American Geophysical Union Fall Meeting
December 9 – 13, 2024, Washington D.C.
The University of Oklahoma

Thursday, December 12, 2024

[Dust in the Southern Great Plains Ecoregion of Oklahoma: Characterization and Spatiotemporal Relationships](#)

Mackenzie Flynn, University of Oklahoma Norman Campus, Geology, Norman, United States, Michael J Soreghan, University of Oklahoma Norman Campus, School of Geosciences, Norman, United States, Caitlin Anne Hodges, University of Georgia, Athens, GA, United States and Gerilyn S Soreghan, Univ of Oklahoma, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

[Microseismic Evolution, Fault Reactivation, and Stress Heterogeneity of Crustal Faults at Pawnee, Oklahoma](#)

Segun Bodunde[1], Junle Jiang[1], Jose Viteri Lopez[1], Jacob I Walter[2] and Brett Carpenter[1], (1)University of Oklahoma Norman Campus, School of Geosciences, Norman, United States, (2)University of Oklahoma, Oklahoma Geological Survey, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

[NH41C](#)

[Hybrid Modeling and Digital Twin Systems for Flood Hazard Prediction and Risk Assessment at Different Spatial Scales Poster](#)

David F Muñoz, Virginia Polytechnic Institute and State University, Civil & Environmental Engineering, Blacksburg, United States, Jun-Whan Lee, University of Texas at Austin, Department of Civil Architectural and Environmental Engineering, Austin, TX, United States, Felix Luis Santiago-Collazo, University of Georgia, School of Environmental, Civil, Agriculture, and Mechanical Engineering, Athens, United States, Aikaterini Kyprioti, University of Oklahoma Norman Campus, School of Civil Engineering and Environmental Science, Norman, United States and James Doss-Gollin, Rice University, Department of Civil and Environmental Engineering, Houston, TX, United States

Session Proposal

- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

[A42A-08](#)

[Evaluating entrainment-mixing characteristics through direct comparisons of drop size distributions using in situ observations from ACE-ENA](#)

Dr. John D'Alessandro[1], Robert Wood[2] and Peter N Blossey[2], (1)University of Oklahoma Norman Campus, Norman, United States, (2)University of Washington, Department of Atmospheric and Climate Science, Seattle, United States

Abstract

- *Thursday, 12 December 2024*
- *11:30 – 11:40*
- *201 (Convention Center)*

Atmospheric Research Supported by Uncrewed Aerial Systems Poster

Fan Mei, PhD, Pacific Northwest National Laboratory, Richland, WA, United States, Gijs de Boer, NOAA, Physical Sciences Laboratory, Boulder, United States and Greg M McFarquhar, Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma, Norman, United States

Session Proposal

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Advances in Cloud and Precipitation Processes: Integrating Observations, Modeling, and Theory IV Oral

Dr. Yongjie Huang, PhD[1], Chunsong Lu[2], Peng Wu[3], Xiaojian Zheng[4], Yi Huang[5], Yangang Liu[6], Timothy Logan[7], Greg M McFarquhar[8], Jianhao Zhang[9], Chuanfeng Zhao[10], Jingjing Tian[11] and Peter Brechner[8], (1)University of Oklahoma Norman Campus, Center for Analysis and Prediction of Storms (CAPS), Norman, United States(2)Nanjing Univerisity of Information Science and Technology (NUIST), Nanjing, China(3)Pacific Northwest National Laboratory, Richland, WA, United States(4)Argonne National Laboratory, Argonne, United States(5)The University of Melbourne, School of Geography, Earth and Atmospheric Sciences and ARC Centre of Excellence for Climate Extremes, Melbourne, Australia(6)Brookhaven National Laboratory, Upton, NY, United States(7)Texas A&M University, College Station, United States(8)Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma, Norman, United States(9)National Oceanic and Atmospheric Administration (NOAA), Chemical Sciences Laboratory, Boulder, United States(10)Peking University, Department of Atmospheric and Oceanic Sciences, Beijing, China(11)Pacific Northwest National Laboratory, Atmospheric Rsch & Measurments, Richland WA, United States

