europass Curriculum vitae

PERSONAL INFORMATION

Michela Ravanelli

michela.ravanelli@uniroma1.it

https://michelaravanelli.github.io/

https://www.linkedin.com/in/michela-ravanelli/

ORCID 0000-0001-9788-7434

WORK EXPERIENCE

Academic positions

01/09/2023–31/12/2025 — **AXA Research Fund & IOC-UNESCO PostDoc Fellowship on Coastal Livelihoods within UN Ocean Decade framework**

Organization: Sapienza University of Rome, Rome, Italy

Project: *ALTRUIST (totAL variomeTry foR tsUnamI hazard eStimaTion).*

Main activities:
- Simultaneous analysis of GNSS co-seismic displacements and ionospheric perturbations
- Development of an interactive front-end dashboard for real-time geospatial data visualization and monitoring

01/12/2021 – 31/08/2023 — **CNES PostDoc in Solid Earth, Geodesy and Cartography - Institut de Physique du Globe de Paris (IPGP)**

Organization: Université Paris Cité, Paris, France

Project: *Earthquake and Tsunami Risk Estimation by Ionospheric Sounding.*

Main activities:
- Analysis of volcanic-induced ionospheric perturbations
- Analysis of Geo Big Data time series (GNSS-TEC ionospheric time series)

01/03/2021–30/11/2021 — **PostDoc at Geodesy and Geomatics Division**

Organization: Sapienza University of Rome, Rome, Italy

Project: *GNSS Seismology through the Total Variometric Approach methodology within the Horizon 2020 GATHERS project.*

Main activities:
- Development of a real-time methodology to detect ground motions and displacements and ionospheric TEC perturbation through GNSS observations

03/06/2017–31/07/2017 — **Summer Scholarship at the National Laboratories of Frascati (INFN-LNF)**

Organization: Italian Institute of Nuclear Physics (INFN), Frascati, Italy

Project: *Activity of thermal and optical characterization of retro-reflectors within the laboratory of Satellite/Lunar/GNSS laser ranging/altimetry and Cubesat/microsat Characterization Facilities.*

Main activities:
- Laboratory analyses to test thehermal and optical properties of retro-reflectors

Visiting PhD researcher

12/02/2021 – 12/03/2021 — **Observatoire Sismologique et Volcanique de la Guadeloupe**

Organization: IPGP-Université Paris Cité,Gourbeyre, Guadeloupe

Description: *Preliminary visit to assess the condition of existing infrastructure for testing a pilot tsunami early warning system based on GNSS ground motion and TEC data within the GNSS network of the Observatory.*

20/01/2020 – 13/03/2020 & 05/10/2020 – 20/11/2020

Planetary and Space Sciences Section of Institut de Physique du Globe de Paris (IPGP)

Organization: Université Paris Cité, Paris, France

Description: *Investigation into the new challenges of real-time GNSS ionospheric seismology, such as developing an innovative methodology to determine the height of the ionospheric layer.*

15/07/2019 – 19/12/2019:

Ionospheric and Atmospheric Remote Sensing Section

Organization: NASA Jet Propulsion Laboratory, Pasadena, California, USA

Description: *Analysis of ionospheric disturbances induced by the Illapel earthquake (Chile, 2015) and the Ridgecrest seismic sequence (California, 2019).*

EDUCATION AND TRAINING

01/11/2017–14/05/2021

PhD in Infrastructure and Transport - Curriculum Infrastructure, Transport Systems and Geomatics

Organization: Sapienza University of Rome, Italy

Thesis: An innovative approach for real-time GNSS Ionospheric Seismology: assessment, potentialities, applications and issues

Additional title: Doctor Europaeus

01/01/2015 –24/01/2017

M.Sc. in Environmental Engineering

Organization: Sapienza University of Rome, Italy

Thesis: The VARION approach for real time detection of earthquake induced ionospheric disturbances:benefits,applications and open problems

Grade: 110/110 summa cum laude

01/10/2011–22/12/2014

B.Sc. in Environmental Engineering

Organization: Sapienza University of Rome, Italy

Thesis: Nanoparticelle di Ferro zero valente per la decontaminazione di terreni da cromo e atrazina: Potenzialitá ed eventuali rischi

