



# ON THE SURFACE

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CSDMS QUARTERLY NEWSLETTER

May 2018



## COMMUNITY CYBER UPDATES

**GRASS** - A new set of [GRASS binaries for Mac](#) - a free Geographic Information System - has been released by Michael Barton, with help from Eric Hutton of the CSDMS IF. The binaries are built with an embedded Anaconda Python distribution with all dependencies

**BLANCA** - [Blanca](#) is the new CSDMS high-performance computing cluster, replacing beach, which was retired in March 2018. Blanca is a "condo" cluster managed by the Univ. of Colorado. CSDMS has purchased several nodes available for community

bundled inside the app. This eliminates many hard-to-fix installation issues with previous versions. The new GRASS binaries are also available as [Anaconda packages](#) that can easily be installed from the csdms-stack channel on [Anaconda Cloud](#).

member use. This cluster allows for easy expansion of compute capabilities. As with beach, CSDMS members get free access to blanca without an allocation. Blanca is administered by CU's [Research Computing](#) group, which also provides [documentation](#) on its use. Contact CSDMS to [get an account](#) on blanca.



**GEOPROCESSES,  
GEOHAZARDS-CSDMS 2018  
MAY 22-24, BOULDER, CO**

[On-site registration](#) closes May 15th! Goals of the meeting are to improve natural hazard modeling for risk assessment, with a special focus on building a next-generation cyberinfrastructure and a community of modern modeling, data analysis practices and high performance computing techniques.

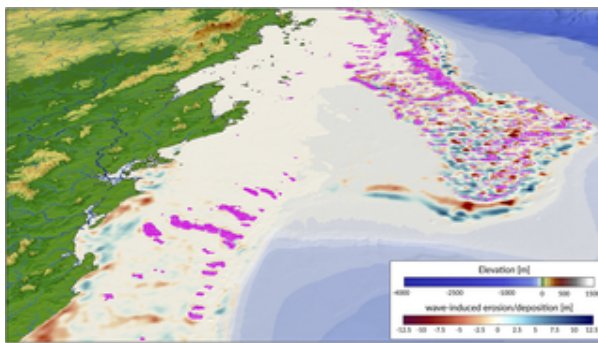
Details regarding the natural hazards-focused meeting can be found [here](#). Remote participation will be available for the plenary keynote presentations. Registration is required for remote participation and can be found [here](#).

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## MEMBER HIGHLIGHTS

CSDMS is proud to congratulate **Gary Parker**, University of Illinois at Urbana-Champaign, for being selected as member of the National Academy of Sciences. [More here](#).

**Julio Hoffman Mendez** of Stanford University is the winner of the 2018 Syvitski Student Modeler Award for developing fast algorithms that analyze and create surface and subsurface patterns. [More info here.](#)



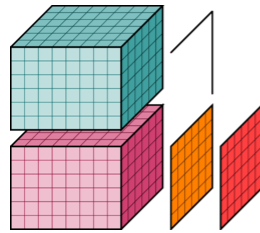
## NEW MODEL PYBADLANDS

Tristan Salles and students at Sydney University, Australia [recently released PyBadlands](#) – a python framework for modeling longterm sediment transport processes. This model is of special interest because it couples carbonate an sediment transport processes - a long wished-for combination of the CSDMS Marine and Biogenic working groups. Publication in [PLOS ONE](#). A description of the model and its source code can be found [here](#).

## TIPS AND TRICKS XARRAY

Do you use Python to work with netCDF files? If so, instead of using the default netcdf4 package, try [xarray](#)! It harnesses the powerful pandas library to make it easy to perform operations on netCDF slices. Check out the xarray

home page [here](#) for installation instructions, examples, and documentation.



xarray

"xarray made it easy for me to process over 8,100 netCDF files for each 100 time steps."

-- Katy Barnhart, University of Colorado Boulder

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## CSDMS/CIG CTSP WORKSHOP



The CTSP Workshop: Coupling Surface and Tectonic Processes, co-sponsored by the CSDMS Geodynamics Focus Research Group and the Computational Infrastructure for Geodynamics, was held at the CSDMS headquarters at the University of Colorado, Boulder this April. The workshop's goal was to survey both questions and state of the art numerical techniques that simulate surface processes and long term tectonic (LTT) processes in an attempt to define a framework for the development of efficient numerical algorithms that couple across multiple length and time scales. The meeting was attended by 95 on-site participants and an additional 98 participants joining remotely. A white paper is currently being drafted and will be posted on the meeting web page [here](#).



**CSDMS is an NSF  
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