



Pubblicazioni 2019

1. Alparone, S., Bonforte, A., Gambino, S., Guglielmino, F., Obrizzo, F., Velardita, R., 2019. Dynamics of Vulcano Island (Tyrrhenian Sea, Italy) investigated by long-term (40 years) geophysical data. *Earth-Science Reviews* 190, 521–535. <https://doi.org/10.1016/j.earscirev.2019.01.002>
2. Azzaro, R., D'Amico, S., Langer, H., Meroni, F., Squarcina, T., Tusa, G., Tuvè, T., Rupakhety, R., 2019. From seismic input to damage scenario: An example for the pilot area of mt. etna volcano (Italy) in the knowrisk project. *Geotechnical, Geological and Earthquake Engineering* 47, 277–292. https://doi.org/10.1007/978-3-319-78187-7_21
3. Barreca, G., Scarfì, L., Gross, F., Monaco, C., De Guidi, G., 2019. Fault pattern and seismotectonic potential at the south-western edge of the Ionian Subduction system (southern Italy): New field and geophysical constraints. *Tectonophysics* 761, 31–45. <https://doi.org/10.1016/j.tecto.2019.04.020>
4. Battaglia, A., de Moor, J.M., Aiuppa, A., Avaró, G., Bakkar, H., Bitetto, M., Mora Fernández, M.M., Kelly, P., Giudice, G., Delle Donne, D., Villalobos, H., 2019. Insights into the mechanisms of phreatic eruptions from continuous high frequency volcanic gas monitoring: Rincón de la Vieja Volcano, Costa Rica. *Frontiers in Earth Science* 6. <https://doi.org/10.3389/feart.2018.00247>
5. Bilotta, G., Cappello, A., Hérault, A., Del Negro, C., 2019. Influence of topographic data uncertainties and model resolution on the numerical simulation of lava flows. *Environmental Modelling and Software* 112, 1–15. <https://doi.org/10.1016/j.envsoft.2018.11.001>
6. Bisson, M., Spinetti, C., Neri, M., Stefanelli, P., Basile, G., Panebianco, M., 2019. Mt. Etna eastern flank flooding hazard: A first evaluation based on GIS approach. *Rendiconti Online Società Geologica Italiana* 48, 69–75. <https://doi.org/10.3301/ROL.2019.40>
7. Bonforte, A., Guglielmino, F., Puglisi, G., 2019. Large dyke intrusion and small eruption: The December 24, 2018 Mt. Etna eruption imaged by Sentinel-1 data. *Terra Nova* 31, 405–412. <https://doi.org/10.1111/ter.12403>
8. Boumediene, F., Vasta, R., Rascunà, C., Lo Fermo, S., Volanti, P., Marziolo, R., Patti, F., Ferrante, M., Preux, P.M., Marin, B., Giammanco, S., Zappia, M., Nicoletti, A., 2019. Amyotrophic lateral sclerosis spatial epidemiology in the Mount Etna region, Italy. *European Journal of Neurology* 26, e90–e91. <https://doi.org/10.1111/ene.14011>
9. Branca, S., Abate, T., 2019. Current knowledge of Etna's flank eruptions (Italy) occurring over the past 2500 years. From the iconographies of the XVII century to modern geological cartography. *Journal of Volcanology and Geothermal Research* 385, 159–178. <https://doi.org/10.1016/j.jvolgeores.2017.11.004>
10. Branca, S., D'Ajello Caracciolo, F., Malaguti, A.B., Speranza, F., 2019. Constraining age and volume of lava flow invasions of the Alcantara valley, Etna volcano (Italy). New insights from paleomagnetic dating and 3D magnetic modeling. *Journal of Volcanology and Geothermal Research* 374, 13–25. <https://doi.org/10.1016/j.jvolgeores.2019.02.009>
11. Brancato, A., Buscema, P.M., Massini, G., Gresta, S., Salerno, G., Della Torre, F., 2019. K-CM application for supervised pattern recognition at Mt. Etna: an innovative tool to forecast flank eruptive activity. *Bulletin of Volcanology* 81. <https://doi.org/10.1007/s00445-019-1299-4>
12. Buscarino, A., Corradino, C., Fortuna, L., Frasca, M., 2019. Turing patterns via pinning control in the simplest memristive cellular nonlinear networks. *Chaos* 29. <https://doi.org/10.1063/1.5115131>



13. Calvari, S., 2019. Understanding Basaltic Lava Flow Morphologies and Structures for Hazard Assessment. *Annals of Geophysics* 62. <https://doi.org/10.4401/ag-8048>
14. Calvari, S., Bonaccorso, A., Oppenheimer, C., Spampinato, L., 2019. Editorial: Exploring Volcanic Paroxysmal Explosive Activity From Magma Source to Ground and Atmosphere. *Frontiers in Earth Science* 7. <https://doi.org/10.3389/feart.2019.00227>
