

Fabio Romanelli

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Academic history:

1993 Laurea in Physics, University of Trieste (cum laude)

1998 PhD in Geophysics (IX Cycle)

Appointments:

2018 - Associate Professor (GEO/10) at the University of Trieste

2019- Visiting Professor at the IEF-CEA at Beijing

2000 - 2018 Researcher (GEO/10) at the University of Trieste

1996 - 2000 Researcher at the GNDT- CNR (National Group for the Defense from Earthquakes)

Courses taught for the Academic Year 2024/2025:

Seismology (GEO/10, 393SM, SM64 - LM Geophysics and Geodata);

Evaluation of Seismic Risk (ICAR/09, 291MI, SM23 – IN11 Civil engineering);

Institutions of Physics for the Earth System (GEO/10, 138SM, SM20 - Physics)

Physical Acoustics (FIS/07, 418ME-1, ME18 - Speech Therapy)

Wave Physics and Theoretical Seismology (PhD EFSDM)

- Editor (Solid Earth Sciences) of Pure and Applied Geophysics
- Member of the Commissions “Effects of Earthquakes on Megacities” e “Strong Ground Motion, Earthquake Hazard and Risk” of IASPEI

Research topics:

- Seismic waves generation and propagation in heterogenous media
- Tsunami generation and propagation in laterally oceanic media
- Groundshaking scenarios and estimation of site effects
- Definition of seismic input; estimation of parameters of engineering importance
- Seismic (and tsunami) hazard and risk
- Study of the lithosphere-asthenosphere system
- Spectral properties of differential operators. Sturm-Liouville systems

Honors:

1993 - Premio di Laurea Irene Galante

2010 - Medal of the Vietnam Academy of Science and Technology for fundamental contribution to the first neo-deterministic map of seismic hazard in Vietnam

Publications on international journals:

- Wu, C., Zhang, Y., Cui, P., Romanelli, F., Peresan, A., Wei, R., Panza, G., 2025. Exploratory relationships between selected ground motion parameters and coseismic landslides: A case study of the 2017 Jiuzhaigou MW6.5 earthquake, *Engineering Geology*, Volume 354, 108208.
<https://doi.org/10.1016/j.enggeo.2025.108208>.
- Affatati, Alice; Pace, Federica; Wood, Michael; Viola, Salvatore; Galante, Beatrice Maria Perla; Sciacca, Virginia; Ducatel, Cécile; Laigle, Mireille; Riccobene, Giorgio; Embriaco, Davide; Simeone, Francesco; Marinaro, Giuditta; Romanelli, Fabio; Racca, Roberto; Camerlenghi, Angelo, 2025. Long-range propagation of airgun-array signals: Comparing numerical simulations and acoustic recordings in the Ionian sea, *The Journal of the Acoustical Society of America*, Volume 157, Issue 4.
- VERNETTO, S, VIGORITO, C.F., KÁKONA, M., DVOŘÁK, R., KODAIRA, S., CIRILLI, ROMANELLI, F., SAVIETTO, D., ZANINI, A., 2025. Performance of the LABDOS01 spectrometer in dosimetric measurements, *Radiation Physics and Chemistry*, Volume 237.
<https://doi.org/10.1016/j.radphyschem.2025.113031>
- RICCI, A., ROMANELLI, F., VACCARI, F., BONCIO, P., VENISTI, N., FARAONE, C., VESSIA, G., PANZA, G.F., 2025. Comparison between the Neo-deterministic Seismic Hazard and FEM approach to assessing 2D local seismic response at Chieti's city site (Abruzzo, Italy), *Engineering Geology*, Volume 347, 2025.
<https://doi.org/10.1016/j.enggeo.2024.107891>
- BADRELDIN, H., M. HASSAN, H., ROMANELLI, F., EL-HADIDY, M., ELGABRY, M.N., 2024. Joint Multi-Scenario-Based Earthquake and Tsunami Hazard Assessment for Alexandria, Egypt. *Appl. Sci.* 2024, 14, 11896.
<https://doi.org/10.3390/app142411896>
- SKŁODOWSKA, A.M., PAROLAI, S., PETROVIC, B., ROMANELLI, F., 2023. Soil-structure interaction assessment combining deconvolution of building and field recordings with polarization analysis: application to the Matera (Italy) experiment. *Bull Earthquake Eng* 21, 5867–5891 (2023). <https://doi.org/10.1007/s10518-023-01750-7>
- ZHANG Y., WU Z., ROMANELLI F. et al., 2023. Earthquake Early Warning System (EWS) empowered by Time-Dependent Neo-Deterministic Seismic Hazard Assessment (TD-NDSHA), *Terra Nova* 2023;00:1–10, DOI: 10.1111/ter.12647.
- MALUSÀ M., BRANDMAYR E., PANZA G.F., ROMANELLI F., FERRANDO S., FREZZOTTI M.L., 2022. An explosive component in a December 2020 Milan earthquake suggests outgassing of deeply recycled carbon. *COMMUNICATIONS EARTH & ENVIRONMENT* (2022) 3:5. <https://doi.org/10.1038/s43247-021-00336-y>
- ZHANG Y, WU Z., ROMANELLI F., VACCARI F., PERESAN A., ZHANG S., JIANG C., PANZA G.F., 2022. Time-dependent neo-deterministic seismic hazard assessment (T-NDSHA); China Seismic Experimental Site (CSES); Annual Consultation, *Pure and Applied Geophysics*, 179, 4103–4119 (2022).
- ZHANG Y., WU Z., ROMANELLI F. et al., 2022. Finite Rupture Attributes Associated with the Great-Earthquake-Prone Areas (GEPAs) of Continental Earthquakes. *J Geol Soc India* 98, 1647–1652 (2022). <https://doi.org/10.1007/s12594-022-2232-6>
- CHIEFFO N., FASAN M., ROMANELLI F., FORMISANO A., MOCHI G., 2021. Physics-Based Ground Motion Simulations for the Prediction of the Seismic Vulnerability of Masonry Building Compounds in Mirandola (Italy). *Buildings* 2021, 11, 667.

