

CURRICULUM VITAE

Dr STEIAKAKIS EMMANUEL

Engineering Geologist

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Occupation: Lecturer, Laboratory of Applied Geology, Technical Univ. of Crete

Education

1985 : BSc in Geology, Aristotle University of Thessaloniki
1987 : M.Sc in Engineering Geology University of Leeds, UK
2003 : Phd, Technical University of Crete

Languages

Greek, English

Research interests

- Investigation of engineering properties of soils and soft rocks.
- Geological and geotechnical parameters related to the design of civil works (foundations, road construction, dams and tunnels).
- Research of geotechnical problems related to surface mining.
- Assessment of hydraulic parameters and water balance of hydro geological basins.

Membership of Professional Bodies

- Fellow of the International Association for Engineering Geology and the Environment (IAEG).
- Fellow of Geological Society of Greece.
- Member of the Association of Greek Geologists.

Professional Experience

1989 - 2008	Scientific Associate, Applied Geology Laboratory, Technical University of Crete. Worked on hydrogeological and geotechnical research projects.
2004 - 2008	Teaching Assistant, Mineral Resources Engineering Department, TUC.
2008 - today	Lecturer, Mineral Resources Engineering Department, TUC. Taught undergraduate courses: " <i>Engineering Geology - Soil Mechanics</i> ", " <i>Hydrogeology and Water Management Projects</i> ", and Post graduate course: " <i>Special topics in Applied Geology</i> ".

Main Research Projects and Technical Studies undertaken for the period 1989 - today

Scientific Associate/ Principal Investigator in the following research projects:

- Development of exploitation methods of the underground water in West Crete.
- Water Supply of Chania Municipal.
- Quality control and rational use of the water resources of Crete.
- Geological and Geotechnical Investigation of Landslides at Ano Meros Village (Amari, Rethimno).
- Exploitation of Almiros river springs (Iraklion).
- Soil Investigation in Chania Museum Foundation area.
- Solid Waste Disposal site in East Selino area.
- Geotechnical investigation and slope stability analysis of "Tomeas 6" (Open Pit Lignite Mine in Ptolemais area).
- Geotechnical Investigation in "MAKRO's store" foundation area (Iraklio, Crete).
- The impacts of the underground water exploitation around Platanos' spring on the hydrogeological and geotechnical conditions of the region (A! stage).
- Assessment of geomaterials for use as cover at waste disposal area.
- Hydrogeological investigation in construction sites of hydro-electric projects.
- Geotechnical classification and shear strength determination of soil samples from Galatas-Chania region.
- Geotechnical parameters of soil samples from Kolybari region.

Publications

Graduate Theses

1. E. K. Stiakakis (1985). **Permeability in the site of a dam foundation**. BSc Thesis. Aristotle Univ. of Thessaloniki.
2. E. K. Stiakakis (1987). **Use of the tilting table to determine fundamental shear parameters for rock joints**. Master's Degree Thesis, University of Leeds.
3. E. K. Stiakakis (2003). **Behavior of deep excavations. An Investigation of geotechnical parameters and the kinetic behavior of a deep excavation in the Ptolemais – Amydeon lignite field**. Doctoral Thesis. Technical University of Crete. Department of Mineral Resources Engineering (In Greek).

Published papers in peer reviewed journals / conferences

- D. Monopolis, E. Steiakakis (1991). **Statistical evaluation of water supply of Agia's aquifer (Crete)**. 1st Hellenic Hydrogeological Congress, Nicosia, Cyprus pp. 102-116. (In Greek).
- D. Monopolis, P. Sofiou, D. Papamastorakis, E. Steiakakis, M. Kleidopoulou, D. Vavadakis (1995). Study of Hydrogeological parameters of Almyros spring (Crete - Greece) under natural flow conditions. 3rd Hellenic Hydrogeological Congress, Iraklio, Crete pp. 105 -123. (In Greek).
- D. Monopolis, P. Sofiou, D. Papamastorakis, E. Steiakakis, M. Kleidopoulou, D. Vavadakis (1995). Study of Hydrogeological Parameters of Almyros Spring (Crete - Greece) under artificial flow conditions. 3rd Hellenic Hydrogeological Congress, Iraklio, Crete, pp. 132 -149. (In Greek).
- D. Monopolis, P. Sofiou, E. Steiakakis, M. Kadianakis, D. Vavadakis, M. Kleidopoulou, (1997). Exploitation of coastal karstic aquifers (Examples from Crete). 4th Hellenic Hydrogeological Congress, Thessaloniki, pp. 309-323. (In Greek).
- D. Monopolis, P. Sofiou, E. Steiakakis, M. Kadianakis, D. Vavadakis, M. Kleidopoulou (1998). Prediction of “fresh water” periods in Almyros Spring (Iraklio, Crete). Geotechnical Scientific Issues, Geotechnical Chamber of Greece, Vol. 9 No2 / 1998 pp. 36 - 45. (In Greek).

