



Closed-System Pingo, North Slope, Alaska - Photo from USPA Educational Permafrost Gallery – JJ Frost



AGU Fall Meeting 2019

Permafrost Related Presentations



United States Permafrost Association (USPA) | Communications Committee
Compiled by Kristina Levine | Texas A&M University | GW Scientific

Table of Contents

Includes 314 presentations

Introduction.....	4
Monday, December 9 th	5
Morning Oral Presentations.....	5
Morning Poster Presentations.....	6
Afternoon Oral Presentations.....	8
Afternoon Poster Presentations.....	9
Tuesday, December 10 th	22
Morning Oral Presentations.....	22
Morning Poster Presentations.....	24
Afternoon Oral Presentations.....	28
Afternoon Poster Presentations.....	30
Wednesday, December 11 th	44
Morning Oral Presentations.....	44
Morning Poster Presentations.....	45
Afternoon Oral Presentations.....	46
Afternoon Poster Presentations.....	47
Thursday, December 12 th	49
Morning Oral Presentations.....	49
Morning Poster Presentations.....	51
Afternoon Oral Presentations.....	54
Afternoon Poster Presentations.....	58

Friday, December 13th 62

Morning Oral Presentations..... 62

Morning Poster Presentations..... 62

Afternoon Oral Presentations 66

Afternoon Poster Presentations 67

References 69

Introduction

This is a collection of all AGU Fall 2019 Conference Presentations that are related to permafrost. Presentations are in chronological order and were searched for on the [AGU Fall 2019 Meeting website](#) using the search terms listed below. The section, "First Author," is sometimes represented by the presenting author if the first author is not presenting. This document is searchable for other key terms of interest (i.e. groundwater) using "Ctrl+F". These permafrost related presentations will be included in future updates of the [Permafrost Monthly Alert \(PMA\) Program](#).

Search terms

- permafrost
- frozen ground
- frost action
- ground ice
- ice level
- ice wedge
- solifluction
- tundra soil
- cryosol
- periglacial
- cryoplanation
- permafrost + carbon

Compiled by the USPA

Communications Committee, Kristina
Levine (lead author)



2019 Annual USPA Meeting Sponsors



Monday, December 9th

Morning Oral Presentations

EP11B-01 Submarine Permafrost Dynamics Along the Arctic Shelf Edge

First Author: Charles K Paull (Oral Presentation)

08:00 - 08:20, Moscone West - 3009, L3

C12B-03 Coastal dynamics in the Kara Sea: spatial and temporal variability from small to large scales

First Author: Alisa Baranskaya (Oral Presentation)

10:50 - 11:05, Moscone West - 2006, L2

C12B-04 Development of a Tightly Coupled Multi-Physics Numerical Model for an Event-Based Understanding of Arctic Coastal Erosion

First Author: Diana L Bull (Oral Presentation)

11:05 - 11:20, Moscone West - 2006, L2

GC12C-04 Investigation of Boundary Layer Inversions, Urban Heat Island and Human Thermal Comfort Trends in Big Cities of Eastern Arctic: First Results (in Connection with UHIARC-Network Measurements)

First Author: Pavel Konstantinov (Oral Presentation)

11:05 - 11:20, Moscone West - 2007, L2

Morning Poster Presentations

B11P-2315 Deriving a More Detailed Vegetation Classification from NALCMS for Anchorage, Alaska

First Author: Monika P Calef (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

EP11C-2133 Using UAV imagery to characterize boulder distributions on hillslopes and in channels in the Appalachian Valley and Ridge to assess the role of resistant boulders in topographic preservation

First Author: Kristin Chilton (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

EP11C-2135 Annual Dynamics of Surface Morphology of Alluvial and Colluvial Fans in Central Svalbard and SE Iceland: Application of Time-series of UAV Images

First Author: Aleksandra Tomczyk (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC11L-1101 Adaptation of the Arctic limnosystems to the climate change

First Author: Irina Fedorova (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC11G-1135 Warming-induced Release of Greenhouse Gases From the Soil into the Atmosphere: How Consequential Can It Be?

First Autor: Mariia Alex Romanovskaya (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

H11H-1574 A Landslide Inventory for British Columbia (Canada) using SAR Interferometry

First Author: Manuele Pichierri (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

PA11C-0956 The Niwot Ridge Long Term Ecological Research Site: Over 30 years of alpine observations

First Author: John T Crawford (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

NS11B-0626 Geophysical Observations of Drained Permafrost Lake Taliks, North Slope, Alaska

First Author: Andy Parsekian (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

NS11B-0627 Geophysical Observations of Organic Matter and Soil Moisture Interactions during Freezing and Thawing of Alaskan Boreal Permafrost

First Author: Taylor D Sullivan (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

NS11B-0628 Improved Quantification of Soil Thermal and Physical Properties from Time-Series of Soil Temperature in Permafrost Environment

First Author: Carlotta Brunetti (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

NS11B-0633 Passive Seismic Monitoring of Arctic Environment.

First Author: Angelina Egorova (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

Afternoon Oral Presentations

H13H-05 Rock Glaciers: Un(der)-Explored Hydrologic Reservoirs and Climate Refugia

First Author: Connie Millar (Oral Presentation)

14:40 - 14:55, Moscone West - 3016, L3

PP14A-05 Miocene Climate-Carbon Cycle Dynamics: A Key to Understand Future Trends?

First Author: Ann Holbourn (Oral Presentation)

17:00 - 17:15, Moscone West - 2002, L2

B14B-08 Natural wetlands and the global methane cycle: Five decades of research presents interesting and surprising challenges for the future

First Author: Elaine Matthews (Oral Presentation)

17:10 - 17:20, Moscone West - 3003, L3

B14B-09 Whither Soil Carbon?

First Author: Eric A Davidson (Oral Presentation)

17:20 - 17:30, Moscone West - 3003, L3

Afternoon Poster Presentations

A13R-3100 Evaluation of ERA5 Atmospheric Reanalysis Datasets for Surface Climatology over the Tibetan Plateau

First Author: Yan Chen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

A13R-3110 The freeze/thaw process and the surface energy budget of the seasonally frozen ground in the source region of the Yellow River

First Author: Jingyuan Wang (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13E-2552 An Unrecognized Greenhouse Gas Emissions Feedback Loop: Nitrous Oxide Inhibits Microbial Methane Production

First Author: Yongchao Yin (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13G-2562 Sunlight and iron control the oxidation of DOC leached from permafrost soils

First Author: Jennifer C Bowen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13G-2576 Extraction efficiency and molecular characterization of organic matter from soils and sediments using high resolution mass spectrometry

First Author: Jason Toyoda (Poster Presentation)

13:40 - 18:00, N/A (but probably Moscone South - Poster Hall)

B13J-2420 New Global Datasets for Methane Modeling: Natural Wetlands, Lakes and Reservoirs

First Author: Vanessa B Genovese (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13K-2610 Energy and water balances in boreal forest with discontinuous permafrost: Implementation of a physically-based hydrological model at sites with varying disturbance histories

First Author: Adrienne Michelle Marshall (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13K-2611 Fine-scale Observations of Permafrost After Repeat Fires in Interior Alaska

First Author: Kristin Olson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13K-2612 Fire, ice, and the battle for lake dominance: Competing aquatic invertebrates in lakes with watersheds affected by forest fire, peat, and permafrost

First Author: Thomas Pretty (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13K-2619 Simulating soil carbon pools and fluxes in the boreal forests of Alaska using a new hybrid model of LANDIS-II and DAMM-MCNiPP

First Author: Melissa Sue Lucash (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13K-2621 Soil Respiration in very High Frequency Boreal wildfires as a Function of Species