Session Proposal

- *Thursday, 12 December 2024*
- *16:00 – 17:30*
- *201 (Convention Center)*

Advances in Modeling of Terrestrial Ecosystem Carbon and Water Fluxes I Poster

Li Pan, University of Oklahoma, School of Biological Sciences, Norman, United States, Xiangming Xiao, University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States, Jorge Andres Celis, University of Oklahoma Norman Campus, Norman, OK, United States, Baihong Pan, School of Biological Sciences, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States and Cheng Meng, University of Oklahoma Norman Campus, School of Biological Sciences, Norman, United States

Session Proposal

- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Advances in Modeling of Terrestrial Ecosystem Carbon and Water Fluxes II Oral

Li Pan, University of Oklahoma, School of Biological Sciences, Norman, United States, Xiangming Xiao, University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States, Jorge Andres Celis, University of Oklahoma

Norman Campus, Norman, OK, United States, Baihong Pan, School of Biological Sciences, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States and Cheng Meng, University of Oklahoma Norman Campus, School of Biological Sciences, Norman, United States

Session Proposal

- *Thursday, 12 December 2024*
- *14:10 – 15:40*
- *150 A (Convention Center)*

GC41I
Advancing Representation of Urban Processes and Dynamics in Models Across Scales I Poster

Lei Zhao, University of Illinois at Urbana Champaign, Civil and Environmental Engineering, Urbana, IL, United States, TC Chakraborty, Pacific Northwest National Laboratory, Richland, WA, United States, Scott E. Krayenhoff, University of Guelph, Guelph, ON, Canada, Chenghao Wang, University of Oklahoma, School of Meteorology; Department of Geography and Environmental Sustainability, Norman, OK, United States and Keer Zhang, Yale University, School of the Environment, New Haven, CT, United States

Session Proposal

- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

GC44A
Advancing Representation of Urban Processes and Dynamics in Models Across Scales II Oral

Lei Zhao, University of Illinois at Urbana Champaign, Civil and Environmental Engineering, Urbana, IL, United States, TC Chakraborty, Pacific Northwest National Laboratory, Richland, WA, United States, Scott E. Krayenhoff, University of Guelph, Guelph, ON, Canada, Chenghao Wang, University of Oklahoma, School of Meteorology; Department of Geography and Environmental Sustainability, Norman, OK, United States and Keer Zhang, Yale University, School of the Environment, New Haven, CT, United States

Session Proposal

- *Thursday, 12 December 2024*
- *16:00 – 17:30*
- *Salon A (Convention Center)*

A42A
Advances in Cloud and Precipitation Processes: Integrating Observations, Modeling, and Theory II Oral

Dr. Yongjie Huang, PhD, University of Oklahoma Norman Campus, Center for Analysis and Prediction of Storms (CAPS), Norman, United States, Chunsong Lu, Nanjing Univerisity of Information Science and Technology (NUIST), Nanjing, China, Peng Wu, Pacific Northwest National Laboratory, Richland, WA, United States, Xiaojian Zheng, Argonne National Laboratory, Argonne, United States, Yi Huang, The University of Melbourne, School of Geography, Earth and Atmospheric Sciences and ARC Centre of Excellence for Climate Extremes, Melbourne, Australia, Yangang Liu, Brookhaven National Laboratory, Upton, NY, United States, Timothy Logan, Texas A&M University, College Station, United States, Greg M McFarquhar, Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma, Norman, United States, Jianhao Zhang, National Oceanic and Atmospheric Administration (NOAA), Chemical Sciences Laboratory, Boulder, United States; University of Colorado, Cooperative Institute for Research in Environmental Sciences (CIRES), Boulder, United States, Chuanfeng Zhao, Peking University, Department of Atmospheric and Oceanic Sciences, Beijing, China, Jingjing Tian, Pacific Northwest National Laboratory, Atmospheric Rsch &

Measurments, Richland WA, United States and Jonathan H. Jiang, NASA Jet Propulsion Laboratory, Pasadena, CA, United States
Session Proposal

