

**31<sup>st</sup> Annual Harold W. Borns, Jr. Symposium**  
**300 Bryand Global Science Center, Harold W. Borns Jr. Polar Facility**

**Conference Schedule**

**April 10, 2024**

**12:00 PM: COFFEE / TEA / WATER (No food) – ROOM 307**

**NO FOOD OR DRINKS EXCEPT WATER IN ROOM 300**

**12:30-12:40 PM: Welcome Address:** Introduction by Dr. Paul Andrew Mayewski, Climate Change Institute, Director and Professor.

**SESSION 1 – Session Moderator: Elizabeth Leclerc**

**12:40 PM: Digitizing the Archaeological Record: Preservation or Cultural Theft?**

*Emily M. Blackwood*

**12:52 PM: Reconstructing Lake Level in South Greenland Using Fossil Diatoms and a Three-Dimensional Bathymetry Model**

*Amanda Gavin*

**1:04 PM: A Comparison of Sciurid Thermoregulatory Traits**

*Eric Brown*

**1:16 PM: Do Unprecedented Worldwide Weather Extremes Since Early 2022 Have an Association to the Hunga Tonga-Hunga Ha’apai Eruption?**

*Ana Trueba*

**1:28 PM: Spatial Distribution of PFAS in Surface Freshwater in South Greenland**

*Ligia Naveira*

**1:40 PM: Life-stage-partitioned Forest Inventory and Analysis (FIA) Data Reveals Multi-Directional Tree Range Shifts in Contemporary Environments**

*Bailey P. McLaughlin*

**1:52 PM: Reconstructing Human-Forest Relationships in Maine**

*Madeleine M. Landrum*

**2:04 PM: Constructing a Be-10 Glacial Chronology on Late Holocene Glacial in the Southern Alps of New Zealand at 43°S**

*Alexzander Roman*

**2:16 PM: How High Vapor Pressure Deficit and Low Soil Water Content Causes Xylem Embolism in Mediterranean Pine?**

*Pratima Pahadi*

**2:28 PM: An Interdisciplinary Review - How Rapid Climate Change is Impacting Human Health, Environmental Policy, and Voter Behavior**

*Douglas Hasson*

**2:40 PM: Evaluating Plastic Waste as a Potential Feedstock for “Renewable” Fuel**

*Erin Victor*

**3:00– 3:30 PM: BREAK WITH REFRESHMENTS – ROOM 307**

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**SESSION 2 – Session Moderator: Lizi Gadrani**

**3:30 PM: Indigenous Connections to Maine’s Interior Landscapes: An Evaluation of the Paleoenvironmental Context of the Seabasticook Lake Fish Weir Complex**  
*Kit M. Hamley*

**3:42 PM: Predictors of Large Icebergs in NW Greenland**  
*Allie Berry*

**3:54 PM: Relating Traditional Wabanaki Knowledge and “Western” Watershed Science for Maine’s Rivers**  
*Elizabeth Leclerc*

**4:06 PM: Nepal’s Multi-Level Governance System: Analyzing Power and Politics in Climate Adaptation Governance**  
*Suman Acharya*

**4:18 PM: Abrupt Transformation of West Greenland Lakes Following Compound Climate Extremes in September 2022**  
*Jasmine Saros*

**SESSION 3 - DAVE CLAYTON SMITH LECTURE**

**4:30 PM:**

**Cindy Isenhour, Professor of Anthropology and Climate Change Institute, University of Maine.**

**Nicholas Micinski, Assistant Professor of Political Science and International Affairs, University of Maine.**

***Taking Stock of Climate Progress at the COP: Challenges and Opportunities in International Climate Governance***

**5:10 PM: Jacobson CCI Distinguished Service Award**

**SESSION 4 – 5:15 PM: POSTER SESSION - HALLWAY / CASH BAR – ROOM 307**

**Developing Hyperspectral Data Processing Toolbox for Ice Cores**  
*Caleb Ames*

**lolite Data Reduction for LA-ICP-MS Use on Ice Core Samples**  
*Samantha Baumgartner*

**Quantifying Changes in Driving Stresses for Glaciers in South Greenland Over the Past 90-Years as They Transition from Marine- to Land-Terminating**  
*Mathilde Børch*

