

## Nikolaos S. KLIMIS – Curriculum Vitae

**BORN:** June 21, 1959 – Thessaloniki, Greece  
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### EDUCATION

Diploma in Civil Engineering, Democritus University of Thrace - Greece, 1983  
D.E.A (M.Sc) Ecole Nationale Superieure des Mines de Paris – France, 1984  
Doctorat (Ph.D) Ecole Nationale Superieure des Mines de Paris – France, 1988

### POSITIONS HELD

Associate Professor, Division of Geotechnical Engineering, Department of Civil Engineering, Democritus University of Thrace (DUTH), 15/07/2008 to date  
Head of Geotechnical Engineering Division, Department of Civil Engineering, Democritus University of Thrace (DUTH), since March 2017  
Head of the Laboratory of Soil Mechanics & Foundation, DUTH, 2008 to 2014  
Senior Researcher in Geotechnical Earthquake Engineering, Institute of Engineering Seismology & Earthquake Engineering (I.T.S.A.K.), 2002 – 15/07/2008  
Assistant Researcher, Institute of Engineering Seismology & Earthquake Engineering (I.T.S.A.K.), 1998 – 2001  
Lecturer Researcher, Institute of Engineering Seismology & Earthquake Engineering (I.T.S.A.K.), 1995 – 1998  
Deputy General Director of I.T.S.A.K, 1999 – 2005  
Head of Soil Dynamics Section of I.T.S.A.K., 2003 – 15/07/2008  
Consultant of EGNATIA ODOS S.A, 2001 – 2008  
Freelancer in Geotechnical Engineering: Designer of Public Works, 1990 – 1996.

### MEMBER OF SCIENTIFIC ORGANIZATIONS

- Technical Chamber of Greece (TEE)
- Hellenic Union of Civil Engineers (ΣΠΜΕ)
- Hellenic Scientific Society of Soil Mechanics & Foundation Engineering and Hellenic Society of Rock Mechanics (ΕΕΕΓΜ)
- International Society of Soil Mechanics and Geotechnical Engineering (ISSMGE)
- Association Francaise de Genie Parassismique (AFPS)
- Hellenic Society of Earthquake Engineering (ETAM)
- Greek Commission on Large Dams (GCOLD)
- Hellenic Geosynthetics Society (HGS)

### RESEARCH FIELDS OF INTEREST

- Soil and site characterisation in geotechnical earthquake engineering.
- Experimental and theoretical studies on seismic ground motion
- Liquefaction and mitigation measures
- Site effects and microzoning studies
- Seismic performance and design of geotechnical structures and infrastructures (earthfill and rockfill dams, unreinforced and reinforced embankments, cut slopes, quay walls, ...).
- Seismic hazard, geotechnical hazards and seismic risk assessment

### PRINCIPAL CONTRIBUTIONS TO RESEARCH PROJECTS:

- Seismicity study and seismic hazard assessment of Gratini Dam broader area at Komotini, *P.P.C, 1997.*
- Seismicity study and seismic hazard assessment of artificial lake of Polyfyto and Ilarion Dam broader area, *P.P.C, 1997.*
- Study of attenuation and local amplification of strong motion and its influence on earth dams of Hellenic area, *G.S.R.T. – P.P.C., 1998 – 2000.*
- Investigation and assessment of seismic behaviour of Papadia Dam, *P.P.C, 1999 – 2000, (Coordinator).*
- Seismic Hazard Assessment along the Egnatia Motorway, *EOAE 0000/406/GD/A01/10-11-99, 1999 – 2001, (WP – Leader).*
- Investigation of the seismic behaviour of the cable-stayed bridge on Eripos channel : Experimental and analytical approaches, *E.P.P.O., 2000 – 2002.*

- Development of inelastic displacement and pseudoacceleration spectra for Greece, *E.P.P.O.*, 2000 – 2002.
- Influence of local soil conditions, topography and soil - foundation - structure seismic interaction, on recordings of the National Strong Motion Network, *E.P.P.O.*, 2001 – 2002.
- The Athens earthquake of Sept. 9, 1999: Evaluation of vulnerability of building stock in the meizoseismal area and comparison with actual damage distribution due to the earthquake, *E.P.P.O.*, 2000 – 2001.
- New seismic hazard map in Greece, compatible with the in force Greek seismic code and EC8, *E.P.P.O.*, 2000 – 2002.
- Assessment of liquefaction hazard and soil - pile interaction at river Nestos bridge, *E.O.A.E.*, 2001 – 2002, **(Coordinator)**.
- SESAME: Site effects assessment using ambient noise, *EVG-2000-22024*, 2001 – 2004.
- Investigation and evaluation of seismic behavior of Ilarion Dam, *P.P.C.*, 2002 – 2003, **(Coordinator)**.
- EURO-SEISRISK. Seismic Hazard Assessment, Site Effects and Soil Structure Interaction Studies in an Instrumented Basin, *EC/DGXII EVG1CT200100040*, 2002 - 2003.
- X-SOILS: Seismically problematic soils – seismic response, foundations, improvement. Funding organization GSRT. Coordinator: EDRASI S.A., participation of ITSAK (**scientific responsible**), 2003-2006.
- Reinforcement measures for stabilization of a rock cliff and prevention from rockfalls at the Community of Episkopi, Pafos, Cyprus: a) Preliminary study, b) design and supervision of construction. Funding Organization: District Administration of Pafos (Cyprus), 2005-2007, **(Coordinator)**.
- *Update of ITSAK scientific infrastructure*. Funding from Regional Operational Programme 2000-2006 of Central Macedonia Region, **(Coordinator)**, 2005-2008.
- *Development for an Information System for Natural Risk Management in the Mediterranean (SyNaRMA)*. Funding from European Regional Development Fund under the EU Community Initiative Programme INTERREG III B ARCHIMED, **(Partner)**, 2006-2007.
- *Assessment of seismic performance of Nestorion Dam at Kastoria, Western Macedonia, Greece*, Funding Prefecture of Kastoria, Region of Western Macedonia, 2008-2009
- *“Assessment of seismic hazard and strong motion at the location of El Ouldja and Berkeche dams in Algeria”*, Funding by ENM s.a., Institute of Engineering Seismology & Earthquake Engineering ITSAK-EPPO, **(Coordinator)**, 2012.
- ARCHIMIDES project Greek GSRT *“Comparative evaluation of the results resulted from geotechnical methods of the in-situ determination of the soil dynamic properties at the sites of the recorded accelerograms and the development in the ground motion predictive equations”*, (2011-2015)
- THALIS – AUTH, *“Characterization of site conditions in Greece for realistic seismic ground motion simulations: pilot application in urban areas”*, Acronym: *SITE-CLASSIFICATION*, Coordinator: A. Kiratzi, Professor of Seismology, Dept of Geophysics, AUTH; **(DUTH: Partner / Scientific Responsible)**, 2012-2015.
- Joint Operational Program “Black Sea Basin 2007-2013”, *“A Scientific Network for Earthquake, Landslide and Flood Hazard Prevention”*, Acronym: *SciNetNatHazPrev*, Coordinator: K. Papatheodorou, Assoc. Professor of Technological Educational Institute of Central Macedonia, Greece; **(DUTH: Partner/Scientific Responsible)**, 2013-2015.
- Joint Operational Program "Black Sea Basin 2014-2020", *“Rapid Earthquake Damage Assessment Consortium”*, Acronym: REDACT, Coordinator: K. Papatheodorou, Professor of International University (ex. Technological Educational Institute of Central Macedonia), Greece; **(DUTH: Partner/Scientific Responsible)**, 2020-2022.
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## PROFESSIONAL EXPERIENCE