- D. Monopolis, E. Stiakakis, Z. Agioutantis, K. Kavouridis (1999). Geotechnical Investigation at lignite mines. Mineral Resources Engineering, Vol 8, No 4, pp. 405 - 418.

- D. Monopolis, P. Sofiou, E. Stiakakis, M. Kadianakis, D. Vavadakis, M. Kleidopoulou (1999). Determination of hydraulic parameters of carbonate rocks (Methodology, Statistical analysis). 5th Hellenic Hydrogeological Congress, Nicosia, Cyprus, pp. 297-309. (In Greek).

- Z. Agioutantis, E. Kalogirou, E. Stiakakis (2003). Comparison of slope stability factors obtained via Finite Element Methods and Limit Equilibrium Methods. Proceedings of the International Workshop on Prediction and Simulation Methods in Geomechanics. Technical Committee 24 of ISSMGE. Athens 2003, pp. 97 -100.

- E. Stiakakis, Z. Agioutantis and D. Monopolis (2004). An investigation of the kinetic behavior of a deep excavation at an open pit mine using finite elements analysis. Advances in Mineral Resources Management and Environmental Geotechnology, Hania 2004, pp. 51 - 56.

- E. Stiakakis and Z. Agioutantis (2005). Stiffness and strength parameters of the Ptolemais calcareous marls. International Workshop in Geoenvironment and Geotechnics, September 2005, Milos Island, pp. 51 - 57.

- C. Papakontantinou, G.S. Kritikakis, A. Vafeidis, E. Stiakakis (2005). Application of Geophysical and Laboratory Methods for the Determination of the Stiffness Modulus of a marly formation. Tech. Chron. Sci. J. TCG V, No 1-2, pp. 67 - 78.

- Z. Agioutantis, E. Stiakakis, I. Kalogirou, S. Kourkoutis (2006). An investigation of the stability and deformations of Mavropigi's open pit lignite mine using finite elements analysis. Mining Information Analytical Bulletin No 10, 2006, pp. 123 - 130.

- C. Papakontantinou, G.S. Kritikakis, A. Vafeidis, E. Stiakakis (2006). Application of Geophysical and Laboratory Methods for the determination of the stiffness modulus of marl formation. Proceedings 5th Hellenic Conference of Geotechnical and Geo environmental Engineering. Xanthi 2006, Vol. 1, pp. 199 - 206.

- E. Stiakakis, I. Kalogirou, Z. Agioutantis, S. Kourkoutis (2006). An investigation on the stability of a deep open pit lignite mine using finite elements analysis. *Advances in Mineral Resources Management and Environmental Geotechnology*, Hania 2006, pp. 431 - 437.
- E. Steiakakis, Z. Agioutantis, (2007). Deep excavations with emphasis in surface coal mining: Kinetic behaviour and Geotechnical Investigation. *Mineral Wealth*, 142/ 2007, pp 47-62 (In Greek).
- E. Steiakakis K. Kavouridis, D. Monopolis (2009). Large scale failure of the external waste dump at the “South Field” lignite mine (Northern Greece). *Engineering Geology* 104, 269–279.
- E. Steiakakis, Z. Agioutantis (2010). A kinetic behavior model at a surface lignite mine, based on geotechnical investigation. *Simulation Modelling Practice and Theory* 18, 558–573
- E. Steiakakis, D. Vavadakis, D. Monopolis (2010) Groundwater flow simulation in Agia’s karst aquifer and evaluation of the consequences due to its exploitation. *Mineral Wealth* 155, 21-32.
- K. Voudouris, P. Georgiou, E. Stiakakis, D. Monopolis (2010). Comparative analysis of stochastic models for simulation of discharge and chloride concentration in Almyros karstic spring in Greece. The 14th Annual Conference of the International Association for Mathematical Geosciences, Budapest, Hungary, 29 August – 2 September 2010.
- E. Steiakakis (2010). Stiffness investigation of Ptolemais marly formation. Volume in Honor of the late Professor K. Kavouridis (accepted paper, in Greek).

Chania, September 2010