



Publicazioni 2020

1. Aiuppa, A., Bitetto, M., Rizzo, A. L., Viveiros, F., Allard, P., Frezzotti, M. L., Valenti, V., & Zanon, V. (2020). The fumarolic CO₂ output from pico do fogo volcano (Cape Verde). *Italian Journal of Geosciences*, 39(3). <https://doi.org/10.3301/IJG.2020.03>
2. Aloisi, M., Bonaccorso, A., Cannavò, F., Currenti, G., & Gambino, S. (2020). The 24 December 2018 Eruptive Intrusion at Etna Volcano as Revealed by Multidisciplinary Continuous Deformation Networks (CGPS, Borehole Strainmeters and Tiltmeters). *Journal of Geophysical Research: Solid Earth*, 125(8). <https://doi.org/10.1029/2019JB019117>
3. Alparone, S., Barberi, G., Giampiccolo, E., Maiolino, V., Mostaccio, A., Musumeci, C., Scaltrito, A., Scarfi, L., Tuvè, T., & Ursino, A. (2020). Seismological constraints on the 2018 Mt. Etna (Italy) flank eruption and implications for the flank dynamics of the volcano. *Terra Nova*, 32(5), 334–344. <https://doi.org/10.1111/ter.12463>
4. Anselmi, M., Saccorotti, G., Piccinini, D., Giunchi, C., Paratore, M., De Gori, P., Buttinelli, M., Maggio, E., Plaisant, A., & Chiarabba, C. (2020). Microseismic assessment and fault characterization at the Sulcis (South-Western Sardinia) field laboratory. *International Journal of Greenhouse Gas Control*, 95. <https://doi.org/10.1016/j.ijggc.2020.102974>
5. Antoncicchi, I., Ciccone, F., Dialuce, G., Grandi, S., Terlizese, F. M. A., Tinti, S., Zaniboni, F., Basili, R., Cavallaro, D., Coltelli, M., Carlino, F., Lipparini, M., Lorito, L., Maesano, S., Romano, F. E., Scarfi, F., Tiberti, L., & Volpe, M. M. (2020). *Progetto Spot-Sismicità Potenzialmente Innescabile Offshore E Tsunami*. <https://doi.org/10.5281/zenodo.3732887>
6. Azzaro, R., Bonforte, A., D'Amico, S., Guglielmino, F., & Scarfi, L. (2020). Stick-slip vs. stable sliding fault behaviour: A case-study using a multidisciplinary approach in the volcanic region of Mt. Etna (Italy). *Tectonophysics*, 790. <https://doi.org/10.1016/j.tecto.2020.228554>
7. Barreca, G., Branca, S., Corsaro, R. A., Scarfi, L., Cannavò, F., Aloisi, M., Monaco, C., & Faccenna, C. (2020). Slab detachment, mantle flow, and crustal collision in eastern sicily (Southern Italy): Implications on mount etna volcanism. *Tectonics*, 39(9), 1–19. <https://doi.org/10.1029/2020TC006188>
8. Barreca, G., Bruno, V., Dardanelli, G., Guglielmino, F., Lo Brutto, M., Mattia, M., Pipitone, C., & Rossi, M. (2020). "An integrated geodetic and InSAR technique for the monitoring and detection of active faulting in southwestern Sicily,..". *Annals of Geophysics*, 63. <https://doi.org/10.4401/ag-8327>
9. Belfiore, C. M., Amato, C., Pezzino, A., & Viccaro, M. (2020). An end of waste alternative for volcanic ash: A resource in the manufacture of ceramic tiles. In *Construction and Building Materials* (Vol. 263). <https://doi.org/10.1016/j.conbuildmat.2020.120118>
10. Bilotta, G. (2020). Studying the rheology of geophysical flows with physical-mathematical models: An application of the GPUSPH particle engine. *Il Nuovo Cimento C*, 43(4–5). <https://doi.org/10.1393/ncc/i2020-20122-4>
11. Bonaccorso, A., Currenti, G., Linde, A., Sacks, S., & Sicali, A. (2020). Advances in Understanding Intrusive, Explosive and Effusive Processes as Revealed by the Borehole Dilatometer Network on Mt. Etna Volcano. In *Frontiers in Earth Science* (Vol. 7). <https://doi.org/10.3389/feart.2019.00357>



12. Bonaccorso, A., & Giampiccolo, E. (2020). Balance Between Deformation and Seismic Energy Release: The Dec 2018 'Double-Dike' Intrusion at Mt. Etna. In *Frontiers in Earth Science* (Vol. 8). <https://doi.org/10.3389/feart.2020.583815>
13. Bonfanti, P., Cocina, O., & Corsaro, R. A. (2020). La condivisione di esperienza e conoscenza nel percorso formativo dei Turnisti dell'Osservatorio Etneo. In *Progetto "Sale Operative Integrate e Reti di monitoraggio del futuro: l'INGV 2.0". Report finale* (Vol. 57, pp. 161–165). <http://hdl.handle.net/2122/14290>
14. Borzi, A. M., Giuffrida, M., Zuccarello, F., Palano, M., & Viccaro, M. (2020). The Christmas 2018 Eruption at Mount Etna: Enlightening How the Volcano Factory Works Through a Multiparametric Inspection. In *Geochemistry, Geophysics, Geosystems* (Vol. 21, Issue 10). <https://doi.org/10.1029/2020GC009226>
