

PERSONAL INFORMATION

Mauro Caccavale



Consiglio Nazionale delle Ricerche, Istituto di Scienze Marine, Calata Porta di Massa, Napoli, Italia

+390815423814 +39 333 2665334

Mauro.caccavale@cnr.it

Orcid: 000-0003-4389-9370
Scopus Author ID: 35306513200
WoS ID: AAc-7797-2019

Sex M | Date of birth 02/10/1979 | Nationality Italian

Enterprise	University	EPR
<input type="checkbox"/> Management Level	<input type="checkbox"/> Full professor	<input type="checkbox"/> Research Director and 1st level Technologist / First Researcher and 2nd level Technologist
<input type="checkbox"/> Mid-Management Level	<input type="checkbox"/> Associate Professor	<input checked="" type="checkbox"/> Level III Researcher and Technologist
<input type="checkbox"/> Employee / worker level	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator	<input type="checkbox"/> Researcher and Technologist of IV, V, VI and VII level / Technical collaborator

WORK EXPERIENCE

2023-now Coordinator of IT-IOOS marine data hub
2013-now Researcher, Consiglio Nazionale delle Ricerche
2019-now Research Associate, "INGV – Osservatorio Vesuviano"
2019-now Contract Professor, "University of Naples Federico II"
2018-2019 Contract Researcher, Physics dep. of "University of Naples Federico II"
2017 Contract Professor, "University of Naples Federico II"
2016-2017 Contract Researcher, INGV – Osservatorio Vesuviano
2013-2016 Contract Researcher, Royal Netherlands Meteorological Institute (KNMI – NL)
2012-2013 Researcher, Royal Netherlands Meteorological Institute (KNMI – NL)

EDUCATION AND TRAINING

2012 **Ph.D in Seismic Hazard** at "University of Naples Federico II"
2011 20th Summer School of Parallel Computing, CINECA, Bologna, Italy
2010 Urban Seismology - European Seismological Commission, Montpellier – France
2009 ShakeMap® course 31st Course of the International School of Geophysics – Erice - Italy
2008 **Degree in Physics** at "University of Naples Federico II"

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s) English (B2 level)

Scientific skills Dr. Caccavale holds a degree in Physics and a Ph.D. in Seismic Hazard at the Naples University "Federico II". He is researcher at CNR since 2013, working in many national and international projects. He is strongly involved in research and computational activity related with the hazard analysis and the development of mitigation strategies for different sites in the Netherlands, South Korea and for the volcanic area of Campi Flegrei in The Campania region. He is involved in the development of a new probabilistic hazard methodology related with the earthquake-induced landslide and of a new tomography algorithm for geothermal areas. He has collaborated with different national laboratory to test an innovative optic fibres sensor and to develop new software tool for the geothermal survey. His scientific interests spread over several topics, mainly regarding the seismic hazard mitigation, seismic technology, seismic data analysis and software development. He has a strong experience as software developer and scientific data management, including production, analysis and dissemination through integrated and interoperable frameworks.

Presently, Dr. Caccavale is the IT manager of the CNR-ISMAR-Napoli. In the framework of the ITINERIS project, he is leading the implementation of the computing and storage infrastructure (Marine Data Hub) of the Italian Integrated Ocean Observing System.

Computing skills OSX, Windows, Linux, Fortran, Python, MATLAB, SAC, Bash sh/zsh

Project 2023- present PNRR – ITINERIS – Responsible WP5.2 Marina data hub Implementation
2022-2023 – BlueNIGHTs - HORIZON-MSCA-2022-CITIZENS-01-01 — European Researchers' Night 2022-2023
2022 Copernicus Marine – Digital operations of Dissemination Units
2020-2023 PON "Marine Hazard- Sviluppo di tecnologie innovative per l'identificazione, monitoraggio, remediation di sorgenti di contaminazione naturale ed antropica
2019-now POR "GEOGRID-Tecnologie e sistemi innovativi per l'utilizzo sostenibile dell'energia geotermica"
2012-2014 PON "MONICA MONitoraggio Innovativo per le Coste e l'Ambiente marino"
2010-2013 GEISER – Geothermal Engineereing integrating mitigationof induced seismicity in reservoirs
2009-2010 SPEED – Hazard and damage scenarios in volcanic area – INGV-DPC 2007-2009
2008-2009 RELUIS – DPC 2005-2008