Professional experience of more than 30 years, as consultant, in several geotechnical projects (over 120 technical projects) in Greece and Cyprus. Consultant of Public Organizations (Hellenic Ministry of Environment, Physical Planning and Public works, Egnatia Odos S.A.), Technical Advisor and Geotechnical Designer – Consultant at Monasteries of Mt Athos (Monasteries of Simonos Petras, Vatopaidiou, Xiropotamou), and consultant of some private companies specialized in geotechnical engineering. Expertise in network development (in situ) and measurement evaluation for monumental buildings and their foundations (Monasteries of Mt Athos), large scale (in situ) pile loading tests (Railway bridge of Aliakmon river, premises of Democritus University of Thrace at Komotini, ...), large scale rock engineering tests (Almopaios river and Gratini Dam of PPC). Seismic design of earthfill and rockfill dams (Papadia, Vassiliada, Ilarion, Nestorion, Chavrias), design and tourist development of natural monuments (Drakos cave in Kastoria, rock-cliff at Episkopi / Pafos), seismic loss assessment.

### **Selected Technical Projects (Design / Consulting):**

- Pile loading tests of a 1200mm diameter foundation pile constructed for the new railway bridge over Aliakmon river (1992 – *Geognosis S.A. / Organisation of Hellenic Railways*)
- Stability project and design of foundation underpinning for an historical Byzantine church at the broad area of Kastoria (1993 – *Geognosis S.A. / 9<sup>th</sup> Service of Byzantine Monuments*)
- Greek Natural Gas Transmission – Geotechnical Investigation at Pyrgetos muddy area (1993 – *Asprofos S.A.*)
- Greek Natural Gas Transmission – Geotechnical Investigation at Varico muddy area (1993 – *Asprofos S.A.*)
- Geological, geophysical and geotechnical assessment for the suitability of an area of industry wastes deposit (1993 – *Geognosis S.A. / SING S.A.*)

- In situ large scale rock mechanics tests for the installation of a small size hydroelectric project at Almopaios river (1993/94 – *Geognosis S.A. / P.P.C.*)
- Foundation design of cement silos at Kalohori (Thessaloniki broad area): Geotechnical investigation and evaluation / pile foundation design (1995 – *Geognosis S.A./ Themeliodomi S.A.*)
- Geotechnical investigation & evaluation – Geotechnical design: settlements, soil improvement for the installation of PORTO SANI complex at Chalkidiki on problematic soils(1994 – *Geognosis S.A.*)
- Design of reinforcement measures and improvement of the static efficiency of foundations of an historical building of Vatopaidi Monastery at Karyes of Mt Athos (1995 – *Geognosis S.A.*)
- Construction of six gorge bridges along the highway bypassing the city of Kavala. Geotechnical design (1995 – *Joint venture: Themeliodomi S.A. / Elliniki Texnodomiki S.A. / Nestos T.S.A.*)
- Final design of Sidiroxori dam of Rodopi prefecture – Geotechnical design of dam (1995 – *Region of East Macedonia & Thrace*)
- Final design of Mavrorema dam at Xanthi prefecture – Geotechnical design of dam (1995 – *Prefecture of Drama-Kavala-Xanthi*)
- Stabilizing and reinforcing countermeasures at an historical building of Monastery Vatopaidiou at Karyes of Mt Athos (1996)
- In situ large scale rock mechanics tests for Gratini dam (1997 – *P.P.C.*)
- Final design of supporting and reinforcing measures of the west – northwest steep rock slope of Simonos Petras Monastery at Mt Athos (1998 – *Monastery of Simonos Petra*)
- Design of reinforcement measures and improvement of static efficiency of the foundation system of the church of Xiropotamou Monastery at Mt Athos (1998 – *Monastery Xiropotamou*)
- Exploitation of a natural cave at Kastoria: Geotechnical investigation – seismic hazard – final design of reinforcement – anchoring and stabilizing measures – final design of exit gallery – editing of contractual issues for construction (1998 – 1999 / *Municipality of Kastoria*)
- Vertical axis Profitis – Thessaloniki Airport (Central domain – Section 59): Geotechnical design (2000 – *Geostatiki LTd*)
- Megalorema bridge: slope stability analysis and design of open excavations for piers deep foundations on the left branch of the bridge – Section 3.2: Anthochori – Anilio (2001 – *E.O.A.E.*)
- Technical Review of several geotechnical projects of EGNATIA ODOS S.A. (2001 / 2002 – *EOAE*)
- Design of a reinforced embankment with steep slopes extending from C.H.10+872.86 to C.H.11+032.86 (2001 – *EOAE*)
- Design of slope stability and protection measures of cut slopes suffering superficial instabilities and weathering problems at the section Psiloraxi – Koumaria: sections 1.2.1 – 1.2.2 (2001/ 2002 – *EOAE*)
- Design of countermeasures and remediation of a rockslide at the area of Palio / Kavala: Egnatia Odos S.A. – Section 13.2 (2003, *EOAE*)
- Design of a reinforced embankment with steep slopes extending from C.H.16+900 to C.H.17+400 (2005, *Egnatia Odos S.A.*)
- Member of a scientific working group: ‘Edition of guidelines concerning design of reinforced embankments of Egnatia Odos S.A.’, 2007.
- Investigation of the interaction of stone-columns with the surrounding soil at foundations of bridges Strymonas and Nestos rivers (2007, 2008: *Egnatia Odos S.A.*)
- *Evaluation of seismic safety of Havrias Dam*, Ministry for Environment, Physical Planning and Public Works of Greece, 2009-2010.
- Soil Amplification Study and Soil Liquefaction Assessment Study for the Site of Compression Station AC03 of the TAP Project, in Albania (2017)
- Soil Amplification Study for the Site of Metering Station AC02 of the TAP Project, in Albania (2017)