15. Bottari, C., Ferranti, L., Di Maio, R., Frisetti, A., De Paola, C., La Manna, M., Piegari, E., & Marazzi, F. (2020). The 847 CE earthquake in central-southern Italy: New hints from archaeosismological and geophysical investigations in the Volturno River Valley area. In *Tectonophysics* (Vol. 774). <https://doi.org/10.1016/j.tecto.2019.228301>
16. Bottari, C., Giammanco, S., Cavallaro, D., Sortino, F., Scudero, S., Amari, S., Bonfanti, P., Daolio, M., & Groppelli, G. (2020). How to reveal unknown hidden faults and historical earthquake damage applying multidisciplinary methods in archaeological sites: The case of mid- third century CE Mt. Etna earthquake (Eastern Sicily, Italy). *Tectonophysics*, 790, 13. <https://doi.org/10.1016/j.tecto.2020.228544>
17. Brugnone, F., D'Alessandro, W., Calabrese, S., Li Vigni, L., Bellomo, S., Brusca, L., Prano, V., Saiano, F., & Parello, F. (2020). A christmas gift: Signature of the 24th December 2018 eruption of Mt. Etna on the chemical composition of bulk deposition in eastern sicily. In *Italian Journal of Geosciences* (Vol. 39, Issue 3, pp. 1–18). <https://doi.org/10.3301/IJG.2020.08>
18. Calusi, B., Andronico, D., Pecora, E., Biale, E., & Cerminara, M. (2020). Pytircam-1.0: A python model to manage thermal infrared camera data. In *Remote Sensing* (Vol. 12, Issue 24, pp. 1–24). <https://doi.org/10.3390/rs12244056>
19. Calvari, S., Bilotta, G., Bonaccorso, A., Caltabiano, T., Cappello, A., Corradino, C., Negro, C. Del, Ganci, G., Neri, M., Pecora, E., Salerno, G. G., & Spampinato, L. (2020). The VEI 2 Christmas 2018 Etna eruption: A small but intense eruptive event or the starting phase of a larger one? *Remote Sensing*, 12(6). <https://doi.org/10.3390/rs12060905>
20. Calvari, S., Traglia, F. Di, Ganci, G., Giudicepietro, F., Macedonio, G., Cappello, A., Nolesini, T., Pecora, E., Bilotta, G., Centorrino, V., Corradino, C., Casagli, N., & Negro, C. Del. (2020). Overflows and pyroclastic density currents in march-april 2020 at stromboli volcano detected by remote sensing and seismic monitoring data. In *Remote Sensing* (Vol. 12, Issue 18). <https://doi.org/10.3390/RS12183010>
21. Camacho, A. G., Fernández, J., Samsonov, S. V., Tiampo, K. F., & Palano, M. (2020). 3D multi-source model of elastic volcanic ground deformation. In *Earth and Planetary Science Letters* (Vol. 547). <https://doi.org/10.1016/j.epsl.2020.116445>
22. Cambiotti, G., Palano, M., Orecchio, B., Marotta, A. M., Barzaghi, R., Neri, G., & Sabadini, R. (2020). New insights into long-term aseismic deformation and regional strain rates from GNSS Data Inversion: The case of the pollino and castrovillari faults. In *Remote Sensing* (Vol. 12, Issue 18). <https://doi.org/10.3390/RS12182921>
23. Cannata, A., Cannavò, F., Moschella, S., Di Grazia, G., Nardone, G., Orasi, A., Picone, M., Ferla, M., & Gresta, S. (2020). Unravelling the relationship between microseisms and spatial distribution of sea



- wave height by statistical and machine learning approaches. In *Remote Sensing* (Vol. 12, Issue 5). <https://doi.org/10.3390/rs12050761>
24. Carbone, D., Antoni-Micollier, L., Hammond, G., de Zeeuw - van Dalftsen, E., Rivalta, E., Bonadonna, C., Messina, A., Lautier-Gaud, J., Toland, K., Koymans, M., Anastasiou, K., Bramsiepe, S., Cannavò, F., Contrafatto, D., Frischknecht, C., Greco, F., Marocco, G., Middlemiss, R., Ménoret, V., ... Vermeulen, P. (2020). The NEWTON-g Gravity Imager: Toward New Paradigms for Terrain Gravimetry. In *Frontiers in Earth Science* (Vol. 8). <https://doi.org/10.3389/feart.2020.573396>
 25. Chauhan, M. S., Cannavò, F., Carbone, D., & Greco, F. (2020). Insights Into Mount Etna December 2018 Eruption From Joint Inversion of Deformation and Gravity Data. In *Geophysical Research Letters* (Vol. 47, Issue 16). <https://doi.org/10.1029/2020GL087786>
 26. Chicco, J. M., Giammanco, S., & Mandrone, G. (2020). Multidisciplinary study of the “salinelle” of paternò mud volcanoes: Characteristics of the fluids and possible correlations with the activity of mt. etna. In *Annals of Geophysics* (Vol. 63, pp. 1–34). <https://doi.org/10.4401/ag-8523>
 27. Cocina, O., Nostro, C., Castellano, M., Bonfanti, P., Corsaro, R. A., Crescimbene, M., De Cesare, W., Di Mauro, D., La Longa, F., Nardi, A., Pizzino, L., & Ricciolino, P. (2020). La formazione del Personale delle Sale Operative INGV. In *Progetto “Sale Operative Integrate e Reti di monitoraggio del futuro: l’INGV 2.0”*. Report finale (Vol. 57, pp. 145–149). <http://hdl.handle.net/2122/14289>