Grade: 110/110 summa cum laude

PERSONAL SKILLS

Mother tongue: Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
French	C2	C2	C2	C2	C2
	Diplôme Approfondi de Langue Française (DALF) C2				
English	C1	C2	C1	C1	C2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

Digital competences

Programming: Python (SciPy, NumPy, matplotlib, seaborn, pandas, scikit-learn, OpenCV), JavaScript, MATLAB, LATEX

Databases: mySQL, MongoDB

Cloud Computing: Google Earth Engine (JS API), Google Cloud Platform

Web Development: HTML, CSS, JavaScript, Leaflet

Commercial and open source geospatial software: QGIS

Version Control: GitHub

GEO BIG DATA AND CLOUD COMPUTING EXPERTISE

GNSS-based Monitoring	Extensive experience in the use of GNSS for variometric analysis, positioning, geodesy, ionospheric perturbation detection and natural hazard monitoring (earthquakes, volcanic eruptions, and tsunamis)
Cloud Computing for Geosciences	Skilled in leveraging cloud platforms (Google Earth Engine, Google Cloud Platform) for large-scale data handling, processing, and visualization
Statistical and AI/ML Methods	Application and development of advanced statistical techniques, machine learning, and deep learning approaches for geophysical data analysis and event detection.
Software Development and Coding	Strong programming background with original code development (e.g., contribution to VARION algorithm design and implemenation) in Python and MATLAB for GNSS processing, TEC analysis, spectral methods, and real-time data pipelines.

AWARDS

2024	**Best Oral Presentation** at 2024 GeoAI workshop - Trento (Italy)
2023	**Young Scientist Award** at 2023 URSI General Assembly, Sapporo (Japan)
2022	AUTeC prize for the best PhD thesis (XXXIII cycle) in Geodesy and Geomatics, Italian University Association of Topography and Cartography, Genova, Italy
2021	Copernicus Prize Italy of the Copernicus Masters ESA (European Space Agency) - ASI (Italian Space Agency), Winner as part of the GENUINE team
2020	**2nd place at Farming by Satellite Prize**, European GNSS Agency (GSA, now EUSPA), as part of the GENUINE team
2017	**Young Author Award**, Italian Society for Photogrammetry and Topography (SIFET), Ragusa (Italy)
2017	**Excellent Student Award**, a.y. 2015/2016, Sapienza University of Rome. Reserved to the 2.5% best Sapienza students of all disciplines

ACKNOWLEDGEMENTS AND HONORS FOR RESEARCH ACTIVITIES

2025	**Italian qualification for Associate Professor in 08/A4 section (Geomatics/Geodesy)**
2024	**French qualification for Associate Professor in CNU sections 35, 36, 37, 60**
2020	Selected for Regularization Methods for Machine Learning course, University of Genova (Virtual)
2019–2021	Selected for Google Geo For Good Summit (2019, 2020, 2021)
2019	Selected for Google Get Ahead Program (Virtual)
2019–2020	Nominated "Subject Expert" (Cultore della materia), DICEA – Sapienza University of Rome, Positioning and Geomatics courses (ICAR/06 – Topography and Cartography)
2018	Selected for ESA Academy Earth Observation Satellite System Design Training course, ESA-ESOC, Belgium
2017	Honours Programme – M.Sc. in Environmental Engineering (a.y. 2015/2016), Sapienza University of Rome

SCIENTIFIC ENGAGEMENTS

2025-present	**Co-Chair of the Topic Group on AI for Geodetic Enhancements to Tsunami Monitoring and Detection**, United Nation International Telecommunication Union (ITU)
2024-present	**Member of EGU Geodesy Division Early Career Scientists**
2022- present	Associate Member of the International GNSS Service (IGS)

International Association of Geodesy (IAG)

2024-present	**Chair of the Joint Study Group T.49 High-resolution Probing of the Troposphere and Ionosphere** of the Inter-Commission Committee on Theory (ICCT)-IAG
	Member of the Joint Study Group T.48 Theoretical foundations of Machine & Deep Learning in Geodesy of the Inter-Commission Committee on Theory (ICCT)-IAG
2024-present	Member of the IAG Early Career Scientist Representatives
2024-present	Member of the GNSS-enhanced Tsunami Early Warning Systems (GeTEWS) for Oceania, Global Geodetic Observing System (GGOS)

