UWIN Student Profiles for Website

*Instructions: Please provide the information below and add your photo to the "headshots" folder by **October 30, 2019**. Sarah will create a student page on the UWIN website.*

Name: Aldo Brandi

Bio: BSc and MSc in Geological and Geophysical Sciences at the University of Bari, Italy. I did my Master Thesis in Boundary Layer Meteorology at the University of Bologna, Italy.
Currently a PhD student in Geography at the School of Geographical Sciences and Urban Planning - Arizona State University.
Research Brief: My research focuses on Urban Climates and deals with WRF model simulations of projected climate change, urban expansion and adaptation strategies in the Conterminous US. I am interested in investigating the trade-off between achieving thermal comfort improvement and potential implications for air quality in urban settings.
Project Link:
https://www.researchgate.net/project/Effects-of-Climate-Change-Urban-Expansion-and-Densification-and-Adaptation-Strategies-on-the-PBL-depth-of-US-cities?_sg=GFZ17kYdTk0Tmz-96IcnDxF0B_r7xgIT17_xvP9jJYSBFgRVV9SZJLnJX4yMVJuspCyPKtvDQIIirjqkTWCbuIYo3GPbIk2hoN3L

Email: abrandi@asu.edu
LinkedIn: https://www.linkedin.com/in/aldo-brandi-b6905552/

Name: Elana Chan

Bio: Current B.S. student in Environmental Engineering and Community Health at Tufts University.
Research Brief: UWIN URP research developed tools to assess the long-term and multifunctional performance of green infrastructure using Detroit, MI as a case study. I modeled the storage of stormwater in a retrofitted bioswale and tracked image-derived greenness from repeat digital images of a bioswale and the Detroit cityscape.
Project Link: NA
Email: Elana.Chan@tufts.edu
LinkedIn: www.linkedin.com/in/e-chan

Name: Molly M Chaney

Bio: BA, Geophysics & Mathematics, Washington University in St. Louis; MA, Civil & Environmental Engineering, Princeton University. Currently a Ph.D. candidate in Civil & Environmental Engineering at Princeton University, on the Environmental Engineering and Water Resources track.

Research Brief: The WSR-88D network of NEXRAD radars was recently upgraded to polarimetric technology. The upgrade has created opportunities for refining extreme rain rate calculations that have not yet been fully harnessed. I use polarimetric radar to refine rain rate calculations while maintaining the fine temporal and spatial resolution necessary for studying extreme storms that cause severe urban flash flooding. My work focuses on both tropical cyclones and inland supercell storms, with the end goal of developing a new rain rate algorithm that takes full advantage of polarimetric radar measurements.
Project Link: hydrometeorology.princeton.edu
Email: mchaney@princeton.edu
LinkedIn: https://www.linkedin.com/in/molly-chaney-396b6ab8/

Name: Ryan Correa

Bio: Currently an undergraduate student majoring in Public Health and Environmental Studies at Franklin and Marshall College.
Research Brief: My UWIN research assessed the accuracy of a popular and widely used method of measuring utility affordability in the United States. We surveyed residents in Qualtrics about their experiences with utility affordability using Qualtrics and Amazon's mechanical turk.
Project Link: NA
Email: rcorrea@fandm.edu
LinkedIn: www.linkedin.com/in/ryan-correa-29041b197

Name: Noelle K. Fillo

Bio: I received my Bachelor of Science degree in Environmental Engineering, (Ecological Engineering concentration) from Colorado State University in Fall 2016. I am currently pursuing a Master of Science degree in Civil Engineering, (Hydrologic Science and Engineering concentration) at Colorado State University. My anticipated graduation is in Spring 2020.

Research Brief: My thesis research aims to quantify municipal water contributions to urban baseflow using streamflow and water-stable isotope analyses. Along with collecting tap water and composite meteoric water samples, I took biweekly surface water samples from 15 watersheds in the Denver metropolitan area. The isotopic composition of these samples are currently being analyzed and interpreted to help understand how urbanization has affected local hydrology.

