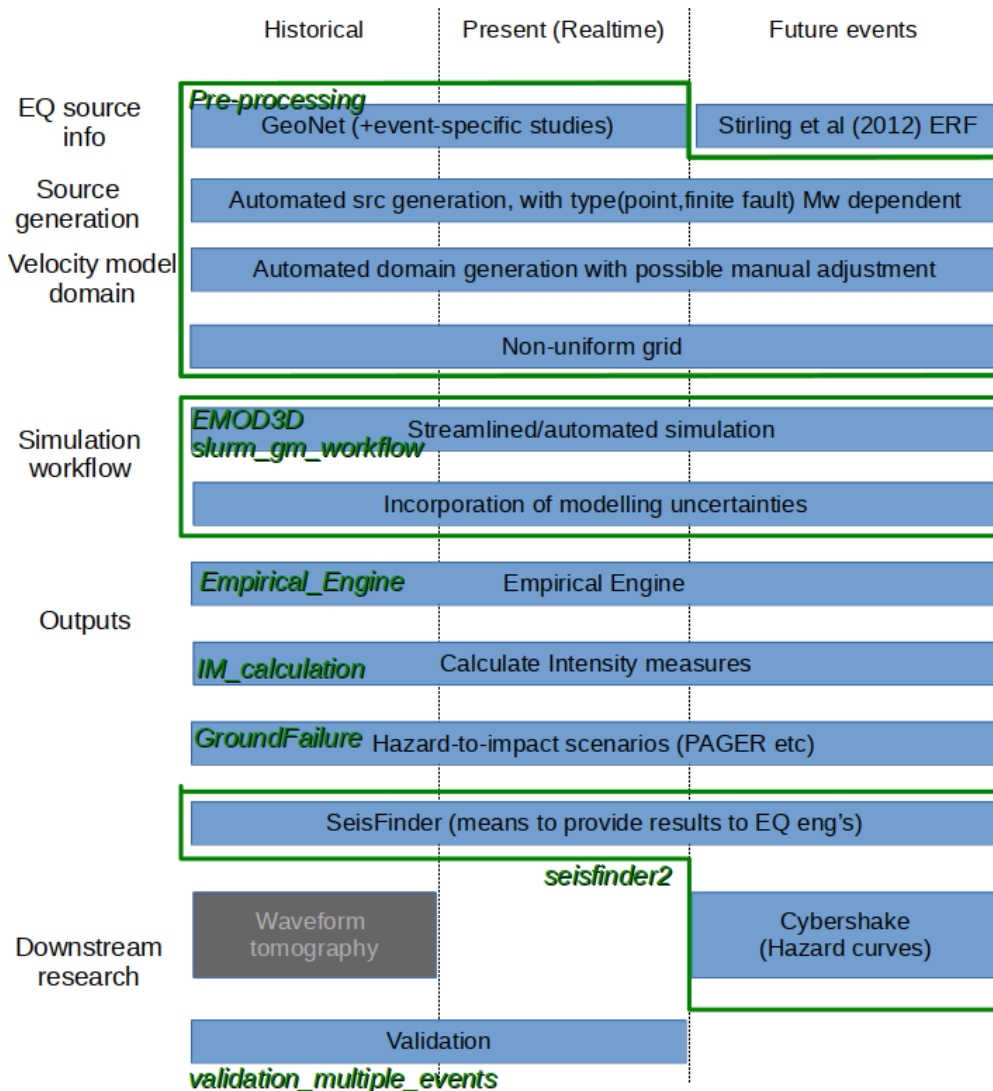


SW Codebase 2019

[This page is outdated, superceded by [SW Codebase 2024](#)]



Current Codes

Name	URL	Summary
[repo] Qcore	https://github.com/ucgmsim/qcore	Functions and programs commonly used by codes from various repos.
[repo] Pre-processing	https://github.com/ucgmsim/Pre-processing	Everything related to producing input for GMSim (NonUniformGrid, SrfGen, geoNet), including a wrapper for VM generation from SRFInfo
[repo] EMOD3D	https://github.com/ucgmsim/EMOD3D	EMOD3D and various C/Fortran codes written by Rob Graves. Partially altered to switch to a workflow based on binary file format.
[repo] slurm_gm_workflow	https://github.com/ucgmsim/slurm_gm_workflow	Orchestrates the automated GM simulation and Cybershake workflow using Slurm.

[repo] IM_calculation	https://github.com/ucgmsim/IM_calculation	Calculates rrup and IMs out of GM simulation output
[repo] Empirical_Engine	https://github.com/ucgmsim/Empirical-Engine	Automatically selects best empirical GMM and orchestrates to calculate all IMs for a given fault, and compute empirical for IM.
[repo] seisfinder2	https://github.com/ucgmsim/seisfinder2	hazard_search and event_search codes that retrieves the output for user query in real-time.
[repo] validation	https://github.com/ucgmsim/validation	Workflow to compute and plot bias for multiple events
[repo] Visualization	https://github.com/ucgmsim/visualization	Gmt and plotting related functions
[repo] GMSimViz	https://github.com/ucgmsim/GMSimViz	Automated 3D Visualization of Ground Motion Simulation with Generic Mapping Tools (GMT)
[repo] GroundFailure	https://github.com/ucgmsim/GroundFailure	Code for landslide and liquefaction
Students_owned		
Velocity-Model (Ethan)	https://github.com/ucgmsim/Velocity-Model	
Vs30-mapping (Kevin)	https://github.com/ucgmsim/Vs30-mapping	project applying Thompson et al. (2014) regression krigging-based Vs30 mapping technique to NZ (Maintainer: Kevin Foster)
Vs30map_clean (Kevin)	https://github.com/ucgmsim/Vs30map_clean	

Historic Codes : No longer maintained

Name	URL	Last update	Summary
Stable			
SeisFinder	https://github.com/ucgmsim/SeisFinder	8 Sep 2017	
gm_publish	https://github.com/ucgmsim/gm_publish	9 Jun 2017	Automatic LaTeX generation for SeisFinder
ansible_seisfinder	https://github.com/ucgmsim/ansible_seisfinder	8 Nov 2017	Automated installation of SeisFinder on a webserver
Outdated			
gm_sim_pkg	https://github.com/ucgmsim/gm_sim_pkg	6 Apr 2018	Only used for real time workflow and external users
Auto-Vel-Mod-Generation	https://github.com/ucgmsim/Auto-Vel-Mod-Generation	1 May 2018	Needed by gm_sim_pkg
Not maintained - Obsolete			
NonErgodic	https://github.com/ucgmsim/NonErgodic	29 Oct 2016	
groundMotionStationAnalysis	https://github.com/ucgmsim/groundMotionStationAnalysis	17 Aug 2016	
post-processing	https://github.com/ucgmsim/post-processing	17 April 2018	Superseded by IM_calculation, visualization
gm_sim_workflow	https://github.com/ucgmsim/gm_sim_workflow	13 Mar 2018	Researchers still use this. Superseded by slurm_gm_workflow
cybershake_postprocessing	https://github.com/ucgmsim/cybershake_postprocessing	22 Mar 2018	Hazard code has been absorbed into seisfinder2 repo.

Ideas for improvement

1. post-processing repo is still used by SrfGen. Needs restructuring
2. QCore, Pre-process etc on Kupe are used by many different parts of workflow. We refrain from keeping these codebase up-to-date due to concern for unexpected consequence. We need a separate sandbox that is regularly kept up-to-date and auto-tested, which is then pushed to the production setup.