

Regents' Rising Researcher Award

Biography:

Elisabeth (Libby) Hausrath attended Brown University, where she received her ScB in Geology-Chemistry, with Honors, Magna Cum Laude. She received her PhD from Penn State University in Geoscience and Astrobiology, where she was an NSF Graduate Fellow working with Dr. Susan Brantley studying basalt weathering on Earth and on Mars. She received a NASA Postdoctoral Fellowship to work at NASA Johnson Space Center with Dr. Douglas Ming, where she began to study phosphate mobility on Mars. She became an assistant professor at UNLV in 2009. Here at UNLV, together with her graduate students, she studies geochemical interactions on Earth and on Mars. She and her students are funded to use a combination of laboratory experiments, field work, and geochemical modeling to understand geochemical interactions, and her published research impacts a variety of diverse disciplines, including terrestrial geochemistry, planetary geochemistry, biogeochemistry, astrobiology, and others. She mentors PhD, MS, and undergraduate students, teaches undergraduate and graduate level classes, and has served as the Geoscience Undergraduate Coordinator for the more than 180 Geoscience students. She has also recently been selected by NASA to be one of 11 scientists to serve on the Returned Sample Science Board to help provide scientific input into the design and implementation of the upcoming Mars 2020 rover mission.



Dr. Henry Fu

Dr. Henry Fu obtained a B.A. (summa cum laude) in Chemistry and Physics with Mathematics minor from Harvard University in 2000, a Certificate of Advanced Study in Mathematics from Cambridge University (UK) in 2001, and his PhD in Physics from University of California at Berkeley in 2006. He conducted his Postdoctoral Research in the Division of Engineering at Brown University. In 2010, he joined the University of Nevada, Reno as an assistant Professor in the Mechanical Engineering Department. He has published 26 papers with an H-Index of 15. At UNR, he has obtained >\$1.6M in competitive research funding from the National Science Foundation via 5 grants including the prestigious NSF CAREER. He teaches both graduate and undergraduate classes and acts as the graduate program director for the ME program. He has mentored over 17 undergraduate students, graduate students and postdoctoral scientist.

Dr. Adam Watts - Brief Biography

Dr. Watts received his B.S. degree in Biology from Emory University in 1999, and his M.S. and Ph.D. degrees in Interdisciplinary Ecology from the University of Florida in 2002 and 2012 respectively.

Dr. Watts's research interests include fire ecology and fire science; interactive effects of ecosystem processes and disturbance on landscapes; ecological restoration; and the development and commercialization of unmanned aircraft systems (UAS) for ecological and natural-resources applications. He is also deputy director of DRI's Climate, Ecosystems, Fire, and Atmosphere (CEFA) Program, and Division lead for UAS work in Atmospheric Sciences.

Current and recent projects include investigating whether repeated fires in wetlands during drought could change fire return intervals in these rarely-burned ecosystems; factors influencing smouldering combustion in organic soils; and the detection of ecological "footprints" in patterned landscapes. At DRI, Dr. Watts conducts research on wetland and peat fires, while working on new techniques and technology for fire prediction and monitoring. These projects include investigating UAS for wildland firefighter situational awareness, fire detection and monitoring, and post-fire mapping and rehabilitation monitoring. He works with a number of local Nevada industry partners, as well as collaborating researchers and businesses abroad, to produce partnerships and innovations to better serve the science and operational needs of firefighters and natural resource agencies. Western ecosystems also face increasingly large and severe fires due to a number of factors. Dr. Watts is interested in understanding interactions of these factors to better explain these fires and improve our abilities to address them, from both a scientific and policy perspective.

Prior to joining the faculty at DRI, Dr. Watts studied and worked at University of Florida on fire ecology. His projects included a strong applied component, and reflect a desire to translate his research to solve important natural resource management questions.

Dr. Watts previously coordinated a multidisciplinary program to develop handheld, amphibious UAS for surveys of levees, invasive plant-control programs, and wildlife populations that continues to enjoy success. He also worked as an alligator biologist, served as an agroforestry extensionist with the Peace Corps in Guinea, and was a volunteer firefighter with Federal wildland firefighter certification. He remains interested in research that improves the lives of people around the world.