.	0.5	14
75	Tracking Episodes of Seismicity and Gas Transport in Campi Flegrei Caldera Through Seismic, Geophysical, and Geochemical Measurements. Seismological Research Letters, 2021, 92, 965-975.	0.8	14
76	Uncertainties in volcanic plume modeling: A parametric study using FPLUME. Journal of Volcanology and Geothermal Research, 2016, 326, 92-102.	0.8	13
77	Data assimilation of volcanic aerosol observations using FALL3D+PDAF. Atmospheric Chemistry and Physics, 2022, 22, 1773-1792.	1.9	13
78	Conclusion: recommendations and findings of the RED SEED working group. Geological Society Special Publication, 2016, 426, 567-648.	0.8	12
79	Insight into Vent Opening Probability in Volcanic Calderas in the Light of a Sill Intrusion Model. Pure and Applied Geophysics, 2016, 173, 1703-1720.	0.8	12
80	Total grain size distribution of components of fallout deposits and implications for magma fragmentation mechanisms: examples from Campi Flegrei caldera (Italy). Bulletin of Volcanology, 2020, 82, 1.	1.1	12
81	Computational modeling of lava flows: A review. , 2005, , .		11
82	Volcanoes in Italy and the role of muon radiography. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180050.	1.6	11
83	Four Years of Continuous Seafloor Displacement Measurements in the Campi Flegrei Caldera. Frontiers in Earth Science, 2020, 8, .	0.8	11
84	Campi Flegrei, Vesuvius and Ischia Seismicity in the Context of the Neapolitan Volcanic Area. Frontiers in Earth Science, 2021, 9, .	0.8	11
85	Long-term hazard assessment of explosive eruptions at Jan Mayen (Norway) and implications for air traffic in the North Atlantic. Natural Hazards and Earth System Sciences, 2022, 22, 139-163.	1.5	9
86	Thermal Energy Release Measurement with Thermal Camera: The Case of La Solfatara Volcano (Italy). Remote Sensing, 2019, 11, 167.	1.8	8
87	Clustering of Experimental Seismo-Acoustic Events Using Self-Organizing Map (SOM). Frontiers in Earth Science, 2021, 8, .	0.8	8
88	Lava flow in a channel with a bifurcation. Physics and Chemistry of the Earth, 1999, 24, 953-956.	0.6	7
89	Dynamics of degassing in evolved alkaline magmas: Petrological, experimental and theoretical insights. Earth-Science Reviews, 2020, 211, 103402.	4.0	7
90	The role of water content and magma composition on explosive eruption dynamics. Physics and Chemistry of the Earth, 1999, 24, 969-975.	0.6	6

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91	The MURAVES project and other parallel activities on muon absorption radiography. EPJ Web of Conferences, 2018, 182, 02015.	0.1	6
92	When the Hydrophone Works as an Accelerometer. Seismological Research Letters, 2021, 92, 365-377.	0.8	6
93	The MU-RAY project: Summary of the round-table discussions. Earth, Planets and Space, 2010, 62, 145-151.	0.9	5
94	Tephra fall hazard for the Neapolitan area. , 2015, , 239-248.		5
95	TITAN2D Simulations of Pyroclastic Flows from Small Scale Eruption at Mt. Baekdusan. Journal of the Korean Earth Science Society, 2013, 34, 615-625.	0.0	5
96	Changes in the Eruptive Style of Stromboli Volcano before the 2019 Paroxysmal Phase Discovered through SOM Clustering of Seismo-Acoustic Features Compared with Camera Images and GBInSAR Data. Remote Sensing, 2022, 14, 1287.	1.8	5
97	Physical Modeling of Collapsing Volcanic Columns and Pyroclastic Flows. , 1996, , 389-427.		4
98	Phreatic explosion hazard assessment by numerical simulation. Physics and Chemistry of the Earth, 1999, 24, 989-995.	0.6	4
99	Numerical model of gas dispersion emitted from volcanic sources. Annals of Geophysics, 2009, 48, .	0.5	4
100	High performance computing simulations of pyroclastic flows. Computer Physics Communications, 2005, 169, 454-456.	3.0	3
101	Motivations for muon radiography of active volcanoes. Earth, Planets and Space, 2010, 62, 139-143.	0.9	3
102	Air Traffic Risk Evaluation In Volcanic Ash Clouds. International Journal of Modelling and Simulation, 1988, 8, 29-32.	2.3	2
103	Ã^ VIVO: Virtual eruptions at Vesuvius; A multimedia tool to illustrate numerical modeling to a general public. Journal of Volcanology and Geothermal Research, 2006, 155, 323-328.	0.8	2
104	End-to-end simulations of the MUon RAdiography of VESuvius experiment. Journal of Instrumentation, 2022, 17, C01015.	0.5	2
105	Combined effects of wind and column mass distribution on tephra fall deposits. Environmental Software, 1990, 5, 168-176.	0.3	0
106	Comment on â€œThe 21 August 2017 MdÂ4.0 Casamicciola Earthquake: First Evidence of Coseismic Normal Surface Faulting at the Ischia Volcanic Islandâ€•by NappietÂal.(2018). Seismological Research Letters, 2019, 90, 313-315.	0.8	0
107	Reply to â€œComment on the paper by Buono et al. â€œDynamics of degassing in evolved alkaline magmas: Petrological, experimental and theoretical insightsâ€•(Earth Science Reviews, 211 (2020), 103402)â€• Earth-Science Reviews, 2021, 220, 103654.	4.0	0