#### **PUBLICATIONS IN INTERNATIONAL SCIENTIFIC JOURNALS AND PEER-REVIEWED CONFERENCES**

1. **N. Klimis** (1988) "Etude en laboratoire de l'attenuation des ondes longitudinales: application a la caracterisation geotechnique des roches", Rapport des Laboratoires des Ponts et Chaussees, GT-28, 196 p. (avril 1988)
2. **N. Klimis**, J.-L. Durville, J. Ehrlich (1989), "Influence de la taille des grains et de l'alteration des roches sur les mesures de l'attenuation des ondes ultrasonores en laboratoire", Rev. Franc. Geotech. No 47, pp. 29-38 (avril 1989)
3. **N. Klimis**, E. Massieu, J.-L. Durville (1989), "Attenuation des ondes ultrasonores dans les roches", Bulletin de Liaison des Laboratoires des Ponts et Chaussees, No 161, pp. 7-16 (mai - juin 1989).
4. **N. Klimis** (1989), "Microcracking – Grain size of rocks: influence on the attenuation of P waves", Technika Xronika, Vol.9, No3, p. 59-82, [in Greek].
5. **N. Klimis** (1991), "Geotechnical characterization of a thermally cracked marble", 7th International Congress of Rock Mechanics, Aachen Germany, 16-20 September 1991.
6. **N. Klimis** (1995), "Laboratory identification of the quality factor Q: comparative presentation and evaluation of spectral ratio and rise time methods", 7th Intern. Conf. of Soil Dynamics and Earthquake Engineering, Hania, GREECE, 24-26 May 1995.
7. Koliopoulos, P.K., B.N. Margaritis and **N.S. Klimis** (1998): "Duration and energy characteristics of Greek strong motion

