



San Francisco | 14 – 18 December 2015

My Schedule

UPCOMING

Prior

This is your personal schedule ONLY. Registration to attend the meeting or special events and sessions is required.

Items highlighted indicate a time conflict.

MONDAY, 14 DECEMBER 2015

10:50 - 11:05

📍 Moscone West - 2003



EP12B-03 Boron isotopes at the Shale Hills Critical Zone Observatory

Jerome Gaillardet¹, Johanna Noireaux², Pamela L Sullivan³, Grit Steinhofel⁴, Pascale Louvat¹ and Susan L Brantley⁴, (1)Institut de Physique du Globe de Paris, Paris, France, (2)Institut de Physique du Globe de Paris, Paris, France, (3)University of Kansas, Lawrence, KS, United States, (4)Earth and Environmental Systems Institute, Penn State, Univ. Pk, PA, United States

13:40 - 18:00

📍 Moscone South - Poster Hall



B13G-0702 The Paradox of High Subsurface [N₂O] and Low Surface Flux of N₂O to the Atmosphere

Julie N Weitzman and Jason P Kaye, The Pennsylvania State University, Department of Ecosystem Science and Management, University Park, PA, United States

TUESDAY, 15 DECEMBER 2015

08:00 - 12:20

📍 Moscone South - Poster Hall



H21C-1387 The tree water isoscape of a central Pennsylvania catchment: ecohydrologic patterns and processes

Katie Gaines, Pennsylvania State University Main Campus, Intercollege Graduate Degree Program in Ecology, University Park, PA, United States and **Kristen Marie Brubaker**, Hobart and William Smith College, Geneva, NY, United States

📍 Moscone South - Poster Hall



H21C-1383 The Activity of Deep Roots in Bedrock Fractures at the Susquehanna Shale Hills Critical Zone Observatory, USA

Elizabeth Ann Hasenmueller¹, **Xin Gu**², **Julie N Weitzman**², **Thomas S Adams**², **Gary E Stinchcomb**³, **David M Eissenstat**², **Susan L Brantley**² and **Jason P Kaye**², (1)Saint Louis University, Earth and Atmospheric Sciences, Saint Louis, MO, United States, (2)Pennsylvania State University Main Campus, University Park, PA, United States, (3)Murray State University, Murray, KY, United States

13:40 - 18:00

📍 Moscone South - Poster Hall



H23E-1624 Comparison of Two Conceptually Different Physically-based Hydrological Models – Looking Beyond Streamflows

Alain N Rousseau¹, **Alvaro Pardo Álvarez**¹, **Xuan Yu**², **Stephane Savary**¹ and **Christopher Duffy**³, (1)Institut National de la Recherche Scientifique-Eau Terre Environnement INRS-ETE, Quebec City, QC, Canada, (2)University of Delaware, Department of Geological Sciences, Newark, DE, United States, (3)The Pennsylvania State University, Department of Civil and Environmental Engineering, University Park, PA, United States

13:55 - 14:10

📍 Moscone West - 3020



H23J-02 Influence of Topography on Root Processes in the Shale Hills-Susquehanna Critical Zone Observatory

David M Eissenstat^{1,2}, **Alexandra S. Orr**^{1,2}, **Thomas S Adams**², **Weile Chen**^{1,2} and **Katie Gaines**^{1,2}, (1)Pennsylvania State University Main Campus, Intercollege Graduate Degree Program in Ecology, University Park, PA, United States, (2)Pennsylvania State University Main Campus, Department of Ecosystem Science and Management, University Park, PA, United States

18:15 - 19:15

📍 Moscone West - 2010



TH25D A Townhall for the Network of Critical Zone Observatories

Timothy White, Pennsylvania State University Main Campus, University Park, PA, United States, **Susan L Brantley**, Earth and Environmental Systems Institute, Penn State, Univ. Pk, PA, United States, **Daniel Richter Jr**, Duke University, Nicholas School of the Environment, Durham, NC, United States, **Louis A Derry**, Cornell University, Earth and Atmospheric Sciences, Ithaca, NY, United States and **Steven A. Banwart**, University of Sheffield, Sheffield, United Kingdom

WEDNESDAY, 16 DECEMBER 2015

08:00 - 12:20

📍 Moscone South - Poster Hall



EP31A-0980 Towards an International Network of Critical Zone Observatories

Hangsheng Lin, Pennsylvania State University Main Campus, University Park, PA, United States

14:55 - 15:10

📍 Moscone West - 2003



EP33D-06 Water-regolith-energy Interaction in Landscape Evolution and Its Influence on Forming Asymmetric Landscape: An Example from the Shale Hills Critical Zone Observatory of Central Pennsylvania

Yu Zhang¹, Rudy L Slingerland¹, Yuning Shi¹, Christopher Duffy² and Nicole West³, (1)Pennsylvania State University Main Campus, University Park, PA, United States, (2)The Pennsylvania State University, Department of Civil and Environmental Engineering, University Park, PA, United States, (3)Georgia Institute of Technology Main Campus, Atlanta, GA, United States

16:00 - 16:15

📍 Moscone West - 2003



EP34A-01 Seeking GUTH, the Grand Unified Theory of Hillslopes: Linking Weathering, Erosion and Landscapes

