

# Dr. Edward Tiernan

Engineer

Southern California Coastal Water Research Project

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## Education

Ph.D., Environmental and Water Resources Engineering, University of Texas at Austin, Austin, TX. 2022

M.S., Environmental and Water Resources Engineering, University of Texas at Austin, Austin, TX. 2018

B.S., Civil and Environmental Engineering, University of Virginia, Charlottesville, VA. 2016

## Professional Experience

Engineer, Southern California Coastal Water Research Project. Costa Mesa, CA. 2022-present

Graduate Research Assistant, University of Texas at Austin. Austin, TX. 2016-2022

Geochemical Modeler, Lawrence Berkeley National Laboratory. Berkeley, CA. 2019

HPC Hydraulic Modeler, Consortium of Universities for the Advancement of Hydrologic Sciences, Inc. (CUAHSI). Tuscaloosa, AL. 2017

Paleohydrology Researcher, Peruvian Ministry of Culture. Cusco

Teaching Assistant, University of Texas at Austin. Austin, TX. 2016-2018

Teaching Assistant, University of Virginia. Charlottesville, VA. 2014-2016

## Honors and Awards

1<sup>st</sup> Place, University Forum at Texas Water - Virtual, 2020 & 2021

2<sup>nd</sup> Place, Storm Water Management Conference, South Padre Island, TX. 2019

3<sup>rd</sup> Place, International Conference on Water Management and Modeling (ICWMM), Ontario, Canada, 2022

Mickey Leland Energy Fellowship, Department of Energy, 2019

National Water Center Innovators Program, Summer Institute, Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), 2017

Excellence in Research Award for Civil, Architectural, and Environmental Engineering, Graduate, and Industry Networking Event (GAIN) at UT Austin, 2018, 2020

Trigg & Fannie E. Twichel Endowed Presidential Scholarship in Civil Engineering, UT Austin, 2020, 2021

William H. Luedecke Endowed Fellowship for Mechanical and Civil Engineering, UT Austin, 2016, 2019

Walter L. and Reta Mae Moore Graduate Fellowship in Water Resources, UT Austin, 2018

## Journal Articles

Tiernan, E. D., & Hodges, B. R. (2022). A topological approach to partitioning flow networks for parallel simulation. *Journal of Computing in Civil Engineering*, 36(4).  
[https://doi.org/10.1061/\(asce\)cp.1943-5487.0001020](https://doi.org/10.1061/(asce)cp.1943-5487.0001020).

Tiernan, E. D., Yu C-W., Riaño-Briceño, G., Sharior, S., Jenkins E., Brashear, C., & Hodges, B. R. (2022). Hydrological comparison of open-source numerical models for the Saint-Venant equations on regional river basins. **\*\*Manuscript in preparation for submission to the journal of Hydrological and Earth Systems Sciences (HESS).**

Tiernan, E. D., Yu C-W., Riaño-Briceño, G., Jenkins E., & Hodges, B. R. (2022). A methodology for generalizing open-channel network models between modeling paradigms. **\*\*Manuscript in preparation for submission to Journal of Open Source Software.**

Sharior, S., Riaño-Briceño, G., Tiernan, E. D., Yu C-W., Jenkins E., & Hodges, B. R. (2022). Computational Performance of a Parallelized Saint-Venant Solver Compared with EPA SWMM. **\*\*Manuscript in preparation for submission to the Journal of Computing in Civil Engineering.**

Hodges, B. R., Yu, C-W. Tiernan, E. D., Riaño-Briceño, G., Sharior, S., Jenkins E. (2021). "SWMM5+ Alpha Release Documentation". Texas Data Repository V2. DOI:  
<https://doi.org/10.18738/T8/WQZ5EX>.