Ronnie Abolafia-Rosenzweig

1130 Monroe Dr. Unit A.
Boulder, CO 80303
C: 210-416-2070
Ronnie.Abolafiarosenzweig@colorado.edu

Education

Ph.D. Hydrology, 2022
University of Colorado, Boulder, CO
Dean's Graduate Assistantship Recipient and Doctoral Assistantship of Excellence
Expected Graduation: May 2022

B.S. Civil Engineering, 2016 (Summa Cum Laude)
Texas A&M University, College Station, TX
Concentration: Environmental Engineering
Dean's List: 2013-2016

Professional Experience

Doctoral Research Assistant — 2017-Present
Cooperative Institute for Research in Environmental Science
University of Colorado, Boulder, CO

Graduate Mentor — Fall 2019
Discovery Learning Apprenticeship
University of Colorado, Boulder, CO

Student Intern — Summer 2019
NASA GSFC – Hydrological Sciences Laboratory

Teaching Assistant — Fall 2018
University of Colorado, Boulder, CO
CVEN 5333: Hydraulic Engineering

Student Intern — Summer 2018
NOAA/National Weather Service, Environmental Modeling Center

Undergraduate Research Assistant — 2015 - 2016
Texas A&M University, College Station, TX

Water Treatment and Utilities Engineer — 2016-2017
Freese and Nichols, Inc., Austin, TX
Halff Associates Inc., Dallas, TX

Peer Mentor — Spring 2015
Texas A&M University, College Station, TX
CVEN 302: Computer Applications

Relevant Skills

Programming in: Matlab, Perl and R Statistical Computing
Processing data in a variety of formats (GRIB, HDF, Net-CDF, ASCII)
Experience in Windows, Mac, and Linux operating systems
Teaching and mentoring undergraduate students
Presenting scientific information in written and oral formats
Experience using CU Boulder's Supercomputer
Data Assimilation (Ensemble Kalman Smoother and Particle Batch Smoother)
Microsoft Application Specialist

Publications

Abolafia-Rosenzweig, Ronnie, Ben Livneh, Eric E. Small, Sujay V. Kumar. "Soil moisture data assimilation to estimate irrigation water use." *Journal of Advances in Modeling Earth Systems*, (November 10, 2019): https://doi.org/10.1029/2019MS001797

Small, Eric, Andrew Badger, Ronnie Abolafia-Rosenzweig, and Ben Livneh. "Estimating Soil Evaporation Using Drying Rates Determined from Satellite-Based Soil Moisture Records." *Remote Sensing* 10, no. 12 (December 4, 2018): 1945. https://doi.org/10.3390/rs10121945.

Conference Presentations

Abolafia-Rosenzweig, R. Livneh, B., Pan, M., American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2019: *REESEN: A remotely-sensed ensemble for estimating the terrestrial water balance* (oral).

Abolafia-Rosenzweig, R. Livneh, B., Badger, A.M., and Small, E.E., American Geophysical Union Fall Meeting, San Francisco, CA, Dec. 2019: *A SMAP-based Continental-scale Soil Evaporation Dataset* (oral).

Abolafia-Rosenzweig, R. Livneh, B. and Small, E.E., Cooperative Institute for Research in Environmental Sciences Rendezvous, Boulder, Colorado, May 2019: *A data assimilation framework to estimate irrigation: merging soil moisture retrievals with land surface models* (oral).

Abolafia-Rosenzweig, R., Livneh, B., Xia, Y., Mocko, D., Dirmeyer, P., Kumar, S., Peters-Lidard, C., Wei, H., Kain, J., Annual Meeting of the American Meteorological Society, Phoenix, Arizona, Jan. 2019: *Comparing Operational NLDAS-2 and Experimental NLDAS-3 Soil Moisture with Observational Soil Moisture Data from In-Situ Networks and SMAP Remote Sensing* (oral).

Abolafia-Rosenzweig, R., Livneh, B., Small, E. E., Badger, A. M., Kumar, S., American Geophysical Union Fall Meeting, Washington, DC, Dec. 2018: *A framework for predicting irrigation through soil moisture data assimilation* (oral).

Abolafia-Rosenzweig, R., Livneh, B., Small, E. E., Annual Meeting of the American Geophysical Union Hydrology Days, Fort Collins, Colorado, Mar. 2018: *Evaluation of soil moisture data assimilation to improve hydrologic partitioning over agricultural areas* (poster).

Livneh, B., Abolafia-Rosenzweig, R., Annual Meeting of the American Meteorological Society, Austin, Texas, Jan. 2018: *Using SMAP satellite observations to estimate terrestrial evaporation rates* (oral).

Awards

Doctoral Assistantship of Excellence Recipient, University of Colorado, 2017
Summa Cum Laude, Texas A&M University, 2016
Dean's List, Texas A&M University, 2013-2016