Mauro Coltelli

List of Publications by Year
in descending order

127	4,346	108046	150775
papers	citations	37 h-index	59 g-index

139	139	139	3185
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Frequency-magnitude distribution of earthquakes at Etna volcano unravels critical stress changes along magma pathways. Communications Earth & Environment, 2022, 3, .	2.6	7
2	EUNADICS-AV early warning system dedicated to supporting aviation in the case of a crisis from natural airborne hazards and radionuclide clouds. Natural Hazards and Earth System Sciences, 2021, 21, 3367-3405.	1.5	8
3	Combined Seismic and Geodetic Analysis Before, During, and After the 2018 Mount Etna Eruption. Geochemistry, Geophysics, Geosystems, 2020, 21, e2020GC009218.	1.0	18
4	A volcanic-hazard demonstration exercise to assess and mitigate the impacts of volcanic ash clouds on civil and military aviation. Natural Hazards and Earth System Sciences, 2020, 20, 1719-1739.	1.5	14
5	Towards a satellite-based approach to measure eruptive volumes at Mt. Etna using Pleiades datasets. Bulletin of Volcanology, 2020, 82, 1.	1.1	12
6	Prehistorical Obsidian Sources in the Island of Lipari (Aeolian Islands). Open Archaeology, 2020, 6, 393-402.	0.3	5
7	Time and space scattered volcanism of Mt. Etna driven by strike-slip tectonics. Scientific Reports, 2019, 9, 12125.	1.6	18
8	Changes in SO2 Flux Regime at Mt. Etna Captured by Automatically Processed Ultraviolet Camera Data. Remote Sensing, 2019, 11, 1201.	1.8	20
9	Understanding the SO2 Degassing Budget of Mt Etna's Paroxysms: First Clues From the December 2015 Sequence. Frontiers in Earth Science, 2019, 6, .	0.8	10
10	The Graham Volcanic Field Offshore Southwestern Sicily (Italy) Revealed by High-Resolution Seafloor Mapping and ROV Images. Frontiers in Earth Science, 2019, 7, .	0.8	19
11	The primary volcanic aerosol emission from Mt Etna: Size-resolved particles with SO2 and role in plume reactive halogen chemistry. Geochimica Et Cosmochimica Acta, 2018, 222, 74-93.	1.6	29
12	First Volcanic Plume Measurements by an Elastic/Raman Lidar Close to the Etna Summit Craters. Frontiers in Earth Science, 2018, 6, .	0.8	9
13	Coseismic Damage at an Archaeological Site in Sicily, Italy: Evidence of Roman Age Earthquake Surface Faulting. Surveys in Geophysics, 2018, 39, 1263-1284.	2.1	11
14	Mass Eruption Rates of Tephra Plumes During the 2011â€“2015 Lava Fountain Paroxysms at Mt. Etna From Doppler Radar Retrievals. Frontiers in Earth Science, 2018, 6, .	0.8	38
15	Active volcanoes in southern Italy (Etna, Stromboli, Vulcano and Lipari) and their multi-hazard - IAVCEI Meeting - Naples, 2018. Geological Field Trips, 2018, 10, 1-106.	0.3	0
16	Volcanic events that have marked the anthropic history of the Aeolian Islands. Annals of Geophysics, 2018, 61, .	0.5	1
17	A multivariate probabilistic graphical model for realâ€time volcano monitoring on Mount Etna. Journal of Geophysical Research: Solid Earth, 2017, 122, 3480-3496.	1.4	24
18	Detection of plumes at Redoubt and Etna volcanoes using the GPS SNR method. Journal of Volcanology and Geothermal Research, 2017, 344, 26-39.	0.8	14