15. Calvari, S., Negro, C.D., Harris, A., n.d. Preface Special Issue: MeMoVolc.
16. Cannata, A., Cannavò, F., Moschella, S., Gresta, S., Spina, L., 2019. Exploring the link between microseism and sea ice in Antarctica by using machine learning. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-49586-z>
17. Cannavò, F., 2019. A new user-friendly tool for rapid modelling of ground deformation. *Computers and Geosciences* 128, 60–69. <https://doi.org/10.1016/j.cageo.2019.04.002>
18. Cannavò, F., Aranzulla, M., Scollo, S., Puglisi, G., 2019. A New GNSS-Based Approach for Volcanic Crater Location during Lava Fountains. *IEEE Geoscience and Remote Sensing Letters* 16, 697–701. <https://doi.org/10.1109/LGRS.2018.2882418>
19. Cannavò, F., Sciotto, M., Cannata, A., Di Grazia, G., 2019. An Integrated Geophysical Approach to Track Magma Intrusion: The 2018 Christmas Eve Eruption at Mount Etna. *Geophysical Research Letters* 46, 8009–8017. <https://doi.org/10.1029/2019GL083120>
20. Cappello, A., Ganci, G., Bilotta, G., Corradino, C., Hérault, A., Del Negro, C., 2019a. Changing Eruptive Styles at the South-East Crater of Mount Etna: Implications for Assessing Lava Flow Hazards. *Frontiers in Earth Science* 7. <https://doi.org/10.3389/feart.2019.00213>
21. Cappello, A., Ganci, G., Bilotta, G., Hérault, A., Zago, V., Negro, C.D., 2019b. Satellite-driven modeling approach for monitoring lava flow hazards during the 2017 etna eruption. *Annals of Geophysics* 62. <https://doi.org/10.4401/ag-7792>
22. Carbone, D., Cannavò, F., Greco, F., Reineman, R., Warburton, R.J., 2019. The Benefits of Using a Network of Superconducting Gravimeters to Monitor and Study Active Volcanoes. *Journal of Geophysical Research: Solid Earth* 124, 4035–4050. <https://doi.org/10.1029/2018JB017204>
23. Cavallaro, D., Coltelli, M., 2019. The Graham Volcanic Field Offshore Southwestern Sicily (Italy) Revealed by High-Resolution Seafloor Mapping and ROV Images. *Frontiers in Earth Science* 7. <https://doi.org/10.3389/feart.2019.00311>
24. Cintorriano, A.A., Palano, M., Viccaro, M., 2019. Magmatic and tectonic sources at Vulcano (Aeolian Islands, Southern Italy): A geodetic model based on two decades of GPS observations. *Journal of Volcanology and Geothermal Research* 388. <https://doi.org/10.1016/j.jvolgeores.2019.106689>
25. Coltelli, M., Patanè, D., Cavallaro, D., Carlino, M.F., Barberi, G., Scarfi, L., Rapisarda, S., D'Anna, G., Fertitta, G., Costanza, A., Cocchi, L., Muccini, F., Stefanelli, P., Mazarini, F., Favalli, M., Nannipieri, L., n.d. The EARTHCRUISERS project (EARTH CRUst Imagery for investigating SEismicity, volcanism and marine natural Resources in the Sicilian offshore).
