Many geophysical methods require knowledge of Green’s functions (GF) or synthetic seismograms in dependence of ranges of source and receiver coordinates. Examples include synthetic seismogram generation, moment tensor inversion, the modeling of depth phases for regional and teleseismic earthquakes, or the modeling of pressure diffusion induced static displacement and strain.

It can be of advantage to calculate the GFs in advance: the same GF traces can then be reused several or many times as required in a typical application. Regarding GF computation as an independent step in a use-case’s processing chain encourages to store these in an application independent form. They can then be shared between different applications and they can also be passed to other researchers, e.g., via web service.

Starting now, we provide such a web service to the seismological community at http://kisheur.org/, where a researcher can share GF stores and retrieve synthetic seismograms for various point and extended earthquake source models for many different earth models at local, regional and global scale. This web service is part of a rich new toolset for the creation and handling of GFs and synthetic seismograms. It can be used off-line or in client mode.

The Pyrocko/GF Seismosizer

An easy-to-use tool for seismic waveform synthesis

- 3D Earth models
- Green’s function libraries
- seismograms

Use in own script

+ Public HTTP API (json) at
  
  http://kisheur.org/

+ Open source
+ Written in Python
+ Develop with us at http://emolch.github.com/pyrocko/

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Many pre-computed GF stores are available online: why not go back to force for modeling errors today? sebastian.heimann@gfz-potsdam.de