First Author: Vishnu Kodicherla (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13L-2472 Investigating Global Scale Wetland and Non-Wetland Soil Methane Emissions and Sinks Using a Land Surface Model

First Author: Shijie Shu (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13L-2473 Mapping and Cataloging Geologic Sources of Greenhouse Gases Across the United States

First Author: Marc L Buursink (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B13N-2528 Spatially-explicit Estimate of Tibetan Permafrost Nitrogen Stock and Its Implication for Land Model

First Author: Dan Kou (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1342 Forecasting coastal hazards, risks, and impacts in Arctic Alaska - to promote sustainable adaptation

First Author: Thomas Ravens (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1357 Assessment of nitrogen dynamics in soil, vegetation, and surface water across successional stages of ice-wedge degradation and stabilization in the tundra of northern Alaska

First Author: Kelcy Kent (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1358 Dissolved organic matter dynamics across a gradient of ice-wedge degradation and stabilization, northern Alaska

First Author: Claire Griffin (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1360 Environmental interactions and feedbacks of degrading ice wedges and impacts on shallow ground temperatures in a high Arctic polar desert system

First Author: Melissa Karine Ward (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1361 Causes and Consequences of Catastrophic Lake Drainage in an Evolving Arctic System: First Year Activities and Initial Results

First Author: Kenneth M Hinkel (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1362 Groundwater Discharge in the Lagoons of Alaskan Beaufort Sea

First Author: Cansu Demir (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1372 Evaluation of Wildfire Initiated Thermokarst Degradation Using in-situ and Remotely Sensed Data at a site on the Seward Peninsula of Alaska

First Author: Robert Busey (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1390 Simulated the spatial and temporal distribution of freeze and thaw fronts

First Author: Ruichao Li (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1335 Coastal erosion at Western Yamal, Russia, under climate changes and anthropogenic impact

First Author: Nataliya Belova (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1336 Rates and Patterns of Shoreline Change Along the Arctic Coast of Alaska: Bering Strait to the U.S. Canadian Border

First Author: Ann Gibbs (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1339 Bluff geometry and material variability influence stress states relevant to coastal permafrost bluff failure

First Author: Matthew A. Thomas (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1340 Engineering Challenges and Options in Remediation and Prevention of Permafrost Coastal Erosion

First Author: Ming Xiao (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1343 Geochemical characterization of eroding coastal permafrost and organic matter fluxes to the Beaufort Sea near Drew Point, Alaska

First Author: Emily M Bristol (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1344 Nutrient fluxes from deglaciated versus proglacial Greenlandic watersheds

First Author: Shaily Rahman (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1345 Impact of the length of the sea ice-free summer season on Alaskan Arctic coastal erosion rates

First Author: Matthew Wiseman (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1351 An emerging international network focused on permafrost coastal systems in transition

First Author: Benjamin M Jones (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1352 NUNATARYUK: Permafrost Thaw and the Changing Arctic Coast - Science for Socio-Economic Adaptation

First Author: Anna M. Irrgang (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13D-1353 Rights Resilience and Community-led Relocation: Co-producing Knowledge To Identify Risk

First Author: Jacquelyn Overbeck (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1354 The Permafrost Monthly Alert (PMA) Program: Improving Reference Searches Now and in the Future

First Author: Michael R Lilly (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1355 Tundra wildfire triggers long-term lateral nitrogen loss

First Author: Benjamin W Abbott (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1356 Ecological indicators of near-surface permafrost habitat at the southern margin of the boreal forest in China

First Author: Yongyu Yue (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1359 Self-organization of ice-wedge systems during their formation and degradation

First Author: Daniel Fortier (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1363 Characterizing Runoff Regimes in Subarctic Wetland-Dominated Landscapes: Application to the Hudson Bay Lowlands, Canada

First Author: Kenneth M Hinkel (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1364 Changes to streamflow variability observed in continuous permafrost watersheds in remote Arctic location

First Author: Svetlana L. Stuefer (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1365 Potential mechanistic causes of increased baseflow across northern Eurasia rivers underlain by permafrost

First Author: Sarah G. Evans (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1366 Thaw dynamics of a rapidly degrading isolated permafrost plateau in south-central Alaska

First Author: Joel Eklof (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1367 Impacts of forest fires on the active layer thickness and near-surface permafrost temperatures in the northern Da Xing'anling (Hinggan) Mountains, NE China

First Author: Xiaoying Li (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1368 Navigating Disturbance Regimes in the New Arctic

First Author: Mark J Lara (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1369 Accounting for spatial heterogeneity of freeze/thaw cycles in surface state retrieval for permafrost landscapes

First Author: Helena Bergstedt (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1370 Post-wildfire surface deformation at Batagay, Eastern Siberia: detection by L- and C-band InSAR and preliminary report of field observations

First Author: Masato Furuya (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1371 Thermokarst subsidence in Central Yakutia revealed by ALOS/ALOS-2 InSAR analysis

First Author: Ke Takahiro Abe (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1373 Permafrost Discovery Gateway: A web platform to enable discovery and knowledge-generation of permafrost Big Imagery products

First Author: Benjamin M Jones (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1374 Big Imagery as a Resource to Understand Patterns, Dynamics, and Vulnerability of Arctic Polygonal Tundra

First Author: Md Abul Ehsan Bhuiyan (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1375 Assessing the Utility of Three Calibration Methods for Digital Elevation Models (DEMs)

First Author: Diana Morgana Miller (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1376 High Resolution Digital Terrain Models Provide Multi-Dimensional Perspective on Thaw Slump-driven Transformation of Permafrost Terrain in the Canadian Western Arctic.

First Author: Jurjen van der Sluijs (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1377 Time Series Analyses of Interior Alaska Thermokarst Using Airborne and Terrestrial Lidar

First Author: Christopher A Hiemstra (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1378 Lateral Thermokarst Lake Dynamics: A Remote Sensing Based Analysis of Spatial Variabilities and Erosion Processes

First Author: Soraya Kaiser (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1380 Mapping Retrogressive Thaw Slumps on the Tibetan Plateau using Sentinel-2 images and Deep Learning

First Author: Lingcao Huang (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1381 Influences of topography on permafrost meltwater

First Author: Nicholas aksel Wondolowski (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1383 Frost Degree-Day Mapping over Permafrost Soils in the Arctic Boreal Zone from Multifrequency Passive Microwave Radiometry

First Author: Nick Steiner (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1384 Electrical Resistivity Imaging Reveals Thawed Substrate Beneath and Across an Entire Arctic Lagoon within Continuous Permafrost

First Author: Micaela Nicole Pedrazas (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1385 New Estimates of Future Permafrost Extent and Corresponding Carbon Feedbacks

First Author: Oliver W Frauenfeld (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1386 Coupling of Snow and Freeze-Thaw Processes to Model Permafrost State in a Timberline Ecotone

First Author: Wenbo Zhou (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1387 Evaluating Integrated Surface/Subsurface Permafrost Thermal Hydrology Models Against Field Data in Polygonal Tundra

First Author: Ahmad Jan (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1388 Insights from Integrated Thermal Hydrology Simulations of an Arctic Watershed with Isolated Permafrost

First Author: James Beisman (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1389 Projected near-surface permafrost degradation over northern North America based on Canadian regional climate model simulations

First Author: Dae Il Jeong (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1391 Geologic Terrain Unit and Geohazards Mapping, Arctic Strategic Transportation and Resources (ASTAR) Project, North Slope, Alaska

First Author: Susan Wilson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C13E-1392 Goldstream Valley Permafrost Map

First Author: Ronald P Daanen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

ED13D-0912 Virtual Reality Modeling of the CRREL Permafrost Tunnel for Online Education on Permafrost and Climate Change

First Author: Conner M Truskowski (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

G13B-0540 Tectonic Deformation and Surface Processes Across the Tibetan Plateau: Insights from Time Series Analysis of Sentinel-1 InSAR Data

First Author: Robert Wayne Zinke (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H13N-1928 Impact of Clay Addition Size on Hyporheic Exchange During Bedform Migration

First Author: Yoni Teitelbaum (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H13Q-1989 Stochastic model of water table depth in snow-dominated and hydrologically connected ecosystems

First Author: Rachel Sophia Lonchar (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

MR13D-0098 Thermophysical & Rheological Properties of Natural Gas Hydrates

First Author: Carolyn Koh (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

Tuesday, December 10th

Morning Oral Presentations

Join Us! USPA 2019 Annual Meeting - December 10, 2019 8:30 to 10:30 pm -
ThirstyBear Brewing Company

B21E-01 Long-Term Local Ecological Change in the Klondike Exposed with Permafrost eDNA.

