CSDMS

community surface
dynamics modeling system

ON THE SURFACE

CSDMS Quarterly Newsletter   *January 2021*

Join CSDMS

CSDMS 2021: Changing Landscapes and Seascapes
Modeling for Discovery, Decision Making, and Communication

May 17 -21th 2021

CSDMS 2021 Annual Meeting

Registration Open!

Please join us for the CSDMS 2021 Annual Meeting, May 18th - 20th, 2020. This year's meeting entitled **"Changing Landscapes and Seascapes: Modeling for Discovery, Decision-making and Communication,"** will be conducted in a virtual format again this year.

There will be several format modifications as well as new offerings, including an **opening Town Hall on Monday, May 17th followed by the annual awards ceremony and a social hour, and a Science Jam on Friday, May 21st.** Choose from among a great lineup of **Clinics** (which you can sign up for when you register). In addition to **Keynote Talks**, the **Group Breakout Sessions** will provide a chance to (virtually) meet with old and new friends, learn about new tools and resources, and enjoy **live poster walkthroughs** to gear up for the **online poster sessions.**

Deadline for registration and abstract submission is April 30th, 2021. **REGISTER HERE**

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HYDROSHARE

CSDMS@Hydroshare

CSDMS@HydroShare is a new capability that brings together cyberinfrastructure developed by two important community facilities: **HydroShare**, which is an online collaboration environment for sharing data, models, and tools, and T**he CSDMS Workbench**, which is the integrated system of software tools, technologies, and standards for building, interfacing, and coupling models.

CSDMS@HydroShare supports finding, accessing, operating and coupling data-model integration tools for reproducible research. The tutorial Jupyter Notebooks for PyMT and Landlab are now available in HydroShare. Anyone can register a free HydroShare account and run those Jupyter Notebooks using the CUAHSI JupyterHub without any software installation. **Researchers can also use the tools from the CSDMS Workbench to create their own model-data integration workflows and share them as Jupyter Notebooks in HydroShare.** This will help the community easily discover and reproduce the modeling process through a cloud-based platform. To try this new prototype capability, please access the PyMT and Landlab Jupyter Notebooks from HydroShare for more details. We hope to expand the current capabilities in the future!

Earth Surface Processes Institute (ESPIn) 2021

June 8th - 17thth 2021, *Virtual*

Earth Surface Processes Modeling Summer Institute (ESPIn)

Application Window Opens February 15th!

CSDMS will host a [10-day, virtual immersive training experience for 25 graduate students, postdoctoral fellows and early career faculty](#). ESPIn will offer hands-on training in best programming practices, open source software development, advanced use of version control systems, writing unit tests, HPC-based sensitivity testing and model uncertainty quantification techniques. Several days will be dedicated to working collaboratively on authentic research and coding projects. Participants will also work on developing their own codes.

A mix of experienced scientists, visiting faculty, software engineers and research computing experts will provide training and instruction. **Additional details can be found here!**

February 15th: Application opens
March 22nd: Application deadline
April 10th: Notification Date
June 8th - 17th: Summer Institute

Help Shape the Future of CSDMS

CSDMS is **your** community facility! Help shape its future by taking this [**quick survey**] about your interests and cyber needs. **Your input is enormously valuable information for planning the next phase for CSDMS. Thank you!**

CSDMS JupyterHub

CSDMS launched a [JupyterHub](#) in fall 2019, and in the time since it has been used successfully by CSDMS staff and community members to run several workshops and classes. If you're interested in a dedicated, always-on computational resource for a workshop or class this spring, consider using the CSDMS JupyterHub. Most of the labs from the [EKT Repository](#) are already hosted, and with the help of a CSDMS research software engineer, getting your own labs hosted is a snap. See our [JupyterHub wiki page](#) for more information, including instructions on how to sign up for an account.

The CSDMS JupyterHub gave me an environment for easy building of labs, and enabled interactive access to these labs for my students from any computer with an internet connection. As always, CSDMS provided invaluable assistance with python libraries and packages.

New Labs - CSDMS EKT Repository

Community members are continuing to submit new labs to the CSDMS EKT Repository! New labs include:

Tilt Current Meter Analyses - *Alejandra Ortiz*, *Colby College.*
Flood Frequency Analyses with Python - *Alejandra Ortiz*, *Colby College.*
Alternative Mesh Generation for Landlab - *Jay Hariharan*, *University of Texas at Austin*

Thank you to all of the community members who have contributed their labs!

Community Member News

Long-standing CSDMS Steering Committee Member **Guillermo Auad**, is now the Senior Research Coordinator at the Bureau of Safety and Environmental Enforcement at the US Department of the Interior.

Kim de Mutsert, CSDMS Ecosystem Dynamics FRG Chair, is now an Assistant Professor in the Division of Coastal Sciences in the School of Ocean Science and Engineering at the University of Southern Mississippi. Her research is

focused on coastal and estuarine fish ecology.

Talea Mayo, CSDMS Coastal Working Group Chair, has joined the Emory University Department of Mathematics where she will focus on numerical modeling of coastal processes, statistical data assimilation and, computational and applied mathematics.

Congratulations to **Moira Zellner,** CSDMS Human Dimension FRG Chair, in her new position as Professor of Public Policy and Urban Affairs; Director of Participatory Modeling and Data Science at Northeastern University.

NSF Ocean Sciences Postdoctoral Research Fellowships

The National Science Foundation Division of Ocean Sciences has issued a Program Solicitation for the **2021 Ocean Sciences Postdoctoral Research Fellowships** (OCE-PRF, NSF Program Solicitation 21-538). The solicitation can be found here.

Ecological Forecasting Initiative RCN

The Ecological Forecasting Initiative's Research Coordination Network (EFI-RCN) is pleased to announce the launch of the inaugural NEON Ecological Forecast Challenge! The challenge is open to any individual or team and is asking participants to make predictions for ecological data being collected by the National Ecological Observatory Network (some CSDMS community-relevant data includes: terrestrial evapotranspiration and soil moisture, stream and lake temperature and dissolved oxygen). The forecasting challenge is similar to a data science challenge or model-intercomparison project except that this is a true forecast -- the validation data hasn't been collected yet at the time predictions are made. The challenge is open to any modeling approach (statistical, process-based, machine learning, etc).

If you are interested please see the attached flyer or visit https://ecoforecast.org/efi-rcn-forecast-challenges/ There are a few universities that are participating in the challenge as part of class projects — if you're interested in participating as a class let us know at eco4cast.initiative@gmail.com

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Join us on Twitter!

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

CSDMS is an NSF sponsored program