

MARIA KAZANTZAKI

Mining and Metallurgical Engineer (NTUA)/Geochronologist

Date of birth: 23/06/1986

Current address:

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Gerakas,
Athens, 15344, Greece
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EDUCATION

- 2019-2022 MSc in Geoinformatics**
DEPARTMENT OF GEOGRAPHY, HAROKOPIO UNIVERSITY, ATHENS, GREECE
MSc Thesis: Shoreline vulnerability assessment of Mirabelo Gulf-NE Crete.
- 2010-2016 Ph.D in Geology-Geochronology and Geotectonics**
SCHOOL OF MINING AND METALLURGICAL ENGINEERING, NATIONAL TECHNICAL UNIVERSITY OF ATHENS, GREECE
PhD Thesis: Basic research and application of luminescence dating techniques on coastal quaternary sediments of Evoikos Gulf (Central Greece).
- 2004-2009 BSEng Mining and Metallurgical Engineering**
SCHOOL OF MINING AND METALLURGICAL ENGINEERING, NATIONAL TECHNICAL UNIVERSITY OF ATHENS, GREECE
Dissertation: Geotectonics of East Corinthia (Greece) and the case of the spring “Almiri”.

RESEARCH AND PROFESSIONAL EXPERIENCE

- 04/2017 to date Post-doc Researcher**
INSTITUTE OF NANOSCIENCE AND NANOTECHNOLOGY (I.N.N.), NATIONAL CENTER FOR SCIENTIFIC RESEARCH “DEMOKRITOS”, ATHENS, GREECE
Current research: Geochronological research using luminescence dating techniques for the palaeogeographic evolution of Sifnos, Serifos and Kythnos islands of Greece working on the project “METAL PLACES: Culture crossroads in eastern Mediterranean” funded by the cooperation programme Interreg V-A «Greece-Cyprus» 2014-2020
- 08/2021 to date Secondary Education Teacher**
- 10/2011 to 2019 Teaching Assistant (Geology module)**
SCHOOL OF MINING AND METALLURGICAL ENGINEERING/SCHOOL OF RURAL AND SURVEYING ENGINEERING, NATIONAL TECHNICAL UNIVERSITY OF ATHENS, GREECE
- 07/2016-03/2017 Research Associate**
INSTITUTE OF NANOSCIENCE AND NANOTECHNOLOGY (I.N.N.), NATIONAL CENTER FOR SCIENTIFIC RESEARCH “DEMOKRITOS”, ATHENS, GREECE
Main responsibilities:
- Geochronological research using luminescence dating techniques (OSL, IRSL, TL)
 - Reconstruction of the palaeoenvironment/palaeogeography/ palaeoclimate
 - Digital mapping of coastal areas using Geographical Information Systems (GIS)
- 08/2008-09/2008 Trainee**
ATTIKO METRO S.A. COMPANY, ATHENS, GREECE
Main responsibilities: Analysis and technical support during the excavation and resistance works at the “Nomismatokopio” Metro Station.