FUNDING

2023-present AXA Research Fund e Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO)
Sapienza University of Rome
One of the 8 global winners of the joint postdoc by the AXA Research Fund and IOC-UNESCO on Coastal Livelihood at Sapienza University of Rome, Italy.
Total funded budget: **€125,000**
Project:*ALTRUIST (totAL variomeTry foR tsUnamI hazard eStimaTion).Principal Investigator.*

2025 Cassini Senior Programme 2025
France Embassy in Italy Cassini Program aims to enable researchers, and professors at Italian universities to establish or develop scientific relationships with French universities and research centers through the organization of scientific events.
Total funded budget: **€1,000**.
Principal Investigator.

2018 Avvio alla Ricerca
Competitive grant for young researchers of Sapienza University of Rome
Total funded budget: **€1,000**.
Project: Geostationary satellites as a strategic tool for real-time ionospheric monitoring. Principal Investigator.

TEACHING EXPERIENCE

2023-2024 Hunting tsunamis and earthquakes with GNSS
Sapienza School of Advanced Studies (SSAS), Sapienza University of Rome
Level M1, 24 Hours, 3 ECTS

2017-2021 Geomatics and Territorial Information Systems, *Sapienza* University of Rome
Level M1, 30 Hours, 3 ECTS

2018-2019 Numerical Analysis, *Sapienza* University of Rome
Level L2, 30 Hours, 3 ECTS

2017-2021 Topography and Positioning, *Sapienza* University of Rome
Level L3, 35 Hours

SUPERVISING ACTIVITIES

PhD

2021-2025 PhD co-supervisor (50%) Federica Fuso, Data Science PhD (XXXVII cycle) at Sapienza University of Rome Supervisor: Mattia Crespi
Thesis: Advancing GNSS Ionospheric Seismologyfor Tsunami Early Warning Systems: Small-Scale Event Detection and Data-Driven Enhancements.

2022-present PhD co-supervisor (25%) Federico Ferrara, Italian National PhD Program in Space Sciences and Technologies (XXXVIII cycle) of University of Trento. Supervisor: Alessandro Bonforte
Thesis: The coupling processes of geospheres induced by volcanic activity (from lithosphere to the upper atmosphere).

Msc Thesis

Michela Lombardi, *Enhancing GNSS Remote Sensing for Natural Hazard Monitoring: TEC-Based Ionospheric Disturbance Detection with Machine Learning* at *Sapienza University of Rome* a.y 2024/2025.

Rachele Fratini, *Variometric approach to real-time slant tropospheric delay estimation: first investigations and issues* at *Sapienza University of Rome* a.y 2022/2023.

Alessandra Maria De Pace, *Variometric approach applied to the troposphere: from an hourly to a real-time knowledge of the tropospheric delay: problems and first investigations* at *Sapienza University of Rome* a.y 2022/2023

Stefano Mattoccia, *A method for indoor mapping based on open-source software: a case study of the Faculty of Arts and Philosophy* at *Sapienza University of Rome* a.y 2018/2019

Paola De Gasperis, *Crowdsourced Mapping of Disused Buildings in Tor Sapienza District (Rome): Opportunities, Preliminary Steps and Problems* at *Sapienza University of Rome* a.y 2017/2018

Bsc Thesis

Claudia Berardocco, *A free and open-source approach for indoor mapping of the Faculty of Engineering at Sapienza University* at *Sapienza University of Rome* a.y 2018/2019

Chiara Pecci, *An Open Source platform for indoor navigation at the ICI Faculty of Sapienza University of Rome: Methodologies, advancements, and challenges* at *Sapienza University of Rome* a.y 2017/2018

DISSEMINATION AND OUTREACH

2024-present EGU Geodesy Blog. Blog Editor

2025 Co-organizer of the *ECS dinner* and of *Women in Geodesy* social event at 2025 IAG Scientific Assembly in Rimini

2017-2019 Co-coordinator (50%) of 3 educational projects "Alternanza Scuola Lavoro", Sapienza University of Rome

Projects: Urban Surface Heat Island Analysis Using Google Earth Engine, Development of a Participatory Mapping Application for Abandoned Buildings in the Outskirts of Rome, Generation of an open-source database of classroom interiors