26. Corradino, C., Ganci, G., Bilotta, G., Cappello, A., Buscarino, A., Negro, C.D., Fortuna, L., 2019a. Improving cloud detection with imperfect satellite images using an artificial neural network approach. *Conference Proceedings - IEEE International Conference on Systems, Man and Cybernetics 2019-October*, 1443–1447. <https://doi.org/10.1109/SMC.2019.8914547>
27. Corradino, C., Ganci, G., Bilotta, G., Cappello, A., Del Negro, C., Fortuna, L., 2019b. Smart decision support systems for volcanic applications. *Energies* 12. <https://doi.org/10.3390/en12071216>
28. Corradino, C., Ganci, G., Cappello, A., Bilotta, G., Hérault, A., Del Negro, C., 2019c. Mapping recent lava flows at Mount Etna using multispectral Sentinel-2 images and machine learning techniques. *Remote Sensing* 11. <https://doi.org/10.3390/rs11161916>
29. Cuffaro, M., Billi, A., Bigi, S., Bosman, A., Caruso, C.G., Conti, A., Corbo, A., Costanza, A., D'Anna, G., Doglioni, C., Esestime, P., Fertitta, G., Gasperini, L., Italiano, F., Lazzaro, G., Ligi, M., Longo, M., Martorelli, E., Petracchini, L., Petricca, P., Polonia, A., Sgroi, T., 2019. The Bortoluzzi Mud Volcano (Ionian Sea, Italy) and its potential for tracking the seismic cycle of active faults. *Solid Earth* 10, 741–763. <https://doi.org/10.5194/se-10-741-2019>



30. Currenti, G., Bonaccorso, A., 2019. Cyclic magma recharge pulses detected by high-precision strainmeter data: the case of 2017 inter-eruptive activity at Etna volcano. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-44066-w>
31. D'aleo, R., Bitetto, M., Donne, D.D., Coltelli, M., Coppola, D., Kilbride, B.M., Pecora, E., Ripepe, M., Salem, L.C., Tamburello, G., Aiuppa, A., 2019. Understanding the SO₂ degassing budget of Mt Etna's paroxysms: First clues from the december 2015 sequence. *Frontiers in Earth Science* 6. <https://doi.org/10.3389/feart.2018.00239>
32. D'Alessandro, A., Greco, L., Scudero, S., Siino, M., Vitale, G., D'Anna, R., Gangi, F.D., Nicolosi, D., Passafiume, G., Speciale, S., Catania, M., Cosenza, P., Martin, L.F., Patanè, D., Martorana, R., Rao, S., Stramondo, S., n.d. Sviluppo di una stazione sismica low-cost basata su tecnologia MEMS.
33. De Angelis, S., Diaz-Moreno, A., Zuccarello, L., 2019. Recent developments and applications of acoustic infrasound to monitor volcanic emissions. *Remote Sensing* 11. <https://doi.org/10.3390/rs11111302>
34. De Beni, E., Cantarero, M., Messina, A., 2019. UAVs for volcano monitoring: A new approach applied on an active lava flow on Mt. Etna (Italy), during the 27 February–02 March 2017 eruption. *Journal of Volcanology and Geothermal Research* 369, 250–262. <https://doi.org/10.1016/j.jvolgeores.2018.12.001>
35. De Michele, M., Raucoules, D., Corradini, S., Merucci, L., Salerno, G., Sellitto, P., Carboni, E., 2019. Volcanic cloud top height estimation using the plume elevation model procedure applied to orthorectified Landsat 8 data. test case: 26 October 2013 Mt. Etna eruption. *Remote Sensing* 11. <https://doi.org/10.3390/rs11070785>
36. De Novellis, V., Atzori, S., De Luca, C., Manzo, M., Valerio, E., Bonano, M., Cardaci, C., Castaldo, R., Di Bucci, D., Manunta, M., Onorato, G., Pepe, S., Solaro, G., Tizzani, P., Zinno, I., Neri, M., Lanari, R., Casu, F., 2019. DInSAR Analysis and Analytical Modeling of Mount Etna Displacements: The December 2018 Volcano-Tectonic Crisis. *Geophysical Research Letters* 46, 5817–5827. <https://doi.org/10.1029/2019GL082467>
37. De Plaen, R.S.M., Cannata, A., Cannavo', F., Caudron, C., Lecocq, T., Francis, O., 2019. Temporal changes of seismic velocity caused by volcanic activity at Mt. Etna revealed by the autocorrelation of ambient seismic noise. *Frontiers in Earth Science* 6. <https://doi.org/10.3389/feart.2018.00251>
38. Del Pezzo, E., Giampiccolo, E., Tuvé, T., Di Grazia, G., Gresta, S., Ibàñez, J.M., 2019. Study of the regional pattern of intrinsic and scattering seismic attenuation in Eastern Sicily (Italy) from local earthquakes. *Geophysical Journal International* 218, 1456–1468. <https://doi.org/10.1093/gji/ggz208>
39. Delle Donne, D., Aiuppa, A., Bitetto, M., D'Aleo, R., Coltelli, M., Coppola, D., Pecora, E., Ripepe, M., Tamburello, G., 2019. Changes in SO₂ Flux regime at mt. etna captured by automatically processed ultraviolet camera data. *Remote Sensing* 11. <https://doi.org/10.3390/rs11101201>
40. Di Renzo, V., Corsaro, R.A., Miraglia, L., Pompilio, M., Civetta, L., 2019. Long and short-term magma differentiation at Mt. Etna as revealed by Sr-Nd isotopes and geochemical data. *Earth-Science Reviews* 190, 112–130. <https://doi.org/10.1016/j.earscirev.2018.12.008>
41. Diaz-Moreno, A., Iezzi, A.M., Lamb, O.D., Fee, D., Kim, K., Zuccarello, L., De Angelis, S., 2019. Volume Flow Rate Estimation for Small Explosions at Mt. Etna, Italy, From Acoustic Waveform Inversion. *Geophysical Research Letters* 46, 11071–11079. <https://doi.org/10.1029/2019GL084598>
42. Falsaperla, S., Reitano, D., Musacchio, G., Merenda, R., n.d. Can Building Seismic Resiliency Benefit from Emergent Technologies? Case Studies from the Projects KnowRISK and 3DTeLC.