ADDITIONAL INFORMATION

Publications Adil M., Inserra G., Buono A., Grieco G., Migliaccio M., Schroeder K., Caccavale M.
A Geophysical Model Function-Based Approach to Estimate the Wind Speed in the Gulf of Salerno Using C-Band SAR Data
(2024) DOI: 10.1109/MetroSea62823.2024.10765738

Aiello G., Caccavale M.
Marine Geohazards of the Bay of Naples (Southern Tyrrhenian Sea, Italy): A Review Integrating Morpho-Bathymetric and Seismo-Stratigraphic Analysis

(2024) DOI: 10.3390/geohazards5020021

Inserra G., Grieco G., Muhammad A., Caccavale M., Migliaccio M., Schroeder K.
On the Fine Scale Estimation of Coastal Wind Speed in the Gulf of Salerno Using the Azimuth
Cut-Off Approach

(2024) DOI: 10.1109/MetroSea62823.2024.10765747

Aiello, G.; Caccavale, M. (2023). Marine Geohazards of the Bay of Naples (Southern Tyrrhenian Sea, Italy): A Review Integrating Morpho-Bathymetric and Seismo-Stratigraphic Analysis. *GeoHazards* 2024, 5, 393–414. <https://doi.org/10.3390/geohazards5020021>

Gemma Aiello, Caccavale M (2023). The Coastal Areas of the Bay of Naples: The Sedimentary Dynamics and Geological Evolution of the Naples Canyons. *GEOSCIENCES*, vol. 13, ISSN: 2076-3263, doi: <https://doi.org/10.3390/geosciences13080226>

Aiello G, Caccavale M (2023). Quaternary Evolution of Ischia: A Review of Volcanology and Geology. *APPLIED SCIENCES*, vol. 13, ISSN: 2076-3417, doi: 10.3390/app13063554

Aiello G., Caccavale M.
Quaternary Evolution of Ischia: A Review of Volcanology and Geology (2023)
Applied Sciences (Switzerland)
DOI: 10.3390/app13063554

Aiello G., Caccavale M.
New Seismoacoustic Data on Shallow Gas in Holocene Marine Shelf Sediments, Offshore from the Cilento Promontory (Southern Tyrrhenian Sea, Italy) (2022)
Journal of Marine Science and Engineering
DOI: 10.3390/jmse10121992

Caccavale M., Quinci E., Passaro S.
Creation of a literature database for the localization, cartography and evaluation of deposits by GSI; 2022
IEEE International Workshop on Metrology for the Sea; Learning to Measure Sea Health Parameters, MetroSea 2022
DOI: 10.1109/MetroSea55331.2022.9950868

Aiello, G., Caccavale, M.
From siliciclastic to bioclastic deposits in the gulf of naples: New highlights from offshore ischia and procida–pozzuoli based on sedimentological and seismo-stratigraphic data. (2021)
DOI: 10.3390/quat4040044

Aiello, G., Caccavale, M.
The depositional environments in the cilento offshore (Southern tyrrhenian sea, italy) based on marine geological data. (2021)
DOI: 10.3390/jmse9101083

Molisso, F., Caccavale, M., Capodanno, M., Di Gregorio, C., Gilardi, M., Guarino, A., Oliveri, E., Tamburrino, S., Sacchi, M.
Sedimentological analysis of marine deposits off the Bagnoli-Coroglio Site of National Interest (SNI), Pozzuoli (Napoli) Bay. (2020)
DOI: 10.1080/02757540.2020.1747447

Sacchi, M., Matano, F., Molisso, F., Passaro, S., Caccavale, M., Di Martino, G., Guarino, A., Innangi, S., Tamburrino, S., Tonielli, R., Vallefuoco, M.
Geological framework of the Bagnoli-Coroglio coastal zone and continental shelf, Pozzuoli (Napoli) Bay. (2020)
DOI: 10.1080/02757540.2020.1735374

Matano, F., Caccavale, M., Esposito, G., Fortelli, A., Scepi, G., Spano, M., Sacchi, M.
Integrated dataset of deformation measurements in fractured volcanic tuff and meteorological data (Coroglio coastal cliff, Naples, Italy. (2020)
DOI: 10.5194/essd-12-321-2020

Sacchi, M., Passaro, S., Molisso, F., Matano, F., Steinmann, L., Spiess, V., Pepe, F., Corradino, M., Caccavale, M., Tamburrino, S., Esposito, G., Vallefucio, M., Ventura, G. The holocene marine record of unrest, volcanism, and hydrothermal activity of campi flegrei and somma-vesuvius. (2020)
DOI: 10.1016/B978-0-12-816454-9.00016-X

