



## **Seismic waveform modeling over cloud**

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With the fast growing computational technologies, numerical simulation of seismic wave propagation achieved huge successes. Obtaining the synthetic waveforms through numerical simulation receives an increasing amount of attention from seismologists. However, computational seismology is a data-intensive research field, and the numerical packages usually come with a steep learning curve. Users are expected to master considerable amount of computer knowledge and data processing skills. Training users to use the numerical packages, correctly access and utilize the computational resources is a troubled task. In addition to that, accessing to HPC is also a common difficulty for many users. To solve these problems, a cloud based solution dedicated on shallow seismic waveform modeling has been developed with the state-of-the-art web technologies. It is a web platform integrating both software and hardware with multilayer architecture: a well designed SQL database serves as the data layer, HPC and dedicated pipeline for it is the business layer. Through this platform, users will no longer need to compile and manipulate various packages on the local machine within local network to perform a simulation. By providing users professional access to the computational code through its interfaces and delivering our computational resources to the users over cloud, users can customize the simulation at expert-level, submit and run the job through it.