Project Link: N/A

Email: n.k.fillo@gmail.com

LinkedIn: https://www.linkedin.com/in/noellefillo/

Name: Edna Liliana Gomez Fernandez

Bio: BA in Economics, Masters in Public Policy and Administration, PhD in Government and Public Policy at the University of Arizona (expected graduation May, 2020)
Research Brief: My research focuses on stakeholders who participate in policy processes and the mechanisms they use, resources they exchange, and policy change that they drive. In my

research I use a multidisciplinary approach and dialogue across disciplines in order to understand and provide useful and applicable solutions in water management. Also, I do research in developing countries, particularly in Latin America and Africa. Prior to my participation in UWIN project, I conducted research in the following topics: Economics of Climate Change, Economic Valuation of Environmental Services, Urban Development, Policy Evaluation, and National Security.
Project Link: https://erams.com/UWIN/c1-1/
Email: elgomezfernandez@email.arizona.edu , liliana.elgf@gmail.com
LinkedIn: https://www.linkedin.com/in/ednagfgf

Name : Mahshid Ghanbari

Bio: B.Sc. in Civil Engineering, M.S. in Highway and Transportation Engineering. Currently a Ph.D. candidate in Civil & Environmental Engineering at Colorado State University, on Water Resources Planning and Management
Research Brief: My current research focuses on developing a probabilistic framework for assessing compound flood frequency and predicting future flood risk to assets and socioeconomic sectors in coastal cities across the United States under non-stationary sea-level conditions. My project evaluates the increasing flood risk due to the co-occurrence of heavy precipitation and storm surge in low-lying coastal areas of the U.S.
Project Link : https://erams.com/UWIN/b3-1/
Email: mahshid.ghanbari@colostate.edu

Name : Hadi Heidari

Bio: B.Sc. in Civil Engineering, and M.S. in Civil Engineering-Water. Currently a Ph.D. candidate in Civil & Environmental Engineering at Colorado State University, on Water Resources Planning and Management
Research Brief: My current research deals with quantifying future vulnerability of U.S. water supply systems to water shortage and extended droughts under nonstationary water supply and demand conditions.
Project Link: https://erams.com/UWIN/a1-1/
Email: hadi.heidari@colostate.edu

Name: Peter C Ibsen

Bio: Currently a PhD Candidate at University of California Riverside, working in the Department of Botany and Plant Sciences. I have been conducting research with Dr. G. Darrel Jenerette for 4 years. Before graduate school I was a landscaper and community college student.
Research Brief: Exploring mechanisms for vegetation derived air cooling in U.S. cities
Project Link:
Email: pibse001@ucr.edu
LinkedIn:

Name: Timothy Kirby

Bio: B.A. in Sustainable Development from Columbia University, M.S. in Environmental Science from Florida International University, currently a PhD Candidate in Earth Systems Science with a concentration in Natural Resource Science and Management from Florida International University

Research Brief: Strategies for improved flood resilience, stormwater management, distributed infiltration, green infrastructure, and community scale reuse of reclaimed and graywater are at varying stages of development and implementation. Technological innovations mean little if they are not widely adopted by homeowners and communities. Understanding household scale adoption of these different strategies, and the factors that influence it, is critical to the identification of promising pathways toward sustainability. However, understanding how adoption decisions are made, and might be influenced, is challenging for an array of reasons that include the distant time horizons involved, the lack of contemporary understanding of the technology, and the ultimate dependence of adoption on social and media factors that are difficult to forecast. The key questions to be addressed include:

- How likely are different technological solutions to be adopted by current and future households?
- How can those strategies be refined to increase the chances of large-scale uptake?
- What are the most effective methods of education and communication for these different water technologies?

The purpose of this project is to clarify and learn about how adoption decisions are made by exploring the ability of dynamic information acceleration (DII) to model how future adoption decisions will likely be made.

Project Link: https://erams.com/UWIN/c2-1/
Email: tkirby@fiu.edu
LinkedIn: https://www.linkedin.com/in/timothy-kirby-29a603114

Name: Laura J. Miller

Bio: University of Wisconsin-Madison Posse Scholar (Undergraduate Fall '19) studying Geography & Environmental Studies with a certificate in Leadership. My interests lie in urban planning, mapping, landscapes, green building practices, and community-based development.
Research Brief: My UWIN URP project focused on modeling stormwater management systems to determine the impact of drainage ratio and rainfall event size on LID performance at the University of Georgia. At my home university, I have aided research projects on invasive species, perennial plants, interseeding and community-based mapping.
Project Link: N/A
Email: lmiller29@wisc.edu
LinkedIn: https://www.linkedin.com/in/laura-j-miller1/

Name: Takondwa Musa

Bio: Senior at Rutgers University majoring in Economics with a minor in Organizational Leadership.

