

# CSDMS

community surface  
dynamics modeling system

## ON THE SURFACE

*CSDMS Quarterly Newsletter*  
September 2020

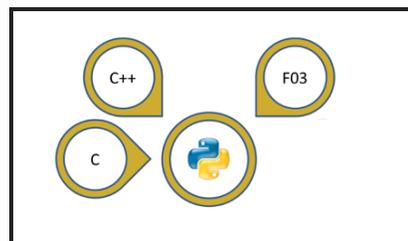
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### Between the Bytes - CSDMS Launches Blog!

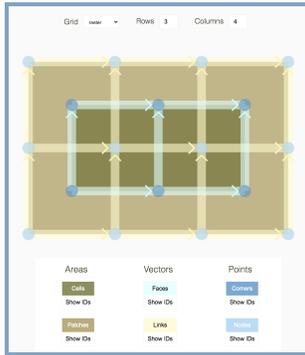
CSDMS is launching a monthly(ish) blog with the inaugural topic presented by Greg Tucker, CSDMS Executive Director, entitled "[CSDMS as a Teenager](#)".

### CSDMS Babelizer Updated for BMIv2

[The CSDMS babelizer](#) an easy-to-use command line tool that automatically wraps BMI models, written in C, C++ or Fortran, so that they can be imported and used as Python packages. Within Python, models, regardless of their core language, appear as classes that expose a BMI. Users are then able to run models interactively through the Python command line, through Python scripts, or Jupyter Notebooks and to use Python-based BMI tools such as the [bmi-tester](#), [pymt](#), or [Landlab](#).



# Landlab Grid Sketchbook



Ever needed to look up grid element IDs when working with Landlab grids? The Landlab Grid Sketchbook makes this easy with a visual app that shows grid element numbering. Check it out at <https://landlab.github.io/grid-sketchbook>.

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## CSDMS Research Software Engineering Services for Community Members

Although software has become fundamental to research, many earth scientists have little training in software development. Through the [Research Software Engineering as a Service \(RSEaaS\) program](#), CSDMS attempts to bridge this gap by providing the community with one-on-one consulting with a CIF software engineer. Through our NSF-funding, we are able to dedicate several pro-bono hours to a project and if additional time is required, we can discuss hourly rate-based options.

As an example of CSDMS' RSEaaS program, our software engineers recently worked with the [LSDTopoTools](#) team to create conda packages for the LSDTopoTools software package. As conda packages, available on [conda-forge](#), users can easily download and install pre-built versions of LSDTopoTools onto their computers - no need for Docker containers or difficult builds.

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## New Dynamic Search Capabilities

### CSDMS Model Repository

Is it difficult to find just the right numerical model for your research among the 380 community tools/models in the CSDMS repository? [CSDMS has a new tool to help narrow down which models might be useful for you!](#) You are now able to search domain,

dimension, scale and several other filters to find the perfect model for your project.

**Thank you to all of the community members who have contributed their code for sharing!**

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## **Automating the Estimation of H-Indices for Models**

[The h-index for models](#) is now fully automated for 30% of all models and tools available in the CSDMS repository, with the goal of having this metric available for most models by the end of the academic year. [The h-index together with all the model references is provided on each model description page.](#) **Congratulations to our prolific community - we have so far found 12,500 model related references!** Please help us make our reference list for each model complete by submitting any missing DOIs on the specific model page.

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## **Updated Education and Knowledge Transfer Repository and New Labs!**

CSDMS is excited to announce the launch of the newly updated [Education and Knowledge Transfer Repository](#). The repo contains 18 new labs covering a variety of earth surface processes that can be run in Jupyter Notebooks or Binder. Content and capabilities will continue to be added to these labs and new labs over the next few months. We encourage CSDMS members to donate labs to the EKT repo for the benefit of your fellow community members and students. [Labs can be submitted here.](#)

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## **Brandon Jones, NSF - Provided JEDI Presentation at CSDMS Summer Science Series**

Based on feedback, the CSDMS Summer Science Series was a success and we hope to offer it again in 2021! A total of 21 presentations on the general theme of linking ecosphere and geosphere were provided and [are archived and available for viewing anytime on the CSDMS webinar page.](#) CSDMS especially thanks Dr. Brandon Jones, NSF for [an eye opening talk on JEDI issues and challenges and a call to action](#) within the geosciences community.

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## **ESPIN 2020 Summer School was a Success!**



Despite the challenges of a global pandemic making the on-site Earth Surface Processes Summer Institute (ESPIIn) unfeasible, the ESPIIn educators were able to change course and offer the 2020 school virtually. The six days of marathon zoom sessions [were packed with tutorials, a panel discussion on career development and small team projects](#). Stay tuned for the ESPIIn 2021 dates announcement and application deadline which should be announced later this year.

## Join us on Twitter!



Be the first to know!! For job postings, events, breaking science, training opportunities (like the ESPIIn Summer Institute, AGU Workshops and Clinics) and more, please follow us [@CSDMS](#) on Twitter.



**CSDMS is an NSF  
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