

PERSONAL INFORMATION

Name: GIANLUCA BENEDETTI

Place and date of birth: Faenza (Ravenna, Italy), 19/05/1972

Nationality: Italian

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MAIN PROFESSIONAL SKILLS

25 years of national and international professional experience in engineering geology. Main areas of work: railway and road infrastructures, landslides, tunnels, maritime works, hydrogeological risk management.

Management Skills

- Executive board member with economic and administrative responsibilities.
- Public Procurement Officer (RUP) for ground investigations and geology/geotechnics services.
- Definition of commercial strategies and initiatives (company presentations, tender selection, identification of investment sectors).
- Technical staff selection.
- Preparation and management of contracts with clients and service suppliers.
- Coordination and supervision of work teams of up to 30 people (Team Leadership).
- Coordinator of multidisciplinary work groups (Coordinator of Specialist Activities).

Technical Skills

- Manager of operational units and/or company sectors in geology, engineering geology and environmental engineering.
- Project Manager.
- Geological design: development of geological, geotechnical and geomechanical models.
- Design and supervision of ground investigation campaigns; planning and verification of geotechnical laboratory tests.
- Geological validation of design documents.

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- Production of thematic cartography.
 - Design of mitigation measures for hydrogeological risk.
 - Geological and geomorphological surveys; hydrogeological monitoring; rock mass surveys and classification.
 - Slope stability and foundation system assessment.
 - Design and interpretation of monitoring systems data.
 - Operational Director Geologist supporting the Construction Management, certified for rope access works.
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EDUCATION

1986–1991 – *Liceo Scientifico F. Severi, Faenza (RA)*

Scientific High School Diploma

27 March 2000 – *Alma Mater Studiorum – Università di Bologna*

Degree in Geological Sciences.

Thesis title: “*Geologia ambientale della zona a Nord di Pescocostanzo (AQ), Parco Nazionale della Maiella, e proposta di organizzazione di una banca dati per le scienze della terra*”

Professional License: State Exam for qualification as Geologist (06/06/2001). Registered in the *Ordine dei Geologi Emilia Romagna*, No. 1019, Section A.

Main Certifications & Training (Selection)

- 2019 – Rope access systems training (basic and advanced modules).
 - 2019 – Training course for supervisors of rope access workers.
 - 2022 – Corporate first aid training.
 - 2024 – Working at height – Rope access – Basic module.
 - 2025 – Training for RUP and Assistants – ANAC module, execution phase.
 - Various courses on railway risk and occupational safety.
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ASSOCIATIONS

- Member of the Study Commission “Il geologo progettista” – Congresso Nazionale dei Geologi Italiani (2016).
- Member of IAEG – International Association for Engineering Geology and the Environment (Italy) since 2016.

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- Member of the Italian Geological Society since 2017.
 - Member of the Permanent Working Group “Costruzioni, Infrastrutture e Opere Geologiche, Geotecniche e Idrauliche” of the Consiglio Nazionale dei Geologi since 2021.
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PROFESSIONAL EXPERIENCE (SUMMARY)

03/2026 – Present – FS Engineering SpA (Gruppo Ferrovie dello Stato Italiane)

Operational Structure Manager – Geology Unit

01/2023 – 02/2026 – ITALFERR SpA (Gruppo Ferrovie dello Stato Italiane)

Operational Structure Manager – Geology Unit

2020 – 2022 – ENSER SRL

Technical Director

2018 – 2022 – ENSER SRL

Board Member

2008 – 2022 – ENSER SRL

Partner and Technical Supervisor – Geology & Environmental Engineering

2002 – 2008 – ENSER SRL

Senior Geologist – Project Manager

2000 – 2001 – EN.SER. Studio Tecnico Associato

Junior Geologist

COUNTRIES WITH WORK EXPERIENCE

On-site: Italy, Malta, Somaliland, Cameroon, Oman, Switzerland, France, Saudi Arabia

Off-site data analysis: Nigeria, Algeria, Angola, Sudan, Qatar, Kazakhstan, Libya, Indonesia, Brazil

UNIVERSITY TEACHING & ACADEMIC ROLES

- 2013–2022: Teaching Assistant and Adjunct Professor of Geology and Applied Geology – Alma Mater Studiorum – Università di Bologna.
- 2013–2017: Council Member and Member of the Seismic Commission – Ordine dei Geologi Emilia Romagna.

Includes co-supervision of numerous MSc and BSc theses (The full list will be sent upon request).