MAJOR COLLABORATIONS

- Dr. Tsakalos Evangelos, ‘*Reconstruction of the palaeoenvironment and palaeoclimate of Sperchios delta plain and study of its change up to date*’, Hellenic Centre for Marine Research (HCMR), Athens, Greece.
- Dr. Filippaki Eleni, ‘*Luminescence dating of sediments collected from the archaeological site of Petroto-Trikala*’, laboratory of Archaeometry, Institute of Nanoscience and Nanotechnology (I.N.N.), National Center for Scientific Research ‘Demokritos’, Athens, Greece.
- Dr. Vaiopoulou Maria, ‘*Geoarchaeological project-Archaeological excavations and fieldwork at Petroto-Trikala (Greece)*’.
- Prof. Günther Wagner, Prof. Bertil Mächtle, Prof. Stefan Hecht, ‘*The prehistoric harbour of Thera (Santorini) and its role in Aegean affairs- Geomorphological Parameters*’, Institute of Geography, University of Heidelberg, Germany.
- Prof. Nena Galanidou, Prof. George Iliopoulos, ‘*Looking for the earliest occupants of the Aegean-Geoarchaeological approaches*’, School of Archaeology, University of Crete, Greece.
- Prof. Theodora Rodoyanni, ‘*Palaeoenvironmental reconstruction of Evoikos Gulf-Greece*’, School of Geological Sciences, National Technical University of Athens, Greece.
- Prof. Nickos Efstratiou, ‘*Establishing the age of the Early Epipalaeolithic site of Vretsia-Roudias in the Troodos Mountains*’, Department of History and Archaeology, Aristotle University of Thessaloniki, Greece.
- Dr. Likoudi Evdokia, ‘*Mapping of North Evoikos gulf using Geographical Information Systems (GIS)*’, School of Mining and Metallurgical Engineering, National Technical University of Athens, Greece.
- Dr. Tsakalos Evangelos, ‘*Unraveling the Palaeoenvironmental Framework of Southeast Cyprus over the Late Quaternary - Luminescence Geochronology and Quartz Grains-Shape Examination*’, Institute of Nanoscience and Nanotechnology (I.N.N.), National Center for Scientific Research ‘Demokritos’, Athens, Greece.
- Dr. Georgiou Charalampos, ‘*Dating of Oktonia fault using luminescence dating techniques*’, Institute of Geology and Mineral Exploration (IGME), Athens

KEY PUBLICATIONS

Kazantzaki M., Tsakalos E., Filippaki E., Bassiakos Y., 2021. Sea Level Rise and Implications for Low-lying areas: Coastal Evolution and Impact of Future Sea Level Rise Scenarios in Mirabello Gulf - NE Crete. *IRC 2021: XV International Research Conference Proceedings, October 25-26, Istanbul, Turkey.*

Tsakalos E., **Kazantzaki M.**, Filippaki E., Bassiakos Y., 2021. Forecasting Impacts on Vulnerable Shorelines: Vulnerability Assessment Along the Coastal Zone of Messologi Area - Western Greece. *IRC 2021: XV International Research Conference Proceedings, October 25-26, Istanbul, Turkey.*

Kazantzaki, M., Tsakalos, E., Rondoyanni, Th., Bassiakos, Y., Filippaki, E., 2019. Middle Pleistocene Luminescence Ages on Coastal Sediments from North Evoikos Gulf: Overcoming Quartz Saturation by Elevated-temperature Infrared Stimulated Luminescence (IRSL) from Feldspars. *Bulletin of the Geological Society of Greece, Special Publication, 7, 93-94, ISBN 978-960-98709-5-5, Print ISSN: 0438-9557, Online ISSN: 2529-1718.*

Tsakalos, E., Lin, A., **Kazantzaki, M.**, Bassiakos, Y., Filippaki, E., Nishiwaki, T., 2019. Absolute Dating of Neotectonic Events: A Feasibility Study on Fault Gouge from the Nojima and Asano Faults, NW Awaji Island, Japan. *Bulletin of the Geological Society of Greece, Special Publication, 7, 166-167, ISBN 978-960-98709-5-5, Print ISSN: 0438-9557, Online ISSN: 2529-1718.*

Tsakalos, E., **Kazantzaki, M.**, Bassiakos, Y., Filippaki, E., 2019. High Resolution Stratigraphy and Evolution of Sperchios Delta Plain-Greece Based on Optical Dating of Quartz and Feldspar. *Bulletin of the Geological Society of Greece, Special Publication, 7, 91-92, ISBN 978-960-98709-5-5, Print ISSN: 0438-9557, Online ISSN: 2529-1718.*