- ZHANG Y., WU Z., ROMANELLI F., VACCARI F., JIANG C., GAO S., LI J., KOSSOBOKOV V.G., PANZA G., 2021. Next-generation EEW empowered by NDSHA: from concept to implementation, *Geosciences* 2021, 11, 473
- ZHANG Y., ROMANELLI F., VACCARI F., PERESAN A., JIANG C., WU Z., GAO S., KOSSOBOKOV V.G., PANZA G., 2021. Seismic hazard maps based on Neo-deterministic Seismic Hazard Assessment for China Seismic Experimental Site and adjacent areas, *Engineering Geology*, 291.
- BRANDMAYR E., VACCARI F., ROMANELLI F., VLAHOVIC G, PANZA G, 2021. Neo-deterministic seismic hazard maps of Kosovo, *Vietnam Journal Of Earth Sciences*.
- PANZA G., BRANDMAYR E., ROMANELLI F., 2020. A geophysical perspective on the lithosphere–asthenosphere system from Periadriatic to the Himalayan areas: the contribution of gravimetry, *Rendiconti Lincei. Scienze Fisiche e Naturali*.
- HASSAN H., FASAN M., SAYED M., ROMANELLI F., ELGABRY M., VACCARI F., HAMED A., 2020. Site-specific ground motion modeling for a historical Cairo site as a step towards computation of seismic input at cultural heritage sites. *Engineering Geology* 268 (2020) 105524.
- DE NATALE G., PETRAZZUOLI S., ROMANELLI F. TROISE C., VACCARI F., SOMMA R., PERESAN A., PANZA G., 2019. Seismic risk mitigation at Ischia island (Naples, Southern Italy): An innovative approach to mitigate catastrophic scenarios. *Engineering Geology*, 261 (2019) 105285.
- DU G., WU Q., ZHANG X., HE J., ZOU L., FENG Y., LIU J., ROMANELLI F., 2019. Pn wave velocity and anisotropy underneath the central segment of the north-south seismic belt in china. *Journal of asian earth sciences* 184, 103941.
- MALUSÀ M., FREZZOTTI M.L., FERRANDO S., BRANDMAYR E., ROMANELLI F., PANZA G.F., 2018. Active carbon sequestration in the Alpine mantle wedge and implications for long-term climate trends, *Scientific Reports*, (2018) 8:4740.
- RASTGOO M., RAHIMI H., ROMANELLI F., VACCARI F., PANZA G.F., 2018. Neo-deterministic seismic hazard assessment for Alborz Region, Iran. *Engineering Geology*, 242, 70-80.
- RASTGOO M., RAHIMI H., MOTAGHI K., SHABANIAN E., ROMANELLI F., PANZA G.F., 2018. Deep structure of the Alborz Mountains by joint inversion of P receiver functions and dispersion curves, *PEPI*, 277, 70-80.
- HASSAN H. M., PANZA G.F., ROMANELLI F., EL- GABRY M.N., 2017. Insight on Seismic Hazard Studies for Egypt, *Engineering Geology*, 220, 99-109.
- HASSAN H. M., ROMANELLI F., PANZA G.F., EL- GABRY M.N., MAGRIN A., 2017. Update and sensitivity analysis of the neo-deterministic seismic hazard assessment for Egypt, *Engineering Geology*, 218, 77-89.
- DENG Y., CHEN L. XU Tao, WU J., ROMANELLI F., PANZA G.F., 2017. Lateral variation in seismic velocities and rheology beneath the Qinling-Dabie orogen, *Science China Earth Sciences*, 59: 1–13 .
- FASAN M., MAGRIN A., AMADIO C., ROMANELLI F., VACCARI F., PANZA G.F., 2016. A seismological and engineering perspective on the 2016 Central Italy earthquakes. *Int. J. Earthquake and Impact Engineering*, 1, Vol. 4, 395-420.
- MAGRIN A., GUSEV A.A., ROMANELLI F., VACCARI F., PANZA G.F., 2016. Broadband NDSHA computations and earthquake ground motion observations for the Italian territory , *Int. J. Earthquake and Impact Engineering*, 1, Vol. 1, 131-158.
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- PANZA G.F., ROMANELLI F., 2015. Erratum to: Seismic waves in 3D: from mantle asymmetries to reliable seismic hazard assessment. *Earthquake Science*, 28(3):233–234 DOI 10.1007/s11589-015-0126-
- PANZA G.F., ROMANELLI F., 2014. Seismic waves in 3D: from mantle asymmetries to reliable seismic hazard assessment. *Earthquake Science*, 27(5): 567–576. doi: 10.1007/s11589-014-0091-y
- ZHANG X., TENG J., SUN R., ROMANELLI F., ZHANG Z., PANZA G.F., 2014. Structural model of the lithosphere–asthenosphere system beneath the Qinghai–Tibet Plateau and its adjacent areas, *Tectonophysics*, 634, 208–226. doi:10.1016/j.tecto.2014.08.017
- PANZA G.F. AND ROMANELLI F., 2014. Seismic waves in 3D: from mantle asymmetries to reliable seismic hazard assessment. *Earthquake Science*, accepted for publication.
- DENG Y., ZHANG Z., ROMANELLI F., MA T., DOGLIONI C., WANG P., ZHANG X., TENG J., PANZA G.F., 2014. Transition from continental collision to tectonic escape? A geophysical perspective on lateral expansion of the northern Tibetan Plateau. *EARTH, PLANETS AND SPACE*, 66, 10.
- ZHANG Z., TENG J., ROMANELLI F., BRAITENBERG C., DING Z., ZHANG S., ZHANG X., FANG L., WU J., DENG Y., MA T., SUN R. AND PANZA G., 2014. Geophysical constraints on the link between cratonization and orogeny: Evidence from the Tibetan Plateau and the North China Craton. *Earth-Sci Rev* 130, 1–48. doi:10.1016/j.earscirev.2013.12.005
- BRANDMAYR, E., ROMANELLI, F. AND PANZA, G.F., 2013. Stability of fault plane solutions for the major N-Italy seismic events in 2012, *Tectonophysics* 608 (2013) 525–529. doi:10.1016/j.tecto.2013.08.034
- GONZÁLEZ, O., MORENO, B., ROMANELLI, F., PANZA, G. F., 2012. Lithospheric structure below seismic stations in Cuba from the joint inversion of Rayleigh surface waves dispersion and receiver functions. *Geophysical Journal International*, 189: 1047–1059. doi: 10.1111/j.1365-246X.2012.05410.x
- PANZA G.F., LA MURA C., PERESAN A., ROMANELLI F., VACCARI F., 2012. Seismic Hazard Scenarios as Preventive Tools for a Disaster Resilient Society. *Advances In Geophysics* (ISSN:0065-2687), pp.93- 165, Vol. 53/2012.
- BRANDMAYR E., MARSON I., ROMANELLI F., PANZA G.F., 2011. Lithosphere density model in Italy: no hint for slab pull. *TERRA NOVA* (ISSN:1365-3121), pp.292- 299, Vol. 23/2011.
- LA MURA C., YANOVSKAYA T.B., ROMANELLI F., PANZA G.F., 2011. Three-dimensional seismic wave propagation by modal summation: method and validation. *Pure And Applied Geophysics*, pp.201- 216, Vol. 168.
- PARVEZ I.A., ROMANELLI F., PANZA G.F., 2011. Long Period Ground Motion at Bedrock Level in Delhi City from Himalayan Earthquake Scenarios. *Pure And Applied Geophysics*, pp 409-452, Vol. 168.
- INDIRLI M., RAZAFINDRAKOTO H., ROMANELLI F., PUGLISI C., LANZONI L., MILANI E., MUNARI M., APABLAZA S., 2011. Hazard Evaluation in Valparaíso: the MAR VASTO Project. *Pure And Applied Geophysics*, pp 543-582, Vol. 168.
- BRANDMAYR E., RAYKOVA R., ZURI M., ROMANELLI F., DOGLIONI C., PANZA G.F., 2010. The lithosphere in Italy: structure and seismicity.. *JOURNAL OF THE VIRTUAL EXPLORER*, Vol. 36/2010.
- AOUDIA A, ISMAIL-ZADEH A.T., ROMANELLI F., 2007. Buoyancy-driven deformation and contemporary tectonic stress in the lithosphere beneath Central Italy. *Terra Nova*, vol. 19; p. 490-495, ISSN: 1081-0749, doi: 10.1111/j.1365-3121.2007.00776.x.