43. Fazio, M., Alparone, S., Benson, P.M., Cannata, A., Vinciguerra, S., 2019. Genesis and mechanisms controlling tornillo seismo-volcanic events in volcanic areas. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-43842-y>
44. Federico, C., Liuzzo, M., Giudice, G., Capasso, G., Pisciotta, A., Pedone, M., 2019. Variations in CO₂ emissions at a mud volcano at the southern base of Mt Etna: are they due to volcanic activity



- interference or a geyser-like mechanism? *Bulletin of Volcanology* 81. <https://doi.org/10.1007/s00445-018-1261-x>
45. Fertitta, G., Costanza, A., D'anna, G., Patanè, D., 2019. The earth lab 5s (ETL3D/5s) seismic sensor. design and test. *Annals of Geophysics* 62. <https://doi.org/10.4401/ag-7857>
 46. Firetto Carlino, M., Cavallaro, D., Coltelli, M., Cocchi, L., Zgur, F., Patanè, D., 2019. Time and space scattered volcanism of Mt. Etna driven by strike-slip tectonics. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-48550-1>
 47. Fischer, T.P., Arellano, S., Carn, S., Aiuppa, A., Galle, B., Allard, P., Lopez, T., Shinohara, H., Kelly, P., Werner, C., Cardellini, C., Chiodini, G., 2019. The emissions of CO₂ and other volatiles from the world's subaerial volcanoes. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-54682-1>
 48. Fittipaldi, M., Urbani, S., Neri, M., Trippanera, D., Acocella, V., 2019. Understanding the origin of magmatic necks: insights from Mt. Etna volcano (Italy) and analogue models. *Bulletin of Volcanology* 81. <https://doi.org/10.1007/s00445-019-1273-1>
 49. Gagliano, A.L., Calabrese, S., Daskalopoulou, K., Cabassi, J., Capecchiacci, F., Tassi, F., Bellomo, S., Brusca, L., Bonsignore, M., Milazzo, S., Giudice, G., Li Vigni, L., Parello, F., D'Alessandro, W., 2019. Degassing and Cycling of Mercury at Nisyros Volcano (Greece). *Geofluids* 2019. <https://doi.org/10.1155/2019/4783514>
 50. Gambino, S., Aloisi, M., Di Grazia, G., Falzone, G., Ferro, A., Laudani, G., 2019. Ground Deformation Detected by Permanent Tiltmeters on Mt. Etna Summit: The August 23-26, 2018, Strombolian and Effusive Activity Case. *International Journal of Geophysics* 2019. <https://doi.org/10.1155/2019/1909087>
 51. Ganci, G., Cappello, A., Bilotta, G., Corradino, C., Negro, C.D., 2019a. Satellite-based reconstruction of the volcanic deposits during the december 2015 etna eruption. *Data* 4. <https://doi.org/10.3390/data4030120>
 52. Ganci, G., Cappello, A., Zago, V., Bilotta, G., Hérault, A., Del Negro, C., 2019b. 3D lava flow mapping of the 17–25 may 2016 ETNA eruption using tri-stereo optical satellite data. *Annals of Geophysics* 62. <https://doi.org/10.4401/ag-7875>
 53. Giudice, G., Sciuto, A., Meli, A., D'Arrigo, G., Longo, D., 2019. SO₂ Monitoring with Solid State-Based UV Spectroscopy Compact Apparatus. *IEEE Sensors Journal* 19, 7089–7094. <https://doi.org/10.1109/JSEN.2019.2913221>
 54. Giudicepietro, F., Calvari, S., Alparone, S., Bianco, F., Bonaccorso, A., Bruno, V., Caputo, T., Cristaldi, A., D'Auria, L., Cesare, W.D., Lieto, B.D., Esposito, A.M., Gambino, S., Inguaggiato, S., Macedonio, G., Martini, M., Mattia, M., Orazi, M., Paonita, A., Peluso, R., Privitera, E., Romano, P., Scarpato, G., Tramelli, A., Vita, F., 2019. Integration of ground-based remote-sensing and in situ multidisciplinary monitoring data to analyze the eruptive activity of stromboli volcano in 2017-2018. *Remote Sensing* 11. <https://doi.org/10.3390/rs11151813>
