



Nikolaos Sabatakakis
Professor in Engineering Geology
Short CV



Personal Information

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Education and Employment

- 1976** Degree in Geology at the Department of Geology of the University of Athens, Greece.
1991 Ph.D. in Geology at the Department of Geology of the University of Patras, Greece.
1980-1998 Public Works Research Center (KEDE), Department of Geotechnical Engineering, Hellenic Ministry of Public Works
1998-σήμερα Faculty member of Geology Department of Patras University, Greece, in **Engineering Geology Lab**

Main research topics

- Engineering geological – geotechnical investigations for technical works construction.
- Physical and mechanical properties of soils and rocks
- Landslides: monitoring, hazard and risk assessment, remedial measures design
- Seismic microzonation and ground zoning against seismic hazard
- Monuments restoration and preservation of national heritage
- Ground suitability for land use and housing - environmental consequences

Teaching and consulting

Modules taught at the undergraduate course (Dept. of Geology, University of Patras, Greece):

- “Engineering Geology” (5th semester)
- “Geology of technical works” (6th semester)
- “Elements of Geotechnical Engineering” (7th semester)
- “Landslide phenomena in terrestrial and marine environment” (8th semester)

Modules taught at the undergraduate course (Dept. of Civil Engineering, University of Patras, Greece):

- “Geology of technical works” (8th semester)

Modules taught at the postgraduate course “Environmental Applied Geology”(Dept. of Geology, University of Patras, Greece):

- “Engineering Geology and Infrastructures”
- “Geotechnical Investigations and Studies”
- “Landslides and Slope Stability”

Textbooks

- “Engineering Geology” (in Greek) «Papasotiriou» Publ. Co, (1st edition 2002, 2nd edition 2019), 514 pages.
- “Geology of technical works” (in Greek) «Papasotiriou» Publ. Co, (1st edition 2002, 2nd edition 2019), 623 pages.
- “Applications of Engineering Geology and Geotechnical Engineering in technical work construction” (in Greek) Patras University Publ. (1st edition 2011, 2nd edition 2015), 131 pages.

Supervised dissertations

- More than sixty (60) postgraduate Diploma Theses and many more undergraduate
- Four (4) PhD completed dissertations

Consulting

1998-today: Senior Geological Engineering Consultant on several engineering projects, slope stability problems and landslides, geotechnical investigations, ground zoning for land use and housing, mainly for government authorities as well as for private technical companies.

Participation in research projects

Participation in more than 50 research projects (in 20 as Scientific Coordinator). Some representative projects are listed below:

- ***“Development of management Tools and diRectives for immediate protection of bIodiversity in coasTal areas affected by sea erOsion and establishment of appropriate eNvironmental control systems (TRITON)”***. Programme Interreg V-A Greece-Italy (EL-IT) Project Code 5003629 (2014 – 2020)
- ***“Development of a monitoring system for Landslide Risk Prevention using geotechnical and satellite methods”***. ESPA Region of Epirus, 2017 – 2020”. ΕΣΠΑ (ΟΠΣ 5007641)
- ***“Landslide Risk Assessment Model for Disaster Prevention and Mitigation - LANDSLIDE”***. European Commission Directorate-General Humanitarian aid and civil protection (2015 – 2018)
- ***“Landslide Vulnerability Model” (LAVMO) based on Remote Sensing technologies”*** Thales Research Programme (2012 – 2015)
- ***“Water leakage Monitoring and recording at Mornos Dam”*** Athens Water Supply and Sewerage Company (EYDAP) (2011 – 2012)
- ***“Landslide phenomena related to burning areas of Helia Prefecture. Remedial measures design”***. Region of Western Greece (2007 – 2010)
- ***“Construction of dams for surface water management in Achaia Prefecture”***. Region of Western Greece (2005 – 2006)
- ***“Geotechnical investigation for slope stability problems of Kyparissia castle”***. Ministry of Environment Physical Planning and Public Works (2004 – 2005)
- ***“Evaluation and classification of critical soil parameters according to their polluting susceptibility for wastes disposal”***. Ministry of Health and Public Care (2003 – 2004)
- ***“Landslides and ground zoning of surroundings of Patras according to the suitability for housing”***. Region of Western Greece (2004 - 2005)
- ***“A classification system for the ground seismic motion parameters of Greek soil formations”***. Organization for Seismic Planning and Protection of Greece. (2000 – 2002).
- ***“Engineering Geological investigation through the Corinthos - Patra motorway”***. EDAFOMICHANIKI SE – GEOSKOPIO SE (2001 – 2002).

