

Curriculum Vitae

Date: March 2013

General information

Full name: **Dimitra Zaharaki** (Mrs)
Occupation: Dr. Mineral Resources Engineer, researcher
Date - place of birth: March 4, 1982 - Athens
Address: Office: Dep. of Mineral Resources Engineering, Technical University
Crete, 73 100, Akrotiri, Hania, Crete
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Post-graduate studies:

November 2005 – July 2009:

PhD diploma, Post-graduate program: "Geotechnology & Environment", Dep. of Mineral Resources Engineering, Technical University of Crete.

PhD thesis: "Contribution to the elucidation of geopolymerisation mechanisms using metallurgical wastes with emphasis on electric arc furnace slags", Supervisor: Professor K. Komnitsas

September 2004 - September 2005:

Master Diploma, Post-graduate program: "Geotechnology & Environment", Dep. of Mineral Resources Engineering, Technical University of Crete.

Post-graduate thesis: "Optimization and properties of geopolymers produced from electric arc furnace ferronickel slag", Supervisor: Professor K. Komnitsas

Education

October 1999 – July 2004:

Dep. of Mineral Resources Engineering, Technical University of Crete, Diploma: Mineral Resources Engineer (7.39 / 10)

June 1999:

Secondary School (18¹⁰/₁₁), Farkadona, Trikala, Greece

Languages

Greek: Native language

English: Certificate of Proficiency in English (ECPE), University of Michigan (June 2006)

Knowledge of computer programming and software

Windows 9X, 2000, XP, 2003, Vista, 7 server

Software: MS Office 2010, DiffracPlus, StatGraphics+5, AutoCAD 2005

Excellences

July 2010, November 2009:

Standard test conduction for the determination of neutralization potential of mining wastes as part of the implementation of the Directive on the management of wastes from the extractive industries, based on the validation of preliminary standard prEN 15875 (<http://www.cen.eu/cenorm/homepage.htm>) carried out in the laboratory of "Management of Mining/Metallurgical Wastes and Rehabilitation of Contaminated Soils" which was chosen by the European standardisation committ e CEN in the line of inter-laboratory evaluation of the proposed methodology.

November 2006-July 2009:

Scholarship for PhD studies – Greek State Scholarships Foundation

September 2008 – May 2011:

Paper review for the following journals:

- "Global NEST" International Journal
- "Land Degradation & Development" International Journal
- Special Issue of the "Journal of Fresenius Environmental Bulletin"
- "African Journal of Agricultural Research"

March 2008:

Invited speaker by Prof. Kostas Fytas from the Department of Mining, Metallurgical and Materials Engineering, Laval University Quebec, Canada to give a presentation regarding "Geopolymerisation of mining and metallurgical wastes"

February 2006:

Award of prize for Master thesis, from Hellenic Solid Waste Management Association

September 1999:

Scholarship for success in Secondary-school exams – Greek State Scholarships Foundation

Work experience

Participation in research projects

- *1/10/2012 – today:*

LIFE+ AGROSTRAT - Sustainable strategies for the improvement of seriously degraded agricultural areas: The example of Pistachia vera L., funded by the EC, (duration: 1/10/2012 - 30/9/2016), Co-ordinator: Prof. K. Komnitsas

- *1/8/2012 – today:*

LIFE+ WasteReuse - Best practices for agricultural WASTEs (AW) treatment and REUSE in the Mediterranean countries, funded by the EC, (duration: 1/9/2011 - 31/8/2015), Co-ordinator: Prof. K. Komnitsas

- *1/2/2012 – today:*

Basic research project 2011: FeNi slag utilisation for the production of building components - identification of their microstructure, funded by the Research Committee of the Technical University of Crete, (duration: 1/2/2012 - 31/1/2014), Co-ordinator: Prof. K. Komnitsas.

