

Tomaso Esposti Ongaro

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,980
citations

236925

25
h-index

265206

42
g-index

63
all docs

63
docs citations

63
times ranked

1150
citing authors

#	ARTICLE	IF	CITATIONS
1	Developing an Event Tree for probabilistic hazard and risk assessment at Vesuvius. Journal of Volcanology and Geothermal Research, 2008, 178, 397-415.	2.1	179
2	Multiparticle simulation of collapsing volcanic columns and pyroclastic flow. Journal of Geophysical Research, 2003, 108, .	3.3	153
3	Results of the eruptive column model inter-comparison study. Journal of Volcanology and Geothermal Research, 2016, 326, 2-25.	2.1	114
4	Quantifying volcanic hazard at Campi Flegrei caldera (Italy) with uncertainty assessment: 1. Vent opening maps. Journal of Geophysical Research: Solid Earth, 2015, 120, 2309-2329.	3.4	101
5	A parallel multiphase flow code for the 3D simulation of explosive volcanic eruptions. Parallel Computing, 2007, 33, 541-560.	2.1	85
6	Transient 3D numerical simulations of column collapse and pyroclastic density current scenarios at Vesuvius. Journal of Volcanology and Geothermal Research, 2008, 178, 378-396.	2.1	83
7	Quantifying volcanic hazard at Campi Flegrei caldera (Italy) with uncertainty assessment: 2. Pyroclastic density current invasion maps. Journal of Geophysical Research: Solid Earth, 2015, 120, 2330-2349.	3.4	79
8	Pyroclastic flow hazard assessment at Vesuvius (Italy) by using numerical modeling. I. Large-scale dynamics. Bulletin of Volcanology, 2002, 64, 155-177.	3.0	72
9	Pyroclastic flow hazard assessment at Vesuvius (Italy) by using numerical modeling. II. Analysis of flow variables. Bulletin of Volcanology, 2002, 64, 178-191.	3.0	65
10	Multiphase flow behaviour and hazard prediction of pyroclastic density currents. Nature Reviews Earth & Environment, 2020, 1, 348-365.	29.7	63
11	4D simulation of explosive eruption dynamics at Vesuvius. Geophysical Research Letters, 2007, 34, .	4.0	58
12	Multiphase flow dynamics of pyroclastic density currents during the May 18, 1980 lateral blast of Mount St. Helens. Journal of Geophysical Research, 2012, 117, .	3.3	55
13	Large Eddy Simulation of gas-particle kinematic decoupling and turbulent entrainment in volcanic plumes. Journal of Volcanology and Geothermal Research, 2016, 326, 143-171.	2.1	52
14	ASHEE-1.0: a compressible, equilibrium Eulerian model for volcanic ash plumes. Geoscientific Model Development, 2016, 9, 697-730.	3.6	51
15	The Effects of Vent Location, Event Scale, and Time Forecasts on Pyroclastic Density Current Hazard Maps at Campi Flegrei Caldera (Italy). Frontiers in Earth Science, 2017, 5, .	1.8	48
16	Fluid dynamics of the 1997 Boxing Day volcanic blast on Montserrat, West Indies. Journal of Geophysical Research, 2008, 113, .	3.3	46
17	Pyroclastic Density Currents. , 2015, , 617-629.		40
18	The footprint of column collapse regimes on pyroclastic flow temperatures and plume heights. Nature Communications, 2019, 10, 2476.	12.8	40