Caccavale, M., Sacchi, M., Spiga, E., Porfido, S. The 1976 Guatemala earthquake: ESI scale and probabilistic/deterministic seismic hazard analysis approaches. (2019)
DOI: 10.3390/geosciences9090403

Sacchi, M., Caccavale, M., Corradino, M., Esposito, G., Ferranti, L., Hámori, Z., Horváth, F., Insinga, D., Marino, C., Matano, F., Molisso, F., Natale, J., Passaro, S., Pepe, F., Tóth, T. The use and beauty of ultra-high-resolution seismic reflection imaging in late quaternary marine volcanoclastic settings, bay of Naples, Italy [Ultra nagy felbontású reflexió szejmikus képalakítás haszná és szépségei: Késő-negyvedidőszaki tengeri vulkanoklasztos felépítmények a Nápolyi-Öbölben] (2019)
DOI: 10.23928/foldt.kozl.2019.149.4.371

Caccavale, M., Matano, F., Sacchi, M. An integrated approach to earthquake-induced landslide hazard zoning based on probabilistic seismic scenario for Phlegrean Islands (Ischia, Procida and Vivara), Italy. (2017)
DOI: 10.1016/j.geomorph.2017.07.010

Minardo, A., Caccavale, M., Coscetta, A., Esposito, G., Matano, F., Sacchi, M., Somma, R., Zeni, G., Zeni, L. Monitoring test of crack opening in volcanic tuff (Coroglio Cliff, Italy) using distributed optical fiber sensor. (2016)

Sacchi, M., Matano, F., Caccavale, M., Esposito, G., Caputo, T., Somma, R., Troise, C., De Natale, G., Minardo, A., Zeni, L., Zeni, G. Application of an integrated monitoring system for rock failures in the Coroglio tuff cliff (Naples, Italy). (2016)
DOI: 10.1201/b21520-221

Carlino, S., Mirabile, M., Troise, C., Sacchi, M., Zeni, L., Minardo, A., Caccavale, M., Darányi, V., De Natale, G. Distributed-temperature-sensing using optical methods: A first application in the offshore area of campi Flegrei Caldera (southern Italy) for Volcano monitoring. (2016)
DOI: 10.3390/rs8080674

Matano, F., Caccavale, M., Esposito, G., Grimaldi, G.M., Minardo, A., Scepi, G., Zeni, G., Zeni, L., Caputo, T., Somma, R., Troise, C., De Natale, G., Sacchi, M. An integrated approach for rock slope failure monitoring: The case study of Coroglio tuff cliff (Naples, Italy) - Preliminary results. (2016)

Iuliano, S., Matano, F., Caccavale, M., Sacchi, M. Annual rates of ground deformation (1993–2010) at Campi Flegrei, Italy, revealed by Persistent Scatterer Pair (PSP) – SAR interferometry. (2015)
DOI: 10.1080/01431161.2015.1111541

Matano, F., Pignalosa, A., Marino, E., Esposito, G., Caccavale, M., Caputo, T., Sacchi, M., Somma, R., Troise, C., De Natale, G. Laser scanning application for geostructural analysis of tuffaceous coastal cliffs: The case of Punta Epitaffio, Pozzuoli Bay, Italy. (2015)
DOI: 10.5721/EuJRS20154834

Somma, R., Caputo, T., Carlino, S., Troise, C., De Natale, G., Matano, F., Esposito, G., Caccavale, M., Iuliano, S., Mazzola, S., Molisso, F., Sacchi, M., Marino, E. Application of laser scanning for monitoring coastal cliff instability in the pozzuoli bay, coroglio site, posillipo hill, Naples. (2015)
DOI: 10.1007/978-3-319-09048-1133

Kraaijpoel, D.A., Caccavale, M., Van Eck, T., Dost, B.
Probabilistic seismic hazard analysis for induced seismicity. (2014)

Convertito, V., Caccavale, M., de Matteis, R., Emolo, A., Wald, D., Zollo, A.
Fault extent estimation for near-real-time ground-shaking map computation purposes. (2012)
DOI: 10.1785/0120100306

Convertito, V., De Matteis, R., Cantore, L., Zollo, A., Iannaccone, G., Caccavale, M.
Rapid estimation of ground-shaking maps for seismic emergency management in the
Campania Region of southern Italy. (2010)
DOI: 10.1007/s11069-009-9359-2

Bibliographic metrics

Scopus: H-Index=8
Google Scholar: H-Index=9

Napoli, 10 maggio 2025