

Short C.V.

CURRENT POSITION

March 2019-today: Associate Professor, GEO/11: Applied Geophysics, University of Catania

Dec. 2019: Achievement ASN-full professor GEO/11

Feb. 2017-today: National University Council advisor (04 area)

Nov.1990 – February 2019: Assistant Prof.

EDUCATION AND TRAINING

July 1982: MsC in Geological Sciences, University of Catania;

June 1987: Professional qualification in Geology

INTERNATIONAL SCHOLARSHIP AWARDS AND FELLOWSHIP

Apr. 1984 – March 1985: Fellowship program "Seismic prospecting of Etna", Institute de Physique du Globe in Paris and the PIRSEV-CNRS for the analysis and processing of seismic data acquired from satellite networks at the University of Grenoble

RESEARCH ACTIVITY AND PUBLICATIONS

Applied Geophysical surveys for the characterization of cultural heritage and its subsoil;
Evaluation of the local seismic response in different structural and geological conditions;
Passive seismic single station surveys for the experimental dynamical characterization of strategic buildings;

Seismic microzonation;

The scientific production includes about 200 papers on national and international journals and conferences; 7 monographs/book chapter; more than 100 scientific and technical reports.

MAIN PROJECTS

Scientific Responsible of several research projects MIUR and C.N.R.:

1991: Physical phenomena precursors of eruptions and geophysical surveillance of active volcanoes;

1992: Determination of three-dimensional structures with seismic tomography methodologies

1993: Study on the identification of seismogenic structures on Etna;

1994: Study of parameters and focal mechanisms, attenuation and site response in the seismogenic areas of eastern Sicily;

1995: Study of focal parameters and microzonation of the hyblean area;

1995: Recent volcanism of mantle origin in insular Italy: Etna and Ustica

1996: Study of volcanic tremor and low-frequency events in the Etna area;

1997: Evaluation of site responses in eastern Sicily;

1998: Determination of the regional and local earthquakes parameters (eastern Sicily).

1999: Characterization of the mantle springs and of the evolutionary processes of sub-alkaline and alkaline magmas that feed volcanic activity in the Etna region and in Ustica.

2002: Seismic microzonation of areas in south-eastern Sicily;

2003: Potential and limits of geophysical methods applied to cultural heritage;

2005: Application of geophysical methodologies aimed at the characterization of cultural heritage;

2007: Geological, geomorphological and geophysical characteristics of areas including geosites and cultural heritage in the Mediterranean basin;

2011: Enhancement and protection of environmental and cultural heritage in eastern Sicily through geophysical, geological and geomorphological investigations;

2012: First level seismic microzonation studies of municipalities located in eastern Sicily;

2012: Active and recent geodynamics of the Calabrian Arch and of the accretionary complex in the Ionian Sea

2017-2018: Multidisciplinary analysis for the assessment of landslide risk in sites of cultural significance and strategic infrastructures;

Scientific participation in international and national research projects

- 2007: "COSMO SkyMED AO: Spaceborn SAR imagery and environmental data fusion for the dynamical evaluation of land regions susceptibility to fire
- 2012-2013 DPC INGV V3_6: Multi-disciplinary analysis of the relationships between tectonic structures and volcanic activity (Finanziato dal Dipartimento Protezione Civile);
- 2014 FIR: codice progetto 2C7D79, "Deformation analysis along Etna's active tectonic structures: geodetic monitoring, geophysical and geotechnical and biological investigations with the use of lichens and bryophytes";
- 1.4.2019-31.03.2022: Member of RU-UNICT in the Italy-Tunisia cross-border cooperation: "Méthodologies Innovantes et Actions de Renforcement pour protéger l'Environnement Méditerranéen" - MIAREM -