 28. Corradini, S., Guerrieri, L., Stelitano, D., Salerno, G., Scollo, S., Merucci, L., Prestifilippo, M., Musacchio, M., Silvestri, M., Lombardo, V., & Caltabiano, T. (2020). Near real-time monitoring of the Christmas 2018 Etna eruption using SEVIRI and products validation. *Remote Sensing*, 12(8). <https://doi.org/10.3390/RS12081336>
 29. Corradino, C., Ganci, G., Cappello, A., Bilotta, G., Calvari, S., & Negro, C. Del. (2020). Recognizing eruptions of Mount Etna through machine learning using multiperspective infrared images. In *Remote Sensing* (Vol. 12, Issue 6). <https://doi.org/10.3390/rs12060970>
 30. Coşkun, I., Falk, R., Pálinkáš, V., Wziontek, H., Rülke, A., Val’ko, M., Ullrich, C., Butta, H., Kostelecký, J., Bilker-Koivula, M., Näränen, J., Prato, A., Mazzoleni, F., Kirbaş, C., Coşkun, Van Camp, M., Castelein, S., Bernard, J. D., Lothhammer, A., ... Steffen, H. (2020). Final report of EURAMET.M.G-K3 regional comparison of absolute gravimeters. In *Metrologia* (Vol. 57, Issue 1 A). <https://doi.org/10.1088/0026-1394/57/1A/07019>
 31. Del Negro, C., Cappello, A., Bilotta, G., Ganci, G., Hérault, A., & Zago, V. (2020). Living at the edge of an active volcano: Risk from lava flows on Mt. Etna. In *Bulletin of the Geological Society of America* (Vol. 132, Issues 7–8, pp. 1615–1625). <https://doi.org/10.1130/B35290.1>
 32. Dellong, D., Klingelhoefer, F., Dannowski, A., Kopp, H., Murphy, S., Graindorge, D., Margheriti, L., Moretti, M., Barreca, G., Scarfi, L., Polonia, A., & Gutscher, M. A. (2020). Reply to comment by a. Argnani on “geometry of the deep Calabrian subduction from wide-angle seismic data and 3-d gravity modeling.” In *Geochemistry, Geophysics, Geosystems* (Vol. 21, Issue 8, pp. 1–5). <https://doi.org/10.1029/2020GC009223>
 33. Dellong, D., Klingelhoefer, F., Dannowski, A., Kopp, H., Murphy, S., Graindorge, D., Margheriti, L., Moretti, M., Barreca, G., Scarfi, L., Polonia, A., & Gutscher, M. A. (2020). Reply to comment by a. Argnani on “geometry of the deep Calabrian subduction from wide-angle seismic data and 3-d gravity modeling.” In *Geochemistry, Geophysics, Geosystems* (Vol. 21, Issue 8, pp. 1–5). <https://doi.org/10.1029/2020GC009223>
 34. Di Stefano, F., Mollo, S., Ubide, T., Petrone, C. M., Caulfield, J., Scarlato, P., Nazzari, M., Andronico, D., & Del Bello, E. (2020). Mush cannibalism and disruption recorded by clinopyroxene phenocrysts



- at Stromboli volcano: New insights from recent 2003–2017 activity. In *Lithos* (Vols. 360–361). <https://doi.org/10.1016/j.lithos.2020.105440>
35. Di Traglia, F., Roverato, M., Bonforte, A., & Gross, F. (2020). Editorial: Flank dynamics, sector collapses, lahars, and rockfalls: analysis, monitoring, and modelling of small to large scale volcanic slope instability. In *International Journal of Earth Sciences* (Vol. 109, Issue 8, pp. 2615–2618). <https://doi.org/10.1007/s00531-020-01930-9>
 36. Escayo, J., Fernández, J., Prieto, J. F., Camacho, A. G., Palano, M., Aparicio, A., Rodríguez-Velasco, G., & Ancochea, E. (2020). Geodetic study of the 2006-2010 ground deformation in La Palma (Canary Islands): Observational results. In *Remote Sensing* (Vol. 12, Issue 16). <https://doi.org/10.3390/RS12162566>
 37. Esse, B., Burton, M., Varnam, M., Kazahaya, R., & Salerno, G. (2020). iFit: A simple method for measuring volcanic SO₂ without a measured Fraunhofer reference spectrum. In *Journal of Volcanology and Geothermal Research* (Vol. 402). <https://doi.org/10.1016/j.jvolgeores.2020.107000>
 38. Falsaperla, S., Musacchio, G., Ferreira, M. A., Lopes, M., & Oliveira, C. S. (2020). Dissemination: Steps towards an effective action of seismic risk reduction for non-structural damage in the knowrisk project. In *Annals of Geophysics* (Vol. 63, pp. 1–22). <https://doi.org/10.4401/ag-8394>
 39. Fortunato, M., Mazzoni, A., Berrino, G., Greco, F., Riguzzi, F., & Sonnessa, A. (2020). Indoor height determination of the new absolute gravimetric station of L'Aquila. In *Annals of Geophysics* (Vol. 63, pp. 1–24). <https://doi.org/10.4401/ag-8473>
 40. Gallo, G., Lo Presti, D., Bonanno, D. L., Bonanno, G., Bongiovanni, D. G., Carbone, D., Ferlito, C., Immé, G., La Rocca, P., Longhitano, F., Messina, A., Reito, S., Riggi, F., Russo, G., & Zuccarello, L. (2020). Improvements of data analysis and self-consistent monitoring methods for the MEV telescope. In *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment* (Vol. 958). <https://doi.org/10.1016/j.nima.2019.04.006>