 55. Grünthal, G., Tertulliani, A., Azzaro, R., Buffarini, G., Musson, R.M.W., Schwarz, J., Stucchi, M., n.d. *Scala Macrosismica Europea 1998 = European Macroseismic Scale 1998. EMS-98.*
 56. Hajian, A., Cannavò, F., Greco, F., Nunnari, G., 2019. Classification of Mount Etna (Italy) volcanic activity by machine learning approaches. *Annals of Geophysics* 62. <https://doi.org/10.4401/ag-8049>
 57. Huret, N., Segonne, C., Payan, S., Salerno, G., Catoire, V., Ferrec, Y., Roberts, T., Fossi, A.P., Rodriguez, D., Croizé, L., Chevrier, S., Langlois, S., La Spina, A., Caltabiano, T., 2019. Infrared hyperspectral and ultraviolet remote measurements of volcanic gas plume at MT etna during IMAGETNA campaign. *Remote Sensing* 11. <https://doi.org/10.3390/rs11101175>
 58. Italiano, F., Bonfanti, P., Maugeri, S.R., 2019. Evidence of Tectonic Control on the Geochemical Features of the Volatiles Vented along the Nebrodi-Peloritani Mts (Southern Apennine Chain, Italy). *Geofluids* 2019, 17–17. <https://doi.org/10.1155/2019/6250393>
 59. Kozłowska, B., Walencik-Łata, A., Giammanco, S., Immè, G., Catalano, R., Mangano, G., 2019. Radioactivity content in volcanic rocks and radionuclides transfer from rocks to groundwater at



- Mt. Etna volcano. *Annals of Geophysics* 62. <https://doi.org/10.4401/ag-7549>
60. Lages, J., Chacón, Z., Burbano, V., Meza, L., Arellano, S., Liuzzo, M., Giudice, G., Aiuppa, A., Bitetto, M., López, C., 2019. Volcanic Gas Emissions Along the Colombian Arc Segment of the Northern Volcanic Zone (CAS-NVZ): Implications for volcano monitoring and volatile budget of the Andean Volcanic Belt. *Geochemistry, Geophysics, Geosystems* 20, 5057–5081. <https://doi.org/10.1029/2019GC008573>
61. Lev, E., Ruprecht, P., Oppenheimer, C., Peters, N., Patrick, M., Hernández, P.A., Spampinato, L., Marlow, J., 2019. A global synthesis of lava lake dynamics. *Journal of Volcanology and Geothermal Research* 381, 16–31. <https://doi.org/10.1016/j.jvolgeores.2019.04.010>
62. Liu, E.J., Wood, K., Mason, E., Edmonds, M., Aiuppa, A., Giudice, G., Bitetto, M., Francofonte, V., Burrow, S., Richardson, T., Watson, M., Pering, T.D., Wilkes, T.C., McGonigle, A.J.S., Velasquez, G., Melgarejo, C., Bucarey, C., 2019. Dynamics of Outgassing and Plume Transport Revealed by Proximal Unmanned Aerial System (UAS) Measurements at Volcán Villarrica, Chile. *Geochemistry, Geophysics, Geosystems* 20, 730–750. <https://doi.org/10.1029/2018GC007692>
63. Locati, M., Camassi, R.D., Rovida, A.N., Ercolani, E., Bernardini, F.M.A., Castelli, V., Caracciolo, C.H., Tertulliani, A., Rossi, A., Azzaro, R., D’Amico, S., Antonucci, A., n.d. Database Macrosismico Italiano DBMI15, versione 2.0.
64. Locati, M., Camassi, R.D., Rovida, A.N., Ercolani, E., Bernardini, F.M.A., Castelli, V., Caracciolo, C.H., Tertulliani, A., Rossi, A., Azzaro, R., D’Amico, S., Antonucci, A., n.d. Italian Macroseismic Database DBMI15, version 2.0.
