DIMITRIS MADELIS

Geophysicist

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SUMMARY

M.Sc. candidate in Applied Geophysics & Seismology with experience in geophysical data analysis, machine learning, and scientific computing. Proven experience in electromagnetic/CPT data fusion, seismic interpretation, and field work. Background in research and team projects.

PROFESSIONAL EXPERIENCE

Geophysicist, Aristotle University of Thessaloniki — **Apr 2024 - Present**

- Conduct **field work** and geophysical survey such as seismic,electric electromagnetic and gravitational methods.
- Conduct research in electromagnetic and CPT data fusion for levee characterization (Master Thesis) and develop **machine/deep learning models (Random Forest, Pytorch)** for geophysical data interpretation.
- Deploy hybrid network for seismic monitoring

Research Intern, Institute of Engineering Seismology and Earthquake Engineering (ITSAK) — **Nov 2020 - Jan 2021**

- Conducted **seismic data analysis** using recordings from a vertical borehole array (ARGONET) to estimate high-frequency attenuation (κ) and evaluate site-specific seismic wave behavior.
- Developed and **applied methods** to derive κ_0 (zero-distance kappa) and effective attenuation (Qeff), validating results against laboratory data and empirical models.
- Contributed to improved site response modeling by integrating in-situ attenuation measurements, enhancing **ground motion amplification** predictions for **seismic hazard assessment**.

EDUCATION

M.Sc. in Applied Geophysics & Seismology — **Nov 2023 - Present**
School of Geology, Department of Science at Aristotle University of Thessaloniki

Geothermal Energy Summer School — **Apr 2024 - Jun 2024**
Politecnico di Torino

B.Sc. in Geology — **Oct 2017 - Sep 2022**
School of Gelogy, Department of Science at Aristotle University of Thessaloniki

- Final Grade : 7.29

TECHNICAL SKILLS

Programming: Python (Scikit-learn, PyTorch), MATLAB, Fortran, Linux, SQL
Geophysical Software: Geosoft, Geopsy, IPI2WIN, DC2DPRO, RES2DINV, FEFLOW, Geoplot
Cloud / DevOps: AWS (EC2, S3, Lambda, CloudFormation)
Data Analysis: Machine Learning, Statistical Analysis (SPSS), GIS Mapping
Other: Microsoft Office, Windows, Paraview

LANGUAGES

- **English** (C2 Proficiency)
- **French** (B2 Intermediate)
- **German** (A2 Basic)

PUBLICATIONS

Theodoulidis, N., Madelis, D., Grendas, I., & Hatzidimitriou, P. (2021, October). Shear wave attenuation (κ_0 / Qeff) from borehole data: The case of ARGONET vertical array in Kefalonia (Greece). Presented at the 6th International Conference on Earthquake Engineering and Seismology (6ICEES), 13–15 October 2021, Gebze, Turkey.