 41. Ganas, A., Elias, P., Briole, P., Cannavo, F., Valkaniotis, S., Tsironi, V., & Partheniou, E. I. (2020). Ground deformation and seismic fault model of the M6.4 Durrës (Albania) nov. 26, 2019 earthquake, based on GNSS/INSAR observations. In *Geosciences (Switzerland)* (Vol. 10, Issue 6, pp. 1–16). <https://doi.org/10.3390/geosciences10060210>
 42. Ganci, G., Cappello, A., Bilotta, G., & Del Negro, C. (2020). How the variety of satellite remote sensing data over volcanoes can assist hazard monitoring efforts: The 2011 eruption of Nabro volcano. In *Remote Sensing of Environment* (Vol. 236). <https://doi.org/10.1016/j.rse.2019.111426>
 43. García, L., Alguacil, G., Titos, M., Cocina, O., De La Torre, A., & Benítez, C. (2020). Automatic S-Phase Picking for Volcano-Tectonic Earthquakes Using Spectral Dissimilarity Analysis. In *IEEE Geoscience and Remote Sensing Letters* (Vol. 17, Issue 5, pp. 874–878). <https://doi.org/10.1109/LGRS.2019.2934220>
 44. Giampiccolo, E., Cocina, O., De Gori, P., & Chiarabba, C. (2020). Dyke intrusion and stress-induced collapse of volcano flanks: The example of the 2018 event at Mt. Etna (Sicily, Italy). In *Scientific Reports* (Vol. 10, Issue 1). <https://doi.org/10.1038/s41598-020-63371-3>
 45. Gibbons, S. J., Lorito, S., Macías, J., Løvholt, F., Selva, J., Volpe, M., Sánchez-Linares, C., Babeyko, A., Brizuela, B., Cirella, A., Castro, M. J., de la Asunción, M., Lanucara, P., Glimsdal, S., Lorenzino, M. C., Nazaria, M., Pizzimenti, L., Romano, F., Scala, A., ... Vöge, M. (2020). Probabilistic Tsunami Hazard Analysis: High Performance Computing for Massive Scale Inundation Simulations. In *Frontiers in Earth Science* (Vol. 8). <https://doi.org/10.3389/feart.2020.591549>



46. Giordano, D., Russell, J. K., González-García, D., Bersani, D., Dingwell, D. B., & Del Negro, C. (2020). Raman spectroscopy from laboratory and proximal to remote sensing: A tool for the volcanological sciences. In *Remote Sensing* (Vol. 12, Issue 5). <https://doi.org/10.3390/rs12050805>
47. Giudicepietro, F., López, C., Macedonio, G., Alparone, S., Bianco, F., Calvari, S., De Cesare, W., Delle Donne, D., Di Lieto, B., Esposito, A. M., Orazi, M., Peluso, R., Privitera, E., Romano, P., Scarpato, G., & Tramelli, A. (2020). Geophysical precursors of the July-August 2019 paroxysmal eruptive phase and their implications for Stromboli volcano (Italy) monitoring. In *Scientific Reports* (Vol. 10, Issue 1). <https://doi.org/10.1038/s41598-020-67220-1>
48. Giuffrida, M., Nicotra, E., & Viccaro, M. (2020). Changing modes and rates of mafic magma supply at Pantelleria (Sicily Channel, Southern Italy): New perspectives on the volcano factory drawn upon olivine records. In *Journal of Petrology* (Vol. 61, Issue 5). <https://doi.org/10.1093/petrology/egaa051>
49. Greco, F., Carbone, D., Cannavò, F., Messina, A. A., & Siligato, G. (2020). *Absolute and Relative Gravity Measurements at Volcanoes: Current State and New Developments Under the NEWTON-g Project*. https://doi.org/10.1007/1345_2020_126
50. Henriquet, M., Dominguez, S., Barreca, G., Malavieille, J., & Monaco, C. (2020). Structural and tectono-stratigraphic review of the Sicilian orogen and new insights from analogue modeling. In *Earth-Science Reviews* (Vol. 208). <https://doi.org/10.1016/j.earscirev.2020.103257>
51. Hirtl, M., Arnold, D., Baro, R., Brenot, H., Coltelli, M., Eschbacher, K., Hard-Stremayer, H., Lipok, F., Maurer, C., Meinhard, D., Mona, L., D. Mulder, M., Papagiannopoulos, N., Pernsteiner, M., Plu, M., Robertson, L., Roki, K., Scherllin-Pirscher, B., Sievers, K., ... Zopp, R. (2020). A volcanic-hazard demonstration exercise to assess and mitigate the impacts of volcanic ash clouds on civil and military aviation. In *Natural Hazards and Earth System Sciences* (Vol. 20, Issue 6, pp. 1719–1739). <https://doi.org/10.5194/nhess-20-1719-2020>
52. Ibáñez, J. M., Castro-Melgar, I., Cocina, O., Zuccarello, L., Branca, S., Del Pezzo, E., & Prudencio, J. (2020). First 2-D intrinsic and scattering attenuation images of Mt Etna volcano and surrounding region from active seismic data. In *Geophysical Journal International* (Vol. 220, Issue 1, pp. 267–277). <https://doi.org/10.1093/gji/ggz450>
53. İçhedef, M., Giammanco, S., Neri, M., Catalano, R., Immé, G., Morelli, D., Muré, F., & Giudice, N. (2020). In soil radon anomalies and volcanic activity on Mt. Etna (Italy). In *Journal of Environmental Radioactivity* (Vol. 218). <https://doi.org/10.1016/j.jenvrad.2020.106267>