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19	Validation of a novel Multi-Gas sensor for volcanic HCl alongside H2S and SO2 at Mt. Etna. Bulletin of Volcanology, 2017, 79, 36.	1.1	16
20	The Use of Surveillance Cameras for the Rapid Mapping of Lava Flows: An Application to Mount Etna Volcano. Remote Sensing, 2017, 9, 192.	1.8	12
21	A Multi-Sensor Approach for Volcanic Ash Cloud Retrieval and Eruption Characterization: The 23 November 2013 Etna Lava Fountain. Remote Sensing, 2016, 8, 58.	1.8	62
22	A Low Cost Customizable Micro-ROV for Environmental Research - Applications, Advances and Challenges. , 2016, , .		3
23	Spatially resolved SO₂ flux emissions from Mt Etna. Geophysical Research Letters, 2016, 43, 7511-7519.	1.5	34
24	Monitoring an active volcanic area and mapping lava flows with multisource data: The case of Mount Etna from 2011 to 2015. , 2016, , .		1
25	Near-source Doppler radar monitoring of tephra plumes at Etna. Journal of Volcanology and Geothermal Research, 2016, 312, 26-39.	0.8	44
26	Exploring the submarine Graham Bank in the Sicily Channel. Annals of Geophysics, 2016, 59, .	0.5	10
27	The TOMO-ETNA experiment: an imaging active campaign at Mt. Etna volcano. Context, main objectives, working-plans and involved research projects. Annals of Geophysics, 2016, 59, .	0.5	7
28	TOMO-ETNA experiment at Etna volcano: activities on land. Annals of Geophysics, 2016, 59, .	0.5	8
29	The marine activities performed within the TOMO-ETNA experiment. Annals of Geophysics, 2016, 59, .	0.5	10
30	Acquisition and preliminary analysis of multi-channel seismic reflection data, acquired during the oceanographic cruises of the TOMO-ETNA experiment. Annals of Geophysics, 2016, 59, .	0.5	2
31	Acquisition procedures, processing methodologies and preliminary results of magnetic and ROV data collected during the TOMO-ETNA experiment. Annals of Geophysics, 2016, 59, .	0.5	5
32	Volcanic ash concentration during the 12 August 2011 Etna eruption. Geophysical Research Letters, 2015, 42, 2634-2641.	1.5	34
33	Evidence of Late Roman collapse at Catania (Sicily, southern Italy): An earthquake in the 4th century AD?. Quaternary International, 2015, 357, 336-343.	0.7	10
34	A multi-sensor approach for monitoring an active volcanic area: The 2011–2014 eruptive phase of Mount Etna. , 2015, , .		3
35	Integration of geotechnical modeling and remote sensing data to analyze the evolution of an active volcanic area: The case of the New South East Crater (Mount Etna). , 2015, , 179-180.		0
36	Monitoring Active Volcanos Using Aerial Images and the Orthoview Tool. Remote Sensing, 2014, 6, 12166-12186.	1.8	5

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37	The 1891 submarine eruption offshore Pantelleria Island (Sicily Channel, Italy): Identification of the vent and characterization of products and eruptive style. Geochemistry, Geophysics, Geosystems, 2014, 15, 2555-2574.	1.0	22
38	Eruption column height estimation of the 2011-2013 Etna lava fountains. Annals of Geophysics, 2014, 57, .	0.5	47
39	The effect of Etna volcanic ash clouds on the Maltese Islands. Journal of Volcanology and Geothermal Research, 2013, 260, 13-26.	0.8	13
40	Late glacial explosive activity on Mount Etna: Implications for proximalâ€“distal tephra correlations and the synchronisation of Mediterranean archives. Journal of Volcanology and Geothermal Research, 2013, 265, 9-26.	0.8	45
41	Experimental and Numerical Study of Particle Ingestion in Aircraft Engine. , 2013, , .		3
42	Insights into magma and fluid transfer at Mount Etna by a multiparametric approach: A model of the events leading to the 2011 eruptive cycle. Journal of Geophysical Research: Solid Earth, 2013, 118, 3519-3539.	1.4	108
43	Tephra hazard assessment at Mt. Etna (Italy). Natural Hazards and Earth System Sciences, 2013, 13, 3221-3233.	1.5	41
44	New archeomagnetic and 226Ra-230Th dating of recent lavas for the Geological map of Etna volcano. Italian Journal of Geosciences, 2012, , 241-257.	0.4	8
45	The volcano-tectonic map of Etna volcano, 1:100.000 scale: an integrated approach based on a morphotectonic analysis from high-resolution DEM constrained by geologic, active faulting and seismotectonic data. Italian Journal of Geosciences, 2012, , 153-170.	0.4	39
46	Monitoring Etna volcanic plumes using a scanning LiDAR. Bulletin of Volcanology, 2012, 74, 2383-2395.	1.1	32
47	Lidar depolarization measurement of fresh volcanic ash from Mt. Etna, Italy. Atmospheric Environment, 2012, 62, 34-40.	1.9	30
48	The case of the 1981 eruption of Mount Etna: An example of very fast moving lava flows. Geochemistry, Geophysics, Geosystems, 2012, 13, .	1.0	12
49	MISR observations of Etna volcanic plumes. Journal of Geophysical Research, 2012, 117, .	3.3	45
50	The morphological evolution of the Sciara del Fuoco since 1868: reconstructing the effusive activity at Stromboli volcano. Bulletin of Volcanology, 2012, 74, 231-248.	1.1	48
51	Structural assessment of Mount Etna volcano from Permanent Scatterers analysis. Geochemistry, Geophysics, Geosystems, 2011, 12, n/a-n/a.	1.0	120
52	Continental margin large-scale instability controlling the flank sliding of Etna volcano. Earth and Planetary Science Letters, 2011, 305, 57-64.	1.8	64
53	Geological map of Etna volcano, 1:50,000 scale. Italian Journal of Geosciences, 2011, , 265-291.	0.4	63
54	Geological evolution of a complex basaltic stratovolcano: Mount Etna, Italy. Italian Journal of Geosciences, 2011, , 306-317.	0.4	33