- *1/2/2012 – 31/7/2012:*

Development of an integrated methodology for the management, treatment and valorisation of hazardous waste (WasteVal), THALIS project, funded by FP7, (duration: 20/1/2012 - 30/9/2015), Co-ordinator: Prof. K. Komnitsas

- *1/1/2009 – 30/6/2012:*

LIFE+ PROSODOL - Strategies to improve and protect soil quality from the disposal of olive oil mills' wastes in the Mediterranean region, funded by the EC, (duration: 1/1/2009 - 31/12/2012), Co-ordinator: Prof. K. Komnitsas

- *1/9/2008 – 31/8/2010:*

Basic research project 2008: Elucidation of mechanisms involved during immobilisation of heavy metals in inorganic polymers synthesised using ferronickel slag, funded by the Research Committee of the Technical University of Crete, (duration: 1/9/2008 - 31/8/2010), Co-ordinator: Prof. K. Komnitsas

- *1/10/2006 – 30/9/2007:*

Basic research project 2006: Elucidation of geopolymerisation mechanisms, funded by the Research Committee of the Technical University of Crete, (duration: 1/10/2006 - 30/9/2007), Co-ordinator: Prof. K. Komnitsas

- *1/1/2007 – 31/3/2008:*

PRBCleanup - Optimization of Permeable Reactive Barriers performance for the Clean up of contaminated by heavy metals leachates and groundwater, funded by the Greek General Secretariat of Research and Technology, (duration: 1/1/2007 - 31/3/2008), Co-ordinator: Prof. K. Komnitsas

- *1/1/2007 – 31/12/2007:*

SINO-GREEK - Integrated rehabilitation options in contaminated areas and waste disposal sites using novel methodologies, funded by the Greek General Secretariat of Research and Technology, (duration: 1/1/2006 - 31/12/2007), Co-ordinator: Prof. K. Komnitsas

- *1/9/2006 – 31/12/2006:*

PREWARC - Strategic plan for prevention of regional water resources contamination from mining and metallurgical activities in Western Balkan Area, INCO C.1 Environment, SSA, funded by the EC, (duration: 1/1/2006 - 31/12/2007), Co-ordinator: Prof. K. Komnitsas

- *1/6/2006 – 31/8/2006:*

INSWAB AL BOSNIA - Integrated Industrial Solid Waste Management in Albania and Bosnia, INCO C.1 Environment, SSA, funded by the EC, (duration: 1/9/2004 - 31/8/2006), Co-ordinator: Prof. K. Komnitsas

- *1/1/2006 – 31/8/2006:*

Innovative technologies for the management of hazardous mining wastes aiming at prevention of groundwater contamination (PYTHAGORAS), funded by the Greek Ministry of Education, budget: 50,000 €, (duration: 1/3/2004 - 31/8/2006), Co-ordinator: Prof. K. Komnitsas

- 1/4/2005 – 31/5/2006, 1/1/2007 – 30/6/2007:

INTREAT - Integrated Treatment of Industrial Wastes Towards Prevention of regional Water Resources Contamination, INCO C.1 Environment, STREP, funded by the EC (duration: 1/8/2004 - 31/7/2007), Co-ordinator: Prof. K. Komnitsas

Research assistant (presidential decree 407/80)

- 1/3/2012 – 31/7/2012, 1/3/2013 – 31/7/2013:

Research unit of Management of Mining/Metallurgical Wastes and Rehabilitation of Contaminated Soils, Graduate course “Pollution prevention and rehabilitation technologies”

- 1/3/2008 – 31/8/2008, 1/9/2009 – 28/2/2010, 1/11/2011 – 29/2/2012, 1/11/12 – 28/2/2013:

Research unit of Management of Mining/Metallurgical Wastes and Rehabilitation of Contaminated Soils, Graduate course “Metallurgical processes”

