

Personal Data

Dr Maria Kouli is currently an Assistant Professor of Geophysics and Geohazards (ΦΕΚ1262/τ.Γ/12-12-2016) at the Electronics Engineering Department of the Hellenic Mediterranean University and Principal Investigator at the Institute of Physics of the Earth's Interior & Geohazards (IFEGG), of the Hellenic Mediterranean University Research and Innovation Center.

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- <https://earth-phys.hmu.gr/>

Education

2004: Ph.D. in Geology, Patras University “Application of Modern Technology to the Solution of Volcanological Problems: I. Use of NDIC to Compare Magma Mixing Plg Textures from the Volcanoes of Teide and Lesvos, II. Identification of Volcanic Structures with the Use of Remote Sensing Technique”

1996: Degree, Department of Geology, University of Patras.

Research Interests

Coupling Remote Sensing and Geoinformatics with Geophysics with the aim of solving geo-environmental problems but also identifying mineral resources of economic interest.

Long-term monitoring of geo-environmental phenomena using satellite images and the assessment of the effects of geo-disasters (landslides, earthquakes, fires, desertification).

The application of geographic information systems in the geosciences, with an emphasis on geology and geophysics.

Spatial Analysis - Modeling of Natural Disasters - Digital Cartography

Research Experience

Dr Maria Kouli has participated in 20 scientific research programs.

Publications

Dr Maria Kouli has 26 publications in Major International Peer- Reviewed Scientific Journals and books, 25 publications in refereed conference proceedings and 30 abstract presentations (oral or poster) in refereed conferences with proceedings.

Selected Publications of the 2 last years

1. Peleli, Sophia; **Kouli, Maria**; Marchese, Francesco; Lacava, Teodosio; Vallianatos, Filippos; Tramutoli, Valerio; Monitoring temporal variations in the geothermal activity of Miocene Lesvos volcanic field using remote sensing techniques and MODIS–LST imagery, *International Journal of Applied Earth Observation and Geoinformation*, 95, 102251, 2021, Elsevier
2. **Kouli, Maria**; Peleli, Sofia; Saltas, Vassilis; Makris, John P; Vallianatos, Filippos; Robust Satellite Techniques for mapping thermal anomalies possibly related to seismic activity

- of March 2021, Thessaly Earthquakes. *Bulletin of the Geological Society of Greece*, 58, 105-130, 2021.
3. Chatzopoulos, Georgios; Papadopoulos, Ilias; Vallianatos, Filippos; Makris, John P; **Kouli, Maria**; Strong ground motion sensor network for civil protection rapid decision support systems, *Sensors*, 21, 8, 2833, 2021, MDPI
 4. Peleli, Sofia; **Kouli, Maria**; Vallianatos, Filippos; Satellite-Observed Thermal Anomalies and Deformation Patterns Associated to the 2021, Central Crete Seismic Sequence, *Remote Sensing*, 14, 14, 3413, 2022, MDPI
 5. Vallianatos, Filippos; Karakonstantis, Andreas; Michas, Georgios; Pavlou, Kyriaki; **Kouli, Maria**; Sakkas, Vassilis; On the patterns and scaling properties of the 2021–2022 Arkalochori earthquake sequence (Central Crete, Greece) Based on Seismological, Geophysical and Satellite Observations, *Applied Sciences*, 12, 15, 7716, 2022, MDPI
 6. Famiglietti, Nicola Angelo; Golshadi, Zeinab; Vallianatos, Filippos; Caputo, Riccardo; **Kouli, Maria**; Sakkas, Vassilis; Atzori, Simone; Moschillo, Raffaele; Cecere, Gianpaolo; D'Ambrosio, Ciriaco; The 2021 Greece Central Crete ML 5.8 Earthquake: An Example of Coalescent Fault Segments Reconstructed from InSAR and GNSS Data, *Remote Sensing*, 14, 22, 5783, 2022, MDPI

Teaching Experience

November 2020- Supervision of a PhD thesis in the fields of Remote Sensing and Natural Hazards (Ms Sophia Peleli).

28/5/2019 – : Remote Sensing & Digital Image Processing (8th semester), Geographic Information Systems-GIS (9th semester), current undergraduate courses at Electronics Engineering Department of the Hellenic Mediterranean University

10/01/2017 – 28/5/2019: Remote Sensing & Digital Image Processing, Geographic Information Systems-GIS, Geophysics, undergraduate courses taught at Natural Resources and Environment Department of the Technological Educational Institute of Crete.

2015 – 2020: MSc course in Geoenvironmental Resources and Risks, TEI Crete, tutor on “Introduction to GIS and Remote Sensing” and “Applications of Remote Sensing in Geo-hazards”. Supervisor of 4 completed MSc theses, in the fields of Remote Sensing, Geographic Information Systems and Geohazards. Co-supervisor of 2 more completed MSc theses.

2004 – 2016: Tutor on Remote Sensing & Digital Image Processing (Laboratory and Theory) and Geographic Information Systems-GIS (Laboratory and Theory), Department of Natural Resources and Environment, Technological Educational Institute of Crete.

11/1998 – 07/2003: Assistant instructor of the following lab courses in the Department of Geology, University of Patras: Ore Deposits I, Ore Deposits II, Volcanology, Volcanology of Greece and Volcanic Hazard.

2004 - Supervisor of more than twenty BSc theses in the fields of Remote Sensing, Geographic Information Systems, Geohazards and Geophysics.

Scholarships - Honorships

05/2001: 05/2001: Participation in the «European Union Large Scale Geochemical Facility, Access to Research Infrastructures action of the Improving Human Potential Programme», as new researcher in the Bristol University, United Kingdom.

2001 –2003: *Scholarship of the Patras University in the framework “Basic Research Programme K. KARATHEODORHS”, through the research program: “Evaluating the integration of geochemical methods and remote sensing techniques for Au-Ag deposits prospecting in the geothermal fields of Lesvos, Nisyros and Milos Islands” funded from the Research Committee of Patras University.*

2017: *The German Aerospace Centre (DLR) approved the exclusively scientific use of TanDEM-X data of Crete by Dr Maria Kouli as a PI.*

Academic Editor Services

- Guest Editor of Special Issue "*Application of Satellite Remote Sensing in Solving Urban Geo-Environmental Issues II*", Remote Sensing, MDPI, IF: 5.349
- Guest Editor of Special Issue "*Application of Satellite Remote Sensing in Solving Urban Geo-Environmental Issues*", Remote Sensing, MDPI, IF: 5.349
- Topical Advisory Panel Member of Land, MDPI, IF: 3.905

Review Responsibilities

Remote Sensing (MDPI), Acta Geophysica (Springer), Environmental Geology (Springer), Natural Hazards (Springer), Land Degradation and Development (Wiley and Sons), Journal of Volcanology and Geothermal Research (Elsevier), Water Resources Management (Springer), Journal of Mountain Science (Springer), Journal of Hydrology (Elsevier), Environment, Development and Sustainability (Springer), Landslides (Springer), Pedosphere (Elsevier), Fresenius Environmental Bulletin, Natural Hazards and Earth System Sciences (NHES) (Copernicus), Journal of Mineralogy and Geochemistry (Schweizerbart and Borntraeger science publishers).