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Green careers guide

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What did you study, and what inspired you to choose that?

I studied civil engineering at the Aristotle University of Thessaloniki, Greece (#aristotleuniversityofthessaloniki) and was fascinated by the complex behaviour of our earth and, most of all, earthquakes. So much so, that I steered my path towards an MSc in Soil Mechanics and Engineering Seismology at Imperial College London (#imperialcollege). That was where I first witnessed cutting-edge academic groups partnering with high-end industrial stakeholders to solve problems in the context of real-life challenges.

How did your studies help you get into the career you're in today, and what inspired you to work in the green industries?

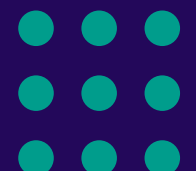
I only found my way to the clean energy sector after I finished my PhD in engineering seismology. Prior to that, I did not know that new-generation nuclear power had zero emissions, a small land footprint, and minimal waste; all of which render it a green energy alternative. It was during my postdoctoral research jobs at the French Institute of Radioprotection and Nuclear Safety (#IRSN) and the Earth Sciences Institute in Grenoble (#isterre) that I discovered seismology could contribute towards safer critical infrastructures around the world, even where earthquakes are not frequent at all. People do not realise it, but even in very low-seismicity places, critical infrastructure must still be carefully designed against large earthquakes. This is because such facilities

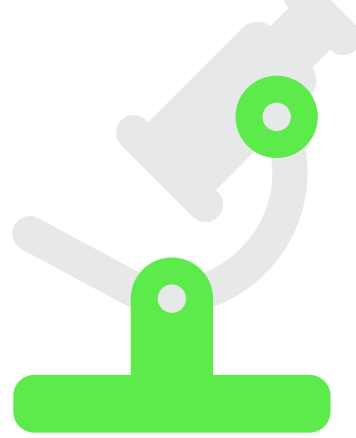


must remain safe for thousands of years, and so are bound to be shaken eventually by a very strong earthquake – something that our ordinary buildings and we will likely never experience in our short lifetime. The particular seismological topic I specialised in is crucial for estimating the seismic behaviour of small concrete dams and for the safe-shutdown of the equipment inside nuclear reactors, and so the models and methods I develop can contribute to their safer design and operation over a long life span.

What other experiences and support have you had along the way, and what exciting projects have you been involved in?

I was lucky to be invited to work in some large international projects of the energy sector, whose panels included some of the most prominent seismologists in the world. My first break was with re-estimating seismic hazard for the Swiss nuclear power plant sites (#seissnuclear), where





I gave an alternative estimate for the most uncertain parameter in the project. One of the opportunities I am most grateful for was an invitation to work at PEER, the Pacific Earthquake Engineering Research Center at the University of California at Berkeley (#ucberkeley). This led to participation in US projects for seismic hazard assessment of critical facility sites, funded by agencies such as the US Nuclear Regulatory Commission (#usnrc), the Electric Power Research Institute (#EPRINews), and companies such as Pacific Gas and Electric (#PGE4Me).

What do you do now – what does your role involve and what exciting projects are you involved in?

Since 2018, I returned to my home country and am an associate researcher at the National Observatory of Athens (@EAA_NOA). For the past year, I've also been head of NOA's 24/7 seismicity monitoring and analysis in Greece. I continue to offer consulting services for specialist seismic hazard projects, and in that capacity I have been working on improving the ground motion characterisation for some of the UK's next-generation power plants currently under licensing. NOA comprises three research institutes, dedicated to geodynamics (where I work), to astronomy and space applications, and to sustainability and the environment. Recently, and with the support of the European Investment Bank, NOA began to launch an ambitious national research infrastructure called PANGEA (the 'PANhellenic GEophysical observatory of Antikythera') on the tiny island of Antikythera. PANGEA will bring together a vast range of disciplines, focusing on climate change and its impact on severe weather and natural disasters in Greece and the Eastern Mediterranean. It aspires to become a global scientific melting pot in a locale acting as a natural laboratory, and it will be exciting being part of such a diverse group.



Why does climate change matter to you?

We modern humans have been around for just a tiny part of our Earth's geological history. It's utterly arrogant to behave as its owners rather than as its guests, and to leave behind us changes so disproportionate to our short stay here.

Do you have any tips for people looking to pursue a career in your sector?

Whichever sector you are considering, don't be afraid of multidisciplinary - straying from your original path could be one of the most interesting and enriching choices you ever make!