- records”, *Journal of Earthquake Engineering*, Vol.2, No3, pp. 391–417
8. **N.S. Klimis**, B.N. Margaris and P.K. Koliopoulos, (1999). “Site dependent amplification functions and response spectra in Greece”, *Journal of Earthquake Engineering*, Vol. 3, No 2, pp. 237-270
  9. **Klimis, N.S.**, Papazachos, C.B., and Efremidis, Ch. F. (1999): “Determination of the behaviour of a sedimentary rock mass: comparison of measured static and dynamic properties”, 9th International Congress on Rock Mechanics, 25-28 August 1999, Paris.
  10. A.J. Anastasiadis, **N.S. Klimis** and B.N. Margaris (1999) “Effect of soil non - linearities on evaluation of site dependent spectra: a case study from Greece”, 9th International Conference on Soil Dynamics and Earthquake Engineering, Abstract Volume.
  11. P. Dimitriu, A. Anastasiadis, N. Theodulidis and **N. Klimis** (2001) “Nonlinear site response during the 7 September 1999 Athens, Greece, earthquake (Mw=5.9)” 4th International Conference on recent advances in Geotechnical Earthquake Engineering and Soil Dynamics, March 26-31, 2001 in San Diego, California, CD-ROM, Session 3, paper 3.36, USA.
  12. **N. Klimis**, K. Dimaras (2001) “Analysis and design of supporting measures of a natural cave”, 4th Greek Congress of Geotechnical and Geoenvironmental Engineering, Vol. I, p.267-274, May 2001, Athens [in Greek].
  13. **N. Klimis**, A. Anastasiadis, Em. Komodromos, S. Siachou (2001) “Seismic behavior of a rockfill dam with a clay core”, 4th Greek Congress of Geotechnical and Geoenvironmental Engineering, Vol. II, p.497-504, May 2001, Athens [in Greek].
  14. Em. Komodromos, **N. Klimis**, A. Anastasiadis, K. Anastasopoulos (2001) “Multi stage non linear analysis simulating of construction and impoundment of Papadia Dam”, 4th Greek Congress of Geotechnical and Geoenvironmental Engineering, Vol. II, p.505-512, May 2001, Athens [in Greek].
  15. **N. Klimis**, N. Theodulidis, A. Anastasiadis, P. Dimitriu and A. Savvaidis (2001) “Seismic response of a narrow shaped valley: numerical analysis and field measurements”, 3rd International Conference on Earthquake Resistant Engineering Structures (ERES), September 2001, Malaga, Spain. Oral presentation at ERES’2001 & included in the Proceedings of 7th Intern. Conf. on Structures under shock and impact (SUSI’2002), 27-29 May 2002, Montreal, Canada.
  16. **N. Klimis**, A. Anastasiadis, E. Komodromos, B. Lekidis (2001) “Influence of construction geomaterials and seismic input motion on an earth dam response”, 2nd Hellenic Congress on Earthquake Engineering & Engineering Seismology, Vol. B, p.173-182, Thessaloniki, November 2001 [in Greek].
  17. **N. Klimis** (2001) “Topography and soil effects on seismic ground motion: theoretical analysis and code provisions”, 2nd Hellenic Congress on Earthquake Engineering & Engineering Seismology, Vol. A, p. 245-254, Thessaloniki, November 2001 [in Greek].
  18. A. Anastasiadis, **N. Klimis**, B. Margaris, B. Lekidis (2001) “Site coefficients: evaluation and assignment of soil non linearities”, 2nd Hellenic Congress on Earthquake Engineering & Engineering Seismology, Vol. A, p. 165-174, Thessaloniki, November 2001 [in Greek].
  19. **N. Klimis**, A. Anastasiadis (2002) “Comparative evaluation of topography effects via code recommendations and 2-D numerical analysis”, 12th European Conference on Earthquake Engineering (ECEE), CD-ROM, September 2002, London, U.K.
  20. A. Anastasiadis, **N. Klimis** (2002) “Site coefficients: theoretical approach of site characterization and soil non linearities”, 12th European Conference on Earthquake Engineering (ECEE), CD-ROM, September 2002, London, U.K.
  21. **N. Klimis**, A. Anastasiadis, G. Gazetas, M. Apostolou (2004) “Liquefaction risk assessment and design of pile foundations for highway bridge”, Paper N° 2973, 13th World Conference on Earthquake Engineering (WCEE), August 1-6, 2004, Vancouver, B.C., Canada.
  22. A. Anastasiadis, **N. Klimis**, K. Makra, B. Margaris (2004) “On seismic behavior of a 130m high rockfill dam: an integrated approach”, Paper N° 2933, 13th World Conference on Earthquake Engineering (WCEE), August 1-6, 2004, Vancouver, B.C., Canada.
  23. V. Lekidis, M. Tsakiri, K. Makra, Ch. Karakostas, **N. Klimis** and I. Sous (2005). “Evaluation of dynamic response and local soil effects of the Evripos cable-stayed bridge using multi-sensor monitoring systems”, *Engineering Geology*, Vol. 79, p.43-59.
  24. C. Athanassiadou, A. Kappos, C. Karakostas, **N. Klimis**, V. Lekidis, V. Margaris & N. Theodulidis (2005) “Elastic and inelastic spectra for Greek earthquakes, based on a representative set of records”, 5th International Conference on Earthquake Resistant Engineering Structures (ERES), Skiathos, May 30 - June 1, 2005, Greece, p.733-743.
  25. **N. Klimis**, B. Margaris, A. Anastasiadis, P. Koliopoulos and Em. Kirtas (2006), ‘Smoothed Hellenic Rock Site Amplification Factors’, 5th Hellenic Congress of Geotechnical and Geoenvironmental Engineering, Vol. 2, p. 239-246, Xanthi, Greece [in Greek].
  26. A. Anastasiadis, B. Margaris, **N. Klimis**, K. Makra and K. Pitilakis (2006), ‘The Lefkas Earthquake (M=6.2, Aug.14, 2003): Strong Ground Motion and evaluation of the subsoil’s impact’, 5th Hellenic Congress of Geotechnical and Geoenvironmental Engineering, Vol. 2, p. 43-50, Xanthi, Greece [in Greek].
  27. Ch. Karakostas, K. Makra, B. Lekidis and **N. Klimis** (2006), ‘Local Soil Effects on Ground Motion and Dynamic Response of the Evripos Cable-Stayed Bridge’, 5th Hellenic Congress of Geotechnical and Geoenvironmental Engineering, Vol. 2, p. 223-230, Xanthi, Greece [in Greek].
  28. **N. Klimis**, M. Apostolou, A. Anastasiadis, I. Anastasopoulos and G. Gazetas, ‘Nestos Bridge: Risk of Extended Liquefaction, Counter-Measures with Piles and Soil Improvement’, 5th Hellenic Congress of Geotechnical and Geoenvironmental Engineering, Vol. 3, p. 207-214, Xanthi, Greece [in Greek].
  29. **N. Klimis**, A. Anastasiadis, K. Makra, B. Margaris, Ch. Papaioannou, E. Comodromos and S. Siachou (2006), ‘Dynamic analysis and seismic safety evaluation of a high earthfill dam’, 5th Hellenic Congress of Geotechnical and

