

CIG Software Releases

- **Cigma 1.0** - The CIG Model Analyzer (Cigma) is a tool for standardizing error analysis and benchmarking of geodynamics modeling codes. Highlights of this 1.0 release include faster comparisons between two finite element solutions and the ability to read Cigma datasets from VTK input files. See Cigma for source code and manual.
- **Flexwin 1.0** - The FLEXWIN software package automates the time-window selection problem for seismologists. It operates on pairs of observed and synthetic single component seismograms, defining windows that cover as much of a given seismogram as possible, while avoiding portions of the waveform that are dominated by noise. See Flexwin for source code and manual.
- **Gale 1.4.1** - Gale is a 2D/3D code that solves problems related to orogenesis, rifting, and subduction with coupling to surface erosion models. This latest release features a new power-law creep rheology and a few bug 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.
- **HC 1.0** - HC is a global mantle circulation solver following Hager & O'Connell (1981) which can compute velocities, tractions, and geoid for simple density distributions and plate velocities. This particular implementation illustrates one possible way to combine the HC solver routines. Based on code by Brad Hager, Richard O'Connell, and Bernhard Steinberger. This version by Thorsten Becker and Craig O'Neill. See HC for binaries, source code and documentation links.

Custom 3D Earth Models Among New Features Available on CIG Seismology Web Portal

- The CIG Seismology Web Portal now allows users to upload their own custom 3D earth models for use in SPECSEM3D Globe simulations. A user creates a 3D Earth model by implementing a handful of routines in Fortran or C, and then packaging the code together with any required data files. Example Earth model implementations, including S20RTS and S362ANI, are available for download. Among the Earth model examples is an interesting new code package which converts the output of the CitcomS mantle convection code into an isotropic SPECSEM3D GLOBE velocity model. This enables users to simulate seismic wave propagation through an Earth model generated by CitcomS. In addition, the portal now runs the 1D Mineos code in parallel, resulting in a much shorter turnaround time for 1D synthetics. Create an account and login at CIG Seismology Web Portal to run default and customized seismology simulations (click "Accept this certificate..." if prompted).

Upcoming Training/Meetings

- **Training Sessions on Tectonic Models and Large-Scale Earth Models at EarthScope 2009**, May 12, 2009, Boise Centre on the Grove, Boise, ID. At EarthScope on May 12, 2009, in Boise, ID, CIG will conduct two separate training sessions, each lasting from 8 a.m. to 3 p.m.: one in the use of the Gale and PyLith software packages for Tectonic Models, and the other in Large-Scale Earth Models using SPECSEM3D/CitcomS software. Financial support is available for graduate students and post-docs who wish to attend. Get more details and register at CIG Training Sessions at EarthScope 2009.
- **2009 Workshop on Numerical Modeling of Crustal Deformation and Earthquake Faulting**, June 22-26, 2009, Golden, CO. The focus of this gathering is on computational models addressing crustal deformation with an emphasis on the seismic cycle across single and multiple events. The workshop will blend science talks on case studies from particular faulting environments and on key rheological behavior with discussions of current obstacles to crustal deformation modeling. Get more details and register at the NMCDEF 09 Announcement.

CIG is Seeking CIG-Enabled One-Pagers, Journal Articles

- In preparation for the next phase of CIG, we are beginning a self-evaluation to understand the range of activities and impact of CIG. As a useful mechanism (and a very nice way to highlight your own science), we are seeking bibliographic information and/or electronic copies of "One-Pagers" (that briefly describe an exciting piece of your science that was made possible using CIG software or resources) or any published, in-press, or planned journal article or other publication that has been enabled by CIG or is contributing to the overall CIG effort. More details, an example one-pager, and forms for submitting your publication are at CIG-Related Publication Submission.

Presentations and Posters from OCCG 09 Meeting Online

- **Opportunities and Challenges in Computational Geophysics**, held March 30-31, 2009, at Caltech. This workshop examined the state of the art in computational geophysics through invited talks, posters and discussion. Participants in all areas of our science attended, including experts in computational science and in geophysics. View the presentations and posters at the announcement page.


CIG Simulations Now on YouTube


- CIG now has its own channel on YouTube, where you can view movie files of simulations of CIG software such as CitcomS, Gale, and MAG; the channel is named [CIGeodynamics](#). You can "subscribe" to CIG's channel and receive an e-mail when a new simulation is uploaded. If you create any simulations using CIG software and wish to add it to our channel, e-mail the file with an appropriate caption to





CIG Software Downloads Visualized Globally


- Visit any CIG software package web page and scroll to the bottom to see a world map that shows where that software has been downloaded since its release. Currently the most downloaded packages are:
 - CitcomS
 - Gale
 - MAG
 - Mineos
 - PyLith
 - SPECSEM3D (Basin)
 - SPECSEM3D_GLOBE


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, 

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