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- DING, Z., ROMANELLI, F., CHEN, Y.T., PANZA, G. F., 2004. Realistic modelling of seismic wave ground motion in Beijing city, *Pure And Applied Geophysics*, 161, 1093-1106.
- ROMANELLI F., VACCARI F., PANZA G. F., 2003. Realistic Modelling of the Seismic Input: Site Effects and Parametric Studies, *Journal of Seismology and Earthquake Engineering*, Vol. 5, n. 3, pp. 27-39.
- YANOVSKAYA, T.B., ROMANELLI, F., PANZA, G.F., 2003. Tsunami excitation by inland/coastal earthquakes: the Green function approach, *Natural Hazards and Earth System science*, 3, 353-365.
- PANZA, G.F., VACCARI, F., ROMANELLI, F., 2001. Realistic modeling of seismic input in urban areas: a UNESCO-IUGS-IGCP project, *Pure And Applied Geophysics*, 158, No 12, 2389-2406.
- PANZA, G.F., ROMANELLI, F., 2001. Beno Gutenberg contribution to seismic hazard assessment and recent progress in the European-Mediterranean region, *Earth-Science Reviews*, 55, 165-180.
- EL-SAYED, A., ROMANELLI, F., PANZA, G.F., 2000. Recent seismicity and realistic waveforms modeling to reduce the ambiguities about the 1303 seismic activity in Egypt, *Tectonophysics*, 328, 341-357.
- PANZA G.F., ROMANELLI F., VACCARI, F., 2000. Realistic modelling of waveforms in laterally heterogeneous anelastic media by modal summation, *Geophysical Journal International*, 143, 340-352.
- PANZA G.F., ROMANELLI F., VACCARI, F., 2000. Seismic wave propagation in laterally heterogeneous anelastic media: Theory and applications to seismic zonation, *Advances in Geophysics*, Vol. 43, pp. 1-95, Academic Press, San Diego.
- ROMANELLI, F., VACCARI, F., 1999. Ground motions scenario in the Catania area for a Magnitude 7.0 earthquake on the Hyblean fault, *JOSE*, 3, 311-326.
- PANZA G.F., ROMANELLI F., YANOVSKAYA, T., 2000. Synthetic Tsunami mareograms for realistic oceanic models, *Geophysical Journal International*, 141, 498-508.
- PANZA, G.F., VACCARI, F., ROMANELLI, F., 1999. IGCP project 414: realistic modeling of seismic input for megacities and large urban areas, *Episodes*, 22, 26-32.
- ROMANELLI, F., BEKKEVOLD, J., PANZA, G.F., 1997. Analytical computation of coupling coefficients in non-poissonian media, *Geophysical Journal International*, 129, 205-208.
- ROMANELLI, F., BING, Z., VACCARI F., PANZA, G.F., 1996. Analytical computation of reflection and transmission coupling coefficients for Love waves, *Geophysical Journal International*, 125, pp. 132-138.
- ROMANELLI, F., PANZA, G.F., 1995. Effect of source depth correction on the estimation of earthquake size. *Geophysical Research Letters*, Vol. 22, No. 9, pp. 1017-1019.

Contributions to volumes/encyclopedies:

- FASAN M., HASSAN H.M., MAGRIN A., VACCARI F., ROMANELLI F., ELGABRY M., 2023. Multi-scenario Physics-Based Seismic Hazard Assessment of Cultural Heritage Sites. In: El-Qady, G.M., Margottini, C. (eds) Sustainable Conservation of UNESCO and Other Heritage Sites Through Proactive Geosciences. Springer Geology. Springer, Cham. https://doi.org/10.1007/978-3-031-13810-2_26
- Hassan H.M., SAYED M.A., FASAN M., ROMANELLI F., AMADIO C., HAMED A., ELGABRY M HAMAMA I., 2023. Seismic Assessment of a Cultural Heritage Minaret in Cairo. In: El-Qady, G.M., Margottini, C. (eds) Sustainable Conservation of UNESCO and Other Heritage Sites Through Proactive Geosciences. Springer Geology. Springer, Cham. https://doi.org/10.1007/978-3-031-13810-2_28
- ROMANELLI F., ALTIN G., INDIRLI M., 2022. Spreading NDSHA application from Italy to other areas, Earthquakes and Sustainable Infrastructure, Elsevier. DOI: 10.1016/C2020-0-00052-6
- ZHANG Y., FANG L., ROMANELLI F., DING Z., GAO S., JIANG C., WU Z., 2022. NDSHA applied to China, Earthquakes and Sustainable Infrastructure, Elsevier. DOI: 10.1016/C2020-0-00052-6
- GARCIA-FERNANDEZ M., VACCARI F., JIMENEZ M.J., MAGRIN A., ROMANELLI F., PANZA G., 2022. Regional application of the NDSHA approach for continental seismogenic sources in the Iberian Peninsula, Earthquakes and Sustainable Infrastructure, Elsevier. DOI: 10.1016/C2020-0-00052-6
- AL-HUSSAINI T., CHOWDURY I., AL FAYSAL H., CHAKRABORTY S., VACCARI F., ROMANELLI F., MAGRIN A., 2022. Neo-deterministic seismic hazard assessment studies for Bangladesh, Earthquakes and Sustainable Infrastructure, Elsevier. DOI: 10.1016/C2020-0-00052-6
- PANZA G.F., LA MURA C., ROMANELLI F., VACCARI F., 2021. Earthquakes, Strong-Ground Motion. In: AA.VV. Encyclopedia of EARTH SCIENCES. ISSN: 1338-4360.
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- RUGARLI P., AMADIO C., PERESAN A., FASAN M., VACCARI F., MAGRIN A., ROMANELLI F. AND PANZA G.F., 2019. Neo-Deterministic Scenario-Earthquake Accelerograms and Spectra: a NDSHA approach to seismic analysis, Chpt. 6 in “Engineering Dynamics and Vibrations: Recent Developments”, Jia, J. and Paik, J.K., eds., pp. 187-241, CRC Press Boca Raton, Florida, USA. ISBN 978-1-4987-1926-1 DOI:10.1201/9781315119908-6
- ROMANELLI F., VACCARI F., 2016. Earthquake scenarios and seismic input for cultural heritage: applications to the cities of Rome and Florence. In: “Enhancing resilience of historic cities to earthquakes”, pp. 157-166, Atti dei Convegni Lincei, 306, Bardi Editore, Roma.
- FASAN M., MAGRIN A., AMADIO C., PANZA G., ROMANELLI F., VACCARI F., NOE' S., 2016. A new design procedure based on the realistic definition of seismic input. In: “Enhancing resilience of historic cities to earthquakes”, pp. 329-337, Atti dei Convegni Lincei, 306, Bardi Editore, Roma.

- PANZA G., ROMANELLI F., VACCARI F., ALTIN G., STOLFO P., 2016. Vademecum for the seismic verification of existing buildings: application to some relevant buildings of the Trieste Province. In: "Enhancing resilience of historic cities to earthquakes", pp. 355-363, Atti dei Convegni Lincei, 306, Bardi Editore, Roma.
- PERESAN A., MAGRIN A., VACCARI F., ROMANELLI F., 2016. Forecasting and planning of safeguard interventions for cultural heritage: an intermediate-term middle-range perspective. In: "Enhancing resilience of historic cities to earthquakes", pp. 43-58, Atti dei Convegni Lincei, 306, Bardi Editore, Roma.
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http://www.provincia.trieste.it/opencms/opencms/it/attivita-servizi/cantieri-della-provincia/immobili/Programma_verifiche_sismiche/
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- PANZA G., CUSPILICI A., DECANINI L., FERRELI L., MOLLAIOLI F., MICHETTI A.M., PISCOPIA R., PANZICA LA MANNA M., ROMANELLI F., VACCARI F., 2004. La messa in sicurezza dell'area industriale di Priolo-Augusta rispetto ai rischi di terremoto e maremoto. APAT, Roma, ISBN: 8844801248.
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Proceedings of International Congresses:

- ROMANELLI, F., VACCARI, F., CANTAGALLO, C., CAMATA, G., PANZA, G.F., 2023. Physics-Based Approach to Define Energy-Based Seismic Input: Application to Selected Sites in Central Italy. In: Varum, H., Benavent-Climent, A., Mollaioli, F. (eds) Energy-Based Seismic Engineering. IWEBSE 2023. Lecture Notes in Civil Engineering, vol 236. Springer, Cham. https://doi.org/10.1007/978-3-031-36562-1_9
- MILKOVA K., DUMOVA-JOVANOSKA E., DROGRESHKA K., CHERNIH-ANASTASOVSKA D., PEKEVSKI L., ROMANELLI F., VACCARI F., PANZA G., 2018. Region Specific Application of Neo-Deterministic Analysis for Reliable Seismic Hazard Assessment. 16ECEE, Thessaloniki, Greece.
- FASAN M., MAGRIN A., AMADIO C., ROMANELLI F., 2018. Multi-Scenario Seismic Hazard Assessment For Structural Design, 16ECEE, Thessaloniki, Greece.
- FASAN M., MAGRIN A., AMADIO C., PANZA G. F., ROMANELLI F., VACCARI F., NOÈ S., 2017. A possible revision of the current seismic design process. In: 16th World Conference on Earthquake Engineering, 16WCEE 2017, Santiago Chile.
- PANZA G., BRANDMAYR E., ROMANELLI F., 2015. The Alps and the deep revolution against standard plate tectonics: polarized plate tectonics, *Rend. Online Soc. Geol. It.*, Vol. 37 (2015), pp. 50-53. doi: 10.3301/ROL.2015.175.
- FASAN M., AMADIO C., NOÈ S., PANZA G., MAGRIN A., ROMANELLI F., VACCARI F., 2015. A new design strategy based on a deterministic definition of the seismic input to overcome the limits of design procedures based on probabilistic approaches, *L'ingegneria sismica in Italia*, ANIDIS. L'Aquila, September.
- PANZA G.F., BISIGNANO D., ROMANELLI F., 2014. Does MoSE cope with inland tsunamis hazard? *Resilienza delle città d'arte alle catastrofi idrogeologiche*, Accademia Nazionale Dei Lincei, Roma, November 4-5.
- PERESAN A., MAGRIN A., VACCARI F., ROMANELLI F., PANZA G.F., 2014. Neo-deterministic seismic hazard assessment: an operational scenario-based approach from national to local scale. 5th National Conference on Earthquake Engineering & 1st National Conference on Earthquake Engineering and Seismology, Bucharest, Romania, June 19-20.
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- INDIRLI M., PUGLISI C., SCREPANTI A., ROMANELLI F., 2010. Multi-hazard maps for the Valparaiso area (Chile). In: Mazzolani F.M.. Urban Habitat Constructions Under Catastrophic Events. Naples, 16-17-18 September 2010, p. 999-1004, LONDON:Taylor and Francis Group, ISBN: 9780415606851
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- PANZA G., KOUTEVA M., VACCARI F., PERESAN A., CIOFLAN C. O., ROMANELLI F., PASKALEVA I., RADULIAN M., GRIBOVSZKI K., HERAK M., ZAICHENCO A., MARMUREANU G., VARGA P., ZIVCIC M., 2008. Recent achievements of the neo-deterministic seismic hazard assessment in the CEI region. In: AA.VV.. 2008 Seismic Engineering Conference commemorating the 1908 Messina and Reggio Calabria Earthquake. Reggio Calabria, 8-11 July, vol. 1020, p. 402-409, MELVILLE, NEW YORK:American Institute of Physics, ISBN: 9789780735401
- PANZA G., PERESAN A., ROMANELLI F., VACCARI F., ZUCCOLO E., 2007. Integrated Neodeterministic Scenarios for Reliable Earthquake Hazard Assessment. ASSiSi 10th World Conference on Seismic Isolation, Energy Dissipation and Active Vibrations Control of Structures. vol. 1, p. 1-12, ISTANBUL:Tasi, Istanbul, 28-31 May 2007
- INDIRLI M., CARPANI B., PANZA G. F., ROMANELLI F., SPADONI B., 2006. Damage Evaluation and Rehabilitation of the Montorio Medieval Tower after the September

- 14th, 2003 Earthquake. In: First European Conference on Earthquake Engineering and Seismology. vol. 1, p. 1-10, GENEVA:ECEES, Geneva, 3-8 September 2006
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- ROMANELLI F., PINAT T., PANZA G.F., 2005. Tsunami modelling in the Mediterranean Sea: a review and perspective. In: IAEA International Workshop on External Flooding Hazards at Nuclear Power Plant Sites. vol. 1, p. 1-12, WIEN:IAEA, Kalpakkan (India), 29 August 2 September 2005
- PERESAN A., VACCARI F., ROMANELLI F., PANZA G. F., 2005. Pericolosità sismica in ambiente urbano: la città di Roma. In: -. Atti dei convegni lincei. Roma, 14-16 April 2004, vol. 218, p. 263-287, ROMA:Accademia Nazionale dei Lincei
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- KOUTEVA M., PASKALEVA I., ROMANELLI F., PANZA G. F., 2003. Deterministic Ground Motion Modelling at Russe, NE Bulgaria, associated to the Vrancea Intermediate-Depth Earthquakes. In: Proceedings of Skopje Earthquake 40 Years of European Earthquake Engineering, SE40-EEE. p. 051-1-051-8, SKOPJE:IZIIS, Skopje, 26-29 August 2003
- DECANINI L, MOLLAIOLI F., ROMANELLI F., VACCARI F., PANZA G. F, 2003. Perspectives of innovative approaches in seismic hazard evolution. In: Fourth International Conference of Earthquake Engineering and Seismology. p. SM22-1-SM22-22, TEHRAN:IIIES, Tehran, 12-14 May 2003
- PANZA G.F, ROMANELLI F., VACCARI F., DECANINI L., MOLLAIOLI, F., 2003. Realistic Seismic Ground Motion Modelling: an Interim Solution for Hazard Assessment. In: 8th world seminar on seismic isolation, energy dissipation and active vibration control of structures. vol. 1, p. 87-112, YEREVAN:Gas Print Publishers, Yerevan, October 6-10
- PANZA G. F, ROMANELLI F., VACCARI F., DECANINI L., MOLLAIOLI F., 2001. Contribution of the deterministic approach to the characterization of seismic input. In: OECD-NEA Workshop on Engineering Characterisation of Seismic Input. vol. 2, p. 655-715, PARIS:NEA/CSNI, New York, 15-17 November 1999
- DECANINI L, MOLLAIOLI F, PANZA G.F, ROMANELLI F., 1999. The realistic definition of seismic input: an application to the Catania area. In: Earthquake Resistant Engineering Structures II. p. 425-434, SOUTHAMPTON:WIT Press, Catania, 15-17 June 1999
- ROMANELLI F., VACCARI F, PANZA G. F, 1999. Recent developments in Europe for the definition of realistic seismic input for structures provided with innovative antiseismic systems. In: 6th International Post-Smirt Seminar on Seismic Isolation. vol. 1, p. 159-189, CHEJU:SMIRT, Cheju (Korea), 23-25 August 1999
- ROMANELLI F., VACCARI F., PANZA G. F, 1998. Realistic Modelling of ground motion: techniques for site response estimation. In: Proceedings of 6th U.S. National Conference on Earthquake Engineering, Seattle. p. 1-10, SEATTLE:EERI, Seattle, 31 May 4 June 1998