PUBLICATIONS

1. Amadesi E., Benedetti G., Minardi G., Mora P., “Proposta di una metodologia informatica di studio del territorio da fotointerpretazione” – Atti della 2° Conferenza ASITA, Bolzano 1998.
2. Amadesi E., Benedetti G., Mora P., “Geologia ambientale: carta geologico-turistica della zona a Nord di Pescocostanzo (AQ)” – Bollettino della Associazione Italiana di Cartografia (AIC) n°107, 1999.
3. Amadesi E., Benedetti G., Minardi G., Mora P., “Organizzazione di una banca dati per le Scienze della Terra” – Bollettino della Associazione Italiana di Cartografia (AIC) n°109 – 110, 2000.
4. Guido Gottardi, Gianfranco Marchi, Alberto Landuzzi, Gianluca Benedetti, “Sui complessi fenomeni di instabilità presso le gole di Scascoli (Appennino settentrionale, Bologna)”, Internationales Symposium INTERPRAEVENT 2004 – Riva / Trento, Italy.
5. Gianluca Benedetti, Alberto Landuzzi, Marco Gualdrini, Stefano Ferro, Gianfranco Marchi, Luigi Samorì, “Landslides in the Scascoli gorge (Bologna Appennines, Italy): from reconnaissance to monitoring (PART 1 and 2)”, 32rd International Geological Congress, 2004 FIRENZE, ITALIA.
6. Gianluca Benedetti, Carta geologico turistica della zona a Nord di Pescocostanzo (AQ), 2° Convegno GEOLOGIA e TURISMO, Bologna 2004.
7. Giacchetti G., Marchi G., Benedetti G., Landuzzi A. – The Scascoli case study (Bologna – Italy) – Design and safety measures for a large landslide area – 11° Congress INTERPRAEVENT 2008, Dornbirn Vorarlberg, Austria.
8. Benedetti G., Giacchetti G., Marchi G., Landuzzi A. – The Scascoli case study (Bologna – Italy) – Design of emergency landslide remediations supported by finite and distinct elements analysis – 33rd International Geological Congress, 2008 OSLO, Norway.

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9. Marchi G., Giacchetti G., Benedetti G., Landuzzi A. – The Scascoli case study (Bologna, Italy) - Investigation design and safety measures of a large landslide area – The Second World Landslides Forum, 2011 Roma, Italy.
10. Benedetti G., Bernardi M., Borgatti L., Continelli F., Ghirotti M., Guerra C., Landuzzi A., Lucente C. C., Marchi G. – San Leo: ten centuries of coexistence with landslide – The Second World Landslides Forum, 2011 Roma, Italy.
11. Benedetti G., Guerra C., Bartolini M., Bernardi M., Borgatti L., Continelli F., Ghirotti M., Landuzzi A., Lucente C.C., Marchi G., Spreafico M.C. – The current and historical landslides in the walled city of San Leo (RN) – IV National Congress AIGA, 2012 Perugia – Italy.
12. L. Borgatti, C. Guerra, O. Nesci, R. W. Romeo, F. Veneri, A. Landuzzi, G. Benedetti, G. Marchi, C. C. Lucente - The 27 February 2014 San Leo landslide (northern Italy) – Landslide, April 2015, Volume 12, Issue 2, pp 387-394. <https://doi.org/10.1007/s10346-015-0559-4>
13. Gabriele Bernagozzi, Gianluca Benedetti, Francesca Continelli, Cristiano Guerra, Renato Briganti, Santo Polimeni, Giuseppe Riggi, Fabio Romano - Impacts on Groundwater Flow Due to the Excavation of Artificial Railway Tunnels in Soils - Engineering Geology for Society and Territory - Volume 6, 2015, pp 967-970. https://doi.org/10.1007/978-3-319-09060-3_175
14. Benedetti G., Braga R., Carlomagno F., Gasparotto G., Paolucci F., Scuri A. “Asbestiform minerals and their impact on underground works. A case study of National Railway Project in the Sultanate of Oman” Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 40 (2016), 88° Congresso SGI, Napoli 2016.
15. Benedetti G., Berti M., Moruzzi F., Rodani S., Sapigni M., Sciascia F. “Characterization of geological and geomechanical uncertainties and risks – The case study of two railway tunnels (Trento, Southern Alps, Italy)” Rend. Online Soc. Geol. It., Suppl. n. 1 al Vol. 40 (2016), 88° Congresso SGI, Napoli 2016.
16. Sandron D., Santulin M., Tamaro A., Orci C., Benedetti G., Castellaro S., Romeo R., Rebez A., Grimaz S., Mlisan P., Guadagnini G., Sciascia F., Slejko D. - Seismic parameter design assessment for the Kribi deep seaport in Cameroon - Bulletin of Earthquake Engineering - Bull Earthquake Engineering (2019) 17: 1825. <https://doi.org/10.1007/s10518-018-0518-2>
17. Arboit F., Chew D., Visoná D., Massironi M., Sciascia F., Benedetti G., Rodani S. – “The geodynamic evolution of the Italian South Alpine basement from the Ediacaran to the Carboniferous: was the South Alpine terrane part of the Peri-Gondwana arc-forming terranes?” – Gondwana Research, Volume 65, 2019, pp. 17-30, <https://doi.org/10.1016/j.gr.2018.08.005>