Tsakalos, E., **Kazantzaki, M.**, Lin, A., Bassiakos, Y., Filippaki E., Takafumi, N., 2019. Absolute dating of fault gouge, breccia and cataclasite samples using luminescence dating techniques-the Nojima and Asano faults, NW Awaji Island, Japan. *Solid Earth 125, 1-18, DOI: <https://doi.org/10.1029/2019JB019257>, ISSN: 2169-9356.*

Tsakalos, E., Efstratiou, N., Bassiakos, Y., **Kazantzaki, M.**, Filippaki, E., 2021. Early Cypriot prehistory: on the traces of the last hunters and gatherers in the island-preliminary results of luminescence dating. *Current anthropology, 62 (4), 412-425. <https://doi.org/10.1086/716100>.*

Tsakalos, E., **Kazantzaki**, M., Lin, A., Bassiakos, Y., Filippaki E., Takafumi, N., 2018. Seismic Moment and Recurrence: Microstructural and mineralogical characterization of rocks in carbonate fault zones and their potential for luminescence and ESR dating. *Journal of Structural Geology*, 117, 186-202. DOI: <https://doi.org/10.1016/j.jsg.2018.09.018> , ISSN: 0191-8141.

Tsakalos, E., Dimitriou, E., **Kazantzaki**, M., Anagnostou Ch., Christodoulakis J., Filippaki E., 2018. Testing optically stimulated luminescence dating on sand-sized quartz of deltaic deposits from Sperchios delta plain, Greece. *Journal of Palaeogeography*, 7(2), 130-145, DOI: <https://doi.org/10.1016/j.jop.2018.01.001>, ISSN: 2095-3836.

Tsakalos, E., Athanassas, C., Tsiapas, P., Triantaphyllou, M., Geraga, M., Papatheodorou, G., Filippaki E., Christodoulakis, J., **Kazantzaki**, M., 2018. Luminescence geochronology and paleoenvironmental implications of coastal deposits of southeast Cyprus. *Journal of Archaeological and Anthropological Sciences*, 10 (1), 41-60, DOI: <https://doi.org/10.1007/s12520-016-0339-7>, Electronic ISSN: 1866-9565, Print ISSN: 1866-9557.

Tsakalos, E., Efstratiou, N., Bassiakos, Y., **Kazantzaki**, M., Filippaki, E., 2019. Early Cypriot prehistory: on the traces of the last hunters and gatherers in the island –preliminary results of luminescence dating. *Current anthropology*, 62, DOI: <https://doi.org/10.1086/716100> , Print ISSN: 0011-3204, Electronic ISSN: 1537-5382.

Kazantzaki, M., Athanassas, C., Bassiakos, Y., Tsakalos E., 2016. Luminescence dating of Quaternary Coastal deposits of Evoikos Gulf (central Greece). 6th Symposium of the Hellenic Society for Archaeometry. Athens, Greece. *British Archaeological Reports*, BAR S2780 Proceedings, 207-215.

Xaplanteris C., Filippaki E., Christodoulakis J., **Kazantzaki** M., Tsakalos E. and Xaplanteris L., 2015. Cold atmospheric plasma activity on microorganisms. A study on the influence of the treatment time and surface. *Journal of Plasma Physics*, 81 (4), 1-14, DOI: <https://doi.org/10.1017/S002237781500032X>, Electronic ISSN: 1469-7807, Print ISSN: 0022-3778.

CONFERENCE PARTICIPATION

Kazantzaki M., Tsakalos E., Filippaki E., Bassiakos Y., 2021. Sea Level Rise and Implications for Low-lying areas: Coastal Evolution and Impact of Future Sea Level Rise Scenarios in Mirabello Gulf - NE Crete. *ICGMGTA 2021: XV International Conference on Geomorphological Mapping, Geospatial Technologies and Applications, October 25-26, Istanbul, Turkey*.

Tsakalos E., **Kazantzaki** M., Filippaki E., Bassiakos Y., 2021. Forecasting Impacts on Vulnerable Shorelines: Vulnerability Assessment Along the Coastal Zone of Messologi Area - Western Greece. *ICGMGTA 2021: XV International Conference on Geomorphological Mapping, Geospatial Technologies and Applications, October 25-26, Istanbul, Turkey*.

