CIG Software Releases

1. **Gale beta release 0.2** - Gale is an Arbitrary Lagrangian Eulerian code for the long term tectonics community. The code solves problems related to orogenesis, rifting, and subduction with coupling to surface erosion models. The current release can simulate shortening and extension models in 2D and 3D. Gale is a joint effort between CIG and Victorian Partnership for Advanced Computing (VPAC). See Gale for binaries, source code, and manual.
2. **PyLith beta release 0.8.1** - PyLith (formerly known as LithoMop) is a finite element code for the solution of visco-elastic/plastic deformation that was designed for lithospheric modeling problems. This release offers significant performance improvements and support for hexahedral elements. See PyLith for binaries, source code, and manual.
3. **MAG 1.0** - MAG is a serial version of a rotating spherical convection/magnetoconvection/dynamo code that solves the non-dimensional Boussinesq equations for time-dependent thermal convection in a rotating spherical shell filled with an electrically conducting fluid. See MAG for source code and manual.

We Would Like Your Opinion...

- What Computing Power Do You Need? In response to NSF plans for a national geosciences facility, CIG is surveying the geoscience community to learn what you require in terms of computing: petascale, terascale, or small to medium clusters. Please let us know what would support your research best by taking just a few moments to fill out our Computing Needs Survey.
- Review and Comment on the Magma Migration Workshop Report. We urge you to read and comment on this detailed report from the Magma Dynamics Community, even if you could not come to the meeting, as you may have a different opinion from that expressed here. Your feedback is crucial as this document will be used by CIG in future planning activities. You can post comments directly on the website or send them privately to the meeting organizers.

Coming Soon...

- **Preinstalled applications on TeraGrid!** Since many of CIG's codes require a fairly extensive installation procedure due to dependence on complex libraries (such as PETSc) and a Python modeling framework, CIG plans to install CitcomS and then other codes on TeraGrid's TACC Lonestar and other sites in the near future. Instructions for using the community codes and a set of examples will be provided, and accounts for small CPU time allocations made available. In this way we hope to expand our codes' user base with these preinstalled versions.

- **CIG Development Priorities.** CIG posts its latest development priorities on the Geodynamics.org website. This feature provides information about the availability of new software with our best estimate of release dates. More information
- **CIG Strategic Plan.** The Science Steering Committee (SSC) completed the strategic plan covering Sept. 1, 2006 to Aug. 31, 2011, and this final version was submitted to the National Science Foundation on July 17. Download the plan.
- **Check Out the CIG Bug Tracker**. If you find an issue or bug with one of CIG's software packages, make sure you report it using Roundup (opens new window), our bug tracking system. To report an issue, click "Create New" under the **Issues**column on the left. This page is also reached via the shortcut http://geodynamics.org/bugs.

Workshops and Training Sessions

1. **October 16-18: CIG Workshop on Challenges and Opportunities at the Interfaces of Scientific Computing and Computational Geodynamics, and Computational Science Roundtable.** This two-day workshop (Oct 16-17) held at the University of Texas at Austin brings together computational geodynamicists and scientific computing experts to identify and assess challenges and opportunities at the interfaces of frontier computational geodynamics problems and scalable numerical and geometric algorithms and software. Following the workshop,the CIG Science Steering Committee will host a computational science roundtable (Oct 18) to focus the workshop discussions on CIG's software development roadmap.

   See Workshop Announcement

   For more information, please contact one of the steering committee members: Wolfgang Bangerth , Omar Ghattas , or Brad Aagaard .

2. **October 31-November 2: Earthscope Imaging Science/CIG Seismology Joint Workshop on Computational Seismology.** Topics will include aspects of forward modeling and imaging with teleseismic data. Limited to 40 participants.

   See Workshop Announcement

   For more information, please contact Alan Levander

3. **December 12: CIG Business Meeting.** You are invited to this public forum for members of the Geosciences community to discuss the future development of CIG over the next few years. Argent Hotel, San Francisco.

   See Meeting Announcement

Committees, Staff, Etc.

Institutional Member Representative Rotation. Existing Institutional Members with more than one researcher involved with CIG should consider switching representatives from time to time to ensure a healthy balance of input and decision making. If your institution would like to change member representatives, please e-mail Ariel .

Committee Elections

- The Science Steering Committee welcomes new SSC committee members Louise Kellogg and Laurent Montesı, and wants to thank Roger Buck and E. Marc Parmentier for their service.
- In addition, Peter Olson was elected Chairman of the SSC by the committee.
- Marc Spiegelman is returning to the EC as Vice Chairman.

New Staff

- Eh Tan joined CIG on July 1 as staff scientist and is developing mantle convection codes and benchmarks.
- Sue Kientz joined CIG on July 17 as a technical writer and CIG website manager.

Who to contact

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

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

SVN software repository and GALE development: Walter Landry, (626) 395-4621,

Benchmark problems, visualization, and CitCom: Luis Armendariz, (626) 395-1695,

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

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

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

Geodynamo 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 Peter Olson (Johns Hopkins),

Executive Committee: contact Chairman Mark Richards (Berkeley)