First Author: Sabrina Shirazi (Oral Presentation)

08:00 - 08:15, Moscone West - 3012, L3

C21B-01 Results from the First National Glacier Inventory of Argentine Andes

First Author: Laura Viviana Zalazar (Oral Presentation)

08:00 - 08:15, Moscone West - 2008, L2

C22C-01 High Potential for Loss of Circumpolar Pingos, Ice-wedge Polygons and Rock Glaciers due to Climate Change

First Author: Olli Karjalainen (Oral Presentation)

10:20 - 10:35, Moscone West - 2006, L2

C22C-02 Identification of Regions Susceptible to Thermokarst Initiation due to “Climate Priming” on the Alaskan Arctic Coastal Plain

First Author: Bob Bolton (Oral Presentation)

10:35 - 10:50, Moscone West - 2006, L2

C22C-03 Long-term monitoring of permafrost degradation documents two forms of landscape response

First Author: Louise Melanie Farquharson (Oral Presentation)

10:50 - 11:05, Moscone West - 2006, L2

EP22A-03 Deciphering the Controls of the Rate and Spatial Distribution of Rockwall Slope Erosion in the NW Himalaya

First Author: Elizabeth Orr (Oral Presentation)

10:50 - 11:05, Moscone West - 3009, L3

C22C-04 Induced polarization as a new tool to monitor the degradation of permafrost

First Author: Andre Revil (Oral Presentation)

11:05 - 11:20, Moscone West - 2006, L2

C22C-05 Seasonal dynamics of permafrost landscapes: InSAR ground displacements and controlling factors documented by in situ and Sentinel-1/-2 remote sensing data

First Author: Line Rouyet (Oral Presentation)

11:20 - 11:35, Moscone West - 2006, L2

C22C-06 Reduced winter off-road tundra travel under climate change

First Author: Anne Gaedeke (Oral Presentation)

11:35 - 11:50, Moscone West - 2006, L2

C22C-07 Towards First pan-Arctic Ice-wedge Polygon Map: Understanding the Synergies of Data Fusion and Deep Learning in Automated Ice-wedge Polygon Detection from High Resolution Commercial Satellite Imagery

First Author: Chandni Witharana (Oral Presentation)

11:50 - 12:05, Moscone West - 2006, L2

Morning Poster Presentations

A21N-2756 Modeling Millennial Time Scale Changes in Water Balance of Mesoscale Watersheds within Permafrost Regions

First Author: Matvey Vladimirovich Debolskiy (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B21G-2420 Modelling lateral transport of riverine organic carbon as a link of terrestrial carbon and hydrology within MPI-ESM

First Author: Swati Gehlot (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B21K-2377 Warming does not lead to soil carbon loss in alpine grasslands on the Tibetan Plateau

First Author: Biao Zhu (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

C21E-1494 Ice Sheet-Moderated Changes in the Precipitation Isotope Climatology of NW Canada during the Late Deglacial

First Author: Spruce W Schoenemann (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

EP21E-2199 CHARACTERIZING SURFACE ROUGHNESS ON PERIGLACIAL ALLUVIAL FANS IN THE AKLAVIK RANGE, NORTHWEST TERRITORIES, AS AN ANALOG FOR COLD AND ICY MARTIAN FANS

First Author: Diane Wagner (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

EP21E-2210 Periglacial Fans in the Aklavik Range, Northwest Territories: An Analog Depositional Environment for a Cold and Icy Mars

First Author: Frances Rivera-Hernandez (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

EP21E-2212 Potential Freeze-Thaw Paleolakes and Channels on the Floor of Lyot Crater, Mars

First Author: Natalie Hanson Glines (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21E Environmental, Socioeconomic, and Climatic Changes in Northern Eurasia II Posters

First Author: Pavel Groisman (Session)

08:00 - 12:20, Moscone South - Poster Hall

GC21E-1274 Future nitrogen availability and its effect on carbon sequestration in Northern Eurasia

First Author: David W Kicklighter (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21E-1276 Influence of engineering-cryogenic processes on the infrastructure of the Arctic due to climatic changes and increasing antropogenic impact

First Author: Valery I Grebenets (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21E-1278 Remote Sensing approaches for assessing vegetation stocks and short-term fluxes in the Sub-Arctic permafrost landscape of the Lena River Delta (Siberia)

First Author: Birgit Heim (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21E-1279 Understanding changes in river flow to the Arctic Ocean from Eurasia using hydrological modeling

First Author: Alexander I Shiklomanov (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21E-1280 Response of permafrost temperature regime in the North-Eastern Yakutia to the recent climate changes.

First Author: Alexander L Kholodov (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21E-1282 Monitoring of Post-fire Effects and Vegetation Recovery in Larch Forests of Central Siberia Using Remote Sensing Observations

First Author: Evgeny Shvetsov (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21E-1291 Formation of technogenic rock glaciers in mining areas of the Russian cryolithozone

First Author: Vasiliy Andreevich Tolmanov (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC21I-1375 Mapping Built-up Areas in the Arctic at 10 m by Fusing Sentinel-2 and VIIRS Nighttime Lights Data

First Author: Chang Liu (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

H21H-1836 Hydrogeological issues associated with nuclear wastes geological repository in clay rocks. Example of CigÃ©o project - France

First Author: Abdelhakim Benabderrahmane Sr (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

H21N-1954 Remotely sensed discharge and sediment flux of the Sagavanirktok River

First Author: Theodore Langhorst (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

NS21C-0834 Imaging the structure of solifluction lobes in the Garner Run Subcatchment of the Susquehanna Shale Hills Critical Zone Observatory using 2D Seismic Refraction Tomography

First Author: Angelo Tarzona (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

NS21C-0835 The Use of Electrical Resistivity Tomography (ERT) to Image Solifluction Lobes in the Garner Run Subcatchment of The Susquehanna Shale Hills Critical Zone Observatory

First Author: Aisha Rodriguez (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

PA21D-1146 Reducing Methane Leakages by Filtering Contaminated Air

First Author: Hal Gokturk (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

Afternoon Oral Presentations

C22C-08 Examining Environmental Gradients in permafrost regions - achievements of the ESA DUE GlobPermafrost project and first results from ESA CCI+ Permafrost

First Author: Annett Bartsch (Oral Presentation)

12:05 - 12:20, Moscone West - 2006, L2

B24C-01 Fire and Ice - the impacts of changing boreal fire regimes and permafrost loss on carbon stocks and stability

First Author: Catherine M Dieleman (Oral Presentation)

16:00 - 18:00, Moscone West - 3007, L3

C24B-02 Does Tundra Fire Accelerate Drainage of Lakes in Discontinuous Permafrost? Evidence from the Yukon-Kuskokwim Delta, Alaska