- *Thursday, 12 December 2024*
- *10:20 – 11:50*
- *201 (Convention Center)*

[A43O](#)
[Advances in Cloud and Precipitation Processes: Integrating Observations, Modeling, and Theory III](#)
Oral
Dr. Yongjie Huang, PhD, University of Oklahoma Norman Campus, Center for Analysis and Prediction of Storms (CAPS), Norman, United States, Chunsong Lu, Nanjing Univerisity of Information Science and Technology (NUIST), Nanjing, China, Peng Wu, Pacific Northwest National Laboratory, Richland, WA, United States, Xiaojian Zheng, Argonne National Laboratory, Argonne, United States, Yi Huang, The University of Melbourne, School of Geography, Earth and Atmospheric Sciences and ARC Centre of Excellence for Climate Extremes, Melbourne, Australia, Yangang Liu, Brookhaven National Laboratory, Upton, NY, United States, Timothy Logan, Texas A&M University, College Station, United States, Greg M McFarquhar, Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma, Norman, United States, Jianhao Zhang, National Oceanic and Atmospheric Administration (NOAA), Chemical Sciences Laboratory, Boulder, United States, Chuanfeng Zhao, Peking University, Department of Atmospheric and Oceanic Sciences, Beijing, China, Jingjing Tian, Pacific Northwest National Laboratory, Atmospheric Rsch & Measurments, Richland WA, United States and Kuan-Man Xu, NASA Langley Research Center, Hampton, VA, United States
Session Proposal

- *Thursday, 12 December 2024*
- *14:10 – 15:40*
- *201 (Convention Center)*

[GC44B-01](#)
[Annual forest cover changes and drivers in the Southwestern United States during 2015-2022 from Analysis of PALSAR, Landsat, and LiDAR dataset](#)
Yuan Yao[1], Xiangming Xiao[2], Yuanwei Qin[1], Jie Wang[3] and Chenchen Zhang[4], (1)Department of Microbiology and Plant Biology, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States, (2)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States, (3)College of Grassland Science and Technology,China Agricultural University, Beijing, China, (4)School of Biological Sciences, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States
Abstract

- *Thursday, 12 December 2024*
- *16:05 – 16:15*
- *Salon H (Convention Center)*

[Quantifying urban heat risks through the lens of metrics and indices](#)
Fengwei Hung[1], Jiaorui Zhang[2,3], Danielle Wood[1] and Mohamed Aboelnour[4], (1)University of Notre Dame, Environmental Change Initiative, Notre Dame, United States, (2)University of Notre Dame, Notre Dame, United States, (3)University of Oklahoma, Norman, United States, (4)University of Notre Dame, Department of Civil and Environmental Engineering and Earth Sciences, Notre Dame, IN, United States
Abstract

- Thursday, 12 December 2024
- 13:40 – 17:30

- Hall B-C (Poster Hall) (Convention Center)

Posterior Exploration and Predictive Analysis of Bayesian Finite-Fault Earthquake Models

Jose Viteri Lopez and Junle Jiang, University of Oklahoma Norman Campus, School of Geosciences, Norman, United States
Abstract
- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Enhancing Subseasonal Precipitation Forecasts through a Hybrid Deep Learning and Statistical Approach

Lujun Zhang, Tiantian Yang, Kendra M Dresback, Christine Szpilka and Randall Lee Kolar, University of Oklahoma Norman Campus, School of Civil Engineering and Environmental Science, Norman, United States
Abstract
- Thursday, 12 December 2024
- 08:30 – 12:20
- Hall B-C (Poster Hall) (Convention Center)

Satellite-Based Gross Primary Production Modeling for Enhanced Sugarcane Yield Estimation

Jorge Andres Celis, University of Oklahoma Norman Campus, Norman, OK, United States, Xiangming Xiao, University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States, Pradeep Wagle, USDA-ARS, Grazinglands Research Laboratory, El Reno, United States, Paul White, USDA ARS, Houma, LA, United States, Nishan Bhattarai, University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States and Brenda Tubana, Louisiana State University, Baton Rogue, United States
Abstract
- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Innovative Process-Oriented Vertical Profiling for Improved QPE in Flash-Flooding Storms