54. Lachatre, M., Mailler, S., Menut, L., Sellitto, P., Guermazi, H., Salerno, G., Caltabiano, T., & Carboni, E. (2020). New strategies for vertical transport in chemistry transport models: Application to the case of the Mount Etna eruption on 18 March 2012 with CHIMERE v2017r4. In *Geoscientific Model Development* (Vol. 13, Issue 11, pp. 5707–5723). <https://doi.org/10.5194/gmd-13-5707-2020>
55. Lages, J., Moussallam, Y., Bani, P., Peters, N., Aiuppa, A., Bitetto, M., & Giudice, G. (2020). First in-situ measurements of plume chemistry at mount garet volcano, island of gaua (Vanuatu). In *Applied Sciences (Switzerland)* (Vol. 10, Issue 20, pp. 1–15). <https://doi.org/10.3390/app10207293>
56. Langer, H., Falsaperla, S., & Hammer, C. (2020). Applications of supervised learning. In *Advantages and Pitfalls of Pattern Recognition* (pp. 127–187). <https://doi.org/10.1016/b978-0-12-811842-9.00004-2>
57. Langer, H., Falsaperla, S., & Hammer, C. (2020). A posteriori analyses—advantages and pitfalls of pattern recognition techniques. In *Advantages and Pitfalls of Pattern Recognition* (pp. 237–259). <https://doi.org/10.1016/b978-0-12-811842-9.00006-6>
58. Langer, H., Falsaperla, S., & Hammer, C. (2020). Software manuals. In *Advantages and Pitfalls of Pattern Recognition* (pp. 261–313). <https://doi.org/10.1016/b978-0-12-811842-9.00007-8>



59. Langer, H., Falsaperla, S., & Hammer, C. (2020). Supervised learning. In *Advantages and Pitfalls of Pattern Recognition* (pp. 33–85). <https://doi.org/10.1016/b978-0-12-811842-9.00002-9>
60. Langer, H., Falsaperla, S., & Hammer, C. (2020). Applications with unsupervised learning. In *Advantages and Pitfalls of Pattern Recognition* (pp. 189–234). <https://doi.org/10.1016/b978-0-12-811842-9.00005-4>
61. Lanzano, G., & Luzi, L. (2020). A ground motion model for volcanic areas in Italy. In *Bulletin of Earthquake Engineering* (Vol. 18, Issue 1, pp. 57–76). <https://doi.org/10.1007/s10518-019-00735-9>
62. Liu, E. J., Aiuppa, A., Alan, A., Arellano, S., Bitetto, M., Bobrowski, N., Carn, S., Clarke, R., Corrales, E., De Moor, J. M., Diaz, J. A., Edmonds, M., Fischer, T. P., Freer, J., Fricke, G. M., Galle, B., Gerdes, G., Giudice, G., Gutmann, A., ... Wood, K. (2020). Aerial strategies advance volcanic gas measurements at inaccessible, strongly degassing volcanoes. In *Science Advances* (Vol. 6, Issue 44). <https://doi.org/10.1126/sciadv.abb9103>
63. Lolli, B., Randazzo, D., Vannucci, G., & Gasperini, P. (2020). The homogenized instrumental seismic catalog (HORUS) of Italy from 1960 to present. In *Seismological Research Letters* (Vol. 91, Issue 6, pp. 3208–3222). <https://doi.org/10.1785/0220200148>
64. Lormand, C., Harris, A. J. L., Chevrel, M. O., Calvari, S., Gurioli, L., Favalli, M., Fornaciai, A., & Nannipieri, L. (2020). The 1974 West Flank Eruption of Mount Etna: A Data-Driven Model for a Low Elevation Effusive Event. In *Frontiers in Earth Science* (Vol. 8). <https://doi.org/10.3389/feart.2020.590411>
65. Lucia, P. G., Susanna, F., Elena, E., & Gemma, M. (2020). Seismic risk communication: Let's students show their own way. In *Annals of Geophysics* (Vol. 63, pp. 1–23). <https://doi.org/10.4401/ag-8396>
66. Martinelli, M. C., Coltelli, M., Manni, M., Bonizzoni, L., Guglielmetti, A., Oddone, M., & Balestrieri, M. L. (2020). Prehistorical Obsidian Sources in the Island of Lipari (Aeolian Islands). In *Open Archaeology* (Vol. 6, Issue 1, pp. 393–402). <https://doi.org/10.1515/opar-2020-0119>
67. Martinez, W. L., & Martinez, A. R. (2020). Unsupervised Learning. In *Computational Statistics Handbook with MATLAB* (pp. 469–508). <https://doi.org/10.1201/b19035-16>
68. Marzano, F. S., Mereu, L., Scollo, S., Donnadiu, F., & Bonadonna, C. (2020). Tephra Mass Eruption Rate from Ground-Based X-Band and L-Band Microwave Radars during the November 23, 2013, Etna Paroxysm. In *IEEE Transactions on Geoscience and Remote Sensing* (Vol. 58, Issue 5, pp. 3314–3327). <https://doi.org/10.1109/TGRS.2019.2953167>
69. Mattia, M., Bruno, V., Montgomery-Brown, E., Patanè, D., Barberi, G., & Coltelli, M. (2020). Combined Seismic and Geodetic Analysis Before, During, and After the 2018 Mount Etna Eruption. In *Geochemistry, Geophysics, Geosystems* (Vol. 21, Issue 9). <https://doi.org/10.1029/2020GC009218>