- Geoenvironmental Engineering, Vol. 3, p. 327-333, Xanthi, Greece [in Greek].
30. E. Comodromos, **N. Klimis**, A. Anastasiadis and K. Anastasopoulos (2006), 'Response prediction of an earthfill dam during construction and the impoundment of the reservoir', 5th Hellenic Congress of Geotechnical and Geoenvironmental Engineering, Vol. 3, p. 335-342, Xanthi, Greece, [in Greek].
  31. K. Papatheodorou, P. Moutsokapas, **N. Klimis** and B. Margaris (2006) "Geotechnical Hazard maps for road networks. An application in the island of Lefkada (Greece)", 9th National Conference on Cartography «Network Cartography and Chartography through networks
  32. K. Papatheodorou, **N. Klimis**, Pr. Moutsokapas, S. Koutrakis and B. Margaris (2007) "Geotechnical earthquake hazard assessment based on a GIS platform", Paper No 1441, 4<sup>th</sup> International Conference on Earthquake Engineering, Thessaloniki, Greece.
  33. K. Trevlopoulos, **N. Klimis** and A. Anastasiadis (2007) "Evaluation of site characteristics in liquefiable soils", Paper No 1651, 4<sup>th</sup> International Conference on Earthquake Engineering, Thessaloniki, Greece.
  34. **N. Klimis**, D. Argyriadi, M. Demosthenous, E. Comodromos, Ch. Efremidis and K. Kyriakides (2007) "Reinforcement and protection of a rock-cliff: methodological approach, analysis and design", Paper No 1739, 4<sup>th</sup> International Conference on Earthquake Engineering, Thessaloniki, Greece.
  35. E. Comodromos, K. Anastasopoulos, **N. Klimis**, M. Papadopoulou and K. Koukaliaroglou (2008), 'Response of earthfill dam during construction and fill: consequences resulting from stiffness modification of the dam shell', 1<sup>st</sup> Hellenic Congress of Large Dams, Larissa, Greece [in Greek].
  36. Ch. Athanasiadou, A. Kappos, Ch. Karakostas, B. Lekidis, N. Theodulidis, B. Margaris and **N. Klimis** (2008), 'Evaluation of the design spectra of the Greek seismic code and EC8 based on Greek earthquake data', 3<sup>rd</sup> Hellenic Congress on Earthquake Engineering & Engineering Seismology, Paper 2057, November 2008, Athens, Greece [in Greek].
  37. **N. Klimis**, Ch. Efremidis, D. Argyriadi and E. Comodromos (2010), 'Analysis and design of reinforced embankments: methodology, implementation and impact of critical parameters', 9<sup>th</sup> International Conference on Geosynthetics, paper 407, May 2010, Brazil
  38. E. Comodromos, M. Papadopoulou and **N. Klimis** (2010), 'Design of reinforced embankments: limit equilibrium and numerical methods', 9<sup>th</sup> International Conference on Geosynthetics, paper 43, May 2010, Brazil
  39. B. Margaris, G. Athanasopoulos, G. Mylonakis, Ch. Papaioannou, **N. Klimis**, N. Theodulidis, A. Savvaidis, V. Efthymiadou and J. P. Stewart (2010), 'The 8 June 2008  $M_w$ 6.5 Achaia-Elia, Greece earthquake: source characteristics, ground motions and ground failure', Earthquake Spectra, Vol. 26 N° 2 p. 399-424, May 2010.
  40. Pr. Moutsokapas, K. Papatheodorou, B. Margaris and **N. Klimis** (2010), 'Landslide hazard pre-estimation methods using Geographic Information Systems: method evaluation and implementation in Magnisia prefecture', 6<sup>th</sup> Hellenic Congress of Geotechnical and Geoenvironmental Engineering, CD proceedings, October 2010, Volos, Greece, [in Greek]
  41. A. Mpatilas, G. Athanasopoulos, P. Pelekis, B. Vlachakis, **N. Klimis** and G. Mylonakis (2010), 'Soil Liquefaction at the Coastal Zone of Kato Achaia in the Achaia-Elia, Greece, Earthquake of June 8, 2008', 6<sup>th</sup> Hellenic Congress of Geotechnical and Geoenvironmental Engineering, CD proceedings, October 2010, Volos, Greece, [in Greek]
  42. **N. Klimis**, D. Argyriadi, Ch. Efremidis, E. Comodromos and B. Margaris (2010), 'Stability assessment of a steep limestone rock cliff under static and seismic conditions', 6<sup>th</sup> Hellenic Congress of Geotechnical and Geoenvironmental Engineering, CD proceedings, October 2010, Volos, Greece, [in Greek].
  43. K. Iordanis, B. Margaris and **N. Klimis** (2012), "Contribution in calculation and analysis of basic energy parameters and characteristics of Hellenic earthquakes", Workshop of the Hellenic Society of Earthquake Engineering (ETAM), 7 December 2012, Thessaloniki.
  44. N. Theodoulidis, A. Savvaidis, B. Margaris, E. Zargli, **N. Klimis**, Th. Lazaridis, J.P. Stewart, G. Athanasopoulos, P. Pelekis, V. Vlachakis and A. Batilas (2013), "Geologic and terrain-based proxy estimation of  $V_{S30}$  in Greece", Knowledge for the future, Joint Assembly IAHS-IAPSO-IASPEI, Gothemburg, Sweden 22-26 July 2013
  45. **N. Klimis** and D. Sarigiannis (2013), "Interaction of stone column and surrounding soil during its construction: 3D numerical analysis", Proceedings of the 18<sup>th</sup> International Conference on Soil Mechanics and Geotechnical Engineering, p. 2517-2520, 2-6 September 2013, Paris.
  46. K. Makra, **N. Klimis**, A. Anastasiadis and E. Komodromos (2013), "Aseismic design of earth and rockfill dams: experiences from Greece", Proceedings of the 2<sup>nd</sup> Pan-Hellenic Congress of Large Dams, 7-8 November 2013, Athens [in Greek].
  47. A. Kiratzi, **N. Klimis**, N. Theodoulidis, V. Margaris, K. Makra, B. Christaras, Al. Chatzipetros, G.Papathanassiou, Al. Savvaidis, Sp. Pavlides, Z. Roumelioti, L. Sapountzi, I. Diamantis, Th. Lazaridis, El. Petala and K. Mimidis (2013), "Characterization of site conditions in Greece for realistic seismic ground motion simulations: pilot application in urban areas", Bulletin of the Geological Society of Greece, Vol. XLVII, Chania, September 2013 [in Greek].
  48. **N. Klimis** (2013), "Conception, expériences et pratiques appliquées en Grèce au sujet du comportement parasismique des barrages en remblai", Colloque International Barrages et Séismes, 17-18 Novembre 2013, Alger [in French, oral presentation].
  49. **Nikolaos Klimis**, Konstantinos Papatheodorou, Prodromos Moutsokapas, Basil Margaris (2013): "Landslide hazard assessment using GIS: evaluation of empirical prediction and implementation" International Conference on Earthquake Geotechnical Engineering, from Case Histories to Practice; In the Honor of Prof. Kenji Ishihara, 17-19 June 2013, Istanbul, Turkey. (Only Invited Lecturers presented orally).
  50. J. P. Stewart, **N. Klimis**, A. Savvaidis, N. Theodoulidis, E. Zargli, G. Athanasopoulos, P. Pelekis, G. Mylonakis and B. Margaris (2014), "Compilation of local  $V_s$  profile database and its application for inference of  $V_{S30}$  from geologic and