Jiaxi Hu, Cooperative Institute for Severe and High-Impact Weather Research and Operations, University of Oklahoma, and NOAA/OAR National Severe Storms Laboratory, Norman, Oklahoma, Norman, United States, Pengfei Zhang, Cooperative Institute for Mesoscale Meteorological Studies, University of Oklahoma, Norman, OK, United States and Alexander Ryzhkov, Cooperative Institute for Severe and High-Impact Weather Research and Operations, Norman, United States
Abstract
- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

TASZERS Findings Energize ARM Cloud Retrievals

Connor J. Flynn, University of Oklahoma Norman Campus, Norman, United States, Stephen H Jones, Aerodyne Research Inc., Billerica, MA, United States, Zachary Payne, Aerodyne Research, Inc., Billerica, United States and Timothy Bruce Onasch, Aerodyne Research, Inc., Billerica, MA, United States
Abstract
- *Thursday, 12 December 2024*
- *08:00 – 17:30*

- *iPoster Gallery (Online)*

GC44A-03
Enhancing the Representation of Hydrological Processes in an Urban Canopy Model: A Multi-parameterization Approach

Yuqi Huang, University of Oklahoma, School of Meteorology, Norman, OK, United States and Chenghao Wang, University of Oklahoma, School of Meteorology; Department of Geography and Environmental Sustainability, Norman, OK, United States
Abstract
- *Thursday, 12 December 2024*
- *16:25 – 16:35*
- *Salon A (Convention Center)*

H43U-06
Field-scale irrigation technology maps for the U.S., 2000-2020

Yanhua Xie, University of Oklahoma, Geography and Environmental Sustainability, Norman, United States, Tyler J Lark, University of Wisconsin - Madison, Center for Sustainability and the Global Environment (SAGE), Nelson Institute for Environmental Studies, Madison, WI, United States, Lu Liang, University of California Berkeley, Department of Landscape Architecture & Environmental Planning, Berkeley, United States, Xiaohui Yuan, University of North Texas, Computer Science and Engineering, Denton, United States, Richard G Niswonger, USGS Water Resources Mission Area, Menlo Park, United States and Jonathan Haynes, U.S. Geological Survey, Oregon Water Science Center, Portland, OR, United States
Abstract
- *Thursday, 12 December 2024*
- *14:50 – 14:58*
- *Salon B (Convention Center)*

NG41A-02
ClimSim-Online: A Large Multi-scale Dataset and Framework for Hybrid ML-physics Climate Emulation

Akshay Subramaniam[1], Sungduk Yu[2], Zeyuan Hu[1,3], Walter M Hannah[4], Liran Peng[2], Jerry Lin[5], Mohamed Aziz Bhouri[6], Ritwik Gupta[7], Björn Lütjens[8], Justus Will[9], Gunnar Behrens[10], Julius Johannes Marian Busecke[11], Nora Loose[12], Charles Stern[13], Tom Beucler[14], Bryce E Harrop[15], Helge Heuer[10], Benjamin R Hillman[16], Andrea M Jenney[17], Nana Liu Ciwro[18], Alistair White[19,20], Tian Zheng[21], Kuang Zhiming[22], Fiaz Ahmed[23], Elizabeth A Barnes[24], Noah Brenowitz[25], Christopher Stephen Bretherton[26], Veronika Eyring[10], Savannah Lee Ferretti[27], Nicholas Lutsko[28], Pierre Gentine[29], Stephan Mandt[30], J David Neelin[31], Rose Yu[32], Laure Zanna[33], Nathan M Urban[34], Janni Yuval[35], Ryan Abernathey[36], Pierre Baldi[37], Wayne Chuang[38], Yu Huang[6], Fernando Iglesias-Suarez[10], Sanket Jantre[39], Po-Lun Ma[40], Sara Shamekh[41], Guang Jun Zhang[42] and Michael Pritchard[25,43], (1)NVIDIA, Santa Clara, United States, (2)University of California Irvine, Earth System Science, Irvine, CA, United States, (3)Harvard University, Department of Earth and Planetary Sciences, Cambridge, MA, United States, (4)Lawrence Livermore National Laboratory, Livermore, CA, United States, (5)University of California, Irvine, Earth System Science, Irvine, United States, (6)Columbia University, Earth and Environmental Engineering, New York, United States, (7)University of California Berkeley, Berkeley, United States, (8)Massachusetts Institute of Technology, Cambridge, MA, United States, (9)University of California Irvine, Irvine, United States, (10)German Aerospace Center DLR Oberpfaffenhofen, Institute of Atmospheric Physics, Oberpfaffenhofen, Germany, (11)LDEO/Columbia University, NYC, United States, (12)Princeton University, Princeton, United States, (13)Lamont Doherty Earth Observatory, Columbia University, Palisades, United States, (14)University of Lausanne, Institute of Earth Surface Dynamics, Lausanne, Switzerland, (15)Pacific Northwest National Laboratory, Atmospheric, Climate, and Earth Sciences Division, Richland, United States, (16)Sandia National Laboratories,