ROMANELLI F., NUNZIATA C, NATALE M., PANZA G. F., 1998. Site response estimation in the Catania Area. In: Irikura K.; Kudo K.; Osada H.; Sasatani T.. The Effects of Surface Geology on Seismic Motion. Yokohama, 1-3 December 1998, vol. 2, p. 1093-1100, Rotterdam:Balkema, ISBN: 90-5809-030-2

Participations to projects:

**PNRA 2018 (2021-): COsmic Rays Dosimetry In Antarctic Latitudes (CORDIAL).
Principal Investigator**

**CEA 2020-: Application research of the neo-deterministic seismic risk assessment
(NDSHA) method in China Seismic Experimental Site**

**HEQEP Project CP-3140 (2015-): “Development of Post-Graduate Research and
Degree Programs in Disaster Risk Reduction at New Institute on Disaster
Prevention and Urban Safety”, University Grants Commission Government of
Bangladesh**

PRIN 2015-2020: The Subduction and Exhumation of the Continental Lithosphere:
Their Effects in the Structure and Evolution of the Orogens (UNITS scientific
responsible)

MAE Italy-Egypt (2016-2019): Advanced seismic hazard assessment in the Nile Delta,
including site effects from distant earthquakes (Italian coordinator)

RELUIS 2019 WP 12

FVG 2016-2019: Operational definition of seismic risk and intervention techniques for
strategic buildings: an integrated system on HPC platform

NCCU CREST NSF (2016-2019): Expanding Seismology Research and Establishing
International Collaboration with the Department of Mathematics and Geosciences,
University of Trieste, Italy

Convenzione MiBACT Veneto (2016-2019): Supporto alla gestione delle attività legate
al miglioramento sismico di edifici monumentali (scientific responsible)

RITMARE (2012-2018) - WP3.A3: Tsunami early warning system

PRIN 2010/11: La subduzione e l'esumazione di litosfera continentale: i suoi effetti
sulla struttura degli orogeni, sull'ambiente e sul clima

PRIN 2008: Struttura e geometria della crosta e del mantello superiore quale vincolo
geofisico per la costruzione di un modello unificato con i dati petrologici e
geochimici: implicazioni sulla dinamica della subduzione continentale e sulle
deformazioni attive al bordo dell'Adria (Appennini, Alpi, Dinaridi)

PRIN 2004: Il modello geofisico multiscala della Terra al di sopra della litosfera in Italia
e nelle regioni circostanti e l'evoluzione temporale della sua sismicità

PRIN 2002: Approccio multiscala per lo studio della sismicità e struttura della
litosfera-astenosfera del settore settentrionale dell'Adria: sismogenesi e
implicazioni geodinamiche

PRIN 2001: Dinamica dei processi geologici in atto nel Mediterraneo Centrale: dati e
modelli geofisici

PRIN 2000: Processi sismogenetici al margine settentrionale dell'Adria: osservazioni e
modellazioni dei dati sismologici

PRIN 1998: Dinamica dei processi sismogenetici PRIN 1999 - Struttura e sismicità della litosfera della placca Adriatica

PRIN 1996: Struttura, dinamica ed evoluzione della litosfera nella regione alpino-himalayana

PNRA 2009-2014: Sismologia a larga banda, geodinamica e strutture litosferiche nella regione del Mare di Scotia

PNRA 2004-2006: Struttura della litosfera e geodinamica del Mare di Scotia

MAE Italy-Egypt, 2012-2014: Surface wave tomography of the South East Mediterranean domain

MAE-MIUR-CEA-CAS Italy-China, 2009-2011: Progetto di internazionalizzazione del dottorato: Metodologie avanzate in campo geofisico e geodinamico

MAE Italy-China, 2000-2002: Geophysical studies for the deterministic evaluation of seismic risk

MAE Italy-India, 2009-2011: Neodeterministic seismic hazard assessment in Indian Megacities

MAE Italy-India, 2005-2007: Realistic site specific seismic hazard assessment for megacities utilizing modelling techniques

MAE Italy-Vietnam, 2009-2012: Advanced seismic microzoning for mega cities (Hanoi and Ho Chi Minh cities) in Vietnam

MAE Italy-Vietnam, 2006-2008: Establishing appropriate approaches to increase tsunami preparedness in Vietnam

MAE Italy-Vietnam, 2004-2006: Establishing appropriate approaches to increase earthquake preparedness in Vietnam

MAE Grande rilevanza Italy-Algeria, 2007-2009: Développement et Intégration de Scénarios de Cartes d'Aléa Sismique Déterministe, Mouvements forts et Tsunamis

IUGS-UNESCO IGCP Project 414: Realistic Modeling of Seismic Input for Megacities and Large Urban Areas

IUGS-UNESCO IGCP Project 457: Seismic hazard and risk assessment in North Africa

IUGS-UNESCO IGCP Project 487: Seismic Microzoning of Latin American Cities

ICTP, 2007-2012: Seismic Hazard in Asia

Banco Interamericano de Desarrollo 2007-2008: MAR VASTO: Risk Assessment in Valparaíso

EU COST C26, 2006- 2010: Urban Habitat Constructions under Catastrophic Events

EU EV5V (CT94-04914): Long Period Earthquake Risk in Europe

EU ENV4 (CT97-0574): Advanced Methods For Assessing The Seismic Vulnerability of Existing Motorway Bridges

INTAS RESEARCH PROJECT 05-104-7584: Numerical Analysis of 3D seismic wave propagation using Modal Summation, Finite Elements and Finite Differences Method

INCE-CEI project: Ref. No. 1202.136-07-08: Deterministic seismic hazard analysis and zoning of the territory of Romania, Bulgaria and Serbia

INCE-CEI project: Ref. No. 1202.038-09: Unified seismic hazard mapping for the territory of Romania, Bulgaria, Serbia and Republic of Macedonia

Azioni integrate Italia-Spagna 2002-2003: Deterministic seismic hazard assessment for Spain

MARSH - Spain 2007-2010: Mitigación del riesgo sísmico mediante escenarios integrados de deformación, peligrosidad, daños y pérdidas, y movimiento del suelo en tiempo real a escala regional y urbana)

Alpine Space Programme Interreg III B: Alpine Integrated GPS Network: Real-Time Monitoring and Master Model for Continental Deformation and Earthquake Hazard (ALPS-GPSQUAKENET)

GNDT - Progetto Esecutivo 1998, Sottoprogetto 6b1: Scenari di danno atteso - Catania. Responsabile: Ing. E. Faccioli

GNDT - Progetto Esecutivo 1998, Sottoprogetto 6b2: Scenari di danno atteso: Augusta, Siracusa e Noto. Resp. L.D. Decanini e G.F Panza

GNDT - Progetto Esecutivo 1998, sottoprogetto 6a4: Interventi a seguito del terremoto Umbria - Marche: Microzonazione, Responsabile Prof. A. Marcellini

ANPA-APAT 2003: La messa in sicurezza dell'area industriale di Priolo-Augusta rispetto al rischio terremoto e maremoto (Progetto Priolo,)

Regione Umbria, 2002-2004: Valutazione della pericolosità sismica in alcune località dell'Umbria

DPC-INGV 2007-2009 Progetto S1: Struttura e spessore della litosfera italiana (Responsible)

ASI Progetto Pilota SISMA 2009-2011: Information System for Monitoring and Alert"

Convenzione PCFVG-ICTP (DGR 1459 dd. 24.6.2009): Lo sviluppo ed aggiornamento di carte di pericolosità sismica dipendenti dal tempo, da utilizzarsi nella definizione delle priorità delle azioni di mitigazione, in una prospettiva di prevenzione a medio termine nella regione Friuli- Venezia Giulia