First Author: Gerald V Frost Jr (Oral Presentation)

16:15 - 16:30, Moscone West - 3024, L3

PA24A-03 Importance of cross-border team science in permafrost research for risk mitigation

First Author: Louise Melanie Farquharson (Oral Presentation)

16:27 - 16:37, Moscone South - 301-302, L3

GC24C-04 Regional impacts of water cycle changes on permafrost eco-hydrological environment in north-eastern Eurasia

First Author: Yoshihiro Iijima (Oral Presentation)

16:45 - 17:00, Moscone West - 2010, L2

C24B-05 The Impact of Freeze-Thaw Cycles on Soil Porosity in Permafrost-Affected Soils

First Author: Erin Rooney (Oral Presentation)

17:00 - 17:15, Moscone West - 3024, L3

GC24C-05 Interactions Between Topography, Permafrost, and Vegetation in Siberian Larch Forest: a Simulation Study

First Author: Hisashi Sato (Oral Presentation)

17:00 - 17:15, Moscone West - 2010, L2

C24B-06 Predictable Soil Stratigraphy of the Upper Thawed Layer in Permafrost Terrain Controls Hydrological Flows and Dynamics

First Author: Michael O'Connor (Oral Presentation)

17:15 - 17:30, Moscone West - 3024, L3

C24B-07 Incorporating the Seasonal Snowpack into Thermo-Hydrologic Modeling of Frozen Ground at Niwot Ridge, CO

First Author: Michael (Mickey) Rush (Oral Presentation)

17:30 - 17:45, Moscone West - 3024, L3

C24B-08 Understanding the importance of water and ice dynamics at a thermokarst site with novel geophysical observations

First Author: Stephanie R. James (Oral Presentation)

17:45 - 18:00, Moscone West - 3024, L3

GC24C-08 Wildfire as a Driver of Permafrost Degradation in Boreal and Tundra Ecosystems of Alaska, Siberia and Northeast China: Implications for Environmental and Socio-Economic Impacts.

First Author: Sergey S Marchenko (Oral Presentation)

17:45 - 18:00, Moscone West - 2010, L2

Afternoon Poster Presentations

B23G Arctic Land Surface Energy Fluxes and Their Impact on the Earth System Under Current and Future Conditions I Posters

First Author: Jacqueline Oehri (Session)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2485 Altering seasonal transition of surface energy fluxes in larch forest on permafrost: warming spring and wetting autumn

First Author: Ayumi Kotani (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2486 Arctic tundra and boreal forest surface energy balance retrieval using a thermal-based remote sensing model

First Author: Jordi Cristobal (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2488 Differences in transpiration between high latitude upland and floodplain shrubs: implications for ecosystem energy balance

First Author: Heather Kropp (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2489 Forest density influences on surface energy and soil thermal dynamics in Siberian larch forests underlain by permafrost

First Author: Michael M Loranty (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2490 Hydrological intensification causes multiple ecosystem effects in the Arctic

First Author: Torben R Christensen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2491 Modeling Active Layer Depth of Permafrost under Changing Surface Boundary Conditions

First Author: Jingfeng Wang (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2492 Modeling Permafrost Sensitivity in Arctic Forest

First Author: Simone Maria StÅ½nzi (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2496 Surface Energy Budget Closure and Energy Fluxes at Two Arctic Terrestrial Sites

First Author: Andrey A Grachev (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23G-2499 Weighing Micro-Lysimeters Used to Quantify Dominant Vegetation Contributions to Evapotranspiration in the Arctic

First Author: Jason Clark (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23H Causes and Consequences of Changing Disturbance Regimes in Boreal Forests Across the Globe II Posters

First Author: Heather Dawn Alexander (Session)

13:40 - 18:00, Moscone South - Poster Hall

B23H-2517 Denitrification and Nitrous Oxide Production in Boreal Terrestrial and Aquatic Ecosystems Varying in Permafrost and Fire Disturbance History

First Author: Melanie Burnett (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23H-2518 Stream Chemistry Indicates Catchment Response to Disturbance and Regional Warming in the Boreal Forest

First Author: Adela Contreras (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23H-2519 Assessing land cover change and lowland vulnerability to permafrost thaw, altered fire regime, and hydrologic changes on Interior Alaska

First Author: Genet Helene (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23H-2527 Fire, Forest, Ice, and Fungi: Exploring the Mesh of Relationships that Drive Seedling Recruitment in the Siberian Arctic

First Author: Sarah Frankenberg (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23H-2528 Post-fire larch (*Larix cajanderi*) recruitment in central Siberia is highest in areas with increased fire severity

First Author: Alison Paulson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23H-2529 Post-fire larch recruitment patterns in the Siberian Arctic indicate forest loss in many areas

First Author: Heather Dawn Alexander (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23H-2530 Post-fire seedling recruitment in high-latitude Siberian Larch (*Larix cajanderi*) forests associated with lower graminoid composition

First Author: Jennie DeMarco (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23I Understanding the Interactions Between Hydrological and Biogeochemical Dynamics in Permafrost Environments with Observations and Models II Posters

First Author: Peter Munroe Douglas (Session)

13:40 - 18:00, Moscone South - Poster Hall

B23I-2532 Influences of Hillslope Biogeochemistry on Anaerobic Soil Organic Matter Decomposition in a Tundra Watershed

First Author: Michael J Philben (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23I-2533 Comparing soil moisture and geochemistry in continuous versus discontinuous permafrost watersheds in the Seward Peninsula, Alaska, USA.

First Author: Brent D Newman (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23I-2535 Seasonal evolution of active-layer thaw depth and streamflow chemistry in a permafrost catchment

First Author: Jan Franssen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23I-2536 Detecting catchment-scale permafrost degradation and biogeochemical regime change from high-frequency stream chemistry

First Author: Alex Webster (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23I-2537 Shifting bottom-up controls on food webs in streams draining permafrost landscapes of the Arctic

First Author: Jonathan A O'Donnell (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23I-2538 Permafrost Thaw as a Mechanism for Widespread pH Increase in Boreal Lakes: Isotopic and Geochemical Evidence

First Author: John J Gibson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23I-2540 Resolving Spatial and Temporal Greenhouse Gas Dynamics across a Heterogeneous Arctic Tundra Landscape in the Western Canadian Arctic

First Author: Carolina Voigt (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23J Ecology of the Cryosphere: Biological and Environmental Interactions in Seasonally and Permanently Cold Ecosystems II Posters

First Author: Megan Dillon (Session)

13:40 - 18:00, Moscone South - Poster Hall

B23J-2545 Investigating Drivers of High Latitude Soil Microbial Community Distributions Across an Alaskan Transect

First Author: Keith O'Connor (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23J-2552 Model sensitivity of fall and early winter carbon and nutrient cycling to topography, hydrology, and soil properties

First Author: Ian Shirley (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23J-2553 Arctic Permafrost Microbiomes: A Meta-Analysis

First Author: Megan Dillon (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23J-2555 Assembly of microbial communities in thawed permafrost and implications for carbon processing

First Author: Stacey Jarvis Doherty (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K The Resilience and Vulnerability of Arctic and Boreal Ecosystems to Climate Change VI Posters

First Author: Michelle C Mack (Session)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2449 Examining Tundra Greening from Ground-based to Satellite Observations

First Author: Karl F Huemmrich (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2450 Influence of Land Slumping from Permafrost Thaw on Lake Methane Emissions in the Yukon-Kuskokwim Delta, Alaska

First Author: Henry Churchill Henson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2459 Determining the Effects of Thermokarst Events on the Availability and Emissions of CH₄, CO₂ and N₂O in the YK Delta, Alaska

First Author: Aquanette Sanders (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2462 Scaling greenhouse gas emissions from freshwaters and identifying methane hotspots in the Yukon-Kuskokwim Delta

First Author: Sarah Ludwig (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2463 The Application of Machine Learning Algorithms and Landsat Data to Calculate Lake Depth in the Arctic Coastal Plain

First Author: Mary Aronne (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2470 Changes in Berry and Leaf Production Following a Tundra Wildfire

First Author: Ellis David Lyles (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2475 Characterizing Sources and Sinks of CO₂ and CH₄ Across Polygonal Tundra: A Multi-Scale Approach

First Author: Sigrid Dengel (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2476 Effects of Wildfire and Permafrost Thaw on Nitrous Oxide Fluxes from Boreal Peatlands in western Canada

First Author: Christopher Schulze (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23K-2480 Plant community shifts as early indicators of abrupt permafrost thaw and thermokarst development in interior Alaska lowlands.

