pyCSEP - RISE VIRTUAL WORKSHOP

Testing Earthquake Forecasts

The Collaboratory for the Study of Earthquake Predictability (**CSEP**) and **Work Package 7** of the **RISE** project cordially invite you to a virtual workshop to learn more about testing earthquake forecasts and perform evaluations with the pyCSEP software toolkit:

Quick information

When:	**Testing seminar**	16 March 2021 (16.00 GMT/17.00 CET/9.00 PDT)
	Forecasting seminar	23 March 2021 (16.00 GMT/17.00 CET/9.00 PDT)
	Installation Troubleshoot clinic	25 March 2021 (16.00 GMT/17.00 CET/9.00 PDT)
	Hands-on workshop	30 March 2021 (16.00 GMT/17.00 CET/9.00 PDT)
Duration:	2 hours	
Where:	https://zoom.us/my/csepmeetings	
Hands-on workshop preparation:	Follow the installation guide Download/clone the workshop material Answer the modeler's survey Bring your own probabilistic long-term forecast (optional)	

Testing/Forecasting seminars

We introduce a short series of presentations related to earthquake forecast testing methods, experiments results and prospects, along with developments from the modelers of the RISE project.

Hands-on workshop

Its objective is to enable modellers to perform simple operations to evaluate their forecasts, using standard CSEP consistency and comparison tests.

Organizers

Bill Savran (USC), Kirsty Bayliss (Edinburgh), Toño Bayona (Bristol), Pablo Iturrieta (GFZ), Max Werner (Bristol) & Danijel Schorlemmer (GFZ)

Learning outcomes

- Import, filter and visualise earthquake catalogue data from an authorised data source
- Understand CSEP formats for catalogues and forecasts
- Import and plot a spatial earthquake gridded forecast
- Evaluate an earthquake forecast with earthquake catalogue data by applying different consistency tests
- Compare the informativeness of multiple forecasts
- Visualise/plot the test results.

Agenda

All times are shown in UTC

16 March 2021

04:00 PM	Danijel Schorlemmer & Max Werner	Welcome
04:05 PM	Bill Savran	Introduction to pyCSEP: testing earthquake forecasts
04:55 PM	Break	
05:00 PM	Toño Bayona	Prospective Evaluation of Multiplicative Hybrid Earthquake Forecasts for California
05:20 PM	Pablo Iturrieta	Testing the first Italy Experiment: Analysis of the spatial distribution of time-independent forecasts
05:40 PM	Giuseppe Falcone	Next Italy experiment prospects
05:50 PM	All	Discussion
06:00 PM	Adjourn	

23 March 2021

04:00 PM	Kirsty Bayliss	Time-independent earthquake forecasts with Inlabru
04:20 PM	Francesco Serafini	Time-dependent earthquake forecasts with Inlabru
04:40 PM	Asim Khawaja	Quadtree gridding approach for testing earthquake forecast models
05:00 PM	Junhao Cheng	Retrospective earthquake forecast model using Coulomb based method
05:20 PM	Simone Mancini	Do Enhanced Seismicity Catalogs Improve Aftershock Forecasts? A test on the 2016-2017 Central Italy Earthquake Cascade
05:40 PM	ETH	To be determined
05:55 PM	Toño Bayona & Asim Khawaja	Global experiment prospects
06:05 PM	Adjourn	

30 March 2021

04:00 PM	Danijel Schorlemmer & Max Werner	Welcome & Introductions
04:05 PM	Bill Savran	Summary of pyCSEP & goals of the tutorial
04:15 PM	Bill Savran	Guided Tutorial
04:35 PM	Instructors	Q&A / break
04:45 PM	Instructors	Hands-on Tutorial
05:45 PM	All	Discussion, Q&A and Feedback
05:55 PM	All	Next steps (your own experiments, contributing/development)
06:00 PM	Adjourn	

Links

Installation Guide https://github.com/SCECcode/pycsep/wiki/Installation-Guide
Workshop material https://github.com/cseptesting/pycsep_workshop_rise21
Survey https://csep.limesurvey.net/481967

If you encounter problems during the installation, you may either submit anissue on git:

https://github.com/cseptesting/pycsep_workshop_rise21
https://github.com/SCECcode/pycsep

or you can drop by during the installation troubleshooting clinic