Publications

Peer-reviewed journals

1. Komnitsas K. and Zaharaki D. (2012). Pre-treatment of olive mill wastewaters at laboratory and mill scale and subsequent use in agriculture: Legislative framework and proposed soil quality indicators, *Resources, Conservation and Recycling* 69, 82– 89.
2. Komnitsas K., D. Zaharaki and G. Bartzas (2012). Effect of sulphate and nitrate anions on heavy metal immobilisation in ferronickel slag geopolymers, *Applied Clay Science*, <http://dx.doi.org/10.1016/j.clay.2012.09.018>.
3. G. Bazdanis, G. Bartzas, E. Sahinkaya and D. Zaharaki (2012). Removal of heavy metals from leachates using organic/inorganic permeable reactive barriers, *Desalination and Water Treatment Journal*; in press.
4. K. Komnitsas, D. Zaharaki, M. Doula and V. Kavvadias (2011). Origin of Recalcitrant Heavy Metals Present in Olive Mill Wastewater Evaporation Ponds and Nearby Agricultural Soils, *Environmental Forensics* 12, 1–8.
5. Zaharaki D. and K. Komnitsas (2011). Long term behaviour of ferronickel slag inorganic polymers in various environments, *Fresenius Environmental Bulletin* 21, No 8c, 2436-2440 (presented at Second International Symposium on Green Chemistry for Environment and Health, Mykonos island, Greece, 27-29 September 2010).
6. Bazdanis G., D. Zaharaki and K. Komnitsas (2010). Efficiency of organic/inorganic fixed beds to clean up leachates, *Fresenius Environmental Bulletin* 21, No 8c, 2431-2435 (presented at Second International Symposium on Green Chemistry for Environment and Health, Mykonos island, Greece, 27-29 September 2010).
7. Zaharaki D., K. Komnitsas and V. Perdikatsis (2010). Use of analytical techniques for identification of inorganic polymer gel composition, *Journal of Materials Science* 45, 2715-2724 (5 citations).
8. Komnitsas K., D. Zaharaki and V. Perdikatsis (2009). Effect of synthesis parameters on the compressive strength of low-calcium ferronickel slag inorganic polymers, *Journal of Hazardous Materials* 161, 760-768 (16 citations).

9. Zaharaki D. and K. Komnitsas (2009). Effect of additives on the compressive strength of slag-based inorganic polymers, *Global NEST Journal* 11(2), 137-146 (1 citation).
10. Komnitsas K., K. Manousaki and D. Zaharaki (2009). Assessment of reactivity of sulphidic tailings and river sludges, *Geochemistry Exploration, Environment, Analysis* 9(4), 313-318 (1 citation).
11. Komnitsas K. and D. Zaharaki (2007). Geopolymerisation: A review and prospects for the minerals industry, *Minerals Engineering* 20, 1261-1277 (97 citations).
12. Komnitsas K., D. Zaharaki and V. Perdikatsis (2007). Geopolymerisation of low calcium ferronickel slags, *Journal of Materials Science* 42, 3073-3082 (19 citations).

Refereed conference proceedings

1. Komnitsas K., D. Zaharaki and D. Vamvuka (2013). Factors affecting quality of compost produced from agricultural waste: assessment of risk, Istanbul International Solid Waste, Water and Wastewater Congress 2013 Istanbul, Turkey (22-24 May); to be presented.
2. Komnitsas K. and D. Zaharaki (2012). Identification of weighted indicators for the evaluation of agricultural waste treatment technologies, Proceedings of the 4th International Conference HSWMA (Hellenic Solid Waste Management Association) on Solid Waste Management in Crisis: New Challenges and Perspectives, Athens, Greece (30 November - 1 December), 629-636.
3. Komnitsas K. and D. Zaharaki (2012). Low cost pre-treatment of olive mill wastewaters: effect on spinach and beetroot growth, Proceedings of the International Symposium 2012 "Olive Oil mill Wastes and Environmental Protection" (Eds Soil Science Institute of Athens (SSIA), Hellenic Agricultural Organization DEMETER), Chania, Crete, Greece (16-18 October), 82-91.
4. Komnitsas K. and D. Zaharaki (2012). LIFE+ PROSODOL project: After-LIFE communication plan, Proceedings of the International Symposium 2012 "Olive Oil mill Wastes and Environmental Protection" (Eds Soil Science Institute of Athens (SSIA), Hellenic Agricultural Organization DEMETER), Chania, Crete, Greece (16-18 October) 180-188.
5. Kavvadias V., M. K. Doula, S. Theocharopoulos, K. Komnitsas and D. Zaharaki (2012). Lettuce cultivation at an olive mill waste disposal area, Proceedings of the International Conference Symposium 2012 "Olive Oil mill Wastes and Environmental Protection" (Eds Soil Science Institute of Athens (SSIA), Hellenic Agricultural Organization DEMETER), Chania, Crete, Greece (16-18 October), 92-100.
6. Zaharaki D. and K. Komnitsas (2012). Effects of pre-treated olive mill wastewaters on soils and plant growth, Proceedings of the International Conference "Protection and Restoration of the Environment-XI (PRE-XI)" (in CD-ROM), Editors: K.L. Katsifarakis, N. Theodossiou, C. Christodoulatos, A. Koutsospyros and Z. Mallios, Thessaloniki, Greece (3-6 July), 605-614.
7. Komnitsas K., G. Bazdanis, G. Bartzas, D. Zaharaki and E. Sahinkaya (2012). Prevention of groundwater contamination in waste disposal sites using composite reactive barriers, Proceedings of the International Conference "Protection and Restoration of the Environment -XI (PRE-XI)" (in CD-ROM), Editors: K.L. Katsifarakis, N. Theodossiou, C. Christodoulatos, A. Koutsospyros and Z. Mallios, Thessaloniki, Greece (3-6 July), 453-462.