First Author: William Cox (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23L-2504 Stability of fen and bog peatland types over the Holocene Epoch in the Hudson Bay Lowlands, Canada

First Author: Sarah A Finkelstein (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23L-2508 Rule of Plum: Comparison of lead-210 dates derived from Bayesian analysis and the Constant Rate of Supply model using simulated and real datasets

First Author: Nicole K Sanderson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23L-2510 Expert Assessment Suggests Global Peatlands Will Switch to a Carbon Source in Near Future

First Author: Julie Loisel (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M Vulnerability of Permafrost Carbon to Climate Change III Posters

First Author: Christina Schaedel (Session)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2564 Ancient C emissions from Arctic tundra: soil carbon isofluxes ($^{14}\text{CO}_2$) in response to long-term changes in winter snow depth

First Author: Robert G Jespersen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2565 Assessing the Degradation State of Soil Organic Matter in the Permafrost Region

First Author: Julie D Jastrow (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2566 Blowing snow impacts on permafrost temperature and greenhouse gas release in the terrestrial Arctic

First Author: Hotaek PARK (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2567 Contrasting Carbon and Nitrogen Stocks and Ice Contents along Two Arctic Hillslope Toposequences

First Author: Roser Matamala (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2568 CONTRIBUTIONS OF OPTICAL REMOTE SENSING TO PERMAFROST MAPPING IN DONNELLY TRAINING AREA, ALASKA

First Author: Kiran Thapa (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2569 Controls on organic matter degradation in thawing permafrost peatlands and subsequent greenhouse gas emissions

First Author: Roya AminiTabrizi (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2570 DOM Composition and Biodegradation from Diverse Permafrost End-members

First Author: Erin MacDonald (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2571 Estimating Soil Organic Carbon in the Active Layer of the Arctic Foothills Using Spaceborne InSAR Surface Deformation Data

First Author: Yue WU (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2572 Fraction modern: molecular carbon dynamics across a Yedoma permafrost thaw chronosequence

First Author: Elizabeth K Coward (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2573 Heat transfer from precipitation hastens permafrost degradation and decreases carbon-climate feedbacks

First Author: Zelalem Amdie Mekonnen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2574 High thaw lake Methane emissions at the permafrost of Qinghai Tibet plateau

First Author: Hanbo Yun (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2575 Impact of long-term warming and wetting on carbon sequestration and nitrogen dynamics in High Arctic tundra soils

First Author: Malissa Ann Gueco Tayo (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2576 Inter-annual Variability of CO₂ and CH₄ Fluxes of a Polygonal Tundra Landscape in the Siberian Arctic

First Author: David Holl (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2577 Methanogens Driving Methane Production from the Active Layer and Permafrost Soils on the Tibetan Plateau

First Author: Yutong Song (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2578 Microbial Carbon Degradation Processes in Thermokarst Lake Sediments from Bykovsky Peninsula, Northern Siberia

First Author: Maria Schindler (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2579 Mineral Controls over Permafrost Carbon Stability and Decomposition

First Author: Shuqi Qin (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2580 Patterns and drivers of potential methane oxidation and production rates across Tibetan alpine permafrost region

First Author: Qiwen Zhang (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2581 Permafrost Mapping with Electrical Resistivity Tomography in Two Wetland Systems North of the Tanana River, Interior Alaska

First Author: Christopher H Conaway (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2582 Probing Organomineral Associations across a Chronosequence of Yedoma Permafrost Deposits in Fox, AK.

First Author: Rucha Wani (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2583 Radiocarbon Data from Permafrost Peatland Lakes Indicate Dissolved Methane is Dominantly Modern while Particulate Matter and Ebullition Methane Contain Older Carbon

First Author: Regina Gonzalez Moguel (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2584 Ramped PyrOx and Ultrahigh Resolution Mass Spectrometry Insights into the Age and Composition of Arctic River Dissolved Organic Matter

First Author: Jennifer Anastasia Rogers (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2585 Reconciling Historical and Contemporary Trends in Terrestrial Carbon Exchange of the High-latitude Permafrost-zone

First Author: Marguerite Mauritz (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2586 Soil CO₂ Profile Measurements Reveal an Increase in the Proportion of Old Soil Carbon over a Thirteen Year Study at a Permafrost Site in Interior Alaska

First Author: Christopher Ebert (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2587 Soil warming leads to stimulate soil CO₂ efflux in tundra ecosystem, Seward Peninsula of western Alaska

First Author: Yongwon Kim (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2588 Trajectory of Topsoil Nitrogen Transformations Along a Thermo-Erosion Gully on the Tibetan Plateau

First Author: Yuanhe Yang (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B23M-2589 Using stable isotopes to determine dominant methane production pathways of thaw ponds in a subarctic peatland

First Author: Kathryn A Bennett (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

Join Us! USPA 2019 Annual Meeting - December 10, 2019 8:30 to 10:30 pm -
ThirstyBear Brewing Company

Wednesday, December 11th

Morning Oral Presentations

A31C-04 Potential methyl chloride and chloroform fluxes from the tundra soils in maritime Antarctica

First Author: Wanying Zhang and Renbin Zhu (Oral Presentation)

08:45 - 09:00, Moscone West - 3012, L3

GH32A-01 Water-related Infectious Disease Spreading under Hydroclimatic Change in the Arctic/Sub-Arctic Region

First Author: Georgia Destouni (Oral Presentation)

10:20 - 10:35, Moscone West - 2020, L2

H32G-01 Contrasting wildfire impacts on hydrologic properties and processes in boreal forest in Alaska and coniferous forest in the Southern Rocky Mountains, USA

First Author: Brian A Ebel (Oral Presentation)

10:20 - 10:35, Moscone West - 3014, L3

EP32A-08 Arctic Deltas: Carbon and nitrogen rich deposits in a dynamic permafrost landscape

First Author: Matthias Fuchs (Oral Presentation)

10:20 - 12:20, Moscone West - 3009, L3

B32D-02 Partitioning Ecosystem Respiration Using $\delta^{13}\text{C}$ and $\Delta^{14}\text{C}$ to Determine Sources of Permafrost C Loss After 10 Years of Experimental Warming

First Author: Elaine Pegoraro (Oral Presentation)

10:35 - 10:50, Moscone West - 3003, L3

B32B-07 Spatial heterogeneity in groundwater and evaporative fluxes and their influence on lakes with varying methane dynamics within Mackenzie River Delta (Canada)

First Author: Hadley McIntosh Marcek (Oral Presentation)

11:50 - 12:05, Moscone West - 3007, L3

Morning Poster Presentations

ED31D-0997 Investigation of Methane Emission in Permafrost Using In-situ Measurements and Satellite Remote Sensing Data for Climate Change Education