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55	Interplay between Tectonics and Mount Etnaâ€™s Volcanism: Insights into the Geometry of the Plumbing System. , 2011, , .		5
56	40Ar/39Ar isotopic dating of Etna volcanic succession. Italian Journal of Geosciences, 2011, , 292-305.	0.4	19
57	A statistical approach to evaluate the tephra deposit and ash concentration from PUFF model forecasts. Journal of Volcanology and Geothermal Research, 2011, 200, 129-142.	0.8	18
58	A Lab-Scale Experiment to Measure Terminal Velocity of Volcanic Ash. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 1340-1347.	2.4	6
59	The flank eruption history of Etna (1610-2006) as a constraint on lava flow hazard. Annals of Geophysics, 2011, 54, .	0.5	5
60	Quantitative analysis of the 1981 and 2001 Etna flank eruptions: a contribution for future hazard evaluation and mitigation. Annals of Geophysics, 2011, 54, .	0.5	2
61	Mitigation of lava flow invasion hazard through optimized barrier configuration aided by numerical simulation: The case of the 2001 Etna eruption. Journal of Volcanology and Geothermal Research, 2010, 192, 16-26.	0.8	35
62	Threeâ€dimensional volcanic aerosol dispersal: A comparison between Multiangle Imaging Spectroradiometer (MISR) data and numerical simulations. Journal of Geophysical Research, 2010, 115, .	3.3	26
63	Monitoring and forecasting Etna volcanic plumes. Natural Hazards and Earth System Sciences, 2009, 9, 1573-1585.	1.5	106
64	The evolution of the Sciara del Fuoco subaerial slope during the 2007 Stromboli eruption: Relation between deformation processes and effusive activity. Journal of Volcanology and Geothermal Research, 2009, 182, 201-213.	0.8	46
65	A quantitative approach for evaluating lava flow simulation reliability: LavaSIM code applied to the 2001 Etna eruption. Geochemistry, Geophysics, Geosystems, 2009, 10, .	1.0	23
66	High precision photogrammetry for monitoring the evolution of the NW flank of Stromboli volcano during and after the 2002â€“2003 eruption. Bulletin of Volcanology, 2008, 70, 703-715.	1.1	41
67	Characterization of shape and terminal velocity of tephra particles erupted during the 2002 eruption of Etna volcano, Italy. Bulletin of Volcanology, 2008, 70, 1103-1112.	1.1	35
68	Geological evolution of Mount Etna volcano (Italy) from earliest products until the first central volcanism (between 500 and 100Âka ago) inferred from geochronological and stratigraphic data. International Journal of Earth Sciences, 2008, 97, 135-152.	0.9	93
69	Sensitivity analysis and uncertainty estimation for tephra dispersal models. Journal of Geophysical Research, 2008, 113, .	3.3	75
70	Photogrammetric and LIDAR surveys on the Sciara del Fuoco to monitor the 2007 Stromboli eruption. , 2008, , .		4
71	A novel measurement strategy for volcanic ash fallout estimation based on RTD Fluxgate magnetometers. , 2008, , .		21
72	Unsupervised Neural Analysis of Very-Long-Period Events at Stromboli Volcano Using the Self-Organizing Maps. Bulletin of the Seismological Society of America, 2008, 98, 2449-2459.	1.1	64