65. MacCioni, E., Giacomelli, U., Carbone, D., Gambino, S., Orazi, M., Peluso, R., Sorrentino, F., 2019. Shallow bore-hole three-axial fiber Bragg grating strain sensor for Etna volcano monitoring. *Review of Scientific Instruments* 90. <https://doi.org/10.1063/1.5086516>
66. Manni, M., Coltelli, M., Martinelli, M.C., 2019. Volcanic Events That Have Marked the Anthropogenic History of the Aeolian Islands. *Annals of Geophysics* 62, 1–16. <https://doi.org/10.4401/AG-7716>
67. Marchese, F., Genzano, N., Neri, M., Falconieri, A., Mazzeo, G., Pergola, N., 2019. A multi-channel algorithm for mapping volcanic thermal anomalies by means of sentinel-2 MSI and Landsat-8 OLI data. *Remote Sensing* 11. <https://doi.org/10.3390/rs11232876>
68. Minissale, A., Donato, A., Procesi, M., Pizzino, L., Giammanco, S., 2019. Systematic review of geochemical data from thermal springs, gas vents and fumaroles of Southern Italy for geothermal favourability mapping. *Earth-Science Reviews* 188, 514–535. <https://doi.org/10.1016/j.earscirev.2018.09.008>
69. Musacchio, G., Falsaperla, S., Solarino, S., Piangiamore, G.L., Crescimbene, M., Pino, N.A., Eva, E., Reitano, D., Manzoli, F., Fabbri, M., Butturi, M., Accardo, M., 2019. KnowRISK on seismic risk communication: The set-up of a participatory strategy- Italy case study. *Geotechnical, Geological and Earthquake Engineering* 47, 413–427. https://doi.org/10.1007/978-3-319-78187-7_31
70. Neri, M., Giammanco, S., Leonardi, A., 2019. Preliminary indoor radon measurements near faults crossing urban areas of Mt. Etna volcano (Italy). *Frontiers in Public Health* 7. <https://doi.org/10.3389/fpubh.2019.00105>
71. Osman, S., Rossi, E., Bonadonna, C., Frischknecht, C., Andronico, D., Cioni, R., Scollo, S., 2019. Exposure-based risk assessment and emergency management associated with the fallout of large clasts at Mount Etna. *Natural Hazards and Earth System Sciences* 19, 589–610. <https://doi.org/10.5194/nhess-19-589-2019>
72. Palaseanu-Lovejoy, M., Bisson, M., Spinetti, C., Buongiorno, M.F., Alexandrov, O., Cecere, T., 2019. High-resolution and accurate topography reconstruction of Mount Etna from pleiades satellite data. *Remote Sensing* 11. <https://doi.org/10.3390/rs11242983>
73. Panzera, F., D’Amico, S., Colica, E., Viccaro, M., 2019. Ambient vibration measurements to support morphometric analysis of a pyroclastic cone. *Bulletin of Volcanology* 81. <https://doi.org/10.1007/s00445-019-1338-1>
74. Paratore, M., D’Ambrosio, M., Bruni, R., Saccorotti, G., 2019. Misure sismometriche di noise



- ambientale e di una esplosione sotterranea alla miniera di Sos Enattos (Nuoro): analisi preliminari. *Rapporti Tecnici INGV* 411, 1–18.
75. Pianezze, J., Tulet, P., Foucart, B., Leriche, M., Liuzzo, M., Salerno, G., Colomb, A., Freney, E., Sellegri, K., 2019. Volcanic Plume Aging During Passive Degassing and Low Eruptive Events of Etna and Stromboli Volcanoes. *Journal of Geophysical Research: Atmospheres* 124, 11389–11405. <https://doi.org/10.1029/2019JD031122>
 76. Plank, S., Marchese, F., Filizzola, C., Pergola, N., Neri, M., Nolde, M., Martinis, S., 2019. The July/August 2019 Lava Flows at the Sciara del Fuoco, stromboli-analysis from multi-sensor infrared satellite imagery. *Remote Sensing* 11. <https://doi.org/10.3390/rs11232879>
 77. Polacci, M., Andronico, D., de' Michieli Vitturi, M., Taddeucci, J., Cristaldi, A., 2019. Mechanisms of Ash Generation at Basaltic Volcanoes: The Case of Mount Etna, Italy. *Frontiers in Earth Science* 7. <https://doi.org/10.3389/feart.2019.00193>