Albuquerque, NM, United States, (17)Oregon State University, Corvallis, United States, (18)University of Oklahoma, The Cooperative Institute for Severe and High-Impact Weather Research and Operations (CIWRO), Norman, United States, (19)Potsdam Institute for Climate Impact Research, Potsdam, Germany, (20)Technical University of Munich, Munich, Germany, (21)Columbia University of New York, Palisades, United States, (22)Harvard University, Cambridge, United States, (23)University of California Los Angeles, Atmospheric and Oceanic Sciences, Los Angeles, United States, (24)Colorado State University, Department of Atmospheric Science, Fort Collins, United States, (25)NVIDIA Corporation, HPC*AI, Santa Clara, United States, (26)Allen Institute for AI, Seattle, United States, (27)University of California Irvine, Earth System Sciences, Irvine, United States, (28)UCSD, Scripps Institution of Oceanography, La Jolla, United States, (29)Columbia University, Department of Earth and Environmental Engineering, New York, NY, United States, (30)University of California Irvine, Computer Science, Irvine, United States, (31)University of California, Los Angeles, Dept. of Atmospheric and Oceanic Sciences, Los Angeles, United States, (32)University of California San Diego, La Jolla, CA, United States, (33)New York University, New York, NY, United States, (34)Brookhaven National Laboratory, Upton, United States, (35)Google, Mountain View, United States, (36)Lamont-Doherty Earth Observatory, Palisades, United States, (37)University of California Irvine, Information and Computer Sciences, Irvine, United States, (38)Columbia University, New York City, United States, (39)Brookhaven National Laboratory, Computational Science Initiative, Upton, NY, United States, (40)Pacific Northwest National Laboratory, Richland, WA, United States, (41)New York University, CAOS, Courant Institute of Mathematical Sciences, New York, NY, United States, (42)Scripps Institution of Oceanography, La Jolla, United States, (43)University of California Irvine, Earth System Science, Irvine, United States

Abstract

- *Thursday, 12 December 2024*
- *08:41 – 08:52*
- *Marquis 12-13 (Marriott Marquis)*

PP44B-01

Hydroclimate Trends Since the Little Ice Age in the Tropical-Subtropical Atlantic from Coral Oxygen Isotope Ratios

Dr. Kristine L DeLong, Ph.D.[1,2], Amy J Wagner[3], Kylie Palmer[1], Nina Susich[4], Alexander Ryan[5], Alethia Kielbasa[6], Elinor R Martin[6] and Niall C. Slowey[7], (1)Louisiana State University, Department of Geography and Anthropology, Baton Rouge, LA, United States, (2)Louisiana State University, Coastal Studies Institute, Baton Rouge, LA, United States, (3)California State University Sacramento, Department of Geology, Sacramento, United States, (4)Louisiana State University, Department of Geography and Anthropology, Baton Rouge, United States, (5)California State University Sacramento, Sacramento, United States, (6)University of Oklahoma, School of Meteorology, Norman, United States, (7)Texas A&M University, Oceanography, College Station, United States

Abstract

- *Thursday, 12 December 2024*
- *16:00 – 16:10*
- *101 (Convention Center)*

A43Z-02

Dry Environmental Air Accelerates Tropical Cyclogenesis through Radiative Feedbacks