8. Komnitsas K., D. Zaharaki, M.T. Hernández, J.L. Moreno Ortego, C.G. Izquierdo, F. Tinivella, G. Minuto, L. Medini, D. Micharikopoulos and E. Tavlaki (2012). Best practices for Agricultural Wastes (AW) treatment and reuse in the Mediterranean countries (WasteReuse), Proceedings of the ATHENS 2012 International Conference on Sustainable Solid Waste Management (in CD-ROM), Athens, Greece (28-29 June 2012).
9. Bazdanis G., K. Komnitsas, E. Sahinkaya and D. Zaharaki (2011). Removal of heavy metals from leachates using permeable reactive barriers filled with reactive organic/inorganic mixtures, Proceedings of the Third International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 2011) & SECOTOX Conference, Skiathos island, Greece (19-24 June).
10. Kavvadias V., A. Sarris, M. Doula, D. Zaharaki, S. Theocharopoulos and K. Komnitsas (2010). Soil quality monitoring in olive oil mill waste disposal sites, Proceedings of the 2nd International Conference "Hazardous and Industrial Waste Management", Chania, Crete, Greece (5-8 October), 485-487.
11. Zaharaki D. and K. Komnitsas (2009). Durability of slag-kaolinite inorganic polymers in various environments, Proceedings of the 5th Panhellenic Conference on Ceramics, National Technical University of Athens, Zografos, Athens, Greece (22-23 October) (in Greek).
12. Zaharaki D. and K. Komnitsas (2009). Role of alkali metals on the synthesis of low Ca ferronickel slag-based inorganic polymers, Proceedings of the International Conference AMIREG 2009 "Towards sustainable development: Assessing the footprint of resource utilization and hazardous waste management" (eds. Z. Agioutantis, K. Komnitsas) (in CD-ROM), Athens, Greece (7 - 9 September), 447-452.
13. Zaharaki D. and K. Komnitsas (2009). Existing and emerging technologies for the treatment of olive oil mill wastewaters, Proceedings of the International Conference AMIREG 2009 "Towards sustainable development: Assessing the footprint of resource utilization and hazardous waste management" (eds. Z. Agioutantis, K. Komnitsas) (in CD-ROM), Athens, Greece (7 - 9 September), 440-446.
14. Bazdanis G., D. Zaharaki and K. Komnitsas (2009). Study of manganese removal mechanisms from leachates, Proceedings of the International Conference AMIREG 2009 "Towards sustainable development: Assessing the footprint of resource utilization and hazardous waste management" (eds. Z. Agioutantis, K. Komnitsas) (in CD-ROM), Athens, Greece (7 - 9 September).
15. Zaharaki D. and K. Komnitsas (2008). Durability of slag-based inorganic polymers, Proceedings of the First International Conference on Indicators for Land Rehabilitation and Sustainable Development (ILR-SUD 2008) (in CD-ROM), Beijing, China (20-21 October).
16. Zaharaki D., K. Komnitsas and G. Bartzas (2008). Geochemical stability of slag-based inorganic polymers in several environments, Proceedings of the International Workshop in Geoenvironment and Geotechnics 2008, Milos island, Greece (8-9 September).
17. Bazdanis G., K. Komnitsas and D. Zaharaki (2008). Stabilisation of sulphidic wastes using red mud, Proceedings of the 1st International Conference on "Hazardous Waste Management", Chania, Crete, Greece (1-3 October).
18. Zaharaki D., K. Komnitsas and V. Perdikatsis (2007). Factors affecting the performance of waste-based geopolymers, Proceedings of the VI International Congress – Valorisation and recycling of Industrial Waste (in CD-ROM), L'Aquila, Italy (27 – 29 June).