OTHER ACTIVITIES AND SKILLS

Peer Review Activities Journals (non-exhaustive list): Nature Scientific Reports, Journal of Geodesy, GPS Solutions, JGR Space Physics, JGR Machine Learning and Computation, JGR Solid Earth, IEEE Transactions on Geoscience and Remote Sensing, IEEE Geoscience and Remote Sensing Letters, Advances in Space Research, Annales Geophysicae (Copernicus Publications), Space Weather, Remote Sensing

Conference Organizations Member of the Local Organizing Committee of the IX Hotine-Marussi Symposium of ICCT-IAG Faculty of Civil and Industrial Engineering of Sapienza University of Rome June, 2018

PEER REVIEWED SCOPUS/WEB OF SCIENCE INDEXED JOURNALS

2025 Ferrara, F., **Ravanelli, M.**, Bonforte, A., Capparelli, V., Carbone, V., Scollo, S., et al., Ionospheric disturbances during the 4 December 2015 Mt. Etna eruption. Earth and Space Science, 12, e2025EA004214, Doi: 10.1029/2025EA004214 *in press*

2024 Fuso, F. & **Ravanelli, M.**, Probing the ionospheric effects of the 2020 Aegean Sea earthquake: Leveraging GNSS observations for tsunami early warning in the Mediterranean, Journal of Geophysical Research: Space Physics, 129, e2024JA032946, Doi: 10.1029/2024JA032946

2024 **Ravanelli, M.**; Constantinou, V.; Liu, H.; Bortnik, J., Exploring AI progress in GNSS remote sensing: A deep learning based framework for real-time detection of earthquake and tsunami induced ionospheric perturbations, Radio Science 59, Doi: 10.1029/2024RS008016

2024 Fuso, F.; Crocetti, L.; **Ravanelli, M.**; Soja, B. Machine learning-based detection of TEC signatures related to earthquakes and tsunamis: the 2015 Illapel case study GPS Solutions 28 3 106, Doi: 10.1007/s10291-024-01649-z

2024 Guerra, M.; Cesaroni, C.; **Ravanelli, M.**; Spogli, L. Travelling ionospheric disturbances detection: A statistical study of detrending techniques, induced period error and near real-time observables Journal of Space Weather and Space Climate 14 17, Doi: 10.1051/swsc/2024017

2023 **Ravanelli, M.**; Astafyeva, E.; Munaibari, E.; Rolland, L.; Mikesell, T. D. Ocean-ionosphere disturbances due to the 15 January 2022 Hunga-Tonga Hunga Ha'apai eruption Geophysical Research Letters 50 10 e2022GL101465, Doi: 10.1029/2022GL101465

2022 Meng, X.; **Ravanelli, M.**; Komjathy, A.; Verkhoglyadova, O. P. On the North-South Asymmetry of Co-Seismic Ionospheric Disturbances During the 16 September 2015 Illapel M8. 3 Earthquake Geophysical Research Letters 49 8 e2022GL098090, Doi: 10.1029/2022GL098090

2022 Astafyeva, E.; Maletckii, B.; Mikesell, T. D.; Munaibari, E.; **Ravanelli, M.**; Coïsson, P.; Manta, F.; Rolland, L. The 15 January 2022 Hunga Tonga eruption history as inferred from ionospheric observations Geophysical Research Letters 49 10 e2022GL098827, Doi: 10.1029/2022GL098827

2021 **Ravanelli, M.**; Occhipinti, G.; Savastano, G.; Komjathy, A.; Shume, E. B.; Crespi, M. GNSS total variometric approach: first demonstration of a tool for real-time tsunami genesis estimation Scientific reports 11 1 3114, Doi: 10.1038/s41598-021-82532-6

2019 Savastano, G.; Komjathy, A.; Shume, E.; Vergados, P.; **Ravanelli, M.**; Verkhoglyadova, O.; Meng, X.; Crespi, M. Advantages of geostationary satellites for ionospheric anomaly studies: Ionospheric plasma depletion following a rocket launch Remote Sensing 11 14 1734, Doi: 10.3390/rs11141734

2019 Fortunato, M.; **Ravanelli, M.**; Mazzoni, A. Real-time geophysical applications with Android GNSS raw measurements Remote Sensing 11 18 2113, Doi: 10.3390/rs11182113

