UWRL welcomes two new faculty members | Utah Water Research Laboratory

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Last spring, the UWRL and USU’s Department of Civil and Environmental Engineering began seeking bright, creative, and interdisciplinary researchers “whose research will yield more holistic approaches to solving water problems in natural, built, and/or agricultural environments” to “lead and develop the next generation of resilient solutions to water problems in these linked environments.” And despite a worldwide pandemic, we were able to welcome two such individuals to the UWRL in time for fall semester!

Although 2020 has surely been a challenging year for them to embark on this new chapter, we are happy to have them on the UWRL team. Get to know them a little better with this socially distanced introduction:

Kyle Moor, Assistant Professor

After earning his BS degree, Kyle wanted to shift his focus to more applied systems. As an avid hiker in the Appalachian Mountains that surround Virginia Tech, he often thought about the chemistry happening in the environment while out on the trails. This sparked his curiosity in environmental systems and led him to pursue advanced degrees in environmental engineering, where he could use his chemistry background to create new environmental technologies. In graduate school, Kyle became enthralled by research and the prospects of teaching, which set his path toward a career in academia.

**Expertise:**

His research focuses on applying chemistry principles to tackle challenges related to water quality and scarcity. His research efforts have spanned engineered and natural systems, from developing nanomaterial technologies for solar disinfection to investigating aquatic pollutant transformation processes with laser spectroscopy.

In his lab, Moor uses materials science, laser spectroscopy, and an overall mechanistic viewpoint to catalyze new environmental technologies and to deepen our understanding of pollutant transformation in environmental systems. His research interests include inexpensive carbon materials for water purification, new advanced oxidation processes, and the fate of environmental plastic.

**Teaching:**

Dr. Moor currently teaches Process Dynamics (CEE 6630) and will be teaching Transport Phenomena in Bio-Environmental Systems (CEE 3670) in Spring 2021.

**Looking to the Future:**

Kyle is excited to join the UWRL, where he will broadly work on the environmental fate of contaminants. He is most excited about working with faculty at the UWRL and drawing on the collective expertise in hydraulics and water resources to help expand his mechanistic, molecular level research focus to larger scale environmental systems.

**Other Interests:**

Kyle enjoys hiking, swimming, and all things fermented, including doing his own fermentations. He and his wife, Emily, (who are east-coasters) are looking forward to exploring the outdoors in Logan and the West.

**Education/Experience:**

**BS** - Chemistry - Virginia Tech

**MS & PhD** - Chemical and Environmental Engineering - Yale, University

**ETH Post-Doctoral Research Fellow** - studying pollutant transformation in aquatic environments at the Institute of Biogeochemistry and Pollutant Dynamics - ETH Zürich
Colin Phillips, Assistant Professor

Education/Experience:

**BA** - Geology - Earth & Planetary Science - University of California, Berkeley

**PhD** - Earth & Environmental Science - University of Pennsylvania

**Post-Doctoral Research Fellow** - studying water quality and river mechanics at the University of Minnesota & Northwestern University

With research experience spanning astronomy education to pyroclastic flows and the role of floods in eroding mountain ranges, Colin found himself becoming increasingly interested in research with the potential for societal impact in the near-future. This led him to pursue postdoctoral experience within Civil and Environmental engineering focusing on river mechanics and fine particle transport dynamics forming the basis for understanding many physical water quality and particulate contaminant problems.

**Expertise:**

His research focuses on broadly on water and sediment, with an emphasis on the fundamental processes through which they are transported through the environment and respond to change resulting in the evolution of river corridors, watersheds, and landscapes.

In his research, Colin uses a mix of field and laboratory experiments combined with the synthesis of large environmental data streams and seeks to address problems of water and land sustainability, management, and conservation of natural and human resources over societally relevant timescales.

**Teaching:**

Dr. Phillips currently teaches Fluid Mechanics (CEE 3500) and Open Channel Hydraulics (CEE 5500) during the Fall Semester.

**Looking to the Future:**

Colin is looking forward to leveraging the excellent hydraulics and data informatics expertise at the UWRL to utilize laboratory experiments to build physical models that can provide the key to harnessing the ever-growing streams of environmental data collected within US watersheds. Ultimately, the combination of these methods may allow researchers to identify areas where the greatest change in rivers and landscapes threaten people and society.

**Other Interests:**

Colin enjoys all manner of outdoor activities and working closely in the lab or field with graduate and undergraduate students. He (and his family) are thrilled to be back in the West after 11 years in the Midwest and on the East Coast and look forward to seeing what Logan and the Cache Valley area are like when it isn’t a pandemic.