

17th RISE Symposium (Research Insights in Semiarid Ecosystems)

Saturday, 20 November 2021

Marley Building, Room 230, University of Arizona

8:30-9:00	Registration	
9:00-9:15	Mitch McClaran UA SNRE, Phil Heilman USDA ARS SWRC	RISE Welcome
9:15-9:30	Abe Karam NEON	Updates and opportunities with NEON the National Ecological Observatory Network
9:35-9:50	Brett Blum SRER	Updates and opportunities at the Santa Rita Experimental Range
9:55-10:10	Andy Hubbard NPS Sonoran Desert Network	Citizen science, research and monitoring in Sonoran Desert national parks
10:15-10:30	Larry Fisher UA SNRE	Using indicators of watershed health to guide management decision making
10:35-10:50	Marguerite Mauritz Univ Texas El Paso	A decade of ecosystem carbon fluxes in Chihuahuan Desert shrubland and outlook on new research
10:55-11:10	Tyson Swetnam, UA CyVerse	The Airborne Environmental Observations Laboratory for Unoccupied Systems (AEOLUS)
11:15-11:30	Bridget Hass NEON	Leveraging NEON remote sensing data in the Desert Southwest
11:35-	Poster Introductions	Presenters give a 1-minute advertisement of their poster
11:35-1:15	Poster Session Lunch w/ Posters	<i>Provided at the meeting; included in RISE registration</i>
1:15-1:30	Gary Nabhan UA Southwest Center	The status of crop wild relatives and their significance to monitoring efforts in USDA ARS Climate Hubs
1:35-1:50	Sheri Spiegall USDA ARS JRN	Circular management of beef supply chains in the Southwestern United States: strategies for sustainability
1:55-2:10	Guillermo Ponce Campos, USDA ARS SWRC	Applying machine learning with NEON-AOP data products to classify vegetation using Google Earth Engine
2:15-2:30	Dave Goodrich USDA ARS SWRC	USA continental scale intensification or not, of sub-daily precipitation intensities
2:30	Poster Awards	

RISE Organizing Committee:

Steve Archer, Phil Heilman, Mitch McClaran,
Jason Williams

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Acronyms:

AEOLUS: Airborne Environmental Observations Laboratory for
Unoccupied Systems
AOP: Airborne Observatory Platform
ARS: Agricultural Research Service
JRN: Jornada Experimental Range
NEON: National Ecological Observatory Network
NPS: National Park Service
SNRE: School of Natural Resources and the Environment
SRER: Santa Rita Experimental Range
SWRC: Southwest Watershed Research Center
UA: University of Arizona
USDA: United States Department of Agriculture

POSTERS

(*=graduate, **=undergraduate in poster contest)

#	Lead Author	Title
1**	Nicolas Katz	Biological soil crust coverage and abundance are reduced along a gradient of disturbance by livestock at the Santa Rita Experimental Range
2	Craig Rasmussen	Pedogenic record of environmental change in the Upper San Pedro River basin
3**	Robin Bradley	Are symbionts of invasive grasses a key to their ecological dominance in grasslands of southern Arizona?
4	Pamela Nagler	A Machine Learning and Data Fusion Approach for Classifying Landsat OLI Spectral and Vegetation Dynamic Data in Support of Habitat Mapping in the Santa Rita Mountains
5**	Alejandra Huerta	Root area responses to varying rainfall frequency and intensity for a semi-arid grassland of the southwest reveal root depth variability and preference for historical normal rainfall.
6	Joel Biederman	An introduction to RainManSR: A field manipulative experiment linking above- and below-ground responses to temporal repackaging of precipitation in a semiarid grassland agroecosystem
7**	Jacob Blais	Quantifying the response of soil respiration to rainfall pulses: A comparison of weekly manual and continuous automated measurement techniques
8*	Moshe Steyn	Microbial exoenzyme activities and resilience to short-term drought conditions in Southern Arizona
9*	Austin Rutherford	Monsoon season precipitation variation, not herbaceous cover, controls shrub (<i>Prosopis velutina</i>) recruitment in Sonoran grasslands
10	Nate Pierce	Investigating the drivers of perennial grass transplant mortality in a semiarid rangeland
11*	Tianyi Hu	The effect of Biological and Physical Processes on Soil Water Dynamics and its Feedback to Arizona Grassland
12	Fangyue Zhang	Field evidence reveals atmospheric demand determines photosynthesis in a semiarid ecosystem
13*	Mostafa Javadian	Impacts of Rainfall Repackaging on Canopy Temperature in a Semiarid Grassland
14	William Smith	Rainfall pulses drive coordinated responses in leaf hydraulic, biochemical, and photosynthetic traits that can be tracked with hyperspectral remote sensing
15*	Charles Devine	Applying novel remote sensing techniques in a rainfall manipulation experiment - progress and updates from the RainManSR project
16*	Brandon Mayer	Grazing Management: Virtual Approach
17	Ravindra Dwivedi	Use of SNOTEL, snow photography and lidar datasets for an improved understanding of amount, timing and duration of net water input to soil at contrasting forested sites in Arizona, USA
18*	Xian Wang	Characterizing the response of photosynthesis, spectral reflectance, and sun-induced chlorophyll fluorescence to extreme drought at a semi-arid grassland site