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73	Features of some paleosols on the flanks of Etna volcano (Italy) and their origin. Geoderma, 2007, 142, 112-126.	2.3	12
74	Analysis of the 2001 lava flow eruption of Mt. Etna from three-dimensional mapping. Journal of Geophysical Research, 2007, 112, .	3.3	86
75	Modeling of the 2001 lava flow at Etna volcano by a Cellular Automata approach. Environmental Modelling and Software, 2007, 22, 1465-1471.	1.9	96
76	Tephra fallout of 2001 Etna flank eruption: Analysis of the deposit and plume dispersion. Journal of Volcanology and Geothermal Research, 2007, 160, 147-164.	0.8	115
77	Computer simulations of lava flow paths in the town of Goma, Nyiragongo volcano, Democratic Republic of Congo. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	26
78	How accurate is â€œpaleomagnetic datingâ€? New evidence from historical lavas from Mount Etna. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	37
79	Changing conditions of magma ascent and fragmentation during the Etna 122ÂBC basaltic Plinian eruption: Evidence from clast microtextures. Journal of Volcanology and Geothermal Research, 2006, 158, 333-354.	0.8	135
80	New results of 40Ar/39Ar dating constrain the timing of transition from fissure-type to central volcanism at Mount Etna (Italy). Terra Nova, 2005, 17, 292-298.	0.9	24
81	Terminal settling velocity measurements of volcanic ash during the 2002â€“2003 Etna eruption by an X-band microwave rain gauge disdrometer. Geophysical Research Letters, 2005, 32, .	1.5	29
82	Remotely monitoring volcanic activity with ground-based Doppler radar. Eos, 2005, 86, 201.	0.1	27
83	Explosive eruption of a picrite: The 3930 BP subplinian eruption of Etna volcano (Italy). Geophysical Research Letters, 2005, 32, .	1.5	34
84	The Landslide Sequence Induced by the 2002 Eruption at Stromboli Volcano. , 2005, , 251-258.		23
85	Application of the cellular automata model SCIARA to the 2001 Mount Etna crisis. Geophysical Monograph Series, 2004, , 343-356.	0.1	6
86	Mt. Etna volcano: A seismological framework. Geophysical Monograph Series, 2004, , 147-165.	0.1	42
87	The control of lava flows at Mt. Etna. Geophysical Monograph Series, 2004, , 357-369.	0.1	7
88	Twelve years of ground deformation studies on Mt. Etna volcano based on GPS surveys. Geophysical Monograph Series, 2004, , 321-341.	0.1	21
89	Dynamics of magmas at Mount Etna. Geophysical Monograph Series, 2004, , 91-110.	0.1	37
90	The influence of conduit processes on changes in style of basaltic Plinian eruptions: Tarawera 1886 and Etna 122 BC. Journal of Volcanology and Geothermal Research, 2004, 137, 1-14.	0.8	142

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91	Seismoacoustic measurements during the Julyâ€“August 2001 eruption of Mt. Etna volcano, Italy. Journal of Volcanology and Geothermal Research, 2004, 137, 219-230.	0.8	33
92	A Measurement Tool for Investigating Cooling Lava Properties. IEEE Transactions on Instrumentation and Measurement, 2004, 53, 507-513.	2.4	6
93	Doppler radar sounding of volcanic eruption dynamics at Mount Etna. Bulletin of Volcanology, 2004, 66, 443-456.	1.1	52
94	Volcanic gas emissions from the summit craters and flanks of Mt. Etna, 1987â€“2000. Geophysical Monograph Series, 2004, , 111-128.	0.1	64
95	Eruptions of Mt. Etna during the past 3,200 Years: A revised compilation integrating the historical and stratigraphic records. Geophysical Monograph Series, 2004, , 1-27.	0.1	72
96	Geological evolution of Etna volcano. Geophysical Monograph Series, 2004, , 49-63.	0.1	34
97	Modeling of ground deformation associated with recent lateral eruptions: Mechanics of magma ascent and intermediate storage at Mt. Etna. Geophysical Monograph Series, 2004, , 293-306.	0.1	26
98	Valle del Bove, eastern flank of Etna Volcano: A comprehensive model for the opening of the depression and implications for future hazards. Geophysical Monograph Series, 2004, , 65-75.	0.1	20
99	The tectonics and geodynamics of Mt. Etna: Synthesis and interpretation of geological and geophysical data. Geophysical Monograph Series, 2004, , 29-47.	0.1	28
100	Seismicity and active tectonics in the Etna Region: Constraints for a seismotectonic model. Geophysical Monograph Series, 2004, , 205-220.	0.1	34
101	Last 100 ka tephrostratigraphic record of Mount Etna. Geophysical Monograph Series, 2004, , 77-89.	0.1	11
102	The Mt. Etna plumbing system: The contribution of seismic tomography. Geophysical Monograph Series, 2004, , 191-204.	0.1	28
103	Coupled magma chamber inflation and sector collapse slip observed with synthetic aperture radar interferometry on Mt. Etna volcano. Journal of Geophysical Research, 2003, 108, .	3.3	86
104	ROBOVOLC: a robot for volcano exploration result of first test campaign. Industrial Robot, 2003, 30, 231-242.	1.2	41
105	Validation and comparison of different techniques for the derivation of digital elevation models and volcanic monitoring (Vulcano Island, Italy). International Journal of Remote Sensing, 2002, 23, 4783-4800.	1.3	42
106	Seismic and infrasonic evidences for an impulsive source of the shallow volcanic tremor at Mt. Etna, Italy. Geophysical Research Letters, 2001, 28, 1071-1074.	1.5	47
107	Documenting surface magmatic activity at Mount Etna using ATSR remote sensing. Bulletin of Volcanology, 2001, 63, 387-397.	1.1	18
108	Stratigraphic constraints for explosive activity in the past 100 ka at Etna Volcano, Italy. International Journal of Earth Sciences, 2000, 89, 665-677.	0.9	126

