

Earthquake Risk Modeller

for the development of exposure, vulnerability and risk models at national and regional scale

The Global Earthquake Model (GEM) is a global collaborative effort that brings together state-of-the-art science, national, regional and international organisations and individuals aimed at the development of open tools, datasets and best practice for calculating and communicating earthquake hazard and risk worldwide.

GEM is leading several efforts to develop open exposure datasets, sets of fragility and vulnerability functions and seismic risk information at national, regional and global scale. These efforts are undertaken in close collaboration with partners from different countries, and aim at supporting decision-makers and other stakeholders in the development and implementation of seismic risk reduction measures. We are looking for a structural/earthquake engineer with expertise in one or more of the following disciplines: structural engineering, earthquake engineering and/or earthquake loss modelling.

This position will have an initial duration of 2 years, starting in October 2019, and the primary duties for this position are:

- Development and improvement of exposure datasets for multi-hazard risk assessment.
- Verification and testing of vulnerability and fragility functions for both site-specific and regional earthquake risk analysis.
- Assessment of probabilistic seismic risk, including the estimation of average annual losses, probable maximum losses, loss disaggregation and risk maps (in collaboration with a team of hazard modellers).
- Development and verification of tools for earthquake loss assessment (in collaboration with a team of IT developers).
- Support the development of project proposals and support large organizations in the use of GEM products.

The ideal candidate has:

- Experience in the development of earthquake loss models.
- Experience in probabilistic and deterministic seismic hazard and risk assessment.
- Experience in performing risk analysis using the OpenQuake-engine.
- Reasonable understanding of GEM's risk modellers toolkit, and other products (GEM Taxonomy, vulnerability database, GEM Risk Explorer).
- Experience working in international projects supported by USAID, World Bank, European Commission, etc.
- Experience in proposal writing.
- Strong background in statistics and reliability.
- Knowledge of scientific programming languages (e.g. Python, IPython notebooks, R).
- Proven ability to work in a multidisciplinary team.
- Good oral and written communication skills.
- Availability to travel around the world.
- Strong multi-tasking and organizational skills.
- Passion for a humanitarian mission to reduce loss of lives and livelihoods due to earthquakes.

The position is open for an initial duration of two years, with possibility of continuation. English is the working language at GEM; the knowledge of second language can be a plus, but not required.

We look forward to hearing from you. Please apply to vitor.silva@globalquakemodel.org with a cover letter/email explaining why you would be a good fit for the position, your resume/CV, list of references (minimum 2), and timeline of availability. The selection procedure will continue until we have found a suitable candidate.