Kazantzaki M., Tsakalos E., Bassiakos Y., Filippaki E., Rondoyanni Th. and Georgiou Ch., 2019. Absolute dating of paleo-earthquakes: Luminescence dating of fault rock related material. *15th International Congress of the Geological Society of Greece*, May 22-24, Athens, Greece.

Tsakalos, E., **Kazantzaki** M., Nishiwaki T., Lin A., M., Bassiakos, Y., Filippaki, E., 2019. Potential of OSL and ITL signal resetting of experimentally sheared quartz from natural gouge at varying slip rates and normal stresses. *15th International Congress of the Geological Society of Greece*, May 22-24, Athens, Greece.

Tsakalos, E., Mitrikas G., **Kazantzaki** M., Nishiwaki T., Lin A., M., Bassiakos, Y., Filippaki, E., 2019. Isothermal Thermoluminescence vs Electron Spin Resonance dating of fault gouge from palaeo-earthquakes: recent advances. *7th Symposium on Archaeometry of the Hellenic Society for Archaeometry*, October 9-12, Athens, Greece.

Kazantzaki M., Tsakalos E., Rondoyanni Th., Bassiakos Y., Filippaki E., 2019. Middle Pleistocene Luminescence Ages on Coastal Sediments from North Evoikos Gulf: Overcoming Quartz Saturation by Elevated-temperature Infrared Stimulated Luminescence (IRSL) from Feldspars. *15th International Congress of the Geological Society of Greece*, May 22-24, Athens, Greece.

Tsakalos E., Lin A., **Kazantzaki** M., Bassiakos Y., Filippaki E., Nishiwaki T., 2019. Absolute Dating of Neotectonic Events: A Feasibility Study on Fault Gouge from the Nojima and Asano Faults, NW Awaji Island, Japan. *15th International Congress of the Geological Society of Greece*, May 22-24, Athens, Greece.

Tsakalos E., **Kazantzaki** M., Bassiakos Y., Filippaki E., 2019. High Resolution Stratigraphy and Evolution of Sperchios Delta Plain-Greece Based on Optical Dating of Quartz and Feldspar. *15th International Congress of the Geological Society of Greece*, May 22-24, Athens, Greece.

Tsakalos E., **Kazantzaki** M., Lin A., Nishiwaki T., 2018. Luminescence and ESR dating of fault gouge materials from the Nojima fault – Japan. *American Geophysical Union (AGU Fall Meeting 2018)*, December 10-14, Washington, Maryland, USA.