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109	Digital elevation model generation using ascending and descending ERS-1/ERS-2 tandem data. International Journal of Remote Sensing, 1999, 20, 1527-1547.	1.3	28
110	Cellular neural networks for real-time monitoring of volcanic activity. Computers and Geosciences, 1999, 25, 101-117.	2.0	13
111	Violent explosions yield new insights into dynamics of Stromboli volcano. Eos, 1999, 80, 633.	0.1	89
112	First testing of a volcano Doppler radar (Voldorad) at Mount Etna, Italy. Geophysical Research Letters, 1999, 26, 3389-3392.	1.5	39
113	ERS-1/ERS-2 tandem data for digital elevation model generation. , 1998, , .		0
114	Discovery of a Plinian basaltic eruption of Roman age at Etna volcano, Italy. Geology, 1998, 26, 1095.	2.0	179
115	SIR-C/X-SAR multifrequency multipass interferometry: A new tool for geological interpretation. Journal of Geophysical Research, 1996, 101, 23127-23148.	3.3	46
116	Generation of digital elevation models by using SIR-C/X-SAR multifrequency two-pass interferometry: the Etna case study. IEEE Transactions on Geoscience and Remote Sensing, 1996, 34, 1097-1114.	2.7	116
117	Chronology and dispersal characteristics of recently (last 5000 years) erupted tephra of Cotopaxi (Ecuador): implications for long-term eruptive forecasting. Journal of Volcanology and Geothermal Research, 1995, 69, 217-239.	0.8	82
118	Evoluzione geologico-strutturale di una valle perpendicolare allâ€™orogene: lâ€™esempio della depressione Chota-Mira, Ecuador. Rendiconti Lincei, 1993, 4, 107-125.	1.0	0
119	Obsidian-bearing lava flows and pre-Columbian artifacts from the Ecuadorian Andes: First new multidisciplinary data. Journal of South American Earth Sciences, 1992, 6, 21-32.	0.6	27
120	Plio-Quaternary volcanism in Ecuador. Geological Magazine, 1988, 125, 1-14.	0.9	113
121	On the survey of volcanic sites: the SIR-C/X-SAR interferometry. , 0, , .		0
122	The Mount Etna case study: a multisensor view. , 0, , .		2
123	Results of the Mt. Etna interferometric E-SAR campaign. , 0, , .		5
124	Investigation on the cooling process of volcanic lava. , 0, , .		3
125	Thermal emittance monitoring in cooling lava process. , 0, , .		0
126	Slope Failures Induced by the December 2002 Eruption at Stromboli Volcano. Geophysical Monograph Series, 0, , 129-145.	0.1	8

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127	2002-2003 Lava Flow Eruption of Stromboli: A Contribution to Understanding Lava Discharge Mechanisms Using Periodic Digital Photogrammetry Surveys. Geophysical Monograph Series, 0, , 229-246.	0.1	4