- terrain-based proxies”, *Bulletin of Seism. Soc. of America*, Vol. 104, No 6, pp. 2827-2841.
51. K. Papatheodorou, **N. Klimis**, B. Margaritis, K. Ntouros, K. Evangelidis and A. Konstantinidis (2014), “Natural Hazard prevention and management in the wider Black Sea area: the SciNetNatHaz project”, International Conference “*New tools for sustainable of aquatic living resources*” AQUALIRES 2014, 17-18 January 2014, Bucharest, Romania.
  52. K. Papatheodorou, **N. Klimis**, B. Margaritis, K. Ntouros, K. Evangelidis and A. Konstantinidis (2014), “An overview of the EU actions towards natural hazard prevention and management: current status and future trends”, *Journal of Environmental Protection and Ecology* 15, No 2, pp. 433-444.
  53. **N. Klimis**, J.P. Stewart, A. Savvaidis, N. Theodoulidis, El. Zargli, G. Athanasopoulos, P. Pelekis, G. Mylonakis and B. Margaritis (2014), “On the use of geologic based proxies to estimate  $V_{S30}$  via an Hellenic  $V_S$  profile database”, 2<sup>nd</sup> ECEES, Istanbul, 25-29 August 2014.
  54. N. Theodoulidis, **N. Klimis**, A. Savvaidis, B. Margaritis, Al. Chatzipetros, G. Papathanassiou, Z. Roumelioti, K. Makra, M. Anthymidis, I. Diamantis, K. Mimidis, El. Petala, Th. Lazaridis, El. Zargli, A. Kiratzi, V. Christaras, St. Kontoe and St. Sapountzi (2014), “Defining shallow structure properties by composing ambient noise and geological data for site response analyses: the case of Xanthi town (NE Greece)”, 2<sup>nd</sup> ECEES, Istanbul, 25-29 August 2014.
  55. A. Papadakos and **N. Klimis** (2014), “Stability analysis of embankments subjected to seismic loading through performance-based approach”, 7<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 5-7 November 2014 [in Greek].
  56. Em. Psaroudakis, G. Mylonakis, **N. Klimis** and A.-M. Phoi (2014), “Non-linear analysis of axially loaded piles using ‘t-z’ curves”, 7<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 5-7 November 2014 [in Greek].
  57. Ch. Charcharidi, Th. Lazaridis, El. Petala and **N. Klimis** (2014), “Correlations between  $V_{S30}$  and shear wave velocities  $V_{S2}$  at depths less than and greater than 30m from Hellenic data”, 7<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 5-7 November 2014 [in Greek].
  58. Ch. Psychogyiou, I. Papoutsis, Ch. Kontoes, El Poyadji, N. Spanou and **N. Klimis** (2015), "Multi-temporal monitoring of slow moving landslides in south Pindos mountains range, Greece", FRINGE 2015 Workshop: 'Advances in the Science and Applications of SAR Interferometry and Sentinel-1 InSar Workshop, 23-27 March 2015, Frascati (Rome), Italy.
  59. **N. Klimis**, O. Stamati and Th. Lazaridis (2015), "Seismic response and amplification of ground motion in the city of Xanthi", Workshop 'New Developments in Research in Civil Engineering', 15 May 2015, Xanthi, Greece [in Greek].
  60. **N. Klimis**, N. Theodoulidis, A. Savvaidis, B. Margaritis, El. Zargli, G. Athanasopoulos, P. Pelekis and G. Mylonakis (2015), "Profile database for Hellenic sites with geophysical characterization", Workshop on Community Shear Wave Velocity Profile Database (organized by PEER, COSMOS, USGS and UCLA), 27 May 2015, Berkeley, CA, USA.
  61. **N. Klimis**, K. Papatheodorou and Em. Psaroudakis (2015), "Landslide Hazard Assessment in Regional and Local Scale: Pilot Study in Greece", Workshop on Landslide Phenomena: occurrence - monitoring - confrontation, 7 December 2015, Thessaloniki, Greece [in Greek].
  62. **N. Klimis**, K. Papatheodorou, El. Petala, Em. Psaroudakis and S. Skias (2016), "Landslide hazard assessment in regional scale: reliability and usefulness", SafeEvros 2016, 22-26 June 2016, Alexandroupoli, Greece [in Greek].
  63. **N. Klimis**, K. Papatheodorou and B. Margaritis (2016), "Landslide Hazard Assessment in Regional Scale: Implementation and Reliability", 3rd International Conference Water Across Time in Engineering Research - WATER 2016, 23-25 June 2016, Constanta, Romania.
  64. E. Petala and **N. Klimis** (2016), "Effect of normal fault rupture on unreinforced highway embankment", 1st International Conference on Natural Hazards & Infrastructure, ICONHIC 2016, 28-30 June 2016, Chania, Greece.
  65. O. Stamati, **N. Klimis** and Th. Lazaridis (2016), "Evidence of complex site effects and soil non-linearities numerically estimated by 2D vs 1D seismic response analyses in the city of Xanthi", *Soil Dynamics & Earthquake Engineering*, vol. 87, p.101-115.
  66. **N. Klimis**, K. Papatheodorou and B. Margaritis (2016), "Landslide hazard assessment in Regional scale: Implementation and reliability", 'OVIDIUS' University Annals (OUASCE Journal), Constanta, Year XVIII - Issue 18 (2016) Series: Civil Engineering, p.135-145.
  67. A. Savvaidis, K. Makra, **N. Klimis**, El. Zargli, A. Kiratzi and N. Theodoulidis (2018), "Comparison of  $V_{S30}$  using measured, assigned and proxy values in three cities of Northern Greece", *Engineering Geology*, vol. 239, p.63-78, doi:10.1016/j.enggeo.2018.03.003.
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  69. E. Petala, **N. Klimis** and E. Psaroudakis (2018), "The response of unreinforced highway embankment due to underlying normal fault rupture", paper No 11717, 16th European Conference of Earthquake Engineering (ECEE), 18-21 June 2018, Thessaloniki, Greece.
  70. E. Petala, **N. Klimis** and E. Comodromos (2018), "The response of unreinforced highway embankment due to underlying reverse fault rupture", paper No 11700, 16th European Conference of Earthquake Engineering (ECEE), 18-21 June 2018, Thessaloniki, Greece.
  71. Th. Lazaridis, O. Stamati and **N. Klimis** (2018), "Numerical analyses of site effects and soil non-linearity on seismic ground response of Xanthi city", paper No 11294, 16th European Conference of Earthquake Engineering (ECEE), 18-21 June 2018, Thessaloniki, Greece.
  72. E. Scordilis, N. Theodoulidis, I. Kalogeras, B. Margaritis, **N. Klimis**, A. Skarlatoudis, J. Stewart, D. Boore, E. Seyhan, A. Savvaidis, G. Mylonakis and P. Pelekis (2018), "Strong motion database for crustal earthquakes in Greece and