 78. Poret, M., Finizola, A., Ricci, T., Ricciardi, G.P., Linde, N., Mauri, G., Barde-Cabusson, S., Guichet, X., Baron, L., Shakas, A., Gouhier, M., Levieux, G., Morin, J., Roulleau, E., Sortino, F., Vassallo, R., Di Vito, M.A., Orsi, G., 2019. The buried caldera boundary of the Vesuvius 1631 eruption revealed by present-day soil CO₂ concentration. *Journal of Volcanology and Geothermal Research* 375, 43–56. <https://doi.org/10.1016/j.jvolgeores.2019.01.029>
 79. Potter, N.J., Carey, R.J., Andronico, D., Costantini, L., 2019. Eruption dynamics of the 23 February 2013 event at Mt. Etna. *Journal of Volcanology and Geothermal Research* 384, 241–250. <https://doi.org/10.1016/j.jvolgeores.2019.07.021>
 80. Queiße, M., Burton, M., Theys, N., Pardini, F., Salerno, G., Caltabiano, T., Varnam, M., Esse, B., Kazahaya, R., 2019. TROPOMI enables high resolution SO₂ flux observations from Mt. Etna, Italy, and beyond. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-018-37807-w>
 81. Rainville, N., Palo, S., Larson, K.M., Mattia, M., 2019. Design and preliminary testing of the volcanic ash plume Receiver Network. *Journal of Atmospheric and Oceanic Technology* 36, 353–367. <https://doi.org/10.1175/JTECH-D-18-0177.1>
 82. Reitano, D., Falsaperla, S., Becciani, U., Vitello, F., Caruso, S., Platania, P.R., Cassaro, P., Merenda, R., Tibaldi, A., Bonali, F., Whitworth, M., n.d. Improving natural risk management by means of virtual surveys through hazardous volcanic contexts by using Augmented and Virtual Reality.
 83. Reitano, D., Falsaperla, S., Musacchio, G., Merenda, R., 2019. Awareness on seismic risk: How can augmented reality help? *Geotechnical, Geological and Earthquake Engineering* 47, 485–492. https://doi.org/10.1007/978-3-319-78187-7_36
 84. Ristuccia, G.M., Bonfanti, P., Giammanco, S., Stella, G., 2019. Assessment of the geochemical potential in a complex tectonic environment of south-east sicily: New insights from hydrochemical data. *Frontiers in Earth Science* 7, 13–13. <https://doi.org/10.3389/feart.2019.00088>
 85. Rogic, N., Cappello, A., Ferrucci, F., 2019a. Role of emissivity in lava flow “Distance-to-Run” estimates from satellite-based volcano monitoring. *Remote Sensing* 11. <https://doi.org/10.3390/rs11060662>
 86. Rogic, N., Cappello, A., Ganci, G., Maturilli, A., Rymer, H., Blake, S., Ferrucci, F., 2019b. Spaceborne EO and a combination of inverse and forward modelling for monitoring lava flow advance. *Remote Sensing* 11. <https://doi.org/10.3390/rs11243032>
 87. Rossi, A., Tertulliani, A., Azzaro, R., Graziani, L., Roviada, A., Maramai, A., Pessina, V., Hailemichael, S., Buffarini, G., Bernardini, F., Camassi, R., Del Mese, S., Ercolani, E., Fodarella, A., Locati, M., Martini, G., Paciello, A., Paolini, S., Arcoraci, L., Castellano, C., Verrubbi, V., Stucchi, M., 2019. The 2016–2017 earthquake sequence in Central Italy: macroseismic survey and damage scenario through the EMS-98 intensity assessment. *Bulletin of Earthquake Engineering* 17, 2407–2431. <https://doi.org/10.1007/s10518-019-00556-w>
 88. Salem, L.C., Edmonds, M., Corsaro, R.A., MacLennan, J., 2019. Carbon Dioxide in Geochemically Heterogeneous Melt Inclusions From Mount Etna, Italy. *Geochemistry, Geophysics, Geosystems* 20, 3150–3169. <https://doi.org/10.1029/2018GC008027>



89. Scarfi, L., Barberi, G., 2019. New insights on the tectonic structure of the Southern Central Andes – Western Argentina – from seismic tomography 1, 1–4.
90. Sciotto, M., Cannata, A., Prestifilippo, M., Scollo, S., Fee, D., Privitera, E., 2019. Unravelling the links between seismo-acoustic signals and eruptive parameters: Etna lava fountain case study. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-52576-w>
91. Sciuto, A., Meli, A., Calcagno, L., Franco, S.D., Mazzillo, M., Franzo, G., Albergo, S., Tricomi, A., Longo, D., Giudice, G., D'Arrigo, G., n.d. Large area SiC-UV photodiode for spectroscopy portable system.
