The 2016 Workshop at MOISST: The Growing Science of Soil Moisture Sensing
Tuesday-Wednesday, May 17-18, 2016
Room 109, Wes Watkins Center, Oklahoma State University
Corner of Hall of Fame and Washington, Stillwater, Oklahoma

Tuesday

Name	Institution	Presentation Title	Time
Welcome Session			
Tyson Ochsner	Oklahoma State Univ.	Welcome, orientation, and introductions	8:15 a.m.
Garey Fox	Oklahoma State Univ.	Oklahoma NSF EPSCoR Project and Oklahoma Water Resources Center	8:40 a.m.
New Advances in Soil Moisture Monitoring			
Chadi Sayde	Oregon State Univ.	Novel Method for Calibrating Actively Heated Fiber Optic (AHFO) Soil Moisture in a Heterogeneous Field: From Theory to Field Application	8:50 a.m.
Abdul Salam	Univ. of Nebraska – Lincoln	Internet of Underground Things	9:15 a.m.
Darin Desilets*	Hydroinnova	ISAAC: Intermodal Survey Across the American Continent	9:40 a.m.
Mid-morning break (snacks and beverages provided)			
Todd Caldwell	Univ. of Texas	The Texas Soil Observation Network – one year in	10:40 a.m.
Xinhua Xiao	Alabama A&M Univ.	Alabama Mesonet based Plant Available Water, Plant Water Use and Soil Water Deficit Index	11:05 a.m.
Steven Quiring	Texas A&M Univ.	Advancing the Coordinated National Soil Moisture Network	11:30 a.m.
Group photo then lunch break (lunch on your own off site)			
Student Poster Session (details next page)			1:30 – 2:45 p.m.
Evaluation of Remotely-Sensed Soil Moisture Products			
Narendra Das*	NASA Jet Propulsion Laboratory	New Directions for SMAP	3:00 p.m.
Mike Cosh	USDA-ARS Beltsville, MD	SMAP Calibration and Validation: The First Year	3:30 p.m.
Jason Patton	Oklahoma State Univ.	Oklahoma Statewide Soil Moisture Mapping Project	3:55 p.m.
Jonathan Muñoz-Barreto	Univ. of Puerto Rico	Mapping Field-Scale Soil Moisture Using Ground-Based L-band Passive Microwave Observations in Western Puerto Rico	4:20 p.m.
Trenton Franz	Univ. of Nebraska - Lincoln	Wrap-up for the day, plans for the evening	4:45 p.m.
Group dinner at Hideaway Pizza, 230 S Knoblock St. – 6:00 p.m.			

** = invited talk with 30 minute time slot; all other talks have a 25 minute time slot;* ***all speakers are expected to allocate at least 10 minutes of their time slot for discussion***

Wednesday

Innovative Applications of Soil Moisture Data			
Mike Cosh	USDA-ARS Beltsville, MD	Welcome and recognition of student poster contest winners	8:30 a.m.
Tricia Lawston	Univ. of Delaware	Assessment of Irrigation Physics in a Land Surface Modeling Framework and Evaluation with High-resolution Soil Moisture Observations	8:40 a.m.
Trent Ford	Southern Illinois Univ.	On the Observation Record Length Necessary to Capture an In Situ Soil Moisture Climatology	9:30 a.m.
Mid-morning break (snacks and beverages provided)			
J.T. Reager*,+	NASA Jet Propulsion Laboratory	GRACE Soil Moisture Estimates Related to US Wildfire Occurrence	10:20 a.m.
J.D. Carlson	Oklahoma State Univ.	Soil Moisture and Wildfire Relationships in Oklahoma	10:50 a.m.
Jeff Basara	Univ. of Oklahoma	Seasonal to Inter Annual Variability of Observations from the MOISST Flux Tower Associated with Changing Soil Moisture Conditions	11:15 a.m.
lunch break (lunch on your own off site)			
Evan Coopersmith	USDA-ARS Beltsville, MD	Forecasting Valley Fever (Coccidioidomycosis) Incidence via Soil Moisture Conditions: Leveraging an Extended In Situ Soil Moisture Record	1:30 p.m.
Brad Illston	Univ. of Oklahoma	Estimating Water Retention Curves Between Measured Depths	1:55 p.m.
Andres Patrignani	Kansas State Univ.	Using In Situ Soil Moisture Sensors to Calibrate a Cosmic-ray Neutron Probe	2:20 p.m.
Mid-afternoon break (snacks and beverages provided)			
Integrating Soil Moisture Information into Precision Agriculture			
Paul Weckler	Oklahoma State Univ.	Soil Moisture Sensing and Precision Agriculture	3:15 p.m.
Haly Neely	Texas A&M Univ.	Using UAVs to Solve Water Stress Issues in Precision Agriculture	3:40 p.m.
Trenton Franz	Univ. of Nebraska - Lincoln	Design of Smart Environmental Monitoring Networks in Agricultural Landscapes	4:05 p.m.
Tyson Ochsner	Oklahoma State Univ.	Workshop wrap-up and feedback	4:30 p.m.

+ = *presented via Skype*

This workshop is supported in part by the National Science Foundation under Grant No. OIA-1301789. Any opinions, findings, and conclusions or recommendations expressed are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Display boards for posters are 3’ high and 4’ wide. Workshop participants will vote to select the top student posters, with the winners recognized on Wednesday morning.

Student Poster Session		
Name	**Institution**	**Presentation Title**
Geano Dong	Oklahoma State Univ.	Primary drivers of meso-scale soil moisture variability: a cosmic-ray neutron rover study
Catie Finkenbiner	Univ. of Nebraska - Lincoln	Integration of soil moisture and geophysical datasets for improved water resource management in irrigated systems
Justin Gibson	Univ. of Nebraska - Lincoln	Quantification of irrigation water savings in Western Nebraska using a physically based unsaturated flow model
Laura Harding	USACE ERDC-GRL and Penn State Univ.	Development of an automated verification for Noah land surface model output using Cosmic-ray Soil Moisture Observing System (COSMOS)
David Hatch	Texas A&M Univ.	Using Proximal Sensor Data to Predict Tree Mortality
Zack Leasor	Texas A&M Univ.	A monthly-to-seasonal temperature forecast utilizing antecedent soil moisture conditions in the SCIPP region
Jonathan Nunez	Univ. of Puerto Rico	Early Results of the Puerto Rico Advance Radiometric Test-bed (PR-SMART)
Sonisa Sharma	Oklahoma State Univ.	Soil moisture influences fuel moisture in Oklahoma grasslands
Bharat Sharma-Acharya	Oklahoma State Univ.	Hydrogeophysical evaluation of vadose zone moisture in grassland and juniper woodland
Liyan Tian	Texas A&M Univ.	Comparison of six drought indices for agricultural drought monitoring in South Central United States
Briana Wyatt	Oklahoma State Univ.	First steps to modeling soil moisture in an oak forest using the FAO-56 dual crop coefficient model
Ning Zhang	Texas A&M Univ.	Soil Moisture-Based Drought Monitoring for the South Central Region
Chen Zhao	Texas A&M Univ.	Comparison of soil moisture interpolation methods