- Tsakalos E., Bassiakos Y., Yiannouli E., **Kazantzaki M.**, Filippaki E., 2018. Late Quaternary Palaeoenvironmental Evolution of the Coastal Zone of SE Kephallenia Island-Greece: a Preliminary Account Based on Luminescence Dating Techniques. *The 42nd International Symposium on Archaeometry (ISA 2018)*, May 20-26, Mérida, Yucatán, Mexico.
- Tsakalos E., Efstratiou N., Bassiakos Y., **Kazantzaki M.**, Filippaki E., 2018. Early Cypriot Prehistory: On the Traces of the Last Hunters and Gatherers in the Island-Preliminary Results of Luminescence Dating. *The 42nd International Symposium on Archaeometry (ISA 2018)*, May 20-26, Mérida, Yucatán, Mexico.
- Kazantzaki M.**, Filippaki E., Bassiakos Y., Tsakalos E., Christodoulakis, J., 2018. Late Pleistocene-Holocene Environmental Changes on Kalamas Delta Plain- NW Greece. *The 42nd International Symposium on Archaeometry (ISA 2018)*, May 20-26, Mérida, Yucatán, Mexico.
- Kazantzaki M.**, Tsakalos E., Bassiakos Y., Filippaki E., 2018. The Potential of Thermoluminescence Techniques in Dating Fault Slickenside Formations. *Asia Oceania Geosciences Society (AOGS), 15th Annual Meeting*, 03-08 June, Honolulu, Hawaii.
- Tsakalos E., Lin A., Bassiakos Y., **Kazantzaki M.**, Filippaki E., 2018. Absolute Dating of Fault Gouge Using Luminescence Dating Techniques- The Borehole Survey of the Nojima Fault, Southwest Japan. *Asia Oceania Geosciences Society (AOGS), 15th Annual Meeting*, 03-08 June, Honolulu, Hawaii.
- Tsakalos E., Lin A., Bassiakos Y., **Kazantzaki M.**, Filippaki E., Takafumi N., 2017. Seismic Moment and Recurrence using Luminescence Dating Techniques: Characterizing brittle fault zone materials suitable for luminescence dating. *American Geoscience Association (AGU) fall meeting 2017*, December 11-15, book of abstracts, New Orleans, USA.
- Tsakalos E., Dimitriou E., Triantaphyllou M., Kouli K., Dimiza M., Anagnostou C., **Kazantzaki M.**, 2016. Late Pleistocene-Holocene environmental changes on Sperchios delta plain-central Greece. *The MedCLIVAR 2016 conference*, September 26-30, book of Abstracts, Athens, Greece.
- Kazantzaki Maria M.**, Filippaki Eleni, Vaiopoulou M., Tsakalos E., Mastrotheodoros G., Christodoulakis J., 2016. *Testing Optically Stimulated Luminescence dating of sand-sized quartz and feldspar sediments from an archaeological site in Petroto – Trikala, Greece. International Symposium on Archaeometry (ISA) 2016*, May 15-21, book of Abstracts, Kalamata, Greece.
- Filippaki E., Rongeucke M., Mourelatos D., Tsakalos E., **Kazantzaki M.**, Mastrotheodoros G.P., Xaplanteris C., Kokkorou-Alevra G., Kalopissi-Verti S., and Panayotidi-Kesisoglou M., 2016. *Conservation of archaeological iron objects using plasma surface cleaning and chemical methods: A multi analytical evaluation. International Symposium on Archaeometry (ISA) 2016*, May 15-21, book of Abstracts, Kalamata, Greece.
- Tsakalos E., Dimitriou E., **Kazantzaki M.** and Anagnostou C., 2016. Luminescence dating of deltaic deposits from Sperchios delta plain, Greece. *International Symposium on Archaeometry (ISA) 2016*, May 15-21, book of Abstracts, Kalamata, Greece.
- Mastrotheodoros G.P., Filippaki E., Papadopoulou V., Beltsios K.G., Christodoulakis J., **Kazantzaki M.**, and Tsakalos E., 2016. Two post-Byzantine, wall painted monuments from Epirus: materials and techniques. *International Symposium on Archaeometry (ISA) 2016*, May 15-21, book of Abstracts, Kalamata, Greece.
- Kazantzaki M.**, Bassiakos Y., Rondoyanni Th., Tsakalos E., Christodoulakis J., 2014. *Luminescence chronology of Quaternary coastal deposits of North Evoikos Gulf (Central Greece). NARNIA International Conference: 'Interdisciplinary Studies of Ancient Materials from the Mediterranean' 2014*, September 17-19, book of Abstracts, Nicosia, Cyprus.
- Kazantzaki M.**, Bassiakos Y., Rondoyanni Th., Tsakalos E., Christodoulakis J., 2014. *Quaternary palaeoenvironmental reconstruction of the coastal zone of North Evoikos Gulf (Greece) based on the use of luminescence dating techniques. International Symposium on Archaeometry (ISA) 2014*, May 19-23, book of Abstracts, Los Angeles, USA.
- Tsakalos E., Bassiakos Y., **Kazantzaki M.**, Christodoulakis J., 2014. *Unraveling the Palaeoenvironmental Framework of Southeast Cyprus over the Late Quaternary - Luminescence Geochronology and Quartz Grains-Shape Examination. International Symposium on Archaeometry (ISA) 2014*, May 19-23, book of Abstracts, Los Angeles, USA.
- Christodoulakis J., Bassiakos Y., Tsakalos E., **Kazantzaki M.**, 2014. *Dating results of new palaeoenvironmental studies conducted in south Peloponnesus, Greece. International Symposium on Archaeometry (ISA) 2014*, May 19-23, book of Abstracts, Los Angeles, USA.
- Kazantzaki M.**, Athanassas C., Rondoyanni Th., Bassiakos Y., 2013. *Geochronology of Quaternary coastal deposits of Evoikos Gulf/ Greece by means of luminescence dating. RCMNS 14th Congress 2013*, September 8-12, book of Abstracts, Istanbul, Turkey.