92. Scollo, S., Prestifilippo, M., Bonadonna, C., Cioni, R., Corradini, S., Degruyter, W., Rossi, E., Silvestri, M., Biale, E., Carparelli, G., Cassisi, C., Merucci, L., Musacchio, M., Pecora, E., 2019. Near-real-time tephra fallout assessment at Mt. Etna, Italy. *Remote Sensing* 11. <https://doi.org/10.3390/rs11242987>
93. Sgroi, T., Grazia, G.D., Favali, P., 2019. Volcanic tremor of Mt. Etna (Italy) recorded by nemo-sn1 seafloor observatory: A new perspective on volcanic eruptions monitoring. *Geosciences (Switzerland)* 9. <https://doi.org/10.3390/geosciences9030115>
94. Spampinato, S., Langer, H., Messina, A., Falsaperla, S., 2019a. Short-term detection of volcanic unrest at Mt. Etna by means of a multi-station warning system. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-42930-3>
95. Spampinato, S., Langer, H., Messina, A., Falsaperla, S., 2019b. Short-term detection of volcanic unrest at Mt. Etna by means of a multi-station warning system. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-42930-3>
96. Speranza, F., Pellegrino, A.G., Zhang, B., Maniscalco, R., Chen, S., Hernandez-Moreno, C., 2019. Paleomagnetic Evidence for 25–15 Ma Crust Fragmentation of North Indochina (23–26°N): Consequence of Collision With Greater India NE Corner? *Geochemistry, Geophysics, Geosystems* 20, 5425–5448. <https://doi.org/10.1029/2019GC008308>
97. Spina, L., Cannata, A., Morgavi, D., Perugini, D., 2019. Degassing behaviour at basaltic volcanoes: New insights from experimental investigations of different conduit geometry and magma viscosity. *Earth-Science Reviews* 192, 317–336. <https://doi.org/10.1016/j.earscirev.2019.03.010>
98. Tamburello, G., Caliro, S., Chiodini, G., De Martino, P., Avino, R., Minopoli, C., Carandente, A., Rouwet, D., Aiuppa, A., Costa, A., Bitetto, M., Giudice, G., Francofonte, V., Ricci, T., Sciarra, A., Bagnato, E., Capecchiacci, F., 2019. Escalating CO₂ degassing at the Pisciarelli fumarolic system, and implications for the ongoing Campi Flegrei unrest. *Journal of Volcanology and Geothermal Research* 384, 151–157. <https://doi.org/10.1016/j.jvolgeores.2019.07.005>
99. Tamburello, Giancarlo, Moune, S., Allard, P., Venugopal, S., Robert, V., Rosas-Carbajal, M., Deroussi, S., Kitou, G.T., Didier, T., Komorowski, J.C., Beauducel, F., De Chabaliere, J.B., Le Marchand, A., Le Friant, A., Bonifacie, M., Dessert, C., Moretti, R., 2019. Spatio-temporal relationships between fumarolic activity, hydrothermal fluid circulation and geophysical signals at an arc volcano in degassing unrest: La soufrière of Guadeloupe (French West Indies). *Geosciences (Switzerland)* 9. <https://doi.org/10.3390/geosciences9110480>
100. Viccaro, M., Giuffrida, M., Zuccarello, F., Scandura, M., Palano, M., Gresta, S., 2019. Violent paroxysmal activity drives self-feeding magma replenishment at Mt. Etna. *Scientific Reports* 9. <https://doi.org/10.1038/s41598-019-43211-9>
101. 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., Nave, R., Pantosti, D., Ricci, T., Sapia, V., Smedile, A., Vallone, R., Venuti, A., 2020. Surface ruptures database related to the 26 December 2018, MW 4.9 Mt. Etna earthquake, southern Italy. *Scientific Data* 7. <https://doi.org/10.1038/s41597-020-0383-0>
102. Werner, C., Fischer, T.P., Aiuppa, A., Edmonds, M., Cardellini, C., Carn, S., Chiodini, G., Cottrell, E., Burton, M., Shinohara, H., Allard, P., 2019. Carbon Dioxide Emissions from Subaerial Volcanic



- Regions. Deep Carbon 188–236. <https://doi.org/10.1017/9781108677950.008>
103. Zago, V., Bilotta, G., Cappello, A., Dalrymple, R.A., Fortuna, L., Ganci, G., Hérault, A., Negro, C.D., 2019. Preliminary validation of lava benchmark tests on the gpusph particle engine. *Annals of Geophysics* 62. <https://doi.org/10.4401/ag-7870>

Rapporti tecnici

1. Paratore M, D'Ambrosio M, Bruni R, Saccorotti G - Misure sismometriche di noise ambientale e di una esplosione sotterranea alla miniera di Sos Enattos (Nuoro): analisi preliminari, Rapporti tecnici INGV, 411, 14 pp.