Shun-Nan Wu, University of Oklahoma Norman Campus, Norman, United States and Brian Soden, University of Miami, Miami, FL, United States

Abstract

- *Thursday, 12 December 2024*
- *14:23 – 14:34*
- *202 A (Convention Center)*

B42A-03
Tracking Desert Locust Swarms Using Doppler Weather Radars (DWR)

Anjita N a[1], J. Indu[1,2], Thiruvengadam Padmanabhan[3], Vishal Dixit[2], Arpita Rastogi[4] and Bagavath Singh Arul Malar Kannan[4], (1)Indian Institute of Technology Bombay, Civil Engineering, Mumbai, India, (2)Indian Institute of Technology Bombay, Centre for Climate Studies, Mumbai, India, (3)University of Oklahoma, School of Meteorology, Norman, Oklahoma, United States, (4)Indian Meteorological Department, New Delhi, India

Abstract

- *Thursday, 12 December 2024*
- *10:50 – 11:00*
- *151 A (Convention Center)*

MR43B-03
Energy Evolution During Stick-Slip Events on Rough Experimental Faults

Doron Morad, University of California Santa Cruz, Earth and Planetary Sciences, Santa Cruz, United States, Ze'ev Reches, University of Oklahoma, School of Geosciences, Norman, OK, United States, Amir Sagy, Geological Survey of Israel, Jerusalem, Israel and Yossef H Hatzor, Ben-Gurion University of the Negev, Department of Earth and Environmental Sciences, Beer Sheva, Israel

Abstract

- *Thursday, 12 December 2024*
- *14:30 – 14:40*
- *Marquis 1-2 (Marriott Marquis)*

MR44A-05
Foreshocks and heterogeneous fault deformation in lab-quakes investigated with slow-motion videos and acoustic emissions

Nicola Tisato, University of Texas at Austin, Austin, TX, United States, Benoit Cordonnier, ESRF European Synchrotron Radiation Facility, Grenoble, France, Isabelle Lambert, The University of Texas at Austin, Austin, United States, Brett Carpenter, University of Oklahoma Norman Campus, School of Geosciences, Norman, United States and Ze'ev Reches, University of Oklahoma, School of Geosciences, Norman, OK, United States

Abstract

- *Thursday, 12 December 2024*
- *16:40 – 16:50*
- *Marquis 1-2 (Marriott Marquis)*

NS44A-08
Machine learning transfer across different seismic datasets: a key step to subsurface critical lithologies and reservoir productivity/injectivity early prediction in project's timeline

Marcus Maas, PETROBRAS, Rio De Janeiro, Brazil, Heather Bedle, University of Oklahoma, School of Geoscienes, Norman, OK, United States and Elayne Maas, Universidade Federal do Ceará, Fortaleza, Brazil

Abstract

- *Thursday, 12 December 2024*
- *17:20 – 17:30*
- *146 A (Convention Center)*

Moho Depth Variations and Seismic Structures in the Crust and Uppermost Mantle of the Central Midcontinent, USA

Hongyu Xiao, University of Illinois at Urbana Champaign, Department of Geology, Urbana, United States; University of Oklahoma, Norman,OK, United States, Stephen Marshak, University of Illinois at

Urbana Champaign, Urbana, IL, United States and Xiaodong Song, School of Earth and Space Sciences, Peking University, Beijing, China

Abstract
- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Overwhelming wetland reclamation suffer severe flood risks in China in the 21st century

Xi Zhang[1], Jinwei Dong[1], Yiqun Shang[2], Xinxin WANG[3] and Xiangming Xiao[4], (1)Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China, (2)Faculty of Science and Engineering, University of Nottingham Ningbo China, Ningbo, China, (3)Fudan University, Shanghai, China, (4)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States

Abstract
- Thursday, 12 December 2024
- 08:30 – 12:20
- Hall B-C (Poster Hall) (Convention Center)