Research Brief: While being hosted at Florida International University, I conducted a social network analysis quantitative study. Under the advisement of Dr. Sukop, Dr. Bolson and PhD student Timothy Kirby, I sought to visualize the interactions within the UWIN network and produce measurements of growth and change.

Email: takondwa.musa@rutgers.edu

LinkedIn: https://www.linkedin.com/in/takondwa-musa-b87055142/

Name: William Rainey

Bio: BSE in Civil Engineering from the University of Michigan. Currently a Master's Student in Civil Engineering at Colorado State University.

Research Brief: My research looks at quantifying different externalities or "co-benefits" of green infrastructure from different UWIN cities. I am interested in quantifying air quality benefits from different green infrastructure technologies and learning more about urban heat fluxes with vegetated surfaces.

Project Link: N/A

Email: wrainey@colostate.edu

LinkedIn: https://www.linkedin.com/in/william-b-rainey/

Name: Kambiz Rasoulkhani

Bio: B.Sc. in Civil Engineering, M.E. in Construction Engineering and Management, Ph.D. in Infrastructure Engineering and Management from Texas A&M University; Expected graduation date is December 2019.

Research Brief: My research analyzes urban water infrastructure system resilience under the impacts of climate change, population growth, aging infrastructure, and other chronic stressors by developing simulation models based on complex-system and decision theories.

Project Link:https://erams.com/UWIN/b1-1-tamu/

Email: kambiz.r@tamu.edu

LinkedIn: https://www.linkedin.com/in/kambiz-rasoulkhani/

Name: Mahdad Talebpour

Bio: Mahdad Talebpour is currently a PhD Candidate in Environmental Engineering at the University of Maryland Baltimore County (UMBC). Mahdad received his MSc in Civil Engineering at Penn State University and holds BSc in Civil Engineering from Persian Gulf University, Bushehr, Iran.

Research Brief: Mahdad had developed a fully-coupled urban atmospheric-hydrological model, WRF-PUCM-ParFlow. The demonstration includes modeling a small watershed in Baltimore to evaluate the effect of coupling of groundwater to the atmosphere in urban system. The next step entails applying WRF-PUCM-ParFlow to three UWIN cities, (Baltimore, Denver, and Portland) to investigate regional urban water-energy interactions. The main research questions to be

addressed include: (1) How does the fully-coupled model improve our ability to simulate interactions of groundwater and atmospheric processes in urban areas? (2) How do urban development patterns affect hydrometeorological processes?

Project Link:https://erams.com/UWIN/a2-1/

Email: mahdad1@umbc.edu

LinkedIn: https://www.linkedin.com/in/mahdadtalebpour/

Name: Manuel Herrera

Bio: Whittier College undergraduate student (Spring 20') and environmental research science assistant. Majoring in Environmental Science with a minor in Biology. I have a great interest in understanding how humans affect the environment around them and in-turn how the environment responds and affects people. Great interest in pursuing a career in public health or a related field.

Research Brief: Studied the ecological service of both U.V. protection and thermal heat comfort that urban trees provide. Using a novel imaging method, identified the U.V. protection in which certain Urban trees provided whilst looking into their water consumption.

Project Link: N/A

Email: Mherrer2@poets.whittier.edu

LinkedIn: https://www.linkedin.com/in/manuel-herrera-208900167

Name: Alex Berk

Bio: Undergraduate student at California State Polytechnic University, Pomona graduating in Spring 2021 with a B.Sc. in civil engineering and a minor in regenerative studies. Interest in mitigating anthropogenic climate change by improving urban systems. Plans on pursuing graduate education in applied mathematics.

Research Brief: Analyzed data collected from victims of Hurricane Harvey to better understand the patterns that make certain populations more vulnerable. Specifically studied the relationship between food insecurity and the victims' experience of hardship.

Project Link: N/A

Email: adberk@cpp.edu

LinkedIn: https://www.linkedin.com/in/alex-berk-b08444169/

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