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Within the framework of the research project "**Engineering Research Infrastructures for European Synergies - ERIES**", the Research Unit of Soil Dynamics and Geotechnical Earthquake Engineering (SDGEE) of the Department of Civil Engineering of Aristotle University of Thessaloniki (AUTH) invites **applications for two (2) positions for PhD on Geotechnical Earthquake Engineering.**

Project summary

ERIES is funded through a call for research infrastructure services advancing frontier knowledge with the overall objective of providing transnational access to advanced research infrastructures in the fields of structural, seismic, wind and geotechnical engineering. This project provides access to leading experimental facilities that permit users to advance frontier knowledge and conduct curiosity-driven research towards: the reduction of losses and disruption due to these hazards; the management of their associated risk; and the development of innovative solutions to address them that will contribute to a greener and more sustainable society. To this end, ERIES offers transnational access to the best European experimental facilities in each field, with new and unique infrastructures available for the first time in this programme.

Within ERIES, the unique Euroseistest and EuroProteas large-scale testing facilities of SDGEE-AUTH will be made available to scientists for performing exciting tests on large-scale geotechnical and structural earthquake engineering.

Project funding and duration

This project is funded by the European Commission under the call *HORIZON-INFRA-2021-SERV-01*, for a period of four years, starting on June 1, 2022.

PhD positions and supervision

1st PhD position

Subject:	Experimental large-scale geotechnical earthquake engineering
Tasks:	Design, setup, execution and data manipulation of the large-scale tests that will be performed at Euroseistest or EuroProteas within ERIES. The PhD research will include, among others, topics as: large-scale experimental study of geotechnical seismic isolation systems, large-scale dynamic response of nonstructural elements, buried controlled explosions to trigger soil liquefaction under structures, experimental and theoretical analysis of site effects.
Supervisor:	Dimitris Pitilakis

2nd PhD position

Subject:	Dynamic properties and behavior of soils and engineered soil mixtures
Tasks:	Laboratory soil mechanic and soil dynamic tests on samples from the test field of Euroseistest as well as in soil mixtures with rubber or other materials. The tests will include classification tests, determination of strength parameters, cyclic triaxial and resonant column tests, as well as tests on small-scale models on a seismic table, to develop and validate appropriate constitutive relationships describing the behaviour of soils and soil mixtures under seismic excitation.
Supervisor:	Professor Anastasios Anastasiadis

Environment

The Aristotle University of Thessaloniki (AUTH) is the sixth oldest, and among the most highly ranked, tertiary education institution within Greece. Named after the philosopher Aristotle, who was born in Stageira, about 55 km east of Thessaloniki, it is the largest university in Greece and its campus covers 230,000 square metres in the centre of the vibrant city of Thessaloniki. As of 2022, there is a student population of approximately 40,000 active students enrolled at the university (31,000 at the undergraduate level and 9,000 in postgraduate programs of which 3,952 at Doctoral level) and 2,366 faculty members.

The Unit of Soil Dynamics and Geotechnical Earthquake Engineering (SDGEE) is part of the Geotechnical Engineering Division at the Department of Civil Engineering. SDGEE-AUTH has a long and worldwide-recognized expertise and know-how in many topics of earthquake engineering, soil dynamics, engineering seismology, microzonation studies, site effects, vulnerability and risk assessment of built environment and infrastructures, lifelines and cultural heritage. Equipped with excellent laboratory and in-situ measuring devices, as well as computing facilities, it is

capable of performing full-spectrum studies ranging from in-situ geophysical surveys, laboratory tests and structural monitoring to seismic design, vulnerability and risk assessment of structures, infrastructures and lifelines.

How to apply

Interested students are invited to email their application file (in a single pdf file) before July 15, 2022 to Associate Professor Dimitris Pitilakis (dpitilakis@civil.auth.gr), containing the following information:

1. motivation letter (indicating the preferred topic, see task description)
2. curriculum vitae (including date of birth, coding experience and software skills, hobbies, interests)
3. list of publications (please do not add the publications)
4. transcript of records (BSc and MSc degrees)
5. copy of diplomas (BSc and MSc degrees)
6. proof of proficiency in English (TOEFL or IETLS certificate or equivalent proof)
7. contact details of two persons who can provide a reference on our request (please do not include reference letters, only provide contact details)

Pre-selected candidates will be invited for an online interview. Shortlisting and final selection of the PhD students are based on scientific background, merit and potential, with due consideration given to gender equality. The scientific merit of the candidates not only considers course grades, but also evidence of team work, interdisciplinary knowledge, creativity, independent working, transferable skills, and public engagement. The promotion of equal opportunities and gender balance will be a key recruitment strategy. Among equally qualified applicants, women receive preferential consideration as part of the special efforts to increase female participation in the field.

The deadline of July 15, 2022 might be extended if required.