Optimizing Laboratory Measurements for Below-Ground Soil CO_2 Isotopes

Martha Jimenez-Castaneda[1], Janine Sparks[1], Jordan Jones[1] and Timothy R Filley[2], (1)The University of Oklahoma, Norman, United States, (2)The University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States

Abstract
- *Thursday, 12 December 2024*
- *08:00 – 17:30*
- *iPoster Gallery (Online)*

Linking Climate Change and Water Quality During Low-flows to Implications for Aquatic Ecology and Instream Flow Management Across the United States

Charlotte I Lee, North Carolina State University, Southeast Climate Adaptation Science Center, Raleigh, United States, Yog Aryal, Indiana University Bloomington, Midwest Climate Adaptation Science Center, Bloomington, United States, Megan Behnke, University of Alaska Southeast, Alaska Climate Adaptation Science Center, Juneau, United States, Jennifer Pensky, University of Colorado Boulder, North Central Climate Adaptation Science Center, Boulder, United States, Farah Nusrat, Utah State University, Southwest Climate Adaptation Science Center, Logan, United States and Joshua Wimhurst, University of Oklahoma, South Central Climate Adaptation Science Center, Norman, United States

Abstract
- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Strategic Deployment of a Single Mobile Weather Radar for the Enhancement of Meteorological Observation: A Coverage-Based Location Problem

Bikram Parajuli, University of Oklahoma Norman Campus, Department of Geography and Environmental Sustainability, Norman, United States and Xin Feng, University of Oklahoma Norman, Norman, United States

Abstract
- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Thirty years of 3-D urbanization in the Yangtze River Delta, China

Chenglong Yin[1,2], Ruishan Chen[1] and Xiangming Xiao[2], (1)East China Normal University, School of Geographic Sciences, Shanghai, China, (2)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

VPM v3.0 model and improved estimates of terrestrial gross primary production from individual eddy flux tower sites to the globe

Li Pan[1], Xiangming Xiao[2], Baihong Pan[3], Cheng Meng[4], Russell Doughty[5], Yuanwei Qin[6], Chenchen Zhang[3], Yuan Yao[6] and Chenglong Yin[7], (1)University of Oklahoma, School of Biological Sciences, Norman, United States, (2)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States, (3)School of Biological Sciences, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States, (4)University of Oklahoma Norman Campus, School of Biological Sciences, Norman, United States, (5)University of Oklahoma, College of Atmospheric and Geographic Sciences, Norman, United States, (6)Department of Microbiology and Plant Biology, Center for Earth Observation and Modeling, University of Oklahoma, Norman, United States, (7)East China Normal University, School of Geographic Sciences, Shanghai, China

Abstract

- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

Overview and Performance of Experimental Real-time RRFS Ensemble Forecasts and AI Products for Rainfall During Summer 2024

Andrew Berrington[1], Keith A Brewster[1], Jun Park[1], Ming Xue[1], Nathan Snook[1] and Marshall R Baldwin[2], (1)University of Oklahoma, Center for Analysis and Prediction of Storms, Norman, United States, (2)University of Oklahoma, School of Meteorology, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Influences of Urbanization on Tree Cover and Forest Structure Across Diverse West African Landscapes

Andrews Korah[1], Michael C Wimberly[1] and Sean Crowell[2], (1)University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States, (2)LumenUs Scientific, Oklahoma City, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Warming Experiment Impacts on Soil Moisture with Depth and Time: A Foundation for Future Syntheses

Jeffrey Beem-Miller, University of Michigan/Lawrence Berkeley National Laboratory, Ann Arbor, United States, Chabbi Abad, INRA Institut National de la Recherche Agronomique, Paris Cedex 07, France, Paul J Hanson, Oak Ridge National Laboratory, Environmental Sciences Division and Climate Change Science Institute, Oak Ridge, TN, United States, Peter Reich, University of Michigan, Institute