2018 Fratarcangeli, F.; **Ravanelli, M.**; Mazzoni, A.; Colosimo, G.; Benedetti, E.; Branzanti, M.; Savastano, G.; Verkhoglyadova, O.; Komjathy, A.; Crespi, M. The variometric approach to real-time high-frequency geodesy Rendiconti Lincei. Scienze Fisiche e Naturali 29 95-108, Doi: 10.1007/s12210-018-0708-5

BOOK CHAPTERS

2024 Hohensinn, R.; Aichinger-Rosenberger, M.; Wareyka-Glaner, M.; **Ravanelli, M.** Natural hazard monitoring with global navigation satellite systems (GNSS) Space geodesy for environmental monitoring 1-123, Doi: 10.1016/bs.agph.2024.06.002

2020 Savastano, G.; **Ravanelli, M.** Real-time monitoring of ionospheric irregularities and tec perturbations Satellites Missions and Technologies for Geosciences, Doi: 10.5772/intechopen.90036

SCOPUS/ WEB OF SCIENCE INDEXED CONFERENCE PROCEEDINGS

2024 Fratini, R.; De Pace, A. M.; Fortunato, M.; **Ravanelli, M.**; Crespi, M.; Mazzoni, A.; GNSS VarioPy: A Comprehensive Tool for Enhancing Early-Warning Systems for Geophysical and Atmospheric Events Through GNSS Permanent Stations Networks Proceedings of the ION 2024 Pacific PNT Meeting (pp. 46-53), Doi: 10.33012/2024.19609

2023 Constantinou, V.; **Ravanelli, M.**; Liu, H.; Bortnik, J. Deep learning driven detection of tsunami related internal GravityWaves: a path towards open-ocean natural hazards detection Proceedings of the IEEE/CVF International Conference on Computer Vision 3748-3753, link

2023 Constantinou, V.; **Ravanelli, M.**; Liu, H.; Bortnik, J.; A Deep Learning Approach for Detection of Internal Gravity Waves in Earth's Ionosphere IGARSS 2023 - 2023 IEEE International Geoscience and Remote Sensing Symposium, Pasadena, CA, USA, 2023, pp. 1178-1181, Doi: 10.1109/IGARSS52108.2023.10282501

2020 **Ravanelli, M.**; Crespi, M.; Foster, J. Tids detection from ship-based GNSS receiver: First test on 2010 maule tsunami IGARSS 2020-2020 IEEE international geoscience and remote sensing symposium 6846-6849, Doi: 10.1109/IGARSS39084.2020.9324549

2020 Mascitelli, A.; **Ravanelli, M.**; Mattoccia, S.; Berardocco, C.; Mazzoni, A.; A complete fos approach for indoor crowdsourced mapping: Case study on Sapienza University of Rome faculties The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, 43, pp. 361-365, Doi: 10.5194/isprs-archives-XLIII-B4-2020-361-2020

2019 Meng, X.; Komjathy, A.; Verkhoglyadova, O. P.; Savastano, G.; Crespi, M.; **Ravanelli, M.** Modeling the near-field ionospheric disturbances during earthquakes Proceedings of the ION 2019 Pacific PNT Meeting, Honolulu, Hawaii, April 2019, pp. 854-861, Doi: 10.33012/2019.16844

INVITED PRESENTATIONS

Invited conference talks

2025 Leveraging AI in GNSS Remote Sensing: A Deep Learning Framework for Real-Time Detection of Ionospheric Perturbations triggered by earthquakes and tsunamis. Invited by Dr. Monique Kuglitsch, on behalf of ITU at the "Resilience to Natural Hazards through AI Solutions" Workshop, 8 May 2025, ESA ESRIN, Frascati, Italy

2024 An insight on Co-Seismic Ionospheric Disturbances: from first observations to new challenges Invited by Dr. Laura Sanchez, on behalf of GGOS (Global Geodetic Observing System) at the 2024 IAG GGOS Topical Meeting on the Atmosphere, 7-9 October 2024, Potsdam, Germany

2024 Artificial Intelligence in Geosciences Invited by AXA Research Fund/AXA Group Operations at the AXA Group Operations Conference: "100 Reasons to Love the Future - The AI Conference"

