

Hisham Eldardiry

Postdoctoral Research Associate

Department of Civil and Environmental Engineering, Cornell University, Ithaca, NY, USA

Lecturer, Department of Hydraulic Engineering, Alexandria University, Alexandria, Egypt

✉ hisham.eldardiry@cornell.edu | hisham.eldardiry@alexu.edu.eg

☎ [USA] (+1) 206-355-0953 | [Egypt] (+20) 101-825-5096

🌐 www.hishameldardiry.com

EDUCATION

Ph.D., University of Washington, Seattle, WA, USA (2017- 2021).

Department of Civil and Environmental Engineering

Ph.D., University of Louisiana at Lafayette, LA, USA (2014- 2016).

Systems Engineering Program [Civil Engineering Concentration]

M.Sc., University of Louisiana at Lafayette, LA, USA (2013- 2014).

Department of Civil Engineering

B.Sc., Alexandria University, Alexandria, Egypt (2005-2010).

Department of Civil Engineering

AWARDS AND HONORS

- Member of the *AGU Voices for Science* cohort (2021).
- University of Washington, recipient of the *Ronald and Mary Nece Endowed Fellowship* (2020).
- American Water Resources Association (AWRA), recipient of the *AWRA Graduate Fellowship* for Washington State Section (2020).
- University of Louisiana at Lafayette, University Honors Program, recognized in "*Academic Honors Day*" for outstanding academic achievement (2015).
- Member of the *Honor Society of Phi Kappa Phi*, University of Louisiana at Lafayette (2014).

RESEARCH AND ACADEMIC APPOINTMENTS

- Postdoctoral Research Associate at the Critical Infrastructure Systems Laboratory, Department of Civil and Environmental Engineering, Cornell University, Ithaca, New York, USA (2024-Present).
- Postdoctoral Research Associate at the Earth Systems Science Division, Pacific Northwest National Laboratory (PNNL), Richland, Washington, USA (2021-2024).
- PhD intern at the Atmospheric Sciences and Global Change Division, Pacific Northwest National Laboratory (PNNL), Richland, Washington, USA (Summer 2019/2020).
- Teaching and Research Assistant at Department of Civil and Environmental Engineering, University of Washington, Seattle, USA (2017-2021).
- Teaching and Research Assistant at Department of Civil Engineering, University of Louisiana at Lafayette, USA (2013-2016).
- Teaching and Research Assistant at Department of Hydraulic Engineering, Alexandria University, Egypt (2012-2013).

SELECTED PUBLICATIONS

Eldardiry, H., Yan, H., Sun, N., Reed, P., and Rice, J. (in review). Characterizing How Meteorological Forcing Selection and Parameter Uncertainty Influence Community Land Model Version 5 Hydrological Applications in the United States (*Journal of Advances in Modeling Earth Systems*).

- Eldardiry, H.**, Zhou, T., Huang, M., and Chegwidan, O. (2022). The Role of Groundwater Withdrawals on River Regulation: Example from the Columbia River Basin. *Water Resources Research*, 58(6).
- Eldardiry, H.**, and Hossain, F. (2020). A Blueprint for Adapting High Aswan Dam Operation in Egypt to Challenges of Filling and Operation of the Grand Ethiopian Renaissance Dam. *Journal of Hydrology*.
- Eldardiry, H.**, Mahmood, A., Chen, X., Hossain, F., Nijssen, B., and Lettenmaier, D. P. (2019). Atmospheric River-Induced Precipitation and Snowpack during the Western United States Cold Season. *Journal of Hydrometeorology*, 20(4), 613-630.
- Eldardiry, H.**, and Habib, E. (2018). Carbon capture and sequestration in power generation: review of impacts and opportunities for water sustainability. *Energy, Sustainability and Society*, 8(1), 6.
- Eldardiry, H.**, Habib, E., and Borrok, D. M. (2016). Small-scale catchment analysis of water stress in wet regions of the US: an example from Louisiana. *Environmental Research Letters*, 11(12), 124031.
- Eldardiry, H.**, Habib, E., and Zhang, Y. (2015). On the use of radar-based quantitative precipitation estimates for precipitation frequency analysis. *Journal of Hydrology*, 531, 441-453.

TRAININGS AND WORKSHOPS

- NASA Summer School on Satellite Observations and Climate Models, organized by the JPL Center for Climate Sciences and the Keck Institute for Space Studies (August 17-28, 2020)
- CUASHI Master Class: Food, Energy, Water Systems in a Global Economy (Northern Arizona University in Flagstaff, AZ, May 13-16, 2019).
- Summer School: Extreme Value Modeling and Water Resources (The Camille Jordan Institute, Université Claude Bernard Lyon 1, France, June 13-24, 2016).

TEACHING EXPERIENCE

- University of Washington, Department of Civil and Environmental Engineering: *Water Resources and Hydraulic Engineering Capstone Design - Quantitative Water Resources Management* (2017-2021).
- University of Louisiana, Department of Civil Engineering: *Engineering Hydrology - Water Resources Capstone Design - Engineering Hydraulics* (2013-2016).
- Alexandria University, Department of Hydraulic Engineering: *Design of Hydraulic Structures - Advanced Hydrology - Computer Applications in Hydraulics - Fluid Mechanics* (2012-2016).

SYNERGISTIC ACTIVITIES

- Invited to participate in the U.S.-Iraqi Research-Focused Dialogues on Mesopotamian River Revival organized by the U.S. National Academies of Sciences, Engineering, and Medicine (January 2023).
- Contributed to The Conversation Africa edition with a piece of article on how to turn confrontation about Africa's biggest hydropower dam to cooperation.
- Interviewed by Jonathan Gornall to participate in an Arab News deep dive “Battle for the Nile” to provide an in-depth examination of the potential impacts on downstream Nile states during the filling and operation of the Grand Ethiopian Renaissance Dam (June 2021).
- Invited for an interview in “*Science in Action*” *BBC weekly radio programme* to talk about the future of the Nile under the challenges of Grand Ethiopian Renaissance Dam (November 2020).
- Organizing a 3-day virtual workshop (*Sensing Rivers 2020*) on satellite remote sensing applications in water resources management (September 2020).
- *NASA/CNES SWOT Virtual Hackathon* Support Team, University of Washington, Seattle (June 2020).
- Student member of the *AGU Precipitation Technical Committee* (2018-2022).