Entry-Level Two-Year Term Seismic Hazard Modeler Position at the Global Earthquake Model

The Global Earthquake Model (GEM; https://www.globalquakemodel.org/) is a worldwide collaborative effort that unites cutting-edge science with national, regional, and international organizations. GEM develops open tools, models, and datasets for calculating hazard and risk.

The GEM Hazard Team assembles and maintains global and regional earthquake databases and develops and provides the capability to compute and analyse seismic hazard. Currently, the GEM Hazard Team actively develops the OpenQuake Engine (the GEM calculation engine), several tools and applications for PSHA input model creation, such as the OpenQuake Model Building Toolkit, and a global mosaic of hazard models. The team also collaborates with groups of scientists worldwide who are involved in activities promoted by GEM.

To expand our modelling capabilities, we are seeking a researcher with a strong quantitative background and a distinct interest in seismic hazard analysis. The position, offered at the entry level, is initially available for two years with the potential to become a permanent role.

Responsibilities and duties

The successful candidate will join the Hazard Team at the GEM Secretariat headquarters in Pavia, Italy. The Hazard Team operates within the larger GEM science and technology group, which comprises approximately 20 scientists and engineers from the Hazard, Risk, and IT teams. Together, the S&T team develops methods, models, and tools for seismic hazard and risk assessment and works with partners worldwide and in different sectors to conduct risk analyses.

Primary duties for this position will be:

- The development of open-source tools and software for probabilistic seismic hazard and risk assessment, in collaboration with the IT team
- To support the creation of national, regional, and global PSHA hazard models, in close collaboration with scientists working in different parts of the world
- Active research into new theoretical concepts and computational techniques for the development and application of probabilistic seismic hazard
- Training scientists and students in both the use of the software and the scientific aspects of seismic hazard analysis

English is the working language at GEM. Knowledge of a second language is desirable but not required. Frequent travel and participation in meetings across various parts of the world are also expected. The candidate will be based at the GEM offices in Pavia, Italy.

The ideal candidate must hold

- A PhD in one of the following disciplines (or related): engineering seismology, seismic hazard assessment, earthquake engineering, or computational seismology.
- Strong knowledge of computational programming for scientific applications. Our software (OpenQuake) is developed in Python, but candidates with experience in other programming languages will also be considered.

- Experience in the calculation of PSHA and familiarity with the creation of PSHA models.
- Experience in the use of GEM tools for creating seismic hazard models and for computing seismic hazard. Proven experience in developing similar tools will be considered an advantage.
- Proven ability to work in a multidisciplinary team
- Good oral and written communication skills
- Strong multi-tasking and organisational skills
- Ability and willingness to work collaboratively, including with team members who work remotely; openness to discussion

What GEM offers

- Work in a multicultural environment with diverse expertise comprising seismic hazard analysis and seismic risk, earthquake geology, vulnerability analysis, and coding for scientific and engineering applications.
- Participation in a variety of seismic-hazard related projects, including but not limited to national and regional seismic hazard analyses, site-specific studies, and risk-tailored hazard studies.
- Prospect to develop international experience through collaborations with GEM's public and private participating organisations and projects.
- Flexible working hours and a personal laptop.

We look forward to hearing from you. Please apply at this link https://cutt.ly/crUqmSkj with a cover letter explaining why you would be a good fit for the position, your CV, a list of references (minimum of 2), and a timeline of availability. The selection procedure will start immediately and continue until the position is filled.

For any additional information, please send an email to hazard@globalquakemodel.org with the following label in the title [GEM Hazard Application].