**Rapid Browning of Lakes Near Kangerlussuaq, West Greenland (Kalaallit Nunaat): A Tale of Dissolved Organic Carbon, Iron, and Suddenly Not-So-Closed Systems**  
*Thomas Grindle*

**Using Geophysical Survey to Reveal Patterns in Monumental Construction at Los Morteros, Peru**  
*Kelly Hoover*

**Water Quality in the Rapidly Changing Environment of West Greenland**  
*Cory Limberger*

**A Comparative Study of Human-Bird Relationships at Two Ceramic Period Archaeological Sites in Wabanaki Homeland, Coastal Maine**  
*Olivia L. Olsen*

**Using Modular Transfer Function to Accurately Determine Resolution in Hyperspectral Images of Ice Cores**  
*Roisin Rumsey*

**Determining Driving Mechanisms of the Last Ice-Age Termination in South America**  
*Sera Thomas*

**Prominent Freshwater Diatom Shifts Reveal Major Climatic Changes Since ~2 ka Just South of the Beagle Channel (~55°S)**  
*Leonardo A. Villacis*

**Interhemispheric Comparison of the Late Glacial Climate Reversal**  
*Katherine Westbrook*

**Understanding Alpine Supraglacial Lake Drainage, Ice Dynamics, and Meltwater Flux Through Remote Sensing and Field-Based Geophysical Observations**  
*Tahi Wiggins*

**April 11, 2024**

**8:00 – 8:30 AM: COFFEE / TEA / WATER (No food) – ROOM 307**

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**8:30 AM: Welcome: Dr. Paul Mayewski**

**SESSION 5 - Session Moderator: Avery Lamb – Churchill / Sturgis Talks**

**8:30 AM: Characterizing the Englacial Stratigraphy at the Bottom of the Denali Ice Core, Alaska: A New Geophysics Approach**  
*Emma Erwin*

**8:42 AM: Modern Plant Wax Calibration at Baboon Lakes, Central Sierra Nevada, California**  
*Meghan Spoth*

**8:54 AM: Evaluating the Spatial Distribution and Continuity of Snow and Firn Stratigraphy using Ground Penetrating Radar**  
*Renée Clavette*

**9:06 AM: Assessing the Biogeochemistry of Glacially fed Lakes and Their Response to Extreme Events in Western Norway**  
*Ansley Grider*

**9:18 AM: Using Past Glacial Response to Climate Change to Predict Water Scarcity in the Western US**  
*Tricia Hall Collins*

**9:30 AM: Constraining the Spatial Distribution of Snowpack Properties of the Kahiltna Glacier, Denali National Park, Alaska**  
*Keegan Bellamy*

**9:42 AM: Snowpack Sampling in Georgia for Future Geoarchaeological Framework**  
*Lela Gadrani*

**9:54 AM: Near-Surface Englacial Structure and Water Storage of Upper Seward Glacier/ Sít'Tlein**  
*Mikaila Mannello*

**10:06 AM: Hydrological Connectivity Shapes Carbon Cycling in Arctic Lakes**  
*Václava Hazuková*

**10:18 AM: Reconstructing the Paleotempestology Record from the Tibes Indigenous Ceremonial Center at Ponce, Puerto Rico**  
*Karina M. Cortijo-Robles*

**10:30 – 11:00 AM: BREAK WITH REFRESHMENTS – ROOM 307**

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**SESSION 6 Session Moderator: Mikaila Mannello**

**11:00 AM: Evidence of Abrupt Climate Change in North-Central Maine during Termination I**  
*Maraina Miles*

**11:12 AM: Firn Density, Stratigraphy and Temperature on Eclipse Icefield, Yukon, Canada**  
*Ingalise Kindstedt*

**11:24 AM: Novel Lead (Pb) Isotope Record Tracking the Impact of policy and the Covid-19 Pandemic on Asian Pollution Emissions Deposited in Alaskan Ice Cores**  
*Hanna L. Brooks*

**11:36 AM: Pleistocene Restructuring of Top-Heavy Trophic Ecologies: Paradise Lost for Large Carnivores?**  
*Nikhil Brocchini*

**11:48 AM: