

The 2017 Workshop at MOISST: Integrating Diverse Sources of Soil Moisture Information

Tuesday-Thursday, May 23-25, 2017

Oklahoma State University, Stillwater, Oklahoma
Jones Seminar Room, ConocoPhillips OSU Alumni Center

Tuesday, May 23rd

Name	Institution	Presentation Title	Time
Welcome Session			
Tyson Ochsner	Oklahoma State Univ.	Welcome, orientation, and introductions	8:30 a.m.
Ray Huhnke	Oklahoma State Univ.	Oklahoma NSF EPSCoR Project	8:55 a.m.
New Advances in Soil Moisture Monitoring			
Chadi Sayde	North Carolina State University	Toward Multi-Scale Tracking of Water Movement Across the Soil-Plant-Atmosphere Continuum Using Fiber Optic Distributed Temperature Sensing	9:00 a.m.
Mie Andreasen	University of Copenhagen	Cosmic-ray neutron soil moisture estimation	9:25 a.m.
Brian Hornbuckle	Iowa State University	Is the Thermal to Fast Neutron Ratio Correction for the Effect of Vegetation on Cosmic-ray Neutron Sensors Independent of Crop Type?	9:50 a.m.
<i>Mid-morning break (snacks and beverages provided)</i>			
Jared Entin	NASA	Soil moisture remote sensing at NASA – present and future	*10:45 a.m.
Morteza Sadeghi	Utah State University	A New Optical Trapezoid Model for Remote Sensing of Soil Moisture	11:15 a.m.
Abdul Salaam	University of Nebraska	Wireless Underground Sensor Networks	11:40 a.m.
<i>Group photo then lunch break (lunch on your own off site)</i>			
Integrating Diverse Sources of Soil Moisture Information			
Mike Cosh	USDA-ARS Beltsville, MD	Ongoing research at the Marena, Oklahoma, In Situ Sensor Testbed (MOISST)	1:30 p.m.
Steven Quiring	Ohio State University	Towards a Harmonized Soil Moisture Database for the South Central United States: Evaluating Methods for Depth Standardization and Quality Control	1:55 p.m.
Yohannes Yimam	Texas A&M University	Effect of air and water filled cracks on soil moisture measurement by neutron moisture meter	2:20 p.m.
<i>Mid-afternoon break (snacks and beverages provided)</i>			
Cristine Morgan	Texas A&M University	How good are SCAN long term soil moisture data? Effect of soil structure on Hydra Probe calibration	3:15 p.m.
Peter Goble	Colorado Climate Center	The Launch of CoCoRaHS Soil Moisture Reporting. A Progress Update	3:40 p.m.
Andres Patrignani	Kansas State University	State of in-situ soil moisture monitoring at the Kansas Mesonet	4:05 p.m.
Mike Cosh	USDA-ARS Beltsville, MD	Daily wrap-up and plans for Wednesday	4:30 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, May 24

Innovative Applications of Soil Moisture Data			
Trenton Franz	University of Nebraska-Lincoln	Welcome and orientation for the day	8:20 a.m.
Trent Ford	Southern Illinois University	Applying Multiple, Diverse Sources of Soil Moisture to Better Understand Soil Moisture-Precipitation Coupling in the Central United States	8:30 a.m.
Mike Lewis	US Army CEERD GRL		8:55 a.m.
Eric Jones	NOAA-NWS ABRFC	River Forecast Center Soil Moisture Products	9:20 a.m.
Rob Hale	iteris	Soil moisture modeling and monitoring: an agricultural perspective	9:45 a.m.
<i>Mid-morning break (snacks and beverages provided)</i>			
Trenton Franz	University of Nebraska	Soil property estimation using a cosmic-ray neutron rover	10:40 a.m.
Saleh Taghvaeian	Oklahoma State University	Using soil moisture sensors to schedule irrigation	11:05 a.m.
J.D. Carlson	Oklahoma State University	Comparison of KBDI (Keetch-Byram Drought Index) and In-Situ Measured Soil Moisture as Predictors of Large Wildfires in Oklahoma	11:30 a.m.
<i>lunch break (lunch on your own off site)</i>			
Student Poster Session (details last page)			1:30 – 2:45 p.m.
National Soil Moisture Network – History, Status, and Vision			
Mike Strobel	NRCS National Water and Climate Center	History and Origin of the National Soil Moisture Network Initiative	3:00 p.m.
Jessica Lucido	USGS Center for Integrated Data Analytics	Outcomes of the National Soil Moisture Network Pilot Project	3:25 p.m.
Steven Quiring	Ohio State University	Vision and Opportunities for the National Soil Moisture Network	3:50 p.m.
Youlong Xia	NOAA NCEP	Interaction of North American Land Data Assimilation System and National Soil Moisture Network: Soil Products and Beyond	4:15 p.m.
Steven Quiring	Ohio State University	Wrap-up for the day, plans for the evening and for Thursday	4:40 p.m.
<i>Group dinner at tbd – 6:00 p.m.</i>			

All speakers are expected to allocate at least 10 minutes of their time slot for discussion.

Thursday, May 25

National Soil Moisture Network Planning			
Mike Strobel	NRCS National Water and Climate Center	Goals and methods for this planning session	8:30 a.m.
Working group breakouts		Session 1	8:50-9:20 a.m.
Working group breakouts		Session 2	9:20-9:50 a.m.
Wrap up moderator?		Working group reports and delegation of action items	9:50-10:20 a.m.
<i>Mid-morning break (snacks and beverages provided)</i>			
Mike Cosh and Tyson Ochsner		Field trip to MOISST (RSVP for van transportation)	10:30-12:00
		Lunch at Katie's Diner in Guthrie	12:30-1:30 p.m.
Chris Fiebrich and Jeff Basara		Tour of Oklahoma Mesonet headquarters in Norman	2:30-4:00 p.m.
		Return to Stillwater	5:30 p.m.
End of workshop			

**We can arrange a van to take people to the OKC airport after the Mesonet tour if needed.*

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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 University	
Justin Gibson	University of Nebraska	Using observed subfield soil moisture patterns to bracket near surface water retention functions and inform smart-sensor-placement algorithms
Xijia Han	Oklahoma State University	
Zack Leasor	Ohio State University	Improvements in Monthly Temperature Forecasts Utilizing Antecedent Soil Moisture in the South-Central U.S.
Candice Medina	Texas A&M University	Calibrating a COSMOS Rover in a Skeletal Soil for Soil Moisture Mapping
Jonathan Nunez	University of Puerto Rico	Test and Validation of Different Methods for Soil Moisture Estimation in Puerto Rico Soils
Gregory Rouze	Texas A&M University	Use of thermal and multispectral imaging for assessing cotton water status: recent progress and future outlook
Sonisa Sharma	Oklahoma State University	
Ryann Wakefield	University of Oklahoma	SMAP downscaling
Briana Wyatt	Oklahoma State University	
Ning Zhang	Ohio State University	Improvement on Quality Control of In Situ Soil Moisture using POLARIS soil properties data
Chen Zhao	Ohio State University	Sensitivity analysis of the soil moisture interpolation methods in US