First Author: Tianlin Wang (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC31E-1298 Demonstrating the Potential of CO₂ Hydrate Self-Sealing During Geological CO₂ Storage

First Author: Stian Almenningen (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

P31A-3429 Distinct small-scale (0.1 to 1 m) regolith features suggest regolith activity and provide clues about the bedrock at Glen Torridon, Gale Crater, Mars

First Author: Bernard Hallet (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

PA31E-1072 Climate Preparedness and Resilience Decision Making for Extreme Events

First Author: Will Veatch (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

Afternoon Oral Presentations

OS33A-02 Progress toward the establishment of an extended-duration gas hydrate reservoir response test on the Alaska North Slope

First Author: Norihiro Okinaka (Oral Presentation)

13:55 - 14:10, Moscone West - 2002, L2

OS33A-05 Deformation Coupled Effective Permeability Change in Hydrate-Bearing Sediment during Depressurization

First Author: Xiang Sun (Oral Presentation)

14:40 - 14:55, Moscone West - 2002, L2

B33B-08 Impacts of increasing wildfire severity on the long-term carbon dynamics of Alaskan boreal forests

First Author: Michelle C Mack (Oral Presentation)

15:25 - 15:40, Moscone West - 3001, L3

OS34A-05 Numerical Modelling Using Homogenization Techniques of Gas Hydrate Bearing Sediments

First Author: Axelle Alavoine (Oral Presentation)

17:00 - 17:15, Moscone West - 2002, L2

Afternoon Poster Presentations

A33J-3072 Potential volatile selenium fluxes from the tundra soils in maritime Antarctica

First Author: Wenjuan Ye and Renbin Zhu (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

EP33C-2356 How Management Practices Influence the Stability of Surface Aggregates During Intense Rainfall Events

First Author: Kenneth Wacha (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

GC33F-1437 A Simple Formula for Calculating Carbon Budgets

First Author: Bruce Parker (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

GC33G-1421 Northern High-latitude Permafrost Response to Solar Geoengineering

First Author: Duoying Ji (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

GC33H-1477 The Investigation of the Deepest Frozen Soil Depth Variation over TP (1981-2005) by Coupled SSiB3 and A Multi-layer Frozen Soil Scheme

First Author: Qian Li (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H33L-2115 Deep Learning Method for Streamflow Forecasting in the Upper Stream of the Heihe River Basin in China

First Author: Yajie Wu and Yong Tian (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

IN33B-0817 rSpectral & ASTRAL: Interactive Tools for Analysis of Hyperspectral Reflectance Data Acquired through the NASA ABoVE Campaign

First Author: Ifeanyi Humphrey Nwigboji (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

NH33E-0964 Impacts of Rapid Climate Changes on Mass Movements in Denali National Park and Preserve, Alaska

First Author: Zena Valentina Robert (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

Thursday, December 12th

Morning Oral Presentations

B41E-04 Between States: The Microbial Ecology of Biogeochemical Processes Near the Freezing Point.

First Author: Mark P Waldrop (Oral Presentation)

08:45 - 09:00, Moscone West - 3001, L3

H41B-04 Relative gravimetry in alpine permafrost-affected tunnel: a first attempt to reveal changes in hydrostatic pressure.

First Author: Markus Heinze (Oral Presentation)

08:45 - 09:00, Moscone West - 3024, L3

B41E-05 Microbiome Re-assembly After Permafrost Thaw: How Time, Space, History and Disturbance Fundamentally Differentiate Permafrost Microbial Communities

First Author: Jessica Gilman Ernakovich (Oral Presentation)

09:00 - 09:15, Moscone West - 3001, L3

B41E-06 Reconstruction of metagenome-assembled genomes from past and extant microbial populations in ancient Siberian permafrost

First Author: Renxing Liang (Oral Presentation)

09:15 - 09:30, Moscone West - 3001, L3

B41A-08 Wildfires in subarctic Canada have no impact on downstream mercury transport but cause decreased delivery of dissolved carbon and nutrients

First Author: Ryan H.S. Hutchins (Oral Presentation)

09:45 - 10:00, Moscone West - 3012, L3

EP42A-04 Quantifying organic carbon mobilization and storage due to bank erosion in permafrost-dominated river floodplains

First Author: Madison Douglas (Oral Presentation)

10:20 - 12:20, Moscone West - 3011, L3

H42A-04 The Fundamental Roles of Iron as a Mediator of Land-Water Interactions in Arctic Catchments

First Author: William B Bowden (Oral Presentation)

11:05 - 11:20, Moscone West - 3016, L3

EP42B-06 Permafrost control on river migration along the Koyukuk River, AK

First Author: Jon Schwenk (Oral Presentation)

11:35 - 11:50, Moscone West - 3009, L3

B32B-07 Spatial heterogeneity in groundwater and evaporative fluxes and their influence on lakes with varying methane dynamics within Mackenzie River Delta (Canada)

First Author: Hadley McIntosh Marcek (Oral Presentation)

11:50 - 12:05, Moscone West - 3007, L3

Morning Poster Presentations

A41S-2639 Monitoring of Greenhouse Gas Emission from Permafrost Regions by the GOSAT Observations of Tropospheric CO₂ and CH₄

First Author: Nobuhiro Kikuchi (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B41I-2437 Microbial community responses to decadal drainage on a Siberian floodplain

First Author: Mincheol Kim (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B41J-2454 CH₄ Flux from Sub-arctic Mire Lakes: A Look at Relationships Between Microbial Communities and Submerged Aquatic Vegetation

First Author: Tamara Sade Marcus (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B41L-2456 Evolution and optimized extension of the high Northern latitude eddy covariance network.

First Author: Martijn Pallandt (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

C41D-1490 Hazardous Permafrost Processes in Areas with Massive Ground Ice Occurrence in the Western Russian Arctic

First Author: Alexander I. Kizyakov (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

H41G-1758 Suitability of Bentonite for Long-term Radioactive Waste Disposal: Consideration of Climatic Change

First Author: Blaise Robertson Winnard (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

H41J-1818 Assessing Baseline Stream Metal Concentrations in the Cumulative Impact Monitoring Program for Hydrocarbon Extraction by Hydraulic Fracturing of the Canol Shale Play, Central Mackenzie Valley, NT, Canada

First Author: David Eickmeyer (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

H41S-2007 Evaluation of Permafrost Changes due to Climate Change in Northern Manitoba

First Author: Bekalu Erkabu (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

OS41B-1677 Gas-Hydrates - Indian Scenario

First Author: Priyadarshi Kumar (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

OS41C-1688 Interpretation of Logging Data from the Hydrate-01 Stratigraphic Test Well drilled in the Prudhoe Bay Unit, Alaska North Slope

First Author: Kiyofumi Suzuki (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

P41C-3451 Fast methane diffusion at the interface of two clathrate structures

First Author: livia Eleonora Bove (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

P41C-3454 Historical Habitability of Mid- and High-Latitude Martian Ground Ice

First Author: Hanna G Sizemore (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

P41C-3457 Mapping Subsurface Ice and Water on Mars with Magnetic Induction Spectrometer

First Author: Svein-Erik Hamran (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

P41C-3458 Mars Drilling: Development of a 1 m Class Rotary-Percussive Drill for Mars Permafrost

First Author: Gale Paulsen (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

P41C-3465 The Northern Terminus of Ground-Ice Detections in Arcadia Planitia on Mars May Be Attributable to Surface Effects

First Author: Blake Irwin Maly (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

PP41B-1542 Exploring biomarkers in Beringian Loess as an archive of orbital-scale Pleistocene climate change

First Author: Elizabeth K Thomas (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

PP41C-1559 Microbial communities in the sedimentary substrate of the Laguna Timone maar, southern Patagonia (52°S)