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18. S. Rodani, G. Penna, F. Marchese, A. Scuri, F. Sciascia, D. Castioni, L. Piccinini, F. Cervi, G. Benedetti – “Monitoring the water resources in the large railway projects: the Fortezza - Ponte Gardena case study, Southern Brenner Base Tunnel access”. Tunnels and Underground cities: Engineering and Innovation meet Archeology, Achitecture and Art – _Peila, Viggiani & Celestino (Eds), 2019 Taylor & Francis Group, London.
19. F. Marchese, S. Rodani, A. Sciotti, S. Vagnozzi, G. Bernagozzi, A. Scuri, F. Sciascia, L. Piccinini, L. Borgatti, G. Benedetti – “A 3D numerical model for the evaluation of the tunneling water inflow: the Fortezza – _Ponte Gardena case study, Southern Brenner Base Tunnel access”. Tunnels and Underground cities: Engineering and Innovation meet Archeology, Achitecture and Art – _Peila, Viggiani & Celestino (Eds), 2019 Taylor & Francis Group, London.
20. F. De Matteis, C. Orci, S. Bilosi, G. Benedetti – “The 3D-BIM-FEM modeling of the Mairie des Lilas Paris metro station line 11 - from design to execution”.- Tunnels and Underground cities: Engineering and Innovation meet Archeology, Achitecture and Art – _Peila, Viggiani & Celestino (Eds), 2019 Taylor & Francis Group, London.
21. E. Poggi, M. Comedini, F. Marchese, S. Ferro, W. Rivola, G. Benedetti "Il modello geologico del viadotto Genova San Giorgio" Strade & Autostrade 145, 01/2021.
22. Monegato G., Fioraso G., Benedetti G., Sciascia F., Borgatti L., Rodani S., Menzies J. “Stratigraphic architecture of the Isarco-Pusteria valley junction (European Alps) showing the interaction between two major alpine glaciers during the Late Pleistocene” poster @ XXI INQUA (International Union for Quaternary Research) Congress, July 14th – 20th 2023, Sapienza University of Rome, Italy
23. Mastrangelo A., Murtas R., Bianchi F., Benedetti G., Carretta N., Paciolla R., Marchi F., Moruzzi F., Cutrera G., Borgatti L., Donati D., “Rockfall characterization and risk evaluation before and after applying mitigation measures along a man-made trench of the Bari-Taranto railway (Apulia, Italy)”, 6th World Landslide Forum, November 14th – 17th 2023, Florence, Italy.
24. Benedetti G., Borgatti L., Fioraso G., Monegato G., Rodani S., Sciascia F. “Slope processes and large-scale infrastructures: the Varna landslide along the access to the Brenner Base Tunnel (Isarco valley, northern Italian Alps)”, 6th World Landslide Forum, November 14th – 17th 2023, Florence, Italy.
25. M. Perozzo, N. Menegoni, M. Foletti, E. Poggi, G. Benedetti, N. Carretta, S. Ferro, W. Rivola, S. Seno, D. Giordan, M. Maino “Evaluation of an innovative, open-source and quantitative approach for the kinematic analysis of rock slopes based on UAV based Digital Outcrop Model: A case study from a railway tunnel portal (Finale Ligure, Italy)”, Engineering Geology, Volume 340, 2024, <https://doi.org/10.1016/j.enggeo.2024.107670>