2023 The variometric approach for the monitoring of natural hazard-induced ionospheric perturbations Invited by Dr. Claudio Cesaroni on behalf of the conveners of session GHE01 Seismo Electromagnetic (Lithosphere-Atmosphere-Ionosphere Coupling) 2023 URSI General Assemble, Sapporo, Japan

2023 Total Variometric Approach, a real-time tool to support tsunami warning systems and to enhance natural hazard understanding Invited by Dr. Victor A. Huerfano of the Puerto Rico Seismic Network at the University of Puerto Rico at Mayagüez within the workshop on "Improving the Geodetic Component in Monitoring Agencies for the Earthquake and Tsunami Warning" organized by the Warning System for the Tsunami and other Coastal Hazards for the Caribbean and Adjacent Regions ICG

Invited seminars

2024 Beyond Boundaries: GNSS Geodesy and Remote Sensing for Comprehensive Analysis of Natural Hazards and Climate Change ENS, Paris

2023 Variometry for GNSS Ionospheric Seismology assessment, potentialities, applications and issues Invited by Paul Chambon at the GNSS & Positioning Working Group (Groupe de Travail GNSS & Positionnement) French National Council for Geolocated Information (Conseil national de l'information géolocalisée - CNIG)

2023 Total Variometric Approach, a real-time tool to support tsunami warning systems and to enhance natural hazard understanding Invited by Dr. Léo Martire, NASA Jet Propulsion Laboratory and IGS Central Bureau Deputy Director, within the International Committee on Global Navigation Satellite Systems (ICG) Disaster Risk Reduction (DRR) Task Force

2021 GNSS Total Variometric Approach: First Demonstration of a Tool for Real-Time Tsunami Genesis Estimation Invited by Dr. Attila Komjathy in the research meetings and seminars series of Section 335S at NASA Jet Propulsion Laboratory (NASA JPL 335S Seminars and Research Meetings).

2020 VARION: a closer (real-time) look at the ionosphere. Invited by Prof. James Foster at the Institute of Geodesy, University of Stuttgart as part of the Institute's seminar series

2019 Real-Time Geophysical Applications with Android GNSS Raw Measurements Invited by Dr. Olga Verkhoglyadova in the research meetings and seminars series of Section 335 at NASA Jet Propulsion Laboratory (SECTION 335 FORUM Presentation)

SELECTED CONFERENCE TALKS

2025 IAG Scientific Assembly 2025 Oral presentation: *"Exploring ALTRUIST: harnessing GNSS towards the enhancement of Tsunami Early Warning Systems"* 01-205 September 2025, Rimini (Italy)

2025 ESA Living Planet Symposium Oral presentation: *"Enhancing Rapid Tsunami Hazard Estimation: the ALTRUIST Project"* 23-27 June 2025, Vienna (Austria)

2025 ITU workshop on "Resilience to Natural Hazards through AI Solutions". Oral presentation: *"Leveraging AI in GNSS Remote Sensing: A Deep Learning Framework for Real-Time Detection of Ionospheric Perturbations triggered by earthquakes and tsunamis"* 8–9 May 2025, European Space Agency (ESA), Frascati, Italy

2025 European Geosciences Union General Assembly 2025 (EGU 2025) Oral presentation: *"Harnessing AI in GNSS remote sensing: A Deep Learning framework for Real-Time Detection of Ionospheric Perturbations triggered by earthquakes and tsunamis "* 27 Aril - 2 May 2025, Vienna (Austria)

2024 IGS (International GNSS Service) 2024 Workshop Oral presentation: *"Advancing GNSS Variometry: From Real-Time Scenarios to Real-Time Implementation for Enhanced Tsunami Early Warning Systems"* 1-5 July 2024, Bern (Switzerland)

2023 American Geosciences Union General Assembly 2023 (AGU 2023) Oral presentation: *"Integrating Ground, Ionosphere, and Sea Level Data for a Comprehensive Analysis of the 2023 Kahramanmaraş Earthquake Sequence"* 11-15 December 2023, San Francisco (USA)

2022 X Hotine-Marussi Symposium Oral presentation: *"A Complete Approach Towards Real-Time GNSS Ionospheric Seismology"* 13-17 June 2022, Milan (Italy)

2022 European Geosciences Union General Assembly 2022 (EGU 2022) Oral presentation: *"The VARION approach to volcanoes: case study on 2021 Etna eruptions"* 23-27 May 2022, Vienna (Austria)