First Author: Mauricio Calderón (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

Afternoon Oral Presentations

P43B-01 The Martian Underground: Sites of potential methane generation, accumulation, and release

First Author: Dorothy Z. Oehler (Oral Presentation)

13:40 - 13:52, Moscone South - 213-214, L2

B43E-01 High-latitude terrestrial regions remain a CO₂ sink over 1990-2015

First Author: Anna-Maria Virkkala (Oral Presentation)

13:40 - 13:55, Moscone West - 3001, L3

B43E Vulnerability of Permafrost Carbon to Climate Change I

First Author: Christina Schaedel (Session)

13:40 - 15:40, Moscone West - 3001, L3

B43E-05 Disturbed High Arctic Permafrost Watersheds: A Decade of Impact on Fluvial Organic Carbon Fluxes

First Author: Casey Robert Beel (Oral Presentation)

13:40 - 15:40, Moscone West - 3001, L3

B43E-02 The Net Aquatic and Terrestrial Carbon Balances are Linked by Weather Events in a Headwater Arctic Catchment

First Author: George W Kling (Oral Presentation)

13:55 - 14:10, Moscone West - 3001, L3

C43A-02 Impact of Climate Change on Water and Sediment Fluxes in Cold Region: an Example from the Source Region of the Yangtze River, High Mountain Asia

First Author: Dongfeng Li (Oral Presentation)

13:55 - 14:10, Moscone West - 3022, L3

B43E-03 The Effect of Permafrost Thaw on the Controls and Pathways of Decomposition that Regulate the Carbon Balance of Boreal Peatlands

First Author: Liam Heffernan (Oral Presentation)

14:10 - 14:25, Moscone West - 3001, L3

B43E-04 Closing the winter gap - year-round measurements of soil respiration sources in Arctic tussock tundra

First Author: Claudia I Czimczik (Oral Presentation)

14:25 - 14:40, Moscone West - 3001, L3

C43A-05 Characteristics and changes of glaciers, rock glaciers and glacial lakes in High Mountain Asia since the 1960s

First Author: Tobias Bolch (Oral Presentation)

14:40 - 14:55, Moscone West - 3022, L3

B43E-06 Arctic Permafrost Soil Hydrology and Snow Cover Depth Critically Determine CO₂ and CH₄ emissions

First Author: Martin Heimann (Oral Presentation)

14:55 - 15:10, Moscone West - 3001, L3

B43E-07 Listen for the Pop: The capture and quantification of ebullitive methane from thaw ponds using a high frequency acoustic bubble trap system

First Author: Sophia A Burke (Oral Presentation)

15:10 - 15:25, Moscone West - 3001, L3

B43E-08 Effects of Warming and Permafrost Thaw on the Three Important Greenhouse Gases - Carbon Dioxide, Methane, and Nitrous Oxide

First Author: Carolina Voigt (Oral Presentation)

15:25 - 15:40, Moscone West - 3001, L3

P43B-10 Martian Near-Surface S and Cl Brines in Fractured and Porous Regolith Could Trigger Microscale Soil Collapse and Cause Recurring Slope Lineae

First Author: Janice L Bishop (Oral Presentation)

15:28 - 15:40, Moscone South - 213-214, L2

B44E Vulnerability of Permafrost Carbon to Climate Change II

First Author: Christina Schaedel (Session)

16:00 - 18:00, Moscone West - 3001, L3

B44E-01 Carbon degradation and CO₂ production within onshore and nearshore zones of eroding permafrost coasts

First Author: George Tanski (Oral Presentation)

16:00 - 18:00, Moscone West - 3001, L3

B44E-03 Influence of permafrost and site history on losses of permafrost carbon after thaw

First Author: Kristen Manies (Oral Presentation)

16:00 - 18:00, Moscone West - 3001, L3

B44E-08 The Vulnerability of Permafrost Carbon to Climate Change: Key Findings from a Decade of Synthesis

First Author: Edward Schuur (Oral Presentation)

16:00 - 18:00, Moscone West - 3001, L3

B44E-02 Accessibility of permafrost carbon in a changing Arctic: Assessing the influence of experimentally- increased snowpack height on microbial carbon sources

First Author: Shawn Pedron (Oral Presentation)

16:15 - 16:30, Moscone West - 3001, L3

C44A-02 Perspectives from the Next Generation of Cryosphere Scientists

First Author: Twila A Moon (Oral Presentation)

16:15 - 16:30, Moscone South - 201-202, L2

B44E-04 Bacterial community composition changes independently of soil edaphic parameters with anthropogenic permafrost thaw

First Author: Brian D Lanoil (Oral Presentation)

16:45 - 17:00, Moscone West - 3001, L3

B44E-05 Undecomposed Organic Particles Dominate the Carbon Storage in Permafrost Soils of the Lena River Delta, Arctic Russia

First Author: Isabel Prater (Oral Presentation)

17:00 - 17:15, Moscone West - 3001, L3

NS44A-05 Using Near Surface Geophysics and Remote Sensing to Understand Hydrogeologic Controls on Recharge to Tropical Glaciated Valleys: Cordillera Blanca, Peru

First Author: Robin Glas (Oral Presentation)

17:00 - 17:15, Moscone West - 2010, L2

PA44B-05 Empowering indigenous women leaders to transform the narratives of communities affected by climate change.

First Author: Karla Brollier (Oral Presentation)

17:02 - 17:15, Moscone South - 301-302, L3

B44E-06 Significant C source driven by elevated water table but sink by increasing thaw depth in Alaska tundra under experimental warming: A data assimilation study

First Author: Yiqi Luo (Oral Presentation)

17:15 - 17:30, Moscone West - 3001, L3

B44E-07 Improved Simulation of Cold-season Methane Emissions over Alaska-Permafrost with the E3SM Land Model (ELM)

First Author: Jing Tao (Oral Presentation)

17:30 - 17:45, Moscone West - 3001, L3

Afternoon Poster Presentations

A43P-2932 A miniaturized laser heterodyne radiometer for global ground-based observations of column CO₂ and CH₄

First Author: Emily Lynn Wilson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

A43P-2938 The New NOAA Barrow Atmospheric Baseline Observatory Near Utqiagvik, Alaska – Facility Upgrades and New Collaboration Opportunities

First Author: Brian A Vassel (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B43I-2602 Aquatic Carbon Exports from Alpine and Boreal Wetlands to Headwater Streams

First Author: Courtlyn Carpenter (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

B43J-2613 Organic Matter Dynamics in Arctic Lagoons: Linking Seasonal and Spatial Patterns to Terrestrial Inputs and Ocean Exchange

First Author: James W McClelland (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

C43D-1515 Heat needed to melt ice: the Cryosphere's contribution to the Earth's Energy Imbalance

First Author: Fiammetta Straneo (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

EP43E-2405 Measuring and modeling periglacial hillslope processes, Seward Peninsula, western Alaska

First Author: Joanmarie Del Vecchio (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

EP43E-2406 The Distribution and Occurrence of Solifluction Lobes and their Role in Mediating Hillslope Biogeochemistry

First Author: Michael Mulugetta Fratkin (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

EP43E-2407 Decadal impacts of wildfire and climate change on permafrost degradation in Arctic Alaska

First Author: Yaping Chen (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H43G-2057 CRITICAL PEAT project : The importance of hydrology for Carbon Reactivity along with atmosphere - peatland interactions. Preliminary results from the Frasne peatland monitoring (Jura Mountains, France).