for Global Change Biology, Ann Arbor, United States, William J Riley, Lawrence Berkeley National Laboratory, Climate & Ecosystem Sciences Division, Berkeley, CA, United States, Andreas Schindlbacher, Bundes Forschungs Zentrum für Wald, Vienna, Austria, Michael W I Schmidt, University of Zurich, Department of Geography, Zurich, Switzerland, Edward Schuur, Northern Arizona University, Department of Biology, Flagstaff, AZ, United States, Serita D Frey, University of New Hampshire, Department of Natural Resources and the Environment, Durham, United States, Bjarni D. Sigurdsson, Agricultural University of Iceland, Borgarnes, Iceland, Margaret S Torn, Berkeley Lab/UC Berkeley, Berkeley, United States, Tana Wood, USDA Forest Service International Institute of Tropical Forestry, Luquillo, United States, Jizhong Zhou, University of Oklahoma, Norman, United States and Biao Zhu, Lawrence Berkeley National Laboratory, Berkeley, CA, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Soil health responses to land use change in the Peruvian Amazon

Martha Jimenez-Castaneda[1], Zachary Scott Brecheisen[1], Carmen Roman Perez[1], Yuri Arevalo Aranda[2], Julio Alegre[3], Darrell G Schulze[4] and Timothy R Filley[5], (1)The University of Oklahoma, Norman, United States, (2)Instituto Nacional de Innovación Agraria, Tarapoto, Peru, (3)Universidad Nacional Agraria La Molina, Lima, Peru, (4)Purdue University, West Lafayette, United States, (5)The University of Oklahoma, Department of Geography and Environmental Sustainability, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Linking Climate Change and Water Quality During Low-flows to Implications for Aquatic Ecology and Instream Flow Management Across the United States

Charlotte I Lee, North Carolina State University, Southeast Climate Adaptation Science Center, Raleigh, United States, Yog Aryal, Indiana University Bloomington, Midwest Climate Adaptation Science Center, Bloomington, United States, Megan Behnke, University of Alaska Southeast, Alaska Climate Adaptation Science Center, Juneau, United States, Jennifer Pensky, University of Colorado Boulder, North Central Climate Adaptation Science Center, Boulder, United States, Farah Nusrat, Utah State University, Southwest Climate Adaptation Science Center, Logan, United States and Joshua Wimhurst, University of Oklahoma, South Central Climate Adaptation Science Center, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Snow avalanche impacts on vegetation patterns in a changing climate

Erich Peitzsch, USGS, Northern Rocky Mountain Science Center, West Glacier, United States, Chelsea Martin-Mikle, University of Oklahoma Norman Campus, Norman, OK, United States, Jordy Hendrikx, Montana State University, Earth Sciences, Bozeman, MT, United States, Karl Birkeland, US Forest Service, National Avalanche Center, Bozeman, MT, United States and Daniel B Fagre, Emeritus, USGS Northern Rocky Mountain Science Center, West Glacier, United States

Abstract

- *Thursday, 12 December 2024*
- *13:40 – 17:30*
- *Hall B-C (Poster Hall) (Convention Center)*

Teleconnections and Regional Drivers of Flash Droughts in the Central United States

Daniel Mesheske, University of Oklahoma Norman Campus, Civil Engineering and Environmental Science, Norman, United States, Jordan Christian, University of North Dakota, Atmospheric Sciences, Grand Forks, United States, Jason C Furtado, University of Oklahoma, School of Meterology, Norman, OK, United States, Jeffrey B Basara, University of Massachusetts Lowell, Department of Earth, Environment, and Atmospheric Sciences, Lowell, MA, United States, Taylor M Grace, University of Oklahoma, School of Meteorology, Norman, OK, United States, Benjamin Fellman, University of Oklahoma, Rockville, MD, UNITED STATES and Paul X Flanagan, University of Oklahoma Norman Campus, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *08:30 – 12:20*
- *Hall B-C (Poster Hall) (Convention Center)*

The Impact of Anthropause During COVID-19 on the Activity of Avian Influenza Host Birds

Qiang Zhang[1,2], Jinwei Dong[1] and Xiangming Xiao[3], (1)Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China, (2)University of Chinese Academy of Sciences, Beijing, China, (3)University of Oklahoma Norman Campus, School of Biological Sciences, Center for Earth Observation and Modeling, Norman, United States

Abstract

- *Thursday, 12 December 2024*
- *08:00 – 17:30*
- *iPoster Gallery (Online)*