FVG 2011-2013: Definition of seismic and tsunamis hazard scenarios by means of indo-european e-infrastructures

FRA 2010-2011: Applicazione di metodologie innovative per la stima della pericolosità sismica e di tsunami nell'area Adriatica (Responsible)

FRA 2012-2014: Analisi sismologiche e ingegneristiche avanzate ai fini della verifica sismica (Responsible)

Invited participation to international congresses/meetings/workshops:

- 3-6 July 2023, Porto, Portugal. 2nd International Workshop on Energy-Based Seismic Engineering – **Invited speaker**
- 19-24 September 2021, Greece. 37th General Assembly of the European Seismological Commission, ESC – **Convener**
- 1-3 June 2019, Porto Pollo, Italy. International Workshop on Seismic source Physics, UNIBO – **Invited speaker**
- 22 March 2019, Rome, Italy. Earth's gravity field and Earth sciences, Accademia dei Lincei – **Invited speaker**
- 20-25 November 2018, Naples, Italy. Resilience and Sustainability of Cities in Hazardous Environments – GVES – **Invited speaker**
- 27 October 2018, Beijing, China. Institute of Earthquake Forecasting- CEA – **Invited speaker**
- 24-26 October 2018, Beijing, China. DEEP-2018 – **Invited speaker**
- 15-16 October 2018, Cairo, Egypt. The Sixth Arab Conference on Astronomy and Geophysics – **Invited speaker**
- 23-26 October 2017, Cairo, Egypt. International Conference on Mitigating the Impact of Natural Risks in Africa - **Invited speaker**
- 16 February 2017, Dhaka, Bangladesh. Seismology and Seismic Hazard Assessment, BUET-Japan Institute of Disaster Prevention & Urban Safety (BUET-JIDPUS - **Invited speaker**
- 26-30 July 2016, Islamabad, Pakistan. International Nathiagali Summer College for National Center for Physics - **Invited speaker**
- 13 June 2016, Rome, Italy. Mineral phases and synthetic analogues in earth and materials science – **Invited speaker**
- 18-24 April 2016, Wien, Austria. EGU General Assembly – **Solicited speaker**
- 5-9 April 2016, Egypt. 1st general Assembly of the African Seismological Commission– **Invited speaker**
- 4 November 2015, Rome, Italy. Enhancing resilience of historic cities to earthquakes, Accademia dei Lincei – **Invited speaker**
- 30 March 2015, Cairo, Egypt. Nuclear Safety (Atomic Agency Authority) – **Invited speaker**
- 25 March 2015, Cairo, Egypt. Egyptian-Italian Science Day – **Invited speaker**
- 20-23 October 2014, Cairo, Egypt. The Fourth Arab Conference on Astronomy and Geophysics – **Invited speaker**
- 24-27 September 2013, Sendai, Japan. 13th World Conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures - commemorating JSSI 20th Anniversary – **Invited speaker**
- 1-2 February 2013, Gandhinagar, India. International Symposium on "Advances in Earthquake Science" (AES-2013) and International school on "Use of e-infrastructures for advanced seismic hazard assessment in Indian Subcontinent" – **Invited speaker**
- 10-11 November 2012, Hanoi, Vietnam. IGP-VAG International Scientific Conference: "Geophysics – Cooperation And Sustainable Development" – **Invited speaker**
- 27-29 June 2012, Mexico City, Mexico. GISELA-CHAIN Joint Conference – **Invited speaker**

- 5-6 September 2011, Hanoi, Vietnam. VAST International Conference: Earthquake and tsunami hazards and early warning systems in the Asian Pacific region – **Invited speaker**
- 22-25 August 2011, Guayaquil, Ecuador. IV Conferencia Ecuatoriana De Ingeniería Sísmica “M.I. Jorge Nuques Cobo” – **Invited speaker**
- 1 July 2011, Rome, Italy. Lessons from Tohoku event. ENEA – **Invited speaker**
- 8-10 November 2010, Hanoi, Vietnam. 8th General Assembly of Asian Seismological Commission – **Invited speaker**
- 16-18 September 2010, Naples, Italy. COST Action C26: “Urban Habitat Constructions Under Catastrophic Events” – **Invited speaker**
- 8-12 August, 2010, Iguassu, Brasil. AGU Meeting of the Americas – **Invited speaker**
- 29-30 March 2010, Beijing, China. First Sino Italian Conference on: “Advanced Methodologies and Technologies in Geophysics, Geodynamics and Seismic Hazard” – **Invited speaker**
- 19-24 April 2009, Wien, Austria. EGU General Assembly 2009.
- 29-26 October 2008, La Valletta, Malta. International Symposium: Urban Habitat Constructions Under Catastrophic Events, COST C26 Action – **Invited speaker**
- 31 March - 11 April 2008, Bangalore India. Workshop n Seismic Hazard in Asia. CCMACS & ICTP – **Invited lecturer**
- 13-17 November, 2007, Islamabad, Pakistan. International Conference on Global Change – **Invited lecturer**
- 28-31 May 2007, Istanbul, Turkey. ASSISI 10th International conference on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures – **Invited lecturer**
- 14-18 May, 2007, Miramar, Italy. Workshop on the Physics of Tsunami, Hazard Assessment Methods and Disaster Risk Management (Theories and Practices for Implementing Proactive Countermeasures) – **Invited lecturer**
- 13-16 May 2007, Tehran, Iran. SEE5 International Conference on Seismology and Earthquake Engineering. **Convener** of the special session: Tsunamis in Indian Ocean with special emphasis on Makran, Gulf of Oman.
- 15-19 May 2006, Trieste, Italy. IAEA: The Conduct of Seismic Hazard Analyses for Critical Facilities – **Invited lecturer**
- 8-12 May 2006, Trieste, Italy. IAEA: Topical Consultancy on Tsunami Hazards, in Particular, and Coastal Flooding, in General, for Nuclear Facility Sites – **Invited lecturer**
- 29 August - 2 September 2005, Kalpakkam, India. IAEA International Workshop on External Flooding Hazards at Nuclear Power Plant Sites – **Invited lecturer**
- 13-16 June 2005, Kobe, Japan. 9th World Seminar on Seismic Isolation, Energy Dissipation and Active Vibration Control of Structures – **Invited lecturer**
- 5-8 April 2005, La Habana, Cuba. 1ra Convencion Cubana de Ciencias de la Tierra – **Invited lecturer**
- 14-25 February 2005, Trieste, Italy. IAEA: 2nd Workshop on Earthquake Engineering for Nuclear Facilities. Uncertainties in Seismic Hazard Assessment – **Invited lecturer**
- 15-18 November 2004, Tsukuba, Japan. Workshop on seismic input motions, incorporating recent geological studies – **Invited lecturer**
- 18-21 October 2004, Yerevan, Armenia. 5th Asian Seismological Commission General Assembly – **Invited lecturer** to Session 4: Strong Ground Motion, Earthquake Hazard and Risk Assessment.