70. Mattia, M., & Madonia, P. (2020). 1968-2018: Fifty years after the belice's earthquake. Geological, geophysical, geochemical and territorial aspects of this earthquake and its heritage for the Italian society. *Annals of Geophysics*, 63(1). <https://doi.org/10.4401/ag-8443>
71. Mereu, L., Scollo, S., Bonadonna, C., Freret-Lorgeril, V., & Marzano, F. S. (2020). Multisensor characterization of the incandescent jet region of lava fountain-fed tephra plumes. In *Remote Sensing* (Vol. 12, Issue 21, pp. 1–18). <https://doi.org/10.3390/rs12213629>
72. Meschis, M., Scicchitano, G., Roberts, G. P., Robertson, J., Barreca, G., Monaco, C., Spampinato, C., Sahy, D., Antonioli, F., Mildon, Z. K., & Scardino, G. (2020). Regional Deformation and Offshore Crustal Local Faulting as Combined Processes to Explain Uplift Through Time Constrained by Investigating Differentially Uplifted Late Quaternary Paleoshorelines: The Foreland Hyblean Plateau, SE Sicily. In *Tectonics* (Vol. 39, Issue 12). <https://doi.org/10.1029/2020TC006187>



73. Moretti, R., Komorowski, J. C., Ucciani, G., Moune, S., Jessop, D., de Chabalière, J. B., Beauducel, F., Bonifacie, M., Burtin, A., Vallée, M., Deroussi, S., Robert, V., Gibert, D., Didier, T., Kitou, T., Feuillet, N., Allard, P., Tamburello, G., Shreve, T., ... Chaussidon, M. (2020). The 2018 unrest phase at La Soufrière of Guadeloupe (French West Indies) andesitic volcano: Scrutiny of a failed but prodromal phreatic eruption. In *Journal of Volcanology and Geothermal Research* (Vol. 393). <https://doi.org/10.1016/j.jvolgeores.2020.106769>
74. Moschella, S., Cannata, A., Cannavò, F., Di Grazia, G., Nardone, G., Orasi, A., Picone, M., Ferla, M., & Gresta, S. (2020). Insights Into Microseism Sources by Array and Machine Learning Techniques: Ionian and Tyrrhenian Sea Case of Study. In *Frontiers in Earth Science* (Vol. 8). <https://doi.org/10.3389/feart.2020.00114>
75. Musumeci, C., Scarfi, L., Tusa, G., Barreca, G., Barberi, G., Cannavò, F., & Gresta, S. (2020). Foreland seismicity associated with strike-slip faulting in southeastern Sicily, Italy: Seismotectonic implications and seismic hazard assessment. In *Physics of the Earth and Planetary Interiors* (Vol. 307). <https://doi.org/10.1016/j.pepi.2020.106553>
76. Nádudvari, Á., Abramowicz, A., Maniscalco, R., & Viccaro, M. (2020). The estimation of lava flow temperatures using landsat night-time images: Case studies from eruptions of Mt. Etna and Stromboli (Sicily, Italy), Kilauea (Hawaii Island), and Eyjafjallajökull and Holuhraun (Iceland). In *Remote Sensing* (Vol. 12, Issue 16). <https://doi.org/10.3390/RS12162537>
77. Napoli, R., Currenti, G., Giammanco, S., Greco, F., & Maucourant, S. (2020). Imaging the salinelle mud volcanoes (Sicily, Italy) using integrated geophysical and geochemical surveys. In *Annals of Geophysics* (Vol. 63, Issue 4, pp. 1–19). <https://doi.org/10.4401/ag-8215>
78. Nardone, L., Bianco, F., Zaccarelli, L., & Patanè, D. (2020). Seismic anisotropy time variations at Mt Etna. In *Geophysical Journal International* (Vol. 220, Issue 1, pp. 450–460). <https://doi.org/10.1093/gji/ggz460>
79. Naticchioni, L., Boschi, V., Calloni, E., Capello, M., Cardini, A., Carpinelli, M., Cuccuru, S., D'Ambrosio, M., De Rosa, R., Di Giovanni, M., D'Urso, D., Fiori, I., Gaviano, S., Giunchi, C., Majorana, E., Migoni, C., Oggiano, G., Olivieri, M., Paoletti, F., ... Tringali, M. C. (2020). Characterization of the Sos Enattos site for the Einstein Telescope. In *Journal of Physics: Conference Series* (Vol. 1468, Issue 1). <https://doi.org/10.1088/1742-6596/1468/1/012242>
80. Pailot-Bonnétat, S., Harris, A. J. L., Calvari, S., De Michele, M., & Gurioli, L. (2020). Plume height time-series retrieval using shadow in single spatial resolution satellite images. In *Remote Sensing* (Vol. 12, Issue 23, pp. 1–23). <https://doi.org/10.3390/rs12233951>
81. Palano, M., Pezzo, G., Serpelloni, E., Devoti, R., D'Agostino, N., Gandolfi, S., Sparacino, F., Anderlini, L., Poluzzi, L., Tavasci, L., Macini, P., Pietrantonio, G., Riguzzi, F., Antoncicchi, I., Ciccone, F., Rossi, G., Avallone, A., & Selvaggi, G. (2020). Geopositioning time series from offshore platforms in the Adriatic Sea. In *Scientific Data* (Vol. 7, Issue 1). <https://doi.org/10.1038/s41597-020-00705-w>