Suzanne P Anderson¹, William E Dietrich², Daniella Rempe², Nicole West³, Susan L Brantley⁴, Allan R Bacon⁵, Heather L Buss⁶, Beth Fisher⁷, Brady A Flinchum⁸, W Steven Holbrook⁸, Peter Z Klos⁹, Matthias Leopold¹⁰, Seulgi Moon¹¹, Travis Nielson¹², Jon D Pelletier¹³ and Neil Terry¹⁴, (1)University of Colorado at Boulder, INSTAAR and Geography, Boulder, CO, United States, (2)University of California Berkeley, Berkeley, CA, United States, (3)Georgia Institute of Technology Main Campus, Atlanta, GA, United States, (4)Earth and Environmental Systems Institute, Penn State, Univ. Pk, PA, United States, (5)University of Florida, School of Forest Resources and Conservation, Ft Walton Beach, FL, United States, (6)University of Bristol, Bristol, United Kingdom, (7)University of Minnesota Twin Cities, Minneapolis, MN, United States, (8)University of Wyoming, Laramie, WY, United States, (9)University of Idaho, Moscow, ID, United States, (10)University of Western Australia, Crawley, WA, Australia, (11)University of California Los Angeles, Los Angeles, CA, United States, (12)Boise State University, Boise, ID, United States, (13)University of Arizona, Tucson, AZ, United States, (14)Rutgers University-Newark, Dept. of Earth and Environmental Sciences, Newark, NJ, United States

17:15 - 17:30

📍 Moscone West - 2003



EP34A-06 Quantifying present-day and long-term shale weathering rates across a latitudinal climosequence

Ashlee Laura Denton Dere¹, Elizabeth Andrews² and Timothy S White², (1)University of Nebraska at Omaha, Omaha, NE, United States, (2)Pennsylvania State University Main Campus, University Park, PA, United States

THURSDAY, 17 DECEMBER 2015

08:00 - 12:20

📍 Moscone South - Poster Hall



EP41C-0941 Microclimate controls on weathering: Insights into deep critical zone evolution from seismic refraction surveys in the Susquehanna Shale Hills Critical Zone Observatory

Nicole West, Georgia Institute of Technology Main Campus, Atlanta, GA, United States, Eric Kirby, Oregon State University, Corvallis, OR, United States, Andrew Nyblade, Penn St Univ, University Park, PA, United States and Susan L Brantley, Earth and Environmental Systems Institute, Penn State, Univ. Pk, PA, United States

13:40 - 18:00

📍 Moscone South - Poster Hall



ED43D-0885 Making Knowledge from Numbers : The Shale Network as an Honest Broker for Evaluating and Educating about the Impacts of Hydraulic Fracturing in the Marcellus Shale Region

Jon Pollak¹, **Sue Brantley**², **Jennifer Williams**², **Sharon Dykhoff**² and **Liza Ida Brazil**¹, (1)Consortium of Universities for the Advancement of Hydrological Science, Washington, DC, United States, (2)Pennsylvania State University, State College, United States

📍 Moscone South - Poster Hall



H43H-1635 Downscaling Satellite Data for Predicting Catchment-scale Root Zone Soil Moisture with Ground-based Sensors and an Ensemble Kalman Filter

Douglas C Baldwin, Pennsylvania State University Main Campus, University Park, PA, United States

FRIDAY, 18 DECEMBER 2015

11:35 - 11:50

📍 Moscone West - 3016



H52C-06 Using WITCH to determine the factors that govern shale weathering and solute fluxes in the Critical Zone

Pamela L Sullivan, University of Kansas, Lawrence, KS, United States, **Yves Godderis**, GET CNRS, Toulouse, France, **Yuning Shi**, Pennsylvania State University Main Campus, University Park, PA, United States, **Xin Gu**, Penn state university, State College, PA, United States, **Jacques Schott**, CNRS, Paris Cedex 16, France, **Christopher Duffy**, The Pennsylvania State University, Department of Civil and Environmental Engineering, University Park, PA, United States and **Susan L Brantley**, Earth and Environmental Systems Institute, Penn State, Univ. Pk, PA, United States

13:40 - 18:00

📍 Moscone South - Poster Hall



H53E-1703 Assimilating the Cosmic-Ray Soil Moisture Observing System Measurements for Land Surface Hydrologic Model Parameter Estimation Using the Ensemble Kalman Filter

Dacheng Xiao¹, **Yuning Shi**¹ and **Li Li**², (1)Pennsylvania State University Main Campus, University Park, PA, United States, (2)Pennsylvania State University Main Campus, John and Willie Leone Family Department of Energy and Mineral Engineering, University Park, PA, United States

📍 Moscone South - Poster Hall



H53E-1700 Understanding the Concentration-Discharge Relationship of Chloride and Magnesium in Shale Hills Using RT-Flux-PIHM

Chen Bao¹, **Li Li**², **Yuning Shi**¹, **Pamela L Sullivan**³, **Christopher Duffy**⁴ and **Susan L Brantley**⁵, (1)Pennsylvania State University Main Campus, University Park, PA, United States, (2)Pennsylvania State University Main Campus, John and Willie Leone Family Department of Energy and Mineral Engineering, University Park, PA, United States, (3)University of Kansas, Lawrence, KS, United States, (4)The Pennsylvania State University, Department of Civil and Environmental Engineering, University Park, PA, United States, (5)Earth and Environmental Systems Institute, Penn State, Univ. Pk, PA, United States

15:25 - 15:40

📍 Moscone West - 3016



H53K-08 Understanding How Nested Reaction Fronts under Watersheds Impact Flow, Transport, and Geomorphological Evolution: the Shale Hills Example

Susan L Brantley, *Earth and Environmental Systems Institute, Penn State, Univ. Pk, PA, United States* and **Pamela L Sullivan**, *University of Kansas, Lawrence, KS, United States*
