



# ON THE SURFACE

CSDMS Quarterly Newsletter  
April 2020

*COVID-19 Note: Because CSDMS is committed to ensuring the safety of our community members, **the planned CSDMS annual meeting this May, "CSDMS 2020: Linking Ecosphere and Geosphere", will not be taking place as an in-person event.** We do still hope to offer several online opportunities, such as a hands-on virtual workshop on CSDMS Tools and several other offerings. Please stay tuned for details on these events. If you have questions regarding your registration reimbursement, please contact [csdms@colorado.edu](mailto:csdms@colorado.edu). The CSDMS Integration Facility is also working to update its online Lab Exercise resources - stay tuned for more on that as well.*

## New Release! CSDMS BMI v2.0



The CSDMS software engineers recently completed an update to [the CSDMS Basic Model Interface \(BMI\)](#) language specifications, examples, and documentation, creating BMI v2.0. This new release represents a collection of improvements to the initial BMI concept described in Peckham et al. (2013), based on the experience gained over the past 7 years in BMI-ing multiple models, finding what worked, and what needed further refinement.

All BMI-related information can be found at <https://bmi.readthedocs.io>. Please feel free to submit feedback and issues through the [BMI GitHub repository](#) or through the [CSDMS Help Desk](#). If you're interested in writing a BMI for a model, check out [Getting Started](#) and [BMI Best Practices](#) in the docs. We're also happy to help get you started; please see the CSDMS [Software Engineering Support](#) page, or contact us directly at [csdms@colorado.edu](mailto:csdms@colorado.edu).

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## **Earth Surface Process Institute (ESPIn)**

**August 13 - 21, 2020!**



### **Application Deadline Extended to April 10th!**

CSDMS is still planning to host a [10-day, immersive training experience for 25 graduate students, postdoctoral fellows and early career faculty](#) at the CSDMS Integration Facility at the University of Colorado, Boulder. Because of the recent disruptions surrounding the developing COVID-19 pandemic, the deadline for submission will be extended to April 10th to allow everyone interested the opportunity to apply. Additionally, the notification date for applicants will be delayed until May 15th in hopes that by then, there will be more clarity regarding travel restrictions and campus impacts resulting from the pandemic. [Additional details \(including cost/travel support\) can be found here!](#)

**April 10:** Application deadline

**May 15:** Notification Date

**August 13-21:** Summer Institute

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## Level Up! Your Scientific Coding

Please join us for the remaining webinar in the Spring 2020 series. **CSDMS Research Software Engineers Mark Piper and Benjamin Campforts** will present a final webinar in the series on topics in scientific software development. **Registration is required** and link is provided below.

### [Level 3: Object-oriented Programming](#)

Tuesday, April 14, 2020, 12:00PM ET

Each webinar will run about 30 minutes, and will focus on the why, where, and how of each topic. Attend these three webinars to gain +3 to hit on any research problem that involves coding! If you missed it, [Level 1: Version Control with Git and GitHub](#) and [Level 2: Unit Testing](#) are now available for viewing.

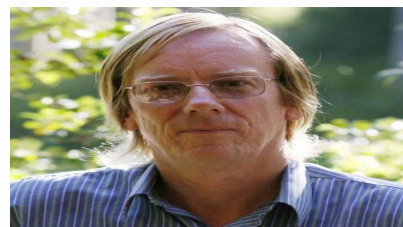
*Previous CSDMS-sponsored webinars are [archived here](#) and available for viewing anytime.*

*If you have suggestions for future Webinars, please contact [csdms@colorado.edu](mailto:csdms@colorado.edu).*

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## Community Member Spotlight

Please join us in congratulating [Garry Willgoose](#), who has received the CSDMS 2020 Lifetime Achievement Award. Garry is recognized for outstanding intellectual leadership in the modeling of landform evolution, dynamics and related processes. Professor Willgoose was a pioneer in the establishment of the modern discipline of computational modeling of landscape evolution.