82. Palano, M., Ursino, A., Spampinato, S., Sparacino, F., Polonia, A., & Gasperini, L. (2020). Crustal deformation, active tectonics and seismic potential in the Sicily Channel (Central Mediterranean), along the Nubia–Eurasia plate boundary. In *Scientific Reports* (Vol. 10, Issue 1). <https://doi.org/10.1038/s41598-020-78063-1>
83. Pardini, F., Corradini, S., Costa, A., Ongaro, T. E., Merucci, L., Neri, A., Stelitano, D., & de' Michieli Vitturi, M. (2020). Ensemble-based data assimilation of volcanic ash clouds from satellite observations: Application to the 24 december 2018 Mt. Etna explosive eruption. In *Atmosphere* (Vol. 11, Issue 4). <https://doi.org/10.3390/atmos11040359>



84. Parracino, S., Santoro, S., Fiorani, L., Nuvoli, M., Maio, G., & Aiuppa, A. (2020). The bridge volcanic Lidar-BILLI: A review of data collection and processing techniques in the Italian most hazardous volcanic areas. In *Applied Sciences (Switzerland)* (Vol. 10, Issue 18). <https://doi.org/10.3390/APP10186402>
85. Pezzo, E. Del, & Ibáñez, J. M. (2020). Seismic coda-waves imaging based on sensitivity kernels calculated using an heuristic approach. In *Geosciences (Switzerland)* (Vol. 10, Issue 8, pp. 1–26). <https://doi.org/10.3390/geosciences10080304>
86. Pezzo, G., Petracchini, L., Devoti, R., Maffucci, R., Anderlini, L., Antoncicchi, I., Billi, A., Carminati, E., Ciccone, F., Cuffaro, M., Livani, M., Palano, M., Petricca, P., Pietrantonio, G., Riguzzi, F., Rossi, G., Sparacino, F., & Doglioni, C. (2020). Active Fold-Thrust Belt to Foreland Transition in Northern Adria, Italy, Tracked by Seismic Reflection Profiles and GPS Offshore Data. In *Tectonics* (Vol. 39, Issue 11). <https://doi.org/10.1029/2020TC006425>
87. Pezzo, G., Palano, M., Tolomei, C., Gori, P. De, Calcaterra, S., Gambino, P., & Chiarabba, C. (2020). Flank sliding: A valve and a sentinel for paroxysmal eruptions and magma ascent at Mount Etna, Italy. In *Geology* (Vol. 48, Issue 11, pp. 1077–1082). <https://doi.org/10.1130/G47656.1>
88. Pipitone, C., Dardanelli, G., Lo Brutto, M., Bruno, V., Mattia, M., Guglielmino, F., Rossi, M., & Barreca, G. (2020). Use of CORS Time Series for Geodynamics Applications in Western Sicily (Italy). In *Communications in Computer and Information Science* (Vol. 1246, pp. 61–76). https://doi.org/10.1007/978-3-030-62800-0_6
89. Pirrotta, C., & Barbano, M. S. (2020). New Macroseismic and Morphotectonic Constraints to Infer a Fault Model for the 9 (Mw6.1) and 11 January (Mw7.3) 1693 Earthquakes (Southeastern Sicily). In *Frontiers in Earth Science* (Vol. 8). <https://doi.org/10.3389/feart.2020.550851>
90. Proietti, C., Coltelli, M., Marsella, M., Martino, M., Scifoni, S., & Giannone, F. (2020). Towards a satellite-based approach to measure eruptive volumes at Mt. Etna using Pleiades datasets. In *Bulletin of Volcanology* (Vol. 82, Issue 4). <https://doi.org/10.1007/s00445-020-01374-8>
91. Saikali, E., Bilotta, G., Hérault, A., & Zago, V. (2020). Accuracy Improvements for Single Precision Implementations of the SPH Method. In *International Journal of Computational Fluid Dynamics* (Vol. 34, Issue 10, pp. 774–787). <https://doi.org/10.1080/10618562.2020.1836357>
92. Sbrana, A., Cioni, R., Marianelli, P., Sulpizio, R., Andronico, D., & Pasquini, G. (2020). Volcanic evolution of the Somma-Vesuvius Complex (Italy). In *Journal of Maps* (Vol. 16, Issue 2, pp. 137–147). <https://doi.org/10.1080/17445647.2019.1706653>
93. Schwellenbach, I., Hinzen, K. G., Petersen, G. M., & Bottari, C. (2020). Combined use of refraction seismic, MASW, and ambient noise array measurements to determine the near-surface velocity structure in the Selinunte Archaeological Park, SW Sicily. In *Journal of Seismology* (Vol. 24, Issue 4, pp. 753–776). <https://doi.org/10.1007/s10950-020-09909-4>
94. Scicchitano, G., Scardino, G., Tarascio, S., Monaco, C., Barracane, G., Locuratolo, G., Milella, M., Piscitelli, A., Mazza, G., & Mastronuzzi, G. (2020). The first video witness of coastal boulder displacements recorded during the impact of medicane “Zorbas” on Southeastern Sicily. In *Water (Switzerland)* (Vol. 12, Issue 5). <https://doi.org/10.3390/w12051497>
95. Scollo, S., Boselli, A., Corradini, S., Leto, G., Guerrieri, L., Merucci, L., Prestifilippo, M., Sanchez, R. Z., Sannino, A., & Stelitano, D. (2020). Multi-sensor analysis of a weak and long-lasting volcanic plume emission. In *Remote Sensing* (Vol. 12, Issue 23, pp. 1–19). <https://doi.org/10.3390/rs12233866>