26. Bonini S., Asti R., Viola G., Tartaglia G., Rodani S., Benedetti G., Comedini M., Vignaroli G., “The impact of active and capable faults structural complexity on seismic hazard assessment for the design of linear infrastructures”, *Natural Hazards and Earth System Sciences*, Volume 25, 2025, <https://doi.org/10.5194/nhess-25-2981-2025>
27. Giovanni Monegato, Gianfranco Fioraso, Federico Sciascia, Lisa Borgatti, John Menzies, Gianluca Benedetti, Stefano Rodani, “Stratigraphic evidence of glacier interactions in the Isarco-Pusteria valley junction (Italian Alps): unraveling the Late Pleistocene landscape evolution”, *Italian Journal of Geosciences* 2024; 143 (3): 409–425, <https://doi.org/10.3301/IJG.2024.18>
28. Paolo Galli, Simone Bello, Francesco Brozzetti, Antonio Galderisi, Giuseppe Naso, Antonio Pignalosa, Gianluca Benedetti, Massimo Comedini, Edoardo Peronace, “Paleoseismic evidence for the Mw~7 1857 earthquake along the Caggiano fault system (southern Italian Apennines)”, *Quaternary Science Reviews*, Volume 365, 2025, <https://doi.org/10.1016/j.quascirev.2025.109508>
29. Rodolfo Rani, Marco Sciarra, Stefano Rodani, Gianluca Benedetti, Matteo Berti, “Landslide susceptibility methodology for railway planning: a comparative analysis of statistical and machine learning methods in a case study of Marche region, Italy”, *Transportation Geotechnics*, Volume 56, 2026, <https://doi.org/10.1016/j.trgeo.2025.101731>

Main professional Development courses

2017 – Workshop BBT “The Brenner Base Tunnel: application field and comparison between technical cultures and advanced operational methods”, Fortezza (BZ), 30 September.

2017 – Seminar “New studies on regional seismic hazard” (Regione Emilia Romagna), Bologna, 5 December.

2017 – Congress “Fault zones: geology and hydrogeology of local and regional faults”, Fortezza (BZ), 27 May.

2018 – Course “Experimental dynamic characterization of structures”, Modules 1 and 2. MOHO srl, Venice, 19–20 December.

2018 – Applied Geophysics Training Day, ITALFERR Spa, Rome, 2 July.

2018 – EGU2018 General Assembly, Vienna (AT), 8–13 April.

2018 – Training Day “Dynamic characterization of soils”, ITALFERR Spa, Rome, 22 June.

2019 – WTC2019. ITA-AITES General Assembly and World Tunnel Congress. Naples, 3–9 May.

2019 – Training Day: “Innovation in rockfall protection works: where are we going?”, GEAM, Turin, 12 July.

2019 – GEOFLUID: “General states of Geology. Investigations, interpretation and monitoring of the subsoil”, Parma, 18 September.

2020 – SIFET: “GNSS positioning with open source tools (RTKLIB)”, online, 30 April.

2020 – SIFET: “Open data with QGIS”, online, 27 April.

2020 – Eco Utility Company: “Construction Management: safety procedures and ANAC guidelines according to Italian public procurement code (D. Lgs. 50/2016)”, online, 8 October.

2021 – MOHO: “Satellite radar interferometry”, 22 January.

2022 – Province of Bolzano, Regional Geologists Council, Bolzano Engineers Council: “XXV Geoalp Wintercup 2022”.

2022 – ITALFERR Spa: “Hydrogeological interaction assessment of underground works”, Modules 1–5.

2023 – ITALFERR Spa: “Quaternary continental deposits in valley and high plain settings”.

2023 – SIGEA: “GEOVIEW 2023 – 1st International Geotechnical Workshop”, 16–18 May, Savona.

2023 – 6th World Landslide Forum, 14–17 November, Florence.

2024 – “The national IDROGEO platform: data and services for public administrations and enterprises”, ISPRA event, 30 May, Rome.

2024 – “Innovation and transformation in landslide risk management in Italy”, Geological Council of Lazio, 18 December, Rome.

2025 – “Geoviews 2025 – II International Geotechnical Workshop – Structural Geology and Rock Mechanics relationships”, 10–11 June, Savona.

DIGITAL SKILLS

Operating Systems:

Windows, iOS, Microsoft Office 365

Specialized Software:

Advanced: Adobe Acrobat, Autodesk AutoCAD, Adobe Illustrator, Rocscience Suite (Rocfall, Swedge, Unswedge, Dips, Rocplane, RocData), WINSTABL, GeoStudio, Geologismiki CPT-SPT

Intermediate: ArcGIS, Autodesk MAP, CloudCompare, GEO&Soft Rotomap

Basic: Plaxis, Adobe Photoshop, ROCKYFOR3D, QGIS, COLTOP 3D, Leapfrog Works

LANGUAGE SKILLS

Language	Comprehension	Speaking	Writing
Italian	Native	Native	Native
English	B2	B2	B2
French	A2	A2	A1

SELECTION OF PROFESSIONAL PROJECTS

Over 100 projects in the last 10 years as technical and managerial lead; over 100 railway projects signed per year during 2023–2025 as Operational Manager at ITALFERR.

(Dozens of detailed project descriptions are included in the original Italian CV. The full list will be sent upon request).

Cesena, December 2025

Gianluca Benedetti