- 12-15 July 2004, Beijing, China. III ICCE, 3rd International Conference on Continental Earthquakes --- Mechanism, Prediction, Emergency Management and Insurance – **Invited lecturer**
- 5-9 July 2004, Singapore. AOGS. **Convener** and chairman of SE18 –Seismic Hazard, Risk and Ground-shaking Scenarios.
- 1-11 July 2003, Sapporo, Japan. IAGA-IASPEI Joint Assembly. **Chairman** della sessione SS04 - Strong ground motion, earthquake hazard and risk – e convener e chairman della SW04 –Effects of earthquakes on Megacities.
- 6-11 April 2003, Nice, France. EGS XXVII General Assembly. **Programme Committee Member** of Seismology e Convener of SM10 Seismology: Groundshaking scenarios and site effects.
- 21-26 April 2002, Nice, France. EGS XXVII General Assembly. **Convener** of SE5.05 Seismology: Groundshaking site effects.
- 19-31 August 2001, Hanoi, Vietnam. IAGA-IASPEI Joint Assembly. **Chairman** of S3.a Strong ground motion, earthquake hazard and risk.
- 25-30 March 2001, Nice, France. EGS XXVI General Assembly. **Convener** of SE12.03 Earthquakes: Groundshaking site effects: empirical and theoretical studies.
- 6-9 March 2001, Hyderabad, India. Membro della delegazione italiana per l' Indo-Italian Workshop on Seismic Risk Evaluation.
- 27-29 November 2000, Belgrade, Italy. Workshop: *Mitigation of Seismic Risk - Support to the Recently Affected European Countries*. **Invited speaker**
- 26-30 April 2000, Nice, France. EGS XXV General Assembly. **Convener** of session SE22.03 Earthquakes: Groundshaking site effects: empirical and theoretical studies.
- 23-25 August 1999, Cheju, Korea. International post-smirt conference seminar on seismic isolation, passive energy dissipation and active control of vibrations of structures. **Invited speaker**

As speaker:

- 9-14 September 1996, Reykjavik, Iceland. 25th ESC Assembly.
- 23-27 March 1997, Strasbourg, France. 9th EUG Conference.
- 20-24 July 1997, Istanbul, Turkey. 8th Soil Dynamics and Earthquake engineering Conference.
- 1-5 June 1998, Seattle, USA. 6th NCEE EERI Conference.
- 23-28 August 1998, Tel-Aviv, Israel. 25th ESC Assembly.
- 10-14 May 1999, Trieste, Italy. Fourth International Conference on Theoretical and Computational Acoustics.

Teaching (and other) activity at UNITS:

- 2024/2025: **Seismology**
(GEO/10, TAF B, 3 CFU), Master in Geophysics
Evaluation of Seismic Risk
(GEO/10, TAF B, 6 CFU), Master in Civil Engineering
Institutions of Physics for the Earth System
(GEO/10, TAF D, 6 CFU), Degree in Physics
Physical Acoustics
(FIS/07, TAF B, 3 CFU), Degree in Speech Therapy
Wave Physics
18 hours Course for PhD ESFDM
Theoretical Seismology
18 hours Course for PhD ESFDM
- 2023/2024: **Seismology**
(GEO/10, TAF B, 3 CFU), Master in Geophysics
Seismic Risk
(GEO/10, TAF B, 6 CFU), Master in Geophysics and Master in Civil Engineering
Institutions of Physics for the Earth System
(GEO/10, TAF D, 6 CFU), Degree in Physics
Physical Acoustics
(FIS/07, TAF B, 3 CFU), Degree in Speech Therapy
Wave Physics
18 hours Course for PhD ESFDM
Theoretical Seismology
18 hours Course for PhD ESFDM
- 2022/2023: **Seismology**
(GEO/10, TAF B, 3 CFU), Master in Geophysics
Seismic and Volcanic Risk
(FIS/07, TAF B, 6 CFU), Master in Geophysics and Master in Civil Engineering
Institutions of Physics for the Earth System
(GEO/10, TAF D, 3 CFU), Degree in Physics
Physical Acoustics
(FIS/01, TAF B, 2 CFU), Degree in Speech Therapy
Wave Physics
18 hours Course for PhD ESFDM
Theoretical Seismology
18 hours Course for PhD ESFDM
- 2021/2022: **Seismology**
(GEO/10, TAF B, 6 CFU), Master in Physics
Seismic and Volcanic Risk
(FIS/07, TAF B, 6 CFU), Master in Physics and Master in Civil Engineering
Microzonation
(GEO/10, TAF B, 2 CFU), Master in Geosciences
Institutions of Physics for the Earth System
(GEO/10, TAF D, 6 CFU), Degree in Physics

Physical Acoustics

(FIS/01, TAF B, 2 CFU), Degree in Speech Therapy

Wave Physics

18 hours Course for PhD ESFDM

Theoretical Seismology

18 hours Course for PhD ESFDM

2020/2021:

Seismology

(GEO/10, TAF B, 6 CFU), Master in Physics;

Seismic and Volcanic Risk

(FIS/07, TAF B, 6 CFU), Master in Physics and in Civil Engineering;

Geophysical Fluid Dynamics

(GEO/12, TAF B, 3 CFU), Master in Physics

Institutions of Physics for the Earth System

(GEO/10, TAF D, 3 CFU), Degree in Physics

Physical Acoustics

(FIS/01, TAF B, 2 CFU), Degree in Speech Therapy

Theoretical Seismology

18 hours Course for PhD ESFDM

2019/2020:

Seismology

(GEO/10, TAF B, 6 CFU), Master in Physics;

Seismic and Volcanic Risk

(FIS/07, TAF B, 6 CFU), Master in Physics;

Fluid Dynamics

(GEO/12, TAF B, 3 CFU), Master in Physics

Institutions of Physics for the Earth System

(GEO/10, TAF D, 3 CFU), Degree in Physics

Physical Acoustics

(FIS/01, TAF B, 2 CFU), Degree in Speech Therapy

2018/2019:

Seismology

(GEO/10, TAF B, 6 CFU), Master in Physics;

Seismic and Volcanic Risk

(FIS/07, TAF B, 6 CFU), Master in Physics;

Institutions of Physics for the Earth System

(GEO/10, TAF D, 3 CFU), Degree in Physics

Physical Acoustics

(FIS/01, TAF B, 1 CFU), Degree in Speech Therapy

2017/2018:

Seismology

(GEO/10, TAF B, 6 CFU), Master in Physics;

Seismic and Volcanic Risk

(FIS/07, TAF B, 6 CFU), Master in Physics;

Institutions of Physics for the Earth System

(GEO/10, TAF D, 6 CFU), Degree in Physics

Physical Acoustics

(FIS/01, TAF B, 1 CFU), Degree in Speech Therapy

2016/2017: **Seismology**
(GEO/10, TAF B, 6 CFU), Master in Physics;
Seismic and Volcanic Risk
(FIS/07, TAF B, 6 CFU), Master in Physics;
Institutions of Physics for the Earth System
(GEO/10, TAF D, 6 CFU), Degree in Physics
Physical Acoustics
(FIS/01, TAF B, 1 CFU), Degree in Speech Therapy

2015/2016: **Seismology**
(GEO/10, 6 CFU), Master in Physics;
Seismic and Volcanic Risk
(FIS/07, 6 CFU), Master in Physics;
Institutions of Physics for the Earth System,
(GEO/10, 6 CFU), Degree in Physics

2012-2015: **Theoretical Seismology**
(GEO/10, 6 CFU), Master in Physics;
Acoustics
(FIS/01, 6 CFU), Degree in Physics

2007-2012: **Seismology I**
(GEO/10, 6 CFU), Master in Physics;
Acoustics
(FIS/01, 6 CFU), Degree in Physics

2001-2007: **Seismology I**
(GEO/10, 6 CFU), Master in Physics;
Acoustics
(FIS/01, 6 CFU), Degree in Informatics

2000/2001: **Seismology A**
(GEO/10, 6 CFU), Master in Physics

2006-2020: **Didactic Board** of the Master Course in Physics and responsible for the CV in Earth and Environmental Physics

2020-: **Didactic Board** of the Master Course in Geophysics and Geodata

Supervisor of more than ten theses for the Degree in Physics, five theses for the Master in Physics and of Geosciences and co-supervisor of more than ten theses for the Master in Physics and in Geosciences

Member of the **PhD Board** in: Geophysics of the Lithosphere and Geodynamics, then Geosciences and Engineering and Architecture, and, from 2020, in **Earth Science, Fluid-Dynamics, and Mathematics. Interactions and Methods**. Supervisor of two PhD thesis, co-supervisor of more than ten PhD thesis (many abroad).

