

curriculum vitae

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ACADEMIC BACKGROUND

1993 Doctor of Philosophy (PhD)
Department of Environmental Chemical Engineering, Graduate School of Science & Engineering,
Saitama University, Japan.

1999 Master in Business Administration (MBA)
Hellenic Association for Business Administration, Thessaloniki, Greece.

1990 Master of Engineering (M.Eng.)
Department of Environmental Chemical Engineering, Graduate School of Science & Engineering,
Saitama University, Japan.

1987 Bachelor in Physics
Department of Physics, Aristotle University of Thessaloniki, Greece.

LANGUAGES

- English (Excellent, Certificate from University of Cambridge)
- Japanese (Very Good, Certificate from Tsukuba University Language Center)
- French (good)

SCHOLARSHIPS – HONORS - MEMBERSHIPS

- Scholarship from the Japanese Ministry of Education (1987-1993).
- 2nd award from the Air Pollution Research Society of Japan (1989).
- Member of ISIE (International Society of Industrial Ecology).

PROFESSIONAL EXPERIENCE

2006 - Professor, Department of Production Engineering & Management
School of Engineering, Democritus University of Thrace.

2002 - 2006 Adjunct Professor, Department of Production Engineering & Management,
School of Engineering, Democritus University of Thrace.

2001 - 2006 Adjunct Professor, Technological Educational Institute of Kavala.

2003 - 2004 Consultant (Environmental and Management issues).

1994 – 2002 Environmental Manager in Industry.

TEACHING and SUPERVISING ACTIVITY

2006 - today Physics for Engineers, Fluid Mechanics, Industrial Process Systems, Environmental Engineering,
Industrial Ecology (post graduate level)

2006 - today Supervision of 60 Diploma Theses,

2008 – today Supervision of twelve (12) Postgraduate Diploma Theses,

2008 - today Supervision of seven (7) Doctoral Theses, three (3) completed

RESEARCH ACTIVITY

Research programs (selectively)

1. “Innovative Industrial Technologies for the Rehabilitation of Land Contaminated from Polymetallic Sulphide Mining and Processing Operations», Acronym: ROLCOSMOS, European Union funding, Contract No. BRPR-CT96-0297, 1997-2000
2. “Life Cycle Assessment of mining projects for waste minimization and long term control of rehabilitated sites”, Acronym: LICYMIN, European Union funding, Contract No. G1RD-CT-2000-00162, 2000-2002
3. “Closure of Tailings Dams”, Acronym: CLOTADAM, European Union funding, Contract No. G1RD-CT-2000-00480, 2000-2002
4. “Black Sea Buildings Energy Efficiency Plan-BSBEEP”, Black Sea Basin Program, 2013-2016
5. “Reinforcing protected areas capacity through an innovative methodology for sustainability (Bio2Care)”, Interreg GR-BG, 2017-2020.
6. “Sustainable Eco-Cultural Valorization of Mines and Quarries Sites in the Cross-Border Area (Terra Mine)”, Interreg GR-BG, 2019-2021.
7. “Promoting Circular Economy Incubator for Youth (CIRCUIT)”, Interreg GR-BG, 2021-2023.

Research Interests

Industrial applications of Industrial Ecology and more specifically industrial symbiosis and eco-industrial parks, applications of the circular economy in industrial systems (reuse of by-products-waste and waste heat), the assessment of the environmental sustainability of natural and artificial systems, eco-efficiency with the development and application of appropriate indicators (eco-efficiency indicators), life cycle analysis (Life Cycle planning, design and assessment), industrial metabolism (Material Flow Analysis), quality of the atmospheric environment and indoor air quality, sustainable cities and local metabolism

CONFERENCE PROCEEDINGS (selectively)

