CIG Software Releases

- CitcomS 3.1.1 CitcomS is a finite element code designed to solve thermal convection problems relevant to Earth's mantle. In mid-June, the 3.1.0 release debuted, which offered many new features and fixed several bugs in the code and manual (the release announcement has full details). The bug-fix 3.1.1 release followed two weeks later to add files missing from Cookbook 10. See CitcomS for source code and manual. You can also run this latest version of CitcomS on the TeraGrid.
- **PyLith 1.4.0** PyLith is a finite element code for the solution of visco-elastic/plastic deformation that was designed for lithospheric modeling problems. New version adds several new features to PyLith, including a Power-law nonlinear bulk rheology; integration with PETSc nonlinear solvers; automatic nondimensionalization of all parameters; parsing of units in spatial database files; a common time-dependent formulation for Dirichlet, Neumann, and point force boundary conditions; pylithinfo, a diagnostic utility that dumps the current hierarchy of PyLith parameters to a file; and replacement of Pyrex/Pyrexembed with SWIG. Nondimensionalization of the problem restores the symmetry of the Jacobian matrix, which significantly reduces memory use (the release announcement has full details). All PyLith users should switch to this latest release. The manual has also been updated for the new features and revised based on feedback from users. See PyLith for source code, binaries, and manual.
- SNAC 1.1.0 SNAC (StGermaiN Analysis of Continua) is an updated Lagrangian explicit finite difference code for modeling a finitely deforming elasto-visco-plastic solid in 3D. In this update, post-processing is improved; checkpointing is activated; the code generating restart files is improved thanks to Colin Stark; a new plugin (hillSlope) for landslide problems is included, donated by Colin Stark; and unnecessary dependencies are disabled and obsolete plugins removed. See SNAC for source code and updated manual.

CIG-II Draft Online; Request Comments, Suggestions

• The Proposal Writing Committee (PWC) is soliciting community review, comments, and suggestions on its draft proposal documents for CIG II, which they are preparing for NSF. Please assist the PWC by visiting The CIG-II Proposal page, downloading and reviewing both the proposal and the supplementary material, and returning to that page to post your comments. CIG greatly appreciates your feedback and thanks you in advance for your comments and suggestions.

EC Selects Next Director

• The Executive Committee is pleased to announce the appointment of Prof. Louise Kellogg of University of California, Davis, as the next Director of CIG. Louise was the most highly nominated candidate, and brings considerable experience in computational geodynamics, software development (through CIG and KeckCaves) and administration. We are confident that Louise will provide the critical leadership that CIG needs to take us through the proposal renewal and into the next exciting phase of CIG development.

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Workshop Presentations/Tutorials Now Online

• 2009 Workshop on Numerical Modeling of Crustal Deformation and Earthquake Faulting, June 22-26, 2009, Golden, CO. The focus of this gathering was on computational models addressing crustal deformation with an emphasis on the seismic cycle across single and multiple events. The workshop blended science talks on case studies from particular faulting environments and on key rheological behavior with discussions of current obstacles to crustal deformation modeling. The workshop's presentations and tutorials are now available at the NMCDEF09 Agenda.

Committees, Staff, Etc.

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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,
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