First Author: Alexandre Lhosmot (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H43G-2078 Seasonal and event-based concentration discharge relationships from contrasting Arctic headwater catchments

First Author: Arial Shogren (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H43G-2081 Evidence for accelerated climate-driven weathering and sulfate export in high alpine environments

First Author: John T Crawford (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H43I-2138 Parameter Sensitivity of the National Hydrologic Model Alaska Domain

First Author: Theodore B Barnhart (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H43I-2148 Macro-scale Hydrologic Modeling for Depression-Dominated Cold Climate Regions

First Author: Mohsen Tahmasebi Nasab (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H43N-2250 Field-scale surface soil moisture from satellites for hydrology, water resources, agriculture, and disaster prevention

First Author: Seungbum Kim (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H43N-2259 Artificial intelligence/machine learning and remote sensing reveals over six decades of surface-water dynamics in Alaska with connections to climate change.

First Author: Neal J. Pastick (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

P43D-3491 Martian methane and other in-situ resources for sustaining human exploration of Mars and outer solar system

First Author: Michael D Max (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

P43F-3520 Developing consistent criteria for assessing the origins of pitted cones on Mars

First Author: James Wray and Angela Dapremont (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

PA43D-1182 Strengthening evidence-based policy for peatlands: potential and pitfalls for quantification of C accumulation and loss using fallout radionuclides

First Author: Nicole K Sanderson (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

V43H-0188 Quench-induced fragmentation of magma during subaqueous eruptions

First Author: Ingo Sonder (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

Friday, December 13th

Morning Oral Presentations

B51D-05 Wetland methane biogeochemistry: Can geophysical approaches improve our understanding of these spatially and temporally heterogeneous processes?

First Author: Ruth K Varner (Oral Presentation)

08:48 - 09:00, Moscone West - 3005, L3

C52A-05 Permafrost Carbon Network: Research synthesis to quantify the permafrost carbon feedback

First Author: Christina Schaedel (Oral Presentation)

11:20 - 11:35, Moscone West - 2006, L2

P52C-06 Evolution of Water and D/H on Mars

First Author: Bruce Martin Jakosky (Oral Presentation)

11:35 - 11:50, Moscone South - 215, L2

Morning Poster Presentations

A51H-2773 Terrestrial biogenic secondary organic aerosol composition on the North Slope of Alaska

First Author: Claire Elizabeth Moffett (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

A51H-2774 Widespread Arctic lead pollution since 1000 BCE documents ancient and medieval European lead-silver smelting, major historical events, and northern-hemisphere Industrialization

First Author: Nathan Chellman (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B51F-2314 Viromes from Northern Minnesota Reveal Peatland Habitat Endemism of Globally Distributed Viral Populations

First Author: Anneliek ter Horst (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B51I-2352 Potential impacts of mercury released from thawing permafrost

First Author: Paul F Schuster (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B51I-2353 Mercury Patterns in Permafrost Peatland Streams and Ponds

First Author: Lauren Thompson (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B51I-2354 Mercury isotopic constraints on mercury cycling across a permafrost thaw gradient in Stordalen Mire, Sweden

First Author: Maria Florencia Fahnestock (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B51K-2380 UAV-based mapping of galloping thermokarst - implications for methane emissions

First Author: Johan Scheller (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

B51K-2384 A new UAS System for Airborne Eddy Covariance Measurements of Heat and Carbon Fluxes

First Author: Torsten Sachs and Mathias Zöllner (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

C51B-1264 Analysis on the responses of the Asian water tower to climate warming and the consequent cryospheric changes

First Author: Taihua Wang (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

C51B-1277 Role of Permafrost and Seasonally Frozen Ground in Groundwater System of Northern Himalayan Mountains

First Author: Yingying Yao (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC51E-1115 Environmental Drivers of Arctic Methane Emissions Hot Spots Determined from Remote Sensing Datasets

First Author: Latha Baskaran (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC51P-1006 Permafrost ALT Estimation along the Qinghai-Tibet Railway through InSAR and Modeling

First Author: Ping Lu (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC51P-1026 Monitoring permafrost changes in the Yangtze River source region of the Qinghai-Tibetan Plateau using differential SAR interferometry

First Author: Lingxiao Wang (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

H51S-1751 Comparing L-band Radiometry and in Situ Permittivity at 50 MHz of Agricultural Soils During a Freeze/Thaw Validation Campaign

First Author: Renato Pardo (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC51L-1071 Plant Functional Traits Vary with Soil Temperature on Periglacial Patterned Ground of the Rocky Mountains in Montana

First Author: Martha E Apple (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC51P-1018 Response of sediment flux in headwater of the Yangtze River to climate and environment changes

First Author: Fan Zhang (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

GC51P-1061 Three-in-one: measuring snow depth, surface soil moisture, and frozen ground elevation changes by GPS Interferometric Reflectometry at a site in Northwestern Qinghai-Tibet Plateau

First Author: Jiahua Zhang (Poster Presentation)

08:00 - 12:20, Moscone South - Poster Hall

PA51D-0900 Convergence NNA:Coordinate a Transdisciplinary Research Network to Identify Challenges of and Solutions to Permafrost Coastal Erosion and Its Socioecological Impacts in the Arctic

First Author: Ming Xiao (Oral Presentation)

08:00 – 12:20, Moscone South – Poster Hall

Afternoon Oral Presentations

NH53A-02 The interaction between permafrost, frost cracking and paraglacial processes and their link to rockfalls

First Author: Daniel Draebing (Oral Presentation)

13:55 - 14:10, Moscone West - 2016, L2

V53C-02 The dynamics of magma fragmentation and pyroclast dispersal during a recent explosive volcanic eruption in Elysium Planitia, Mars

First Author: Pranabendu Moitra (Oral Presentation)

13:55 - 14:10, Moscone South - 152, Upper Mezz.

OS53A-05 Predicting submarine slope instability along Arctic continental margins

First Author: Jeffrey Obelcz (Oral Presentation)

14:40 - 14:55, Moscone West - 2002, L2

H53E-06 Potential applications of SMAP brightness temperature to improve permafrost monitoring in Arctic tundra area

First Author: Yonghong Yi (Oral Presentation)

14:55 - 15:10, Moscone West - 2000, L2

P54B-07 Putative Pingos may Populate Portions of Occator Crater, Ceres

First Author: Kynan Hughson (Oral Presentation)

17:21 - 17:33, Moscone South - 211-212, L2

Afternoon Poster Presentations

B53G-2476 Quantifying the Effects of Warming and Ecosystem Change on Arctic Soil Microbial Communities

First Author: Jeffrey Ryan Propster (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

EP53F-2199 The Pleistocene-Holocene Transition in Eastern Glacier National Park as Evidenced by Lake Sediment Lithostratigraphy

First Author: Noah Slade (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

EP53F-2206 Land use versus climate controls on erosion at a farmed headwater catchment in central Pennsylvania

First Author: Perri Silverhart (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

GC53G-1249 Identifying rock glacier in western China using deep learning and satellite data

First Author: Min Feng (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H53J-1897 Tracing to Sources of River Water by Using Environmental Isotopes and Hydrogeochemical Methods in a Cold Alpine Catchment with Seasonally Frozen Ground

First Author: Zhao Pan (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

H53M-1966 Does Spatially Variable Melting Seasonal Ground Ice Lead to Spatially Variable Potential Evapotranspiration? Implications for a Boreal Peatland

First Author: Brandon Van Huizen and Richard M Petrone (Poster Presentation)

13:40 - 18:00, Moscone South - Poster Hall

References

“AGU Fall Meeting 2019.” AGU,
agu.confex.com/agu/fm19/meetingapp.cgi/Search/0?sort=Relevance&size=10&page=1.

“Educational Permafrost Photo Gallery (EPPG)”, USPA,
<https://uspermafrost.org/gallery/EPPgallery.shtml>