1. K. Sakamoto, G. Gaidajis, et al, “Chemical Characterization of Atmospheric Aerosols in Northern (Beijing) and Southwestern (Guiyang) China”, proceedings p. 195, International Conference on Global and Regional Environmental Atmospheric Chemistry (ICGREAC), May 3-10, 1989, Beijing, China.
2. K. Sakamoto, G. Gaidajis, Q. Wang, Y. Hirota, K. Kimijima and M. Okuyama, “Transportation of Atmospheric Pollutants by Sea-Land Breeze in and over the Tokyo Metropolitan Area”, Proceedings IU-11C-09 (12 pages), 9th World Clean Air Congress, August 30-September 4, 1992, Montreal, Canada.
3. K. Sakamoto, G. Gaidajis, Q. Wang, Y. Yoshimura, O. Ishitani and K. Kimijima, “Comparison of acidity for atmospheric particulate matter collected at northern and southwestern cities in China and south Kanto area in Japan”, Proceedings pages 254-266, International Conference on Acid Deposition in East Asia, 1996, Taipei, Taiwan.
4. G. Gaidajis, E. Mylona, K. Adam, “A reclamation scheme for sulphidic waste rock at Stratoni mines, Greece”, Proceedings, pages 111-117, International Workshop “New Frontiers in Reclamation: Facts and Procedures in Extractive Industry”, September 19-21, 2001, Milos, Greece.
5. G. Gaidajis, “Heavy metals and elements in coastal waters close to mining activities”, Proceedings, pages 723-728, 2nd International Conference on Advances in Mineral Resources Management and Environmental Geotechnology, September 25-17, 2006, Hania, Greece.
6. G. Gaidajis, “A quick sustainability assessment of an industrial facility”, Proceedings, pages 177-182, “International workshop on Geoenvironment & Geotechnics”, September 8-9, 2008, Milos, Greece.
7. G. Gaidajis and D. Aktsoglou, “The impact of mining activities in the quality of coastal sea waters”, 2nd International Conference on Environmental Management, Engineering, Planning and Economics (CEMEPE 09) & SECOTOX Conference, June 21-25, Mykonos, Greece 2009.
8. G. Gaidajis, P. Botsaris, “Assessment of the environmental and sustainability performance of construction projects”, 2nd International Conference on Environmental Policy & Management, June 19-21, Mytilini, Greece 2009.
9. G. Gaidajis and K. Angelakoglou, “Recovery of waste lubricant oil contained in used automotive filters”, 3rd International Conference “Towards Sustainable Development: Assessing the footprint of resource utilization & Hazardous Waste Management”, AMIREG 2009, September 7-9, Athens 2009.
10. Gaidajis, G., Angelakoglou, K. and Aktsoglou, D., “Incorporating Industrial Ecology as an enhancement tool for teaching Sustainable Development to Engineers - current experience from Greece”, EESD 2010, 5th International Engineering Education in Sustainable Development Conference, 19-22 of September, 2010, Göteborg, Sweden.
11. Gaidajis G. and Angelakoglou K., “Development of a holistic tool for assessing the environmental sustainability of mining facilities”, 5th International Conference Sustainable Development in the minerals industry, SDIMI 2011, June 14-17, Aachen, Germany.

12. Gaidajis, G. and Angelakoglou, K., "Indoor Concentrations of Particulate Matter in Hospital Environment". Protection and Restoration for the Environments – *PRE11 XI International Conference*, July 3-6, 2012, Thessaloniki, Greece.
13. G. Gaidajis and Angelakoglou K., "Relative Contribution of the Transportation Sector to the Carbon Footprint of an Urban Centre – A Medium Sized Greek City Case Study", TAP 2012 Conference, November 26-27, 2012, Thessaloniki, Greece.
14. G. Gaidajis and K. Angelakoglou, "Carbon footprint and energy assessment of a medium sized municipality in Greece". CEST 2013, 13th International conference on Environmental Science and Technology, September 5-7, 2013, Athens, Greece.
15. G. Gaidajis, A. Anagnostopoulos, M. Papachristoforu, "Investigation of Phosphogypsum as Material for Embankments", 9th International Concrete Conference, July 4-6, 2016, Dundee, Scotland.
16. Angelakoglou K., Gaidajis G., and Garidi A., "Assessing and improving the sustainability performance of mining industries", 9th International Conference on Sustainable Development in the Mining Industry, May 27-29, 2019, Sydney, Australia.
17. Garidi A. and Gaidajis G., "Benefit-sharing mechanisms in developed mining countries: a literature review", 9th International Conference on Sustainable Development in the Mining Industry, May 27-29, 2019, Sydney, Australia.
18. Gaidajis G., "Ambient Air Quality Levels in a semi-urban area close to an industrial site in Northeastern Greece", International Conference Protection and Restoration of the Environment XV, July 2020, Kalamata, Greece.
19. Gaidajis G., Kakanis I., Symeonidis P., Vakkas T., and Mirli A., "Development of a Geospatial Environmental Monitoring System for the National Park of East Macedonia-Thrace", International Conference Protection and Restoration of the Environment XV, July 2020, Kalamata, Greece.
20. Anagnostopoulos A., Navarro E., Ding Y., and Gaidajis G., "Phosphogypsum-paraffin composites for low temperature thermal energy storage applications", International Conference on Raw Materials and Circular Economy, RawMat21, Athens, September 5-9, 2021 (best paper for new researcher).

