

The summer sun shines bright on scholarship winners

NSF EPSCoR Track 1



Maya Zawlodzki from Nevada State College, works in the lab on her summer UROP project. (Kurt Regner/UNLV)

The National Science Foundation Experimental Program to Stimulate Competitive Research awarded 11 scholarships through the Undergraduate Research Opportunity Program (UROP). Most of the scholarship award winners will be conducting research directly related to The Solar-Energy-Water-Environment Nexus project (Solar Nexus project).

The undergraduate students represented five from northern Nevada colleges and six from southern Nevada colleges. Majority of recipients will explore the impact of generating solar power on the limited water resources and the environment throughout Nevada. Students will present a poster of their finding in August at a summer undergraduate research symposium in Reno and Las Vegas.

View the summer 2014 scholarship award winners, see their abstracts and their mentors, [linked here](#).

The teachers become the students

NSF EPSCoR Track 3

CLASSP - the Cyberlearning Activities to Scaffold STEM Practices project held its first teacher training this June. Middle school teachers throughout Nevada participated in a week long training hosted collaboratively by the Nevada State GEAR UP program and the NSF EPSCoR Track 3 CLASSP program. During the week, teachers engaged in inquiry based learning practices and an engineering design cycle while exploring the question "What Would an Alien Eat?". In order to determine the alien species and what they would eat to survive, participants engaged in variability reading, math perceptions, statistics, scaling and collecting and analyzing data while participating in lab experiences.



Teachers in classroom workshop (Michele Casella/NSHE)

A hands-on activity included field work at the Clark

County Wetlands Park & Nature Center. The teachers, now the students, set out as groups to work together and gather data.

This activity allowed each group a specific point to research at the Wetlands while then gathering water samples to examine habitats



In the field training at the Wetlands (Lori Brazfield/NSHE)

in which the alien species could live. These samples included data collection of chlorine level, mineral content, alkalinity, salinity and temperature and would then allow the group to find the answer to the alien diet.

In addition, CLASSP participants throughout the week were introduced to effective argumentation strategies and concepts within the 5-featured Dynamics Inquiry Enterprise (5-DIE): A Research Based Instructional Application for Developing Scientific Literacy (Kern, Cindy L.; Crippen, Kent J., 2013).

NASA launches new research in Nevada

Nevada NASA EPSCoR

Nevada NASA EPSCoR is being awarded \$750,000 for a three year research project entitled, "Building Capacity in Interdisciplinary Snow Sciences for a Changing World". NASA EPSCoR awarded \$11.25 million nationwide to 15 colleges and universities. The money was awarded to develop research and technology in climate change, nanotechnology, astrophysics, aviation and other areas relevant to the agency's missions.

Daniel Obrist, Co-I/Science PI, Desert Research Institute will lead the science team, which includes researchers from DRI, University of Nevada, Las Vegas, and University of Nevada, Reno. Including Obrist there are six researchers from DRI: Drs. Hans Moosmüller, Alison Murray, Gail Ferrell, Ian McCubbin, and Rina Schumer; two from UNLV: Drs. Elisabeth Hausrath, and James Raymond; and Dr. Scott Tyler from UNR.

Research conducted by the NSHE institutions aligns with NASA's core strategic research and technology development priorities. The research will help answer

questions from NASA's Earth Science Division: How is the global Earth system changing? How does life begin and evolve? In collaboration with NASA Centers, Nevada scientists will build both research and education capacity for the study of snow across many disciplines at NSHE institutions. The research will help identify links between snow's physical, chemical, and biological environments, and combine nonlinear responses to climate change and other anthropogenic impacts.

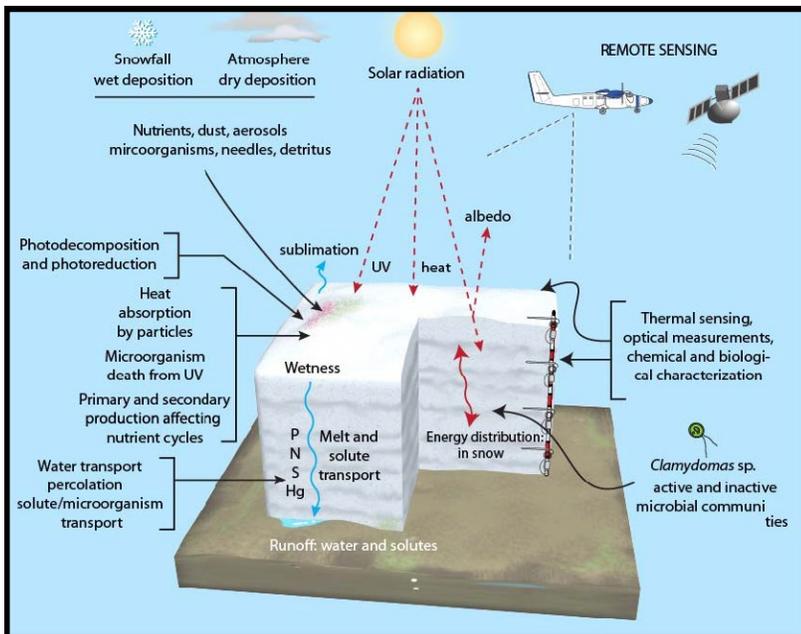
The statewide project allows scientists to study and research snow albedo and snow energy balance, biochemical conditions and the life that exists in snow, and snowmelt processes and watershed hydrology.

Research Benefits:

- development of mobile field instruments
- establish new laboratory methods
- formation of new interdisciplinary teams from NSHE campuses for integrated snow study

Educational and Workforce Development Benefits:

- development of new graduate-level courses
- new field technician education program
- lecture series for students, faculty, and the public



Conceptual diagram showing important linkages between snow biology, chemistry, and physics. (Daniel Obrist/DRI)

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SYSTEM SPONSORED PROGRAMS AND EPSCoR
5550 W. FLAMINGO ROAD, SUITE A2
LAS VEGAS, NV 89103
MAIN LINE: 702.522.7070
FAX: 702.522.7077
NSHESPO@NSHE.NEVADA.EDU
www.epscorspo.nevada.edu