Selected publications

Author and co-author of more than 120 published papers in scientific journals and conference proceedings. Some representative publications through the time are listed below:

- Sabatakakis N, Tsiambaos G, Ktena S, Bouboukas S (2018). *“The effect of microstructure on m_i strength parameter of common rock types”*. Bulletin of Engineering Geology and the Environment, 77: 1673-1688. doi: [10.1007/s10064-017-1059-7](https://doi.org/10.1007/s10064-017-1059-7)
- Nikolakopoulos K, Kavoura K, Depountis N, Kyriou A, Argyropoulos N, Koukouvelas I, Sabatakakis N (2017): *“Preliminary results from active landslide monitoring using multidisciplinary surveys”* European Journal of Remote Sensing, 50:1, 280-299. doi: [10.1080/22797254.2017.1324741](https://doi.org/10.1080/22797254.2017.1324741)
- Chousianitis K, Del Gaudio V, Sabatakakis N, Kavoura K, Drakatos G, Bathrellos G, Skilodimou H (2016). *“Assessment of earthquake - induced landslide hazard in Greece: From Arias intensity to spatial distribution of slope resistance demand”*. Bulletin of the Seismological Society of America, 106(1): 174 - 188. doi: [10.1785/0120150172](https://doi.org/10.1785/0120150172)
- Lainas S, Sabatakakis N, Koukis G (2016): *“Rainfall thresholds for possible landslide initiation in wildfire-affected areas of western Greece”* Bulletin of Engineering Geology and the Environment, 75:883-896, doi: [10.1007/s10064-015-0762-5](https://doi.org/10.1007/s10064-015-0762-5)
- Sabatakakis N, Nikolakopoulos K, Papatheodorou G, Kelasidis G (2016). *“A multisource approach for coastal mapping purposes: Limeni bay, Mani and surrounding area, southern Greece”* Earth Sciences Informatics, 9(2):183-196, doi: [10.1007/s12145-016-0250-x](https://doi.org/10.1007/s12145-016-0250-x)