#	ARTICLE	IF	CITATIONS
19	Inter-comparison of three-dimensional models of volcanic plumes. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 326, 26-42.	2.1	38
20	Multiphase-flow numerical modeling of the 18 May 1980 lateral blast at Mount St. Helens, USA. <i>Geology</i> , 2011, 39, 535-538.	4.4	34
21	Vulcanian Eruptions. , 2015, , 505-518.		34
22	Lagrangian modeling of large volcanic particles: Application to Vulcanian explosions. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	33
23	Pyroclastic flow dynamics and hazard in a caldera setting: Application to Phlegrean Fields (Italy). <i>Geochemistry, Geophysics, Geosystems</i> , 2006, 7, n/a-n/a.	2.5	28
24	A semi-implicit, second-order-accurate numerical model for multiphase underexpanded volcanic jets. <i>Geoscientific Model Development</i> , 2013, 6, 1905-1924.	3.6	28
25	Assessing future vent opening locations at the Somma-Vesuvio volcanic complex: 2. Probability maps of the caldera for a future Plinian/sub-Plinian event with uncertainty quantification. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 4357-4376.	3.4	28
26	A fast, calibrated model for pyroclastic density currents kinematics and hazard. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 327, 257-272.	2.1	27
27	Influence of grain-size distribution on the dynamics of underexpanded volcanic jets. <i>Journal of Volcanology and Geothermal Research</i> , 2014, 285, 60-80.	2.1	26
28	IMEX_SfloW2D 1.0: a depth-averaged numerical flow model for pyroclastic avalanches. <i>Geoscientific Model Development</i> , 2019, 12, 581-595.	3.6	26
29	Volcanic plume vent conditions retrieved from infrared images: A forward and inverse modeling approach. <i>Journal of Volcanology and Geothermal Research</i> , 2015, 300, 129-147.	2.1	24
30	Dynamics of shallow hydrothermal eruptions: new insights from Vulcano's Breccia di Commenda eruption. <i>Bulletin of Volcanology</i> , 2018, 80, 1.	3.0	24
31	Ensemble-Based Data Assimilation of Volcanic Ash Clouds from Satellite Observations: Application to the 24 December 2018 Mt. Etna Explosive Eruption. <i>Atmosphere</i> , 2020, 11, 359.	2.3	22
32	Modelling pyroclastic density currents from a subplinian eruption at La Soufrière de Guadeloupe (West Indies, France). <i>Bulletin of Volcanology</i> , 2020, 82, 76.	3.0	19
33	An immersed boundary method for compressible multiphase flows: application to the dynamics of pyroclastic density currents. <i>Computational Geosciences</i> , 2007, 11, 183-198.	2.4	18
34	Pyroclastic Density Current Hazards and Risk. , 2015, , 109-140.		18
35	Modeling Tsunamis Generated by Submarine Landslides at Stromboli Volcano (Aeolian Islands, Italy): A Numerical Benchmark Study. <i>Frontiers in Earth Science</i> , 2021, 9, .	1.8	17
36	A framework for validation and benchmarking of pyroclastic current models. <i>Bulletin of Volcanology</i> , 2020, 82, 1.	3.0	16

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37	Treeâ€Branchingâ€Based Enhancement of Kinetic Energy Models for Reproducing Channelization Processes of Pyroclastic Density Currents. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB019271.	3.4	16
38	Tsunami risk management for crustal earthquakes and non-seismic sources in Italy. <i>Rivista Del Nuovo Cimento</i> , 2021, 44, 69-144.	5.7	16
39	Non-equilibrium processes in ash-laden volcanic plumes: new insights from 3D multiphase flow simulations. <i>Journal of Volcanology and Geothermal Research</i> , 2016, 326, 127-142.	2.1	15
40	Insights into the formation and dynamics of coignimbrite plumes from oneâ€dimensional models. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 4211-4231.	3.4	12
41	Synthetic benchmarking of concentrated pyroclastic current models. <i>Bulletin of Volcanology</i> , 2021, 83, 1.	3.0	12
42	Destructiveness of pyroclastic surges controlled by turbulent fluctuations. <i>Nature Communications</i> , 2021, 12, 7306.	12.8	11
43	Reproducing pyroclastic density current deposits of the 79â€%CE eruption of the Sommaâ€Vesuvius volcano using the box-model approach. <i>Solid Earth</i> , 2021, 12, 119-139.	2.8	8
44	Influence of carbon dioxide on the large-scale dynamics of magmatic eruptions at Phlegrean Fields (Italy). <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	7
45	Multiphase Flow Modeling of Explosive Volcanic Eruptions. <i>Mechanical Engineering Series</i> , 2022, , 243-281.	0.2	6
46	From magma ascent to ash generation: investigating volcanic conduit processes by integrating experiments, numerical modeling, and observations. <i>Annals of Geophysics</i> , 2017, 60, .	1.0	5
47	Reconstructing Pyroclastic Currents' Source and Flow Parameters From Deposit Characteristics and Numerical Modeling: The Pozzolane Rosse Ignimbrite Case Study (Colli Albani, Italy). <i>Journal of Geophysical Research: Solid Earth</i> , 2022, 127, .	3.4	5
48	Calibration strategies of PDC kinetic energy models and their application to the construction of hazard maps. <i>Bulletin of Volcanology</i> , 2022, 84, 1.	3.0	4
49	High performance computing simulations of pyroclastic flows. <i>Computer Physics Communications</i> , 2005, 169, 454-456.	7.5	3
50	An interactive virtual environment to communicate vesuvius eruptions numerical simulations and Pompeii history. , 2006, , .		3