PUBLICATIONS (selectively)

1. G. Gaidajis, E. Mylona, K. Adam, E. Gazea, "Pilot scale field performance of a reclamation scheme for sulphidic waste rock", *European Journal of Mineral Processing & Environmental Protection*, Vol. 4, 2004.
2. G. Gaidajis and K. Angelakoglou, "Indoor air quality in university classrooms and relative environment in terms of mass concentrations of particulate matter", *Journal of Environmental Science and Health*, Vol. A44, No. 12, 2009.
3. G. Gaidajis, K. Angelakoglou, D. Aktsoglou, "E-waste: Environmental problems and current management", *JESTR*, Vol. 3(1), pp. 193-199, 2010.
4. S. Hosoi, H. Yoshikado, G. Gaidajis and K. Sakamoto, "Study of the relationship between elevated concentrations of photochemical oxidants and prevailing meteorological conditions in the north Kanto area, Japan", *Journal of Water, Air and Soil Pollution*, Vol. 215, pp. 105-116, 2011.
5. G. Gaidajis, K. Angelakoglou and D. Aktsoglou, "Sustainable Development integration in Greek school of engineering – current situation, experiences and actions", *International Journal of Sustainable Engineering*, 2011.
6. G. Gaidajis, K. Angelakoglou, P. Botsaris and F. Fillipidou, "Analysis of the recycling potential of used automotive oil filters using the Life Cycle Assessment approach" *Resources, Conservation and Recycling*, 55, pp. 986-994, 2011.
7. G. Gaidajis, and K. Angelakoglou, "Screening life cycle assessment of an office used for academic purposes", *Journal of Cleaner Production*, 19, pp. 1639-1646, 2011.
8. G. Gaidajis, K. Angelakoglou and D. Aktsoglou, "Sustainable Development integration in Greek school of engineering – current situation, experiences and actions", *International Journal of Sustainable Engineering*, Vol. 5, pp. 175-185, 2012.
9. Gaidajis, G. and Angelakoglou, K., "Environmental performance of renewable energy systems with the application of Life Cycle Assessment: a Multi-Si photovoltaic module case study", *Civil Engineering and Environmental Systems*, Vol. 29 (4), pp. 231-238, 2012.
10. Kazakidis V., Gaidajis G. and Angelakoglou K., "Evaluation of Environmental and Social Parameters of a gold-mining project at the pre-feasibility stage: A case study", *Journal of Global Perspective on Engineering Management*, Vol. 2, pp 93-104, 2013.
11. Angelakoglou K., Dimitriou M. and Gaidajis G., "Comparative evaluation of flat roof thermal systems: A life cycle analysis based approach", *International Journal of Sustainable Building Technology and Urban Development*, 2013.
12. G. Gaidajis, K. Angelakoglou and D. Aktsoglou, "Wintertime particulate mass concentrations in urban environment and the impact of economical crisis – Evidence from Greece", *Journal of Environmental Science and Health, Part A*, Vol. 49 (14), 1653 – 1660, 2014.
13. K. Angelakoglou, P. Botsaris and G. Gaidajis, "Issues regarding wind turbines positioning: A benchmark study with the application of the life cycle assessment approach", *Journal of Sustainable Energy Technologies and Assessments*, Vol. 5, pp 7-18, 2014.
14. K. Angelakoglou, and G. Gaidajis, "A review of methods contributing to the assessment of the environmental sustainability of industrial systems", *Journal of Cleaner Production* 108, pp.725-747, 2015.
15. K. Lympelopoulou, P. Botsaris, K. Angelakoglou and G. Gaidajis, "Sustainable energy action plans of medium-sized municipalities in North Greece", *Advances in Energy Research*, Vol. 3, No. 1, pp. 11-30, 2015.
16. K. Angelakoglou, D. Aktsoglou, G. Gaidajis, I. Margiolaki and V. Tzomaka, "A preliminary assessment of the carbon footprint of households in Greece", *International Journal of Sustainable Society*, Vol. 7, No. 4, pp. 322-332, 2015.