Assignments and contracts

- 2005: Scientific coordinator of the UniCt working group of an agreement with the Superintendence of Archaeological and Cultural Heritage of Catania for a study concerning an "Urgent Intervention and Conservative Restoration in the Archaeological Area of the Roman Amphitheater of Catania";
- 2006: Member of the University of Catania working Group within an agreement with the Civil Protection of Eastern Sicily, for a geophysical, geological and geotechnical study focused on seismic microzonation of the areas affected by the seismic events of October, November and December 2002 falling within the municipalities of Aci Catena, Acireale, Santa Venerina, Zafferana Etnea, Milo, Sant'Alfio, Giarre, Linguaglossa and Piedimonte Etneo (Catania);
- 2012: Scientific coordinator of the UniCt working Group within an agreement between the Civil Protection Eastern Sicily University of Catania for a geophysical study, focused on the first level seismic microzonation of the Municipalities of: Catania, Nicolosi, Trecastagni, Aci S. Antonio, Aci Castello, Tremestieri Etneo, Fiumefreddo, Mascali, Valverde, San Gregorio di Catania;
- since 2015: President of the Technical Commission set up by the University of Catania and the Municipality of San Gregorio di Catania, within an agreement for studies aimed to seismic and geodetic characterization of the area affected by the fault crossing the city centre
- 2015 - 2016: Scientific Responsible of the agreement with the Catania Civil Engineering Office for the execution of geodetic and seismic surveys in the Acitrezza area;
- 2015-2019: Scientific Head of the agreement between the University of Catania and the Department of Biological, Geological and Environmental Sciences - Section of Earth Sciences, for the study of the vulnerability of the building heritage owned by the University of Catania.
- 2016: UniCt Manager for the geophysical surveys of the U.O Marche 2 belonging to the National Center for Seismic Microzonation.
- 2017: Scientific Responsible of the agreement between the E.R.S.U. (Regional institution for the Right to University Education and the University of Catania, Department of Biological, Geological and Environmental Sciences - Section Earth Sciences - for "Study for the characterization of the subsoil, through 3D electro-tomographic investigations and transects seismic-tomographic, aimed at defining electrical interfaces, physical-resistive anomalies as well as elastic variations, attributable to the presence of physical inhomogeneities under the structure (Student House, located in the area of the University Citadel of Catania ";
- 2018 - 2020: Member of the Regional Public Works Commission - Sicily Region;
- since 2019: Scientific Responsible of an agreement between University of Catania, Department of Biological, Geological and Environmental Sciences - Section Earth Sciences and the Superintendence of Cultural Heritage of Ragusa;
- since 2020: Scientific Responsible of an agreement between University of Catania, Department of Biological, Geological and Environmental Sciences - Section Earth Sciences and the Superintendence of Cultural Heritage of Syracuse;
- 2021: Scientific Responsible of an agreement between University of Catania, Department of Biological, Geological and Environmental Sciences - Section Earth Sciences and the Municipalities of Ragusa.

Teaching and Seminar Activity

- July 2003, invited speaker for give a lecture about the methodologies applied to Cultural Heritage (Course of Geoarcheologia, Arts Faculty of the University of Messina,

June 2004, lectures about the "Seismic response and local effects" at the "Disaster Manager" Master, University of Catania,

October 2004, lectures about the "Geophysical methodologies and surveys applied to Cultural Heritage" at the Specialization School "Le Scienze della Terra e i Beni Culturali: aspetti relativi alla conoscenza, alla conservazione ed al restauro" organized in co-operation with the Sicilian Regional Association of Geologists,

June 2004, lectures about the "Seismic response and local effects" at the "Disaster Manager" Master, University of Catania

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Affiliations, Reviews, Organization

Member of the GNGTS (National Group of Solid Earth Geophysics); IAVCEI (International Association of Volcanology and Chemistry of the Earth's Interior); American Geophysical Union.

From 2000 to today: reviewer and consultant, in the Scientific Committee of the specialist journal "Geologists" published by the Regional Order of Geologists of Sicily.

From 1998 to today: reviewer for the journals: Environmental Geology; International Journal of Architectural Heritage; Journal of Applied Geophysics; Environmental Earth Science; Bulletin of Engineering Geology and the Environment; Bulletin of Volcanology; Journal of Cultural Heritage, Survey in Geophysics, Pure and Applied Geophysics;.

He has supervised more than 190 graduation thesis, 3 master thesis and 5 PhD thesis.