- surrounding area", paper No 12077, 16th European Conference of Earthquake Engineering (ECEE), 18-21 June 2018, Thessaloniki, Greece.
73. E. Petala and **N.S. Klimis** (2019), "Numerical assessment of distortion and damage induced on a highway embankment due to reverse fault rupture propagation", *Soil Dynamics and Earthquake Engineering*, vol. 116, p.264-277, doi.org/10.1016/j.soildyn.2018.10.029.
  74. E.G. Psaroudakis, G. E. Mylonakis and **N.S. Klimis** (2019), "Non-linear analysis of axially loaded piles using 't-z' and 'q-z' curves", *Geotechnical and Geological Engineering*, doi.org/10.1007/s10706-019-00823-2.
  75. E. Petala and **N. Klimis** (2019), "Exploring the interplay between normal fault rupture and a highway embankment founded on a single-layered soil: mapping and quantification of damage", *Soil Dynamics and Earthquake Engineering*, vol. 123, p. 91-109, doi.org/10.1016/j.soildyn.2019.04.015.
  76. El. Petala and **N.S. Klimis** (2019), "Fault rupture propagation and induced damage on a highway embankment: the role of the single-layered soil formation", paper ID128, 2<sup>nd</sup> International Conference on Natural Hazards & Infrastructure, ICONHIC 2019, 23-26 June 2019, Chania, Greece.
  77. El. Petala and **N.S. Klimis** (2019), "Fault rupture propagation and impact on an overlying embankment: does fault tip location matters?", paper ID129, 2<sup>nd</sup> International Conference on Natural Hazards & Infrastructure, ICONHIC 2019, 23-26 June 2019, Chania, Greece.
  78. D. Sotiriadis, **N. Klimis**, B. Margaritis and A. Sextos (2019), "Influence of structure-foundation-soil interaction on ground motion recorded within buildings", *Bulletin of Earthquake Engineering*, vol.17, issue 11, pp.5867-5895, DOI 10.1007/s10518-019-00700-6.
  79. D. Sotiriadis, **N. Klimis**, B. Margaritis, A. Sextos and P. Pelekis (2019), "Empirical assessment of kinematic soil-structure interaction based on ground motion data", paper E18471, 4<sup>th</sup> Pan-Hellenic Congress of Earthquake Engineering & Engineering Seismology, September 2019, Athens, Greece [in Greek].
  80. P. Pelekis and **N. Klimis** (2019), "Assessment of design seismic parameters for a site of construction of a compressor station of natural gas", paper E18656, 4<sup>th</sup> Pan-Hellenic Congress of Earthquake Engineering & Engineering Seismology, September 2019, Athens, Greece [in Greek].
  81. M. Tsiantoula, D. Sotiriadis, N. Theodoulidis and **N. Klimis** (2019), "Calibration of 1D soil model based on recordings of the vertical array "ARGONET" at the island of Cephalonia", 8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 6-8 November 2019 [accepted, in Greek].
  82. El. Petala, **N. Klimis**, I. Zevgolis and Emm. Psaroudakis (2019), "Quantification and Mapping of Highway Embankment's Damage due to Propagation of Underlying Seismic Fault Rupture", 8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 6-8 November 2019 [accepted, in Greek].
  83. Emm. Psaroudakis, F. Zouglos, El. Petala and **N. Klimis** (2019), "Assessment of the role of double non-linearity of the interactive soil-pile system under lateral loading", 8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 6-8 November 2019 [accepted, in Greek].
  84. Emm. Psaroudakis, Ch. Efremidis and **N. Klimis** (2019), "Multi-Surface Landslide of Cut Slope at the Aegean Motorway – Failure Mechanism and Rehabilitation Measures", 8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 6-8 November 2019 [accepted, in Greek].
  85. D. Sotiriadis, B. Margaritis, **N. Klimis** and A. Sextos (2019), "Estimation of "kappa" parameter and Soil-Structure Interaction Effect", 8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 6-8 November 2019 [accepted, in Greek].
  86. D. Pavlakis, I. Zevgolis and **N. Klimis** (2019), "Probabilistic Analysis of Reinforced Earth Walls under Pseudo-static Loading Conditions", 8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens, 6-8 November 2019 [accepted, in Greek].
  87. D. Sotiriadis, **N. Klimis**, B. Margaritis and A. Sextos (2019), "Analytical expressions relating free-field and foundation ground motions in buildings with basement, considering soil-structure interaction", submitted to *Engineering Structures*.
  88. B. Margaritis, M. Scordilis, J.P. Stewart, D. Boore, N. Theodoulidis, I. Kalogeras, N. Melis, A. Skarlatoudis, **N. Klimis** and E. Seyan (2019), "Hellenic Strong-Motion Database with Uniformly Assigned Source and Site Metadata for period of 1972-2015" submitted to *Seismological Research Letters*.
  89. E.G. Psaroudakis, G. E. Mylonakis and **N. S. Klimis** (2019), "Non-linear analysis of laterally loaded piles using 'p-y' curves", (to be submitted).

