



RichterX: a generalized earthquake prediction platform

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Predictability of earthquakes has been vigorously debated in the last decades with the dominant -albeit contended -view being that earthquakes are inherently unpredictable. The absence of a framework to rigorously evaluate earthquake predictions has led to prediction efforts being viewed as "a happy hunting ground for amateurs, cranks, and outright publicity-seeking fakers" (Richter, 1977). Consequently funding for earthquake prediction has dried out and the community has shifted its focus towards earthquake forecasting.

The Collaboratory for the Study of Earthquake Predictability (CSEP) has emerged as an authoritative cyberinfrastructure to evaluate earthquake forecasting models. However, CSEP has the following limitations:

- It has a very rigid framework allowing only for a limited set of models to be tested, effectively excluding any alarm based forecasts relying on intermittent seismic and non-seismic precursory signals (such as thermal/gas/electromagnetic anomalies)
- It requires the methods to be published in peer-reviewed journals thereby excluding unorthodox prediction efforts by people outside the seismological community, under the presumption that there is no value in such efforts.
- It lacks a framework to provide frequent feedback and evaluations to modelers and thereby slows down the model improvement process.

In order to address the aforementioned drawbacks we have developed RichterX: an earthquake prediction platform which allows for testing of any earthquake prediction in a user-defined magnitude, space, time window anywhere on the globe. Our platform makes earthquake prediction accessible to the general public, thereby harnessing the potential of wisdom of the crowd and tapping into the local non-seismic observations.

To demonstrate the full functionality of the platform we organize a one month long prediction experiment where EGU participants will be able to submit their prediction. The predictions will be evaluated and ranked against state-of-the-art statistical forecasting models in real-time and the top ranking participants will be compensated for their efforts by a monetary reward.