96. Sellitto, P., Salerno, G., La Spina, A., Caltabiano, T., Scollo, S., Boselli, A., Leto, G., Zanmar Sanchez, R., Crumeyrolle, S., Hanoune, B., & Briole, P. (2020). Small-scale volcanic aerosols variability, processes



- and direct radiative impact at Mount Etna during the EPL-RADIO campaigns. In *Scientific Reports* (Vol. 10, Issue 1). <https://doi.org/10.1038/s41598-020-71635-1>
97. Selva, J., Bonadonna, C., Branca, S., De Astis, G., Gambino, S., Paonita, A., Pistolesi, M., Ricci, T., Sulpizio, R., Tibaldi, A., & Ricciardi, A. (2020). Multiple hazards and paths to eruptions: A review of the volcanic system of Vulcano (Aeolian Islands, Italy). In *Earth-Science Reviews* (Vol. 207). <https://doi.org/10.1016/j.earscirev.2020.103186>
 98. Sparacino, F., Palano, M., Peláez, J. A., & Fernández, J. (2020). Geodetic deformation versus seismic crustal moment-rates: Insights from the Ibero-Maghrebian region. In *Remote Sensing* (Vol. 12, Issue 6). <https://doi.org/10.3390/rs12060952>
 99. Tadini, A., Roche, O., Samaniego, P., Guillin, A., Azzaoui, N., Gouhier, M., de' Michieli Vitturi, M., Pardini, F., Eychenne, J., Bernard, B., Hidalgo, S., & Le Pennec, J. L. (2020). Quantifying the Uncertainty of a Coupled Plume and Tephra Dispersal Model: PLUME-MOM/HYSPLIT Simulations Applied to Andean Volcanoes. In *Journal of Geophysical Research: Solid Earth* (Vol. 125, Issue 2). <https://doi.org/10.1029/2019JB018390>
 100. Terray, L., Gauthier, P. J., Breton, V., Giammanco, S., Sigmarsson, O., Salerno, G., Caltabiano, T., & Falvard, A. (2020). Radon Activity in Volcanic Gases of Mt. Etna by Passive Dosimetry. In *Journal of Geophysical Research: Solid Earth* (Vol. 125, Issue 9). <https://doi.org/10.1029/2019JB019149>
 101. Tusa, G., Langer, H., & Azzaro, R. (2020). Localizing ground-motion models in volcanic terranes: Shallow events at mt. etna, Italy, revisited. In *Bulletin of the Seismological Society of America* (Vol. 110, Issue 6, pp. 2843–2861). <https://doi.org/10.1785/0120190325>
 102. Vajda, P., Zahorec, P., Papčo, J., Carbone, D., Greco, F., & Cantarero, M. (2020). Topographically Predicted Vertical Gravity Gradient Field and Its Applicability in 3D and 4D Microgravimetry: Etna (Italy) Case Study. In *Pure and Applied Geophysics* (Vol. 177, Issue 7, pp. 3315–3333). <https://doi.org/10.1007/s00024-020-02435-x>
 103. Varnam, M., Burton, M., Esse, B., Kazahaya, R., Salerno, G., Caltabiano, T., & Ibarra, M. (2020). Quantifying Light Dilution in Ultraviolet Spectroscopic Measurements of Volcanic SO₂ Using Dual-Band Modeling. In *Frontiers in Earth Science* (Vol. 8). <https://doi.org/10.3389/feart.2020.528753>
 104. Villani, F., Pucci, S., Azzaro, R., Civico, R., Cinti, F. R., Pizzimenti, L., Tarabusi, G., Branca, S., Brunori, C. A., Caciagli, M., Cantarero, M., Cucci, L., D'Amico, S., De Beni, E., De Martini, P. M., Mariucci, M. T., Messina, A., Montone, P., Nappi, R., ... Venuti, A. (2020). Surface ruptures database related to the 26 December 2018, MW 4.9 Mt. Etna earthquake, southern Italy. In *Scientific Data* (Vol. 7, Issue 1). <https://doi.org/10.1038/s41597-020-0383-0>
 105. Watson, L. M., Johnson, J. B., Sciotto, M., & Cannata, A. (2020). Changes in Crater Geometry Revealed by Inversion of Harmonic Infrasound Observations: 24 December 2018 Eruption of Mount Etna, Italy. In *Geophysical Research Letters* (Vol. 47, Issue 19). <https://doi.org/10.1029/2020GL088077>
 106. White, J. C., Neave, D. A., Rotolo, S. G., & Parker, D. F. (2020). Geochemical constraints on basalt petrogenesis in the Strait of Sicily Rift Zone (Italy): Insights into the importance of short lengthscale mantle heterogeneity. In *Chemical Geology* (Vol. 545). <https://doi.org/10.1016/j.chemgeo.2020.119650>
 107. Wood, K., Liu, E. J., Richardson, T., Clarke, R., Freer, J., Aiuppa, A., Giudice, G., Bitetto, M., Mulina, K., & Itikarai, I. (2020). BVLOS UAS Operations in Highly-Turbulent Volcanic Plumes. In *Frontiers in Robotics and AI* (Vol. 7). <https://doi.org/10.3389/frobt.2020.549716>



Rapporti tecnici

1. Sicali A, Cappuccio P, Amantia A - Tecnologie dei regolatori solari standalone per il monitoraggio magnetico dell'Etna e dell'isola di Stromboli., 414, 15 pp.
2. Sicali A, Consoli S, Amantia A, Cappuccio P - Evoluzione del sistema di compressione ACE e applicazione ai dati magnetici. 422, 83 pp.
3. Di Prima S, Rossi M - La rete a microonde per la trasmissione dati dell'INGV – OE Sezione di Catania. 423, 18 pp.