## REVIEWER

### *Scientific Journals & International / National Conferences*

- Engineering Structures, since 2006
- Soil Dynamics and Earthquake Engineering, since 2007
- Journal of Geotechnical and Geoenvironmental Engineering, ASCE, since 2009
- *XIX Congress of the Carpathian Balkan Geological Association, 2010*
- Geotechnical and Geological Engineering, since 2011
- Natural Hazards and Earth System Sciences, since 2011
- Natural Hazards, since 2013

- Mathematical problems in Engineering, since 2013
- *2<sup>nd</sup> Pan-Hellenic Congress of Dams and Reservoirs, 2013*
- Bulletin of Earthquake Engineering, since 2014
- Geotechnique, since 2016
- *3<sup>rd</sup> Pan-Hellenic Congress of Dams and Reservoirs, 2017*
- *16<sup>th</sup> European Conference of Earthquake Engineering (ECEE), 2018*
- *4<sup>th</sup> Pan-Hellenic Congress of Earthquake Engineering & Engineering Seismology, 2019*
- *8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, 2019*

## **OTHER SCIENTIFIC ACTIVITIES**

- Reporter in the 4<sup>th</sup> International Conference on Recent Advances in Geotechnical Earthquake Engineering and Soil Dynamics, March 26-31, 2001 in San Diego, California
- Member of the Organizing Committee of the 4<sup>th</sup> ICEGE, Thessaloniki, 2007
- Member of the Organizing Committee of the 4<sup>th</sup> Japan – Greece Workshop, Japan 2011
- Member of the Scientific Committee of the 2<sup>nd</sup> Pan-Hellenic Congress of Dams and Reservoirs and Chairman/Moderator of the Session "Development in Seismic Design", Athens 2013
- Member of the Organizing & Scientific Committee of the 7<sup>th</sup> Pan-Hellenic Congress of Geomechanics and Chairman / Moderator of the Session: "Soil Dynamics: Laboratory and In situ Tests in Soil Dynamics", Athens 2014
- Co-Chairman and Moderator of the Workshop on Characterization of site conditions in Greece for realistic simulations of seismic ground motions - pilot implementation in urban centers (co-organized by AUTH, DUTH and EPPO-ITSAK), Xanthi, Greece (2015)
- Chairman and Moderator of the Open Seminar 'Contribution in Prevention of Natural Hazards', organized by the Laboratory of Soil Mechanics, Department of Civil Engineering, Faculty of Engineering, DUTH (2015)
- Member of the Scientific Committee of the 3<sup>rd</sup> Pan-Hellenic Congress SafeEvros, Alexandroupoli 2016
- Member of the Scientific Committee of the 3<sup>rd</sup> Pan-Hellenic Congress of Dams and Reservoirs, Athens 2017
- Member of the Scientific Committee of the 16<sup>th</sup> ECEE, Thessaloniki 2018
- Member of the Scientific Committee of the 4<sup>th</sup> Pan-Hellenic Congress of Earthquake Engineering & Engineering Seismology, Athens 2019
- Member of the Scientific Committee of the 8<sup>th</sup> Pan-Hellenic Congress of Geomechanics, Athens 2019

### **Invited Speaker in:**

- EPPO (2002),
- OTM – private company (2002),
- University of Thessaly – Civil Engineering Department (2003, 2004),
- Technical Chamber of Central Macedonia & EPPO (2008),
- Seminar on Eurocodes - Technical Chamber of Thraki - Greece (2011),
- Rotary Group of Eastern Thessaloniki (2012),
- 1<sup>st</sup> Cyprus Seminar on Special Subjects on Geotechnical Engineering by the Cyprus Association of Civil Engineers (2012)
- 2<sup>nd</sup> Cyprus Seminar on Special Subjects on Geotechnical Engineering by the Cyprus Association of Civil Engineers (2015)
- Workshop on Community Shear Wave Velocity Profile Database (co-organized by PEER, COSMOS, USGS and UCLA), Berkeley, CA, USA (2015)
- Open Seminars in the framework of the project 'A Scientific Network for Earthquake, Landslide and Flood Hazard Prevention', at Xanthi, Serres, Thessaloniki (Greece) and Moldova (2015)
- Workshop on Characterization of site conditions in Greece for realistic simulations of seismic ground motions - pilot implementation in urban centers (co-organized by AUTH, DUTH and EPPO-ITSAK), Xanthi, Greece (2015)
- Workshop on Landslide Phenomena: occurrence - monitoring - confrontation, organized by the Technical Chamber of Greece - Branch of Central Macedonia, 7 December 2015, Thessaloniki, Greece (2015)
- 3<sup>rd</sup> International Conference Water Across Time in Engineering Research - WATER 2016 (Plenary Speaker and Moderator of a Session), 23-25 June 2016, Constanta, Romania

### **Book Chapter:**

Athanassiadou, C., Kappos, A., Karakostas, C., **Klimis, N.**, Lekidis, V., Margaris, B., and Theodulidis, N., "Elastic and inelastic spectra for Greece, based on a representative set of records; in Earthquake Ground Motion: Input Definition for Aseismic Design (edited by S. Syngellakis), WIT Press, 2015 (ISBN 978-1-78466-000-0), 29-38.