

Four USU Geoscientists Receive College of Science Awards

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CoS Faculty and Staff Awards

Faculty Researcher of the Year: Alexis Ault

Alexis Ault is a thermochronologist and an Assistant Professor in the Department of Geology. Her research pushes the boundaries of low-temperature thermochronology to document the temperatures and timing of fundamental Earth processes through integration of geological, nanotextural, and geochemical data. To support this work, she maintains a dynamic, externally-funded research program including active grants from the National Science Foundation and Southern California Earthquake Center.

Faculty Undergraduate Research Mentor of the Year: Carol Dehler

Carol Dehler is a 'deep time' geologist and an associate professor in the Geology Department at Utah State University. She received her Ph.D. in Earth and Planetary Sciences at the University of New Mexico, Albuquerque and an M.S. in Geology from Northern Arizona University, Flagstaff. Her research interests include questions about pre-metazoan biotic evolution, the composition of Earth's early atmosphere and oceans, associated climate change, the nature of ancient landscapes, and the geologic timescale. All of her projects are field-based and may be combined with lab techniques including stable-isotope and elemental geochemistry, petrography, scanning electron microscopy, and geochronology.

Carol's research group includes graduate and undergraduate students and numerous collaborators

from universities worldwide. Research has taken Carol and students to places including Grand Canyon, Death Valley, the Uinta Mountains, Namibia, and Sweden. Her group has published in journals such as Science, Nature Geoscience, Precambrian Research, and the Geological Society of America, and has generated geologic maps for state geological surveys in the west. Carol is also a voting member of the Cryogenian sub-commission, which is working on the latest GSSP (a rock-based Global Stratotype Section and Point) for the International Geologic Time Scale.

CoS Student Awards

Masters Graduate Researcher of the Year: James Mauch

James Mauch grew up in Grand Junction, Colorado, and fell in love with the landscapes of the western US from an early age. A passion for understanding the ground beneath his feet led him to pursue a bachelor's degree in Earth Science from Montana State University, where he graduated in 2014. After taking a year off to hike the Continental Divide Trail and instruct for the Wild Rockies Field Institute, he returned to school for a master's in Geology at Utah State University. Under the guidance of Dr. Joel Pederson, his research at USU has focused on understanding the processes and rates of active salt tectonism beneath the city of Moab. He has found that valley subsidence from salt-dissolution has accelerated geologically-recently and appears to be controlled by the downcutting of the nearby Colorado River. As part of this research he made a geologic map of a 7.5' quadrangle east of Moab, which he is preparing to publish with the Utah Geological Survey. After graduating this spring, James is excited to apply his passion for Earth-surface processes and geologic hazards as he pursues a career with a geological survey or land management agency.

Undergraduate Researcher of the Year: Mikaela Pulsipher

As a senior Geology major, Mikaela's involvement with several research projects has bolstered her education and her lab and field expertise. She began her research career by working with Dr. Jim Evans on projects that culminated in co-authorship on a publication detailing the in-situ stresses of a borehole in the western Snake River Plain. Mikaela then worked with fellow student Fallon

Rowe on a funded URCO project under the mentorship of Dr. Carol Dehler. Together, they utilized uranium-lead detrital zircon geochronology and petrography in order to better understand the depositional age and provenance of the mid-Neoproterozoic Visingsö Group in southern Sweden.

Mikaela has presented this research at several poster sessions and is now writing a first-authored paper that will be submitted for publication shortly. Mikaela has served as an Undergraduate Teaching Fellow, Vice President of the USU Geology Club, and field assistant for two geology graduate students. In addition to her research and classes, Mikaela currently works as a lab assistant in Dr. Dennis Newell's Stable Isotope Geochemistry Lab where she prepares and analyzes samples using various scientific instruments. Mikaela will be graduating this summer and plans to begin a master's degree in geology in the fall of 2019.