- Sabatakakis N, Tsiambaos G, Rondoyianni R, Papanakli St, Kavoura Kat (2015). “Deep - seated structurally controlled landslides of Corinth Gulf rift zone, Greece: The case of Panagopoula landslide” Proc. of 13th ISRM Congress Innovations of Applied and Theoretical Rock Mechanics - ISBN: 978-1-926872-25-4, paper 651
- Sabatakakis N, Depountis N, Vagenas N (2014). “Evaluation of rockfall restitution coefficients” G. Lollino et al. (eds.) Springer, Engineering Geology for Society and Territory – Volume 2, 2023-2016. doi: [10.1007/978-3-319-09057-3_359](https://doi.org/10.1007/978-3-319-09057-3_359)
- Sabatakakis N, Koukis G, Vassiliades E, Lainas S (2013): “Landslide susceptibility zonation in Greece”. Natural Hazards 65(1):523 – 543. doi: [10.1007/s11069-012-0381-4](https://doi.org/10.1007/s11069-012-0381-4)
- Tsiambaos G, Sabatakakis N (2011). “Empirical estimation of shear wave velocity from in situ tests on soil formation in Greece” Bulletin of Engineering Geology and the Environment 70(2):291 – 297. doi: [10.1007/s10064-010-0324-9](https://doi.org/10.1007/s10064-010-0324-9)
- Koukis G, Sabatakakis N, Lainas S, Depountis N, Skias S (2010): “Engineering geological investigation of heavy rainfall induced landslides in wildfire affected areas, western Greece”. In: Williams et al. (eds) Geologically Active. Proceedings of the 11th IAEG congress, Auckland, New Zealand, pp 331 – 338
- Koukis G, Sabatakakis N, Ferentinou M, Lainas S, Alexiadou X and Panagopoulos A (2009): “Landslide phenomena related to major fault tectonics: rift zone of Corinth Gulf, Greece”. Bulletin of Engineering Geology and the Environment 68(2): 215 – 229. doi: [10.1007/s10064-008-0184-8](https://doi.org/10.1007/s10064-008-0184-8)
- Sabatakakis N, Koukis G, Tsiambaos G, Papanakli S (2008): “Index properties and strength variation controlled by microstructure for sedimentary rocks”. Engineering Geology 97 (1 – 2):80 – 90, doi: [10.1016/j.enggeo.2007.12.004](https://doi.org/10.1016/j.enggeo.2007.12.004)
- Depountis N, Koukis G, Sabatakakis N (2008): “Environmental problems associated with the development and operation of a lined and unlined landfill site. A case study demonstrating two landfill sites in Patras, Greece”. Environmental Geology 56(7): 1251 – 1258. doi: [10.1007/s00254-008-1224-1](https://doi.org/10.1007/s00254-008-1224-1)
- Koukis G, Sabatakakis N, Spyropoulos A (2007): “Resistance variation on low quality aggregates”. Bulletin of Engineering Geology and the Environment 66(4): 457 – 466. doi: [10.1007/s10064-007-0098-x](https://doi.org/10.1007/s10064-007-0098-x)
- Sabatakakis N, Koukis G, Mourtas D (2005): “Composite landslides induced by heavy rainfalls in suburban areas: City of Patras and surrounding area, western Greece”. Landslides 2(3): 202 – 211. doi: [10.1007/s10346-005-0002-3](https://doi.org/10.1007/s10346-005-0002-3)
- Koukis G, Sabatakakis N, Tsiambaos G, Katrivesis N (2005): “Engineering geological approach to the evaluation of seismic risk in metropolitan regions: case study of Patras, Greece”. Bulletin of Engineering Geology and the Environment 64(3): 219 – 235. doi: [10.1007/s10064-005-0273-x](https://doi.org/10.1007/s10064-005-0273-x)
- Tsiambaos G, Sabatakakis N (2004): “Considerations on strength of intact sedimentary rocks”. Engineering Geology 72(3 – 4): 261 – 273. doi: [10.1016/j.enggeo.2003.10.001](https://doi.org/10.1016/j.enggeo.2003.10.001)
- Anagnostopoulos A, Koukis G, Sabatakakis N, Tsiambaos G (2003): “Empirical correlations of soil parameters based on Cone Penetration Tests (CPT) for Greek soils”. Geotechnical and Geological Engineering 21(4): 377 – 387. doi: [10.1023/B:GEGE.0000006064.47819.1a](https://doi.org/10.1023/B:GEGE.0000006064.47819.1a)
- Marinos P, Bouckovalas G, Tsiambaos G, Sabatakakis N, Antoniou A (2001): “Ground zoning against seismic hazard in Athens, Greece”. Engineering Geology 62(4): 343 – 356. doi: [10.1016/S0013-7952\(01\)00035-7](https://doi.org/10.1016/S0013-7952(01)00035-7)
- Koukis G, Sabatakakis N (2000): “Engineering geological environment of Athens, Greece”, Bulletin of Engineering Geology and the Environment 59(2): 127 – 135. doi: [10.1007/s100640000058](https://doi.org/10.1007/s100640000058)
- Koukis G, Tsiambaos G, Sabatakakis N (1996): “Landslides in Greece: Research evolution and quantitative analysis”, Proceedings of the 7th International Symposium on Landslides, Trondheim, Norway, 17 – 21 June, Vol. 3:1935 – 1940.
- Koukis G, Tsiambaos G, Sabatakakis N (1994): “Slope movements in the Greek territory: A statistical approach”, Proceedings of the 7th International Congress of the International Association of Engineering Geology, Lisboa, Portugal, 5 – 9 Sept., Vol. 7:4621 – 4628
- Kalteziotis N, Koukis G, Tsiambaos G, Sabatakakis N, Zervogiannis H (1991): “Structural damage in a populated area due to an active fault”, Proceedings of the 2nd International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, St. Louis, Missouri, 11 – 15 March, Paper No. LP28, Vol. 3:1709 – 1716.
- Kalteziotis N, Tsiambaos G, Sabatakakis N (1987): “The application of Rock Mass classification system on tunnelling in Greek limestones”, International Conference on Foundations and Tunnels, University of London, 24 – 26 March, Vol. 2:182 – 186
- Christoulas S, Tsiambaos G, Sabatakakis N (1985): “Engineering geological conditions and the effects of the 1981 earthquake in Athens, Greece”. Engineering Geology 22(2): 141 – 155. doi: [10.1016/0013-7952\(85\)90044-4](https://doi.org/10.1016/0013-7952(85)90044-4)