19. Komnitsas K., G. Bartzas, D. Zaharaki and K. Fytas (2007). Treatment of highly acidic mine discharges in multi-component permeable reactive barriers: Column and modelling studies, Proceedings of the 3rd International Symposium on Permeable Reactive Barriers and Reactive Zones (in CD-ROM), Rimini, Italy (8-9 November).
20. Zaharaki D., K. Komnitsas and V. Perdikatsis (2006). Factors affecting synthesis of ferronickel slag based geopolymers, Proceedings of the 2nd International Conference on "Advances in Mineral Resources Management and Environmental Geotechnology-AMIREG 2006" (eds. Z. Agioutantis, K. Komnitsas), Chania, Crete, Greece (25-27 September), 63-68.
21. Zaharaki D. and K. Komnitsas (2005). Use of factorial design in environmental applications and in waste management, Proceedings of the International Workshop in Geoenvironment and Geotechnics, Milos island, Greece (12-14 September), 261-268.

Books

1. Komnitsas K. and D. Zaharaki (2009). Chapter: "Utilisation of low-calcium slags to improve the strength and durability of geopolymers" in Book: "Geopolymers Structures, processing, properties and industrial applications", Edited by J.L Provis and J.S.J. Van Deventer, WOODHEAD PUBLISHING LIMITED; ISBN-13: 978 1 84569 449 4 (2 citations).

Honourable editions

1. Zaharaki D. and K. Komnitsas (2009). Durability of slag-kaolinite inorganic polymers in various environments, Honourable edition for late Prof. K. Kavouridis, Chania, Greece, 99-108 (in Greek).

Participation in Conferences

With paper presentation

- 16-18/10/2012: International Symposium 2012 "Olive Oil mill Wastes and Environmental Protection", Chania, Crete, Greece, <http://www.prosodol.gr/Crete2012/>
- 3-6/7/2012: International Conference "Protection and Restoration of the Environment-XI (PRE-XI)", Thessaloniki, Greece, <http://www.pre11.org/>
- 28-29/6/2012: ATHENS 2012 International Conference on Sustainable Solid Waste Management, Athens, Greece, <http://uest.ntua.gr/athens2012/>
- 27-29/9/2010: Second International Symposium on Green Chemistry for Environment and Health, Mykonos island, Greece, <http://www.greenchem2.prd.uth.gr/>
- 22-23/10/2009: 5th Hellenic Conference on Ceramics, National Technical University of Athens, Zografos, Athens.
- 4-8/10/2009: 6th International Conference "Instrumental Methods of Analysis (IMA09)" Athens, Greece, http://www.chem.uoa.gr/ima2009/IMA_01_homepage1.htm
- 7-9/9/2009: "Towards sustainable development: Assessing the footprint of resource utilization and hazardous waste management (AMIREG 2009)" Athens, Greece, <http://heliotopos.conferences.gr/?amireg2009>
- 22-23/10/2008: "First International Conference on Indicators for Land Rehabilitation and Sustainable Development (ILR-SUD 2008)", Beijing, China.

- 1-3/10/2008: "1st International Conference on Hazardous Waste Management", Chania, Crete, Greece, <http://www.hwm-conferences.tuc.gr/>
- 8-9/9/2008: "2nd International Workshop in Geoenvironment and Geotechnics 2008", Milos island, Greece, <http://milos.conferences.gr/?geoenv2008>.
- 3-5/06/2008: "2nd International Conference on Engineering for Waste Valorisation", Patras, Greece, <http://www.wasteeng08.org/>
- 14-19/7/2007: "23rd International Applied Geochemistry Symposium", Oviedo, Spain, <http://www.uniovi.es/IAGS2007/>
- 25-27/9/2006: "2nd International Conference on Advances in Mineral Resources Management and Environmental Geotechnology", Chania, Crete, Greece, <http://heliotopos.conferences.gr/amireg2006>.
- 12-14/9/2005: "1st International Workshop in Geoenvironment and Geotechnics", Milos island, Greece, <http://milos.conferences.gr/?geoenv2005>.

Without paper presentation

- 2-4/11/2006: «9th National Conference on Mapping – Network Mapping, Mapping using networks», Venetian Arsenal, Chania, Crete, Greece.
- 7-9/6/2004: "1st International Conference on Advances in Mineral Resources Management and Environmental Geotechnology", Chania, Crete, Greece, <http://heliotopos.conferences.gr/amireg2004>.

Training

7/7/2003 - 6/8/2003:

"Institute of Geology & mineral exploration", (IGME), Thessaloniki, Greece

1/7/2002 - 15/7/2002:

"TVX Hellas", Stratoni Chalkidiki, Greece