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SOLAR NEXUS EXTERNAL ENGAGEMENT IN ACTION

By Jane Palmer

At the 2015 NEXUS annual meeting, Drs. Markus Berli and Mary Cablk, the NEXUS External Engagement Co-Leads put together a stakeholder panel that included representatives from several federal agencies and the industry side of solar development. Immediately after the event, the representatives from Valley Electric Association, Inc. and the U.S. Fish and Wildlife Service began talking and the result of these discussions was an innovative approach designed to minimize the environmental footprint of VEA's community solar project.

Such partnerships are precisely the objective of the NEXUS External Engagement team, who focus on developing research collaborations between scientists, industries, and institutions, aimed at supporting economic development (namely solar) in Nevada. Through these collaborations NEXUS aims to widely disseminate information about innovative research in solar energy in arid regions.

"This is an example of the importance of connecting people," says Cablk. "In today's day and age of technology, sound bites, and character limitations all it took was conversation between two people to come to the realization that there was a shared vision and together they might innovate. While still in the early phases, the collaboration is commendable." [VEA Community Solar](#)



VEA Community Solar Project Construction --VEA Photo

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GRADUATE STUDENT POSTER HIGHLIGHTS SOLAR NEXUS 2016 ANNUAL MEETING

By Jane Palmer



Poster Session --Danielle Nobles-Lookingbill Photo

Twenty-one students presented posters at the March 2016 Solar NEXUS annual meeting covering every aspect of the project's mission. Although the presentations were unified in their excellence, we highlight just three posters that relate to NEXUS's core objectives: Supporting the water needs of solar energy development, increasing the efficiency of solar energy supplies and accelerating NEXUS research with new advanced data services.

Putting Numbers on the Water Requirements of Solar Energy - The sunny southwestern U.S. possesses tremendous potential for capitalizing on solar energy, but for the lack of water. To understand whether this region could support sustainable solar energy development, Saria Bukhary, a

graduate student at the University of Nevada, Las Vegas, has put numbers on the water requirements of solar photovoltaics (PV) and concentrated solar power (CSP) technologies in distinct locales.

Estimating Aerosols Role in Degrading Solar Panels - Minute particles suspended in the atmosphere—aerosols—turn out to have outsized impacts on the efficiency of solar panels, with dire financial consequences. The first step to tackling this challenge lies in understanding the effects of these aerosols, but this is difficult because the optical effect of these particles are not well understood. Patricio Piedra, a graduate student at the Desert Research Institute, is attempting to simulate the action of this 'particle-substrate' system using discrete dipole approximation (DDA), with significant success.

An App for Gathering Climate Data - When it comes to gathering varied climate data on a minute-by-minute basis, day after day, a log book doesn't quite cut it. To help ease the pain of documenting every minutiae of the atmosphere, Hannah Munoz, Samantha Grant, Matthew Salivar, Vinh Le, Royal Stewart, and Eric Fritzinger, all undergraduate students at the University of Nevada, Reno (UNR) have developed an App for the Android mobile platform for NEXUS technicians in the field. [Read More](#)

NSF EPSCoR CYBERINFRASTRUCTURE DAY GREAT SUCCESS

Research is a strong driving force behind technology and the advancement of research and it was the focus of the Nevada EPSCoR's annual Cyberinfrastructure Day, held on the campus of the University of Nevada, Reno on Monday, May 2, 2016. Faculty, researchers and students from the Nevada System of Higher Education and teachers from Nevada school districts attended the event at the Harry Reid Engineering Laboratory Building.

Guests participated in lectures, demonstrations, lab tours and a poster session highlighting the latest technical advances in high-end computing, networking and visualization and how they intersect with research, education and workforce development. Research lectures explored topics such as the use of technology in field research, collaborative robotics and the human-computer interaction. Dr. Sergiu Dascalu provided an overview of the research and education capabilities of the Nevada Research Data Center (NRDC), while technician Eric Fritzing demonstrated NRDC functions. Guests engaged in demonstrations from the robotics, drones, seismology and high-performance computing and visualization labs. Several students, funded by NSF EPSCoR, presented their CI-related research during a poster session. Session presenters, representing many disciplines, showcased their cyber-related research, answering questions and sharing their research with other student researchers.

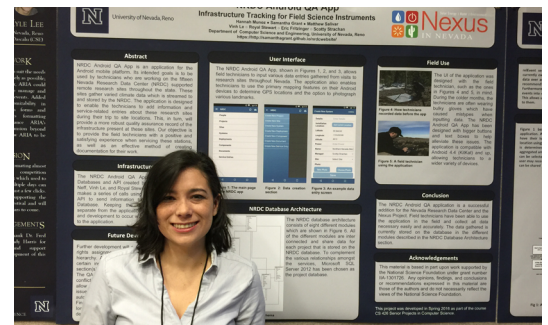
The CI Days event is a collaborative effort between the cyberinfrastructure and workforce development components of the NSF EPSCoR and the Solar Energy-Water-Environment Nexus in Nevada project. Next year's CI day event will take place in southern Nevada, on the campus of University of Nevada, Las Vegas. This year's event successfully brought over 60 faculty, students and teachers together to understand the benefits that cyberinfrastructure can bring to scholarly pursuits, to see what others are doing with cyberinfrastructure, and to learn what resources are available on the campus of UNR, across institutions, and nationally.



Vladimir Bajenov, UNR --Michele Casella Photo

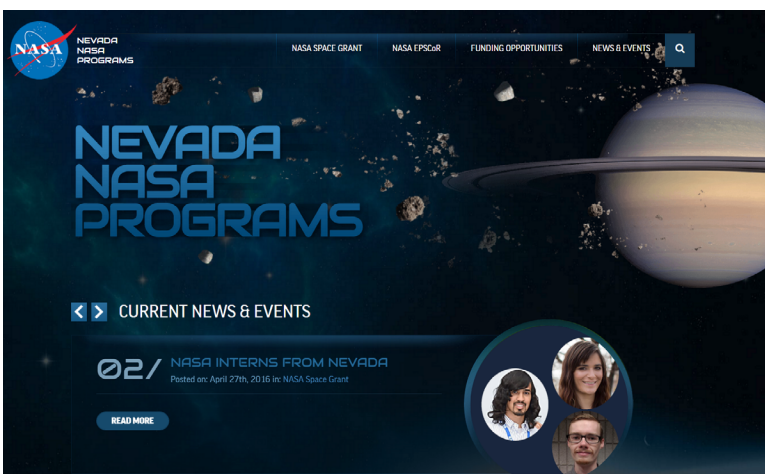


Banafsheh Rekabdar, UNR --Michele Casella Photo



Hannah Munoz, UNR --Michele Casella Photo

NEVADA NASA PROGRAMS WEBSITE RELAUNCHED



Nevada NASA EPSCoR and Space Grant faculty and students participated in the Nevada NASA Programs annual meeting held in Reno, NV, April 29th. During the meeting it was announced that the new Nevada NASA programs website was launched. This website provides one central location for accessing the Nevada NASA EPSCoR and Space Grant Consortium programs. The site nvspacegrant.org was originally just focused on the space grant program but since these two programs provide synergy it was a perfect way to unite the websites. The new website allows for college students and faculty to easily navigate to areas of interest targeted to them for both programs.

Centralizing these sites will be great for searching NASA funding opportunities both locally and nationally. And if you are interested in current news and events, there is a designated tab for that too. Check out the new website and sign up for the newsletter to keep up to date about solicitations and announcements.



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