Geophysical Research Abstracts
Vol. 21, EGU2019-16567, 2019
EGU General Assembly 2019

Pyrocko - A Versatile Software Framework for Seismology

Sebastian Heimann (1), Marius Kriegerowski (1,2), Marius Isken (1,3), Nima Nooshiri (1), Andreas Steinberg (3), Henriette Sudhaus (3), Hannes Vasyura-Bathke (2), and Torsten Dahm (1)

(1) GFZ Potsdam, Section 2.1: Physics of Earthquakes and Volcanoes, Potsdam, Germany (sebastian.heimann@gfz-potsdam.de), (2) University of Potsdam, (3) University of Kiel

Pyrocko is an open source seismology toolbox and library, written in the Python programming language. It can be utilized flexibly for a variety of geophysical tasks, like seismological data processing and analysis, modelling of waveforms, InSAR or GPS displacement data, or for seismic source characterization. At its core, Pyrocko is a library and framework providing building blocks for researchers and students wishing to develop their own applications. Pyrocko contains a few standalone applications for everyday seismological practice. These include the Snuffler program, an extensible seismogram browser and workbench, the Cake tool, providing travel-time and ray-path computations for 1D layered earthmodels, Fomosto, a tool to manage pre-calculated Green's function stores, Jackseis, a command-line tool for common waveform archive data manipulations, and Colosseo, a tool to create synthetic earthquake scenarios, serving waveforms and static displacements. This poster gives a glimpse of Pyrocko's features, for more examples and tutorials visit http://pyrocko.org.