

William S. Kearney

Postdoctoral Research Associate – Department of Environmental Sciences
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Education

Boston University **Boston, MA**
Ph.D. *2018*
Earth Sciences

University of Pennsylvania **Philadelphia, PA**
B.A. *2013*
Science, Technology & Society and Earth Science

Academic appointments

Postdoctoral Research Associate *2018-*
University of Virginia
High-frequency observations of the momentum budget in a tidal creek

Graduate research assistant *2013-2018*
Boston University
Long-term monitoring of sediment fluxes in a mesotidal estuary

Undergraduate research assistant *2012-2013*
University of Pennsylvania
Monitoring of sediment deposition after a tidal wetland restoration

Publications and Presentations

Peer-reviewed articles.....

Arnold Fernandes, Christine R. Rollinson, **William S. Kearney**, Michael C. Dietze, and Sergio Fagherazzi. Declining radial growth response of coastal forests to hurricanes and nor'easters. *Journal of Geophysical Research: Biogeosciences*, 2018.

William S. Kearney, Giulio Mariotti, Linda A. Deegan, and Sergio Fagherazzi. Stage-discharge relationship in tidal channels. *Limnology and Oceanography: Methods*, 15(4):394–407, 2017.

Giulio Mariotti, **William S. Kearney**, and Sergio Fagherazzi. Soil creep in salt marshes. *Geology*, 44(6):459–462, 2016.

William S. Kearney and Sergio Fagherazzi. Salt marsh vegetation promotes efficient tidal channel networks. *Nature Communications*, 7, 2016.

In press.....

Giulio Mariotti, **William S. Kearney**, and Sergio Fagherazzi. Soil creep in a mesotidal salt marsh channel bank: fast, seasonal and water table mediated. *Geomorphology*, 2019. Forthcoming.

Sergio Fagherazzi, Shimon C. Anisfeld, Linda K. Blum, Emily V. Long, Rusty A. Feagin, Arnold Fernandes, **William S. Kearney**, and Kimberlyn Williams. Sea level rise and the dynamics of the marsh-upland boundary. *Frontiers in Environmental Science*, 2019.

Under review.....

Sergio Fagherazzi, **William S. Kearney**, Giulio Mariotti, Nicoletta Leonardi, and William Nardin. Understanding marsh dynamics: Modeling approaches. 2018.

William S. Kearney, Arnold Fernandes, and Sergio Fagherazzi. Sea-level rise structures coastal forests into persistence and regeneration niches. 2018.

Invited talks.....

William S. Kearney. Sediment and energy fluxes in Plum Island salt marshes. Coastal Ocean Fluid Dynamics Laboratory, Woods Hole Oceanographic Institution, 2018.

Conference presentations.....

William S. Kearney, Inke Forbrich, and Sergio Fagherazzi. Tidal exchange of heat in salt marshes. Presented at the Ocean Sciences Meeting, Portland, Oregon, 2018.

William S. Kearney. Learning representations of salt marsh hydrodynamics. Presented at the AGU Fall Meeting, Washington, DC, 2018.

William S. Kearney, Arnold Fernandes, and Sergio Fagherazzi. Sea level rise and storm surge structures coastal forests into persistence and regeneration niches. Presented at the CERF Biennial Meeting, Providence, RI, 2017.

William S. Kearney, Giulio Mariotti, and Sergio Deegan, Linda A. Fagherazzi. Stage-discharge relationships in tidal channels. Presented at the AGU Fall Meeting, San Francisco, CA, 2016.

William S. Kearney and Sergio Fagherazzi. Deriving process knowledge from data in coastal ecohydrology. Presented at Data Science Workshop, University of Washington, Seattle, WA, 2015.

William S. Kearney and Sergio Fagherazzi. Salt marsh vegetation promotes efficient tidal channel networks. Presented at the AGU Fall Meeting, San Francisco, CA, 2014.

Teaching

Digital Image Processing (GE440/640)

Boston University, Department of Earth and Environment

Teaching fellow

Introduction to Unix/Bash and Introduction to Version Control Instructor
Boston University, Open Science Study Group

Estuaries and Nearshore Systems (ES543) Teaching fellow
Boston University, Marine Program

Introduction to Environmental Earth Science (ES105) Guest lecturer
Boston University, Department of Earth and Environment

Introduction to Hydrology (ES317) Teaching fellow
Boston University, Department of Earth and Environment

Mentorship

BosLab's Open Yeast Engineering Project Mentor
Mozilla Open Leaders Program 2017
The Mozilla Open Leaders Program supports open projects that contribute to the goal of a healthy Internet. I guided members of a DIY Biology lab as they developed online resources for genetic engineering experiments.

Open Maine Mentor
Mozilla Open Leaders Program 2019
I am helping the leaders of Open Maine, a group dedicated to improving the systems that serve the citizens of Maine, to create an online curriculum for open source civics and active citizenship.

Awards

Boston University Department of Earth and Environment
Outstanding Teaching Fellow 2018

Funding

Boston University Marine Program
Warren-McLeod Summer Fellowship Summer 2015

Service

College of Arts and Sciences, Boston University
Natural Sciences Curriculum Committee, Graduate Student Representative 2017–2018

College of Arts and Sciences, Boston University
Graduate Academic Affairs Committee, Graduate Student Representative 2016–2017

College of Arts and Sciences, Boston University
Academic Policy Committee, Graduate Student Representative 2015–2016

Department of Earth and Environment, Boston University
Graduate Student Representative

2015–2017

Reviewing.....

Journal of Geophysical Research: Earth Surface, Journal of Open Source Software, Earth Surface Dynamics, Earth Surface Processes and Landforms, Journal of Geophysical Research: Oceans

Contributions to Research Infrastructure.....

JuliaPlots **Maintainer**
The core plotting libraries for the Julia programming language *2018–*
<http://docs.juliaplots.org/latest/>

TidalFluxes.jl **Developer**
A library for analyzing tidal fluxes in the Julia programming language *2017–*
<http://www.wskearney.com/TidalFluxes.jl/>

References

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