Yearly participation to the **stages**, for the Degrees in Physics, devoted to High-School students and to university students for the vocational guidance.

Speaker for several dissemination seminars, e.g.:

“La Tutela Del Costruito Dai Terremoti: Problematiche e Prospettive” (Verona, April 2012)

“Proteggersi Dal Terremoto: Problemi Attuali e Soluzioni Innovative” (Passariano (UD), December 2013)

“La fisica dei terremoti: dalla struttura della terra al rischio di tsunami” (Licei Stefanini Mestre, April 2016)

“La fisica dei terremoti” (Scuola P. Tomazic Trebiciano, January 2017)

“1117-2017 Novecento anni dal più grande terremoto dell’Italia Settentrionale” (Istituto Veneto di Scienze, Lettere ed Arti , January 2017)

“La sicurezza della Biblioteca Marciana: innovative metodologie di verifica sismica” (MIBACT, Venice, June 2018)

“Cos’è il terremoto” (Ordine degli Ingegneri, Trieste, September 2018)

“I suoni della Terra: melodie, ritmi e rischi” (Sulla Cresta dell’Onda, Lignano, July 2021)

Teaching activity at ICTP:

2006-now: Teacher of the “**Wave Physics**” and “**Theoretical Seismology**” courses at the ESP Diploma Course

2006-now: Thesis **Tutor** for more than ten foreign students of the Earth System Physics Diploma Course

2017. Invited teacher at "Workshop on Earthquake and Tsunami: Modeling and Observations", Hanoi, Vietnam (10-16 December).

2013. Invited teacher at "School on Earthquake and Tsunami Hazard and Risk", Algeri, Algeria (9-20 December).

2012. Invited lecturer at "Workshop on Geophysical Data Analysis and Assimilation", ICTP (29 October -3 November).

2010. Invited teacher at "Geophysics, Geodesy and Tectonics of the North Africa Plate Boundary for Better Earthquake and Tsunami Hazard Assessments", Algeri, Algeria (15-21 April).

2010. Invited lecturer at "Advanced School on Direct and Inverse Problems of Seismology", ICTP (27 September -9 October).

2008. Invited lecturer at "9th workshop on Three-dimensional modelling of seismic waves generation, propagation and their inversion", ICTP (22 September - 4 October).

2006. Invited lecturer at "First IIEES-ICTP international training course on Seismology, Engineering Seismology and Wave Form Modeling" presso l'International Institute of earthquake Engineering and Seismology di Tehran (Iran, 20-31 August).

2006. Invited lecturer at "Eight workshop on Three-dimensional modelling of seismic waves generation, propagation and their inversion", ICTP (25 September - 8 October).

2004. Invited lecturer at "Seventh workshop on Three-dimensional modelling of seismic waves generation, propagation and their inversion", ICTP (25 October - 5 November).

2002. Invited lecturer at "Sixth workshop on Three-dimensional modelling of seismic waves generation, propagation and their inversion", ICTP (30 September - 12 October).

2000. Invited lecturer at "Fifth workshop on Three-dimensional modelling of seismic waves generation, propagation and their inversion", ICTP (25 September - 6 October).

1998. Invited lecturer at "Fourth workshop on Three-dimensional modelling of seismic waves generation, propagation and their inversion", ICTP (4-15 November).

1996. Teaching assistant at "Third workshop on Three-dimensional modelling of seismic waves generation, propagation and their inversion", ICTP (4-15 November).

Advanced training activity for international organizations (invited):

2018. Co-organizer and invited lecturer at "2nd School on Advanced Modeling of Seismic Hazard in Africa" 17-18 October 2018, NRIAG, Egypt.
2018. Co-organizer and invited lecturer at "International school on: Use of E-Infrastructures In Seismology", Institute of Seismological Research, Gandhinagar, Gujarat, India.
2017. Invited lecturer at "Methods of Comprehensive Assessment of Seismic Hazard", Russian Academy of Sciences, Moscow, Russia.
2017. Invited lecturer at "Training Program on "Seismology and Seismic Hazard Assessment", BUET-Japan Institute of Disaster Prevention & Urban Safety (BUET-JIDPUS), Dhaka, Bangladesh.
2016. Invited lecturer at "International Nathiagali Summer College", National Center for Physics, Islamabad, Pakistan.
2016. Invited lecturer at "Systems Analysis and Seismic Hazard Assessment School for Young Scientists", Russian Academy of Sciences, Moscow, Russia.
2016. Invited ERASMUS+ teacher, Sofia University St. Kliment Ohridski, Sofia, Bulgaria.
2016. Invited lecturer at "The 2nd African Workshop on Seismic Hazard", National Research Institute of Astronomy and Geophysics, Aswan, Egypt.
2014. Invited lecturer at "International School on the "School on Advanced Modeling of Seismic Hazard in Africa", National Research Institute of Astronomy and Geophysics, Helwan, Egypt.
2013. Invited lecturer at "International School on the "Use of e-infrastructures for advanced seismic hazard assessment in Indian subcontinent", Gandhinagar, India.
2012. Invited lecturer at Asian Seismological Commission Training Course "Seismology, Seismic Hazard Assessment" Ulanbataar, Mongolia.
2010. Invited teacher at Asian Seismological Commission Training Course "Seismic hazards and disasters in Asia" Hanoi, Vietnam.
2010. Invited lecturer at "IAEA International Workshop on External Flooding Hazards at Nuclear Power Plant Sites in Commemoration of the 5 Years of Indian Ocean Tsunami Event". Kalpakkam (India).
2010. Invited lecturer at "Advanced Conference on Seismic Risk Mitigation and Sustainable Development", IAEA, Miramare Italy.
2009. Invited lecturer at "ICTP/IAEA Advanced Workshop on Earthquake Engineering for Nuclear Facilities", IAEA, Miramare, Italy.
2008. Invited lecturer at "Workshop on Seismic Hazard in Asia". CCMMACS-ICTP, Bangalore India.
2007. Invited lecturer at "Workshop on the Physics of Tsunami, Hazard Assessment Methods and Disaster Risk Management (Theories and Practices for Implementing Proactive Countermeasures)", IAEA, Miramare, Italy.
2006. Invited lecturer at "The Conduct of Seismic Hazard Analyses for Critical Facilities", IAEA, Miramare, Italy.
2005. Invited lecturer at "2nd Workshop on Earthquake Engineering for Nuclear Facilities. Uncertainties in Seismic Hazard Assessment", IAEA, Miramare, Italy.
2005. Invited lecturer at "IAEA International Workshop on External Flooding Hazards at Nuclear Power Plant Sites". Kalpakkam (India).
2004. Invited lecturer at the Asian Seismological Commission Training Course "Recent Trends in Seismic Networks, Data Processing & Exchange, Hazard & Risk Assessment, and Disaster Mitigation" Yerevan, Armenia.