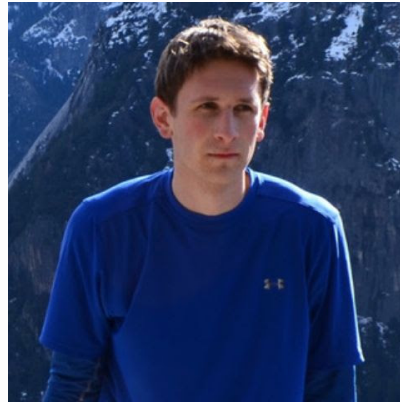
We're delighted to announce that [Kehui \(Kevin\) Xu](#) Associate Professor and James



P. Morgan Distinguished Professor of Coastal Studies, Department of Oceanography & Coastal Sciences at Louisiana State University, has joined CSDMS as Chair of the Education and Knowledge Transfer Working Group. Professor Xu is also Interim Director of LSU's [Coastal Studies Institute](#) and leads LSU's [Sediment Dynamics Lab](#).



The 2020 Syvitski Student Modeler Award Winner is [Ian Reeves](#) currently a Ph.D. student in the Department of Geological Sciences at the University of North Carolina, Chapel Hill. Ian's submission, ["Impacts of Seagrass Dynamics on the Coupled Long-Term Evolution of Barrier-Marsh-Bay Systems"](#) using GEOMBEST+ coupled with components from a march-tidal flat model, demonstrated the influence of seagrass on sediment dynamics and coastal erosion. Ian's work was also appreciated for the excellent software documentation - a hallmark of open source software development best practices.



[Talea Mayo](#), [Assistant Professor, Department of Civil, Environmental and Construction Engineering](#), at the University of Central Florida was elected to Co-Chair the Coastal Working Group (along with current Chair Andrew Ashton). Talea's research focus includes storm surge modeling (ADCIRC), coastal ocean modeling, coastal erosion and flood risk analysis.



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## Publications of Interest

Nienhuis, J., Ashton, A., Edmonds, D., Hoitink, A., Kettner, A., Rowland, J. and Tornquist, T. 2020. ["Global-scale human impact on delta morphology has led to net land area gain"](#). Nature

Kirschbaum, D., Kapnick, S., Stanley, T. and Pascale, S. 2020. ["Changes in Extreme Precipitation and Landslides Over High Mountain Asia"](#). Geophysical Research Letters

Broeckx, J., Rossi, M., Lijnen, K., Campforts, B., Poesen, J. and Vanmaercke, M. 2020. "[Landslide mobilization rates: A global analysis and model](#)". Earth Science Reviews

Lelpi, A. and Lapotre, M. 2020. "[A tenfold slowdown in river meander migration driven by plant life](#)". Nature Geoscience

Huppert, K., Perron, J.T. and Royden, L. 2020. "[Hotspot swells and the lifespan of volcanic ocean islands](#)". Science Advances (AAAS)

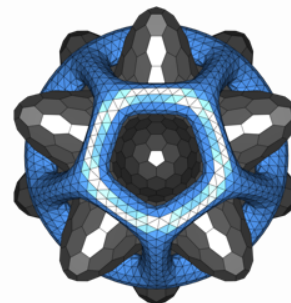
Lacroix, P., Dehecq, A. and Taipe, E. 2020. "[Irrigation-triggered landslides in a Peruvian desert caused by modern intensive farming](#)". Nature Geoscience

**CSDMS would like to thank community members who submitted publications of interest. To submit publications or resources of interest for a future CSDMS "On the Surface", please contact [csdms@colorado.edu](mailto:csdms@colorado.edu)**

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## Journal of Open Source Software (JOSS) Call for Editors

[JOSS is growing its editorial team!](#) They are especially interested in recruiting editors with expertise in bioinformatics, the social sciences, and R/statistics. [JOSS](#) is a developer friendly, open access journal for research software packages.



**CSDMS is an NSF  
sponsored program**



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