

## Enhanced Seismology Web Portal Released

- **Portal Runs SPECFEM3D\_GLOBE 4.0.3 and Mineos.** The SPECFEM3D Globe web portal has been updated and renamed the CIG Seismology Web Portal, and features the latest version of SPECFEM3D Globe, version 4.0.3 and the Mineos 1D code. The portal enables users to request synthetic seismograms for any given earthquake, selecting from an assortment of 3D and 1D Earth models, or users may upload custom CMT data. Simulations are performed on the TACC Lonestar TeraGrid cluster. Once a simulation is complete, the user is notified to return to the portal to download the resulting seismograms in ASCII and SAC format. To get started using the portal, visit the CIG Seismology Web Portal.

## CIG Software Releases

- **Gale 1.3** - Gale is a 2D/3D code that solves problems related to orogenesis, rifting, and subduction with coupling to surface erosion models. This latest release has more benchmarks, a thoroughly tested implementation of friction, and a number of robustness and memory fixes. Gale is a joint effort between CIG, Victorian Partnership for Advanced Computing (VPAC), and Monash University. See Gale for binaries, source code, and manual.
- **PyLith 1.3**- PyLith is a finite element code for the solution of visco-elastic/plastic deformation that was designed for lithospheric modeling problems. This release allows the solution of both quasi-static and dynamic problems in one, two, or three dimensions. The code runs in either serial or parallel mode, and the design allows for relatively easy scripting using the Python programming language. Material properties and parameters for boundary and fault conditions are specified using a spatial database, which permits easy prescription of complex spatial variations of properties and parameters. Simulation parameters are generally specified through the use of simple ASCII files or the command line. See PyLith for source code, binaries, and manual.

## Software Bug Fixes

- **CitcomS 3.0.3** - CitcomS is a finite element code designed to solve thermal convection problems relevant to Earth's mantle. This release fixes five bugs that are related to regional coordinate refinement, geoid, full-regional coupling, and the geoid post-processing script. See CitcomS for source code and manual. You can also run this latest version of CitcomS on the TeraGrid.
- **SPECFEM3D\_GLOBE 4.0.3** - SPECFEM3D\_GLOBE simulates global and regional (continental-scale) seismic wave propagation. The latest version fixes a bug in attenuation. See SPECFEM3D\_GLOBE for source code and manual.

## Software Addition to CIG Website

- **Geodynamics AMR Suite (deal.II)** - The Geodynamics AMR Suite uses deal.II, a C++ program library targeted at the computational solution of partial differential equations using adaptive finite elements. Its state-of-the-art programming techniques offer a modern interface to the complex data structures and algorithms required. CIG has sponsored Wolfgang Bangerth (Texas A&M) to produce tutorials that use deal.II in various implementations. See Geodynamics AMR Suite for online documentation that is updated automatically on the 3rd of each month.

## Upcoming Meetings

- **CIG Workshop on Mathematical and Computational Issues in the Solid Earth Geosciences, Sept. 15-17, 2008, Santa Fe, NM.** This CIG workshop will bring together solid-earth geoscientists, mathematicians, computational and computer scientists to focus on specific issues arising from a range of solid-Earth dynamics problems that have proven both difficult and critical for progress in studying and modeling the dynamics of the planet. These problems form the core activities for CIG and provide new challenges and opportunities in multi-scale/multiphysics modeling and inference. See the workshop announcement for further information.

## Presentations from SSC Meeting and Recent Workshops Online


- The CIG Science Steering Committee (SSC) met on May 29-30, 2008, to discuss CIG's progress, review short- and long-term goals in each topic area, and look towards the future funding of CIG-2. View the PDF and PPT presentations given at the meeting at SSC Meeting May 2008.
- 2008 Workshop on Numerical Modeling of Crustal Deformation and Earthquake Faulting (June 23-27, 2008, Colorado School of Mines, Golden, CO). The focus of this gathering was on computational models addressing the seismic cycle across single and multiple events. See the posters and presentations from the workshop at the NMCDEF08 workshop announcement.
- Workshop for Advancing Numerical Modeling of Mantle Convection and Lithospheric Dynamics (July 9-11, 2008, UC Davis). This workshop brought together both the mantle convection and lithospheric dynamics communities. All presentations given at the workshop are available at Mantle/Litho08 Workshop Presentations.

## CIG Five-Year Strategic Plan Submitted to NSF


- This year's Strategic Plan (SP) was developed by the SSC with assistance provided by the CIG staff. Each committee member polled different subdisciplines of the CIG communities and submitted written descriptions that included accomplishments and goals organized over the short-, intermediate-, and long-terms. At the annual SSC meeting held at CIG in Pasadena on May 29-30, the committee reviewed our accomplishments and had extensive discussions on our goals while attempting to identify common themes in different disciplines. The finalized SP was submitted to NSF on July 9, 2008. Download the plan (PDF).


---


## Committees, Staff, Etc.


CIG Administration, contracts, travel, etc.: Ariel Shores, (626) 395-1699, 


Equation solvers (PETSc) and PyLith development: Matt Knepley, 


Gale and Magma development: Walter Landry, (626) 395-4621, 


Benchmarking, Cigma, and visualization: Luis Armendariz, (626) 395-1695, 

Build procedure and computational seismology: Leif Strand, (626) 395-1697, 

Citcom and Mantle convection benchmarks: Eh Tan, (626) 395-1693, 

Website and user manuals: Sue Kientz, (626) 395-1694, 

Geodynamo, SVN software repository, and systems administration: Wei Mi, (626) 395-1692, 

Software architecture and Pyre framework: Michael Aivazis, (626) 395-1696, 

Administration: Mike Gurnis, (626) 395-1698, 

[Science Steering Committee](#): contact Chairman Brad Aagaard (USGS), 

[Executive Committee](#): contact Chairman Marc Spiegelman (Columbia) 