2021 European Geosciences Union General Assembly 2021 (EGU 2021) Oral presentation: *"An innovative methodology for locating ionosphere layer height: case study on 2011 Tohoku-Oki earthquake and tsunami"* 19-30 April 2021, Online

2020 IEEE International Geoscience and Remote Sensing Symposium 2020 (IGARSS 2020) Oral presentation: *"TIDs Detection from Ship-Based GNSS Receiver: First Test On 2010 Maule Tsunami"* 26 September - 2 October 2020, Online

2020 European Geosciences Union General Assembly 2020 (EGU 2020) Oral presentation: *"Detection of tsunami-induced ionospheric perturbation with ship-based GNSS measurements: 2010 Maule tsunami case study"* 4-8 May 2020, Online

2019 European Geosciences Union General Assembly 2019 (EGU 2019) Oral presentation: *"A joint use of GNSS GEO and MEO satellites for earthquake and tsunami-induced TIDs analysis: application to recent relevant events in the Pacific area"* 7-12 April 2019, Vienna (Austria)

2018 European Geosciences Union General Assembly 2018 (EGU 2018) Oral presentation: *"A joint variometric approach for real-time analysis of earthquake-driven ionospheric disturbances using a Stand-Alone GNSS Receiver: the 2015 Chile earthquake case study"* 8-13 April 2018, Vienna (Austria)

MAIN COLLABORATIONS

2024-present Collaboration on the PRIN 2020 project - GRAAL - 2020FR2JHF - 'Development of absolute gravity and height reference systems in Italy,' ERC sector: PE2 National coordinator: Prof. Riccardo Barzaghi. Coordinator of the Sapienza University of Rome unit: Prof. Augusto Mazzoni. Participation in measurement activities and processing of total station and GNSS observations

2023-present Prof. Benedikt Soja from the Institute of Geodesy and Photogrammetry at ETH Zurich (Switzerland) on the use of machine learning algorithms for detecting ionospheric perturbations induced by earthquakes and tsunamis, as well as the application of these techniques in geodesy

2022-present Italian National Institute of Geophysics and Volcanology (INGV) - Etna Observatory (OE) and the University of Catania Collaboration with Dr. Alessandro Bonforte (INGV-OE), Dr. Giuseppe Puglisi (INGV-OE), and Prof. Vincenzo Carbone (University of Calabria) on the analysis of the ionospheric response induced by Etna's eruptions (Italy)

2021-present Observatoire Sismologique et Volcanologique de la Guadeloupe (OVSG) of the Institut de Physique du Globe de Paris (IPGP) - Université Paris Cité. Implementation of the ALTRUIST project within Observatory's GNSS network

2022-2023 Tonga eruption working group. Lucie Rolland, Fabio Manta, Edhah Munaibari (GeoAzur), Pierdavide Coïsson, Elvira Astafyeva(IPGP), T.D. Mikesell (Norwegian Geotechnical Institute)

2020-present Dr. Claudio Cesaroni INGV - Rome section - Travelling ionospheric disturbance detection

2020-present Valentino Constantinou Infactory for the analysis of applying deep learning algorithms to real-time GNSS ionospheric seismology

2020-present Dr. Giovanni Occhipinti and Dr. Elvira Astafyeva - Institut de Physique du Globe de Paris (IPGP) - Université Paris Cité. Analysis of new challenges in GNSS Ionospheric Seismology, such real-time detection of ionospheric perturbations

2020-2023 Prof. James Foster from the Institute of Geodesy at the University of Stuttgart (Germany). Analysis of ionospheric perturbations generated by tsunamis using shipborne GNSS and deep learning

2019-2022 Dr. Attila Komjathy, Dr. Panagiotis Vergados, and the Ionospheric and Atmospheric Remote Sensing section of NASA JPL. Analysis of ionospheric perturbations induced by the Illapel earthquake (Chile, 2015) and the Ridgecrest seismic sequence (California, 2019)

DATI PERSONALI

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali
La sottoscritta dichiara di essere consapevole che il presente curriculum vitae sarà pubblicato sul sito istituzionale dell'Ateneo, nella Sezione "Amministrazione trasparente", nelle modalità e per la durata prevista dal d.lgs. n. 33/2013, art. 15