17. G. Gaidajis and K. Angelakoglou, "Sustainability of Industrial Facilities through Water Indicators", *Environmental Processes*, 3, (Suppl 1): S91-S103, 2016.
18. G. Gaidajis, A. Anagnostopoulos, A. Garidi, E. Mylona and I. Zevgolis, "Laboratory Evaluation of Phosphogypsum for alternative uses", *Environmental Geotechnics*, Volume 5, Issue 6, pp. 310-323, 2018.
19. K. Angelakoglou and G. Gaidajis, "A Conceptual Framework to Evaluate the Environmental Sustainability Performance of Mining Industrial Facilities", *Sustainability*, 12, 2135, 2020.
20. D. Aktsoğlu and G. Gaidajis, "Environmental Sustainability Assessment of Spatial Entities with Anthropogenic Activities-Evaluation of Existing Methods", *Sustainability* 12, 2680, 2020.
21. D. Aktsoğlu and G. Gaidajis, "A Case Study on Environmental Sustainability Assessment of Spatial Entities with Anthropogenic Activities: The National Park of Eastern Macedonia and Thrace, Greece", *Sustainability* 12, 4486, 2020.
22. I. Kakanis and G. Gaidajis, "Evaluating the benefits of a potential industrial symbiosis network within the boundaries of a protected area, using the method of life cycle assessment", *Progress in Industrial Ecology*, Vol. 14, No. 3/4, pp. 246-263, 2020.
23. I. Kakanis and G. Gaidajis, "Proposal of a conceptual sustainability labelling scheme for environmentally sensitive areas with anthropogenic activities", *Progress in Industrial Ecology*, Vol. 14, No. 3/4, pp. 264-283, 2020.
24. A. Anagnostopoulos, E. Navarro, M. Stefanidou, Y. Ding and G. Gaidajis, "Red Mud-Molten Salt composites for medium-high temperature thermal energy storage and waste heat recovery applications", *Journal of Hazardous Materials*, 2021.
25. G. Gaidajis and I. Kakanis, "Life Cycle Assessment of Nitrate and Compound Fertilizers Production – A Case Study", *Sustainability* 13, 148, 2021.
26. A. Anagnostopoulos, M. Navarro, A. Ahmad, Y. Ding and G. Gaidajis, "Valorization of phosphogypsum as a thermal energy storage material for low temperature applications", *Journal of Cleaner Production*, 342 2022.
27. G. Gaidajis, "Air pollution levels in an urban-residential site adjacent to industrial activities", *Fresenius Environmental Bulletin*, Vol. 31-No.01/2022, pp.689-696.
28. A. Anagnostopoulos, M. Navarro, M. Stefanidou, P. Seferlis, G. Gaidajis and Y. Ding, "Effect of carbon on the performance of red mud-molten salt composites for thermal management and waste heat recovery applications", *Journal of Energy Storage* 44, 2021.
29. I. Kakanis and G. Gaidajis, "Eco-industrial Development in Greece: Existing situation, barriers and opportunities", *Fresenius Environmental Bulletin*, 31, 9643-9654, 2022.
30. I. Kakanis and G. Gaidajis, "Comparative Life Cycle Assessment of Masonry Systems with different chemically cured construction blocks", *Fresenius Environmental Bulletin*, 31, 9856-9866, 2022.
31. M. Pliaka, G. Gaidajis, "Potential uses of phosphogypsum: A review", *Journal of Environmental Science and Health, Part A*, 57:9, 746-763, 2022.