Kazantzaki M., Rondoyanni Th., Athanassas C., 2013. *Luminescence dating of Quaternary Coastal deposits of Evoikos Gulf*. 6th Symposium of the Hellenic Society for Archaeometry (HSA), May 16-18, book of Abstracts, Athens, Greece.

INVITED SPEAKER

Kazantzaki M., «*Chronological studies using radiometric techniques: research and applications*». Postgraduate program “Ancient world: History and Archaeology”, Interdisciplinary Seminar of Prehistoric Archeology, School of philosophy, Department of history and archaeology, University of Ioannina, 26th of March 2021, Ioannina.

Kazantzaki M., «*Luminescence dating: basics, methods and applications*». NIA - Leiden Workshop Conservation, Conservation and Physicochemical study of Nisyros shipwreck pottery, June 17-28, 2019, Athens, Greece.

Kazantzaki M., Tsakalos E., Lin A., Nishiwaki T., *Drilling into the active fault damage zone: The use of luminescence dating techniques on the assessment of previous activations of the Nojima fault-Japan*. American Geophysical Union (AGU Fall Meeting 2018), December 10-14, 2018, Washington, Maryland, USA.

Kazantzaki M., «*The application of the luminescence dating techniques in archaeology and geoarchaeology-practical steps*». NIA - Leiden Workshop Conservation, Documentation & Physicochemical Study of Glazed Ceramics, June 18-29, 2018, Athens and Chalkis, Greece.

Kazantzaki M., *The application of luminescence dating techniques on palaeoseismology*. 3rd Hellenic Forum for Science, Technology & Innovation 2015, 29 June - 3 July, Athens, Greece.

SEMINARS AND WORKSHOPS

Kazantzaki M., “*Geochronology and tectonism in north Euboean Gulf during the Quaternary*.”. Oral presentation: Training Course on Ancient Mediterranean Landscape Reconstruction. National Centre for Scientific Research “Demokritos”, 29-31 Oct. 2013, Athens, Greece.

Participation at training course: “*Luminescence and other dating techniques*”. National Centre for Scientific Research “Demokritos”. 21-25 November 2011, Athens, Greece.

Participation at training course: “*Physical and chemical properties of clays and archaeological ceramics*”. National Centre for Scientific Research “Demokritos”. 17-21 October 2011, Athens, Greece.

MEMBERSHIP IN GROUPS AND ASSOCIATIONS

- Member of the Technical Chamber of Greece (TCG)
- Member of Hellenic Society of Archaeometry (HSA)
- Member of the American Geophysical Union (AGU)

COMPUTER SKILLS:

Excellent knowledge of **Internet Explorer**, **Ms Office**, **Matlab** (spatial cartography via SEKS-QUI, statistical analysis) **Aquachem and Surfer** (chemical water analysis), **Geographic Information Systems** (ArcGIS geographical and spatial analysis and digital cartography).

LANGUAGES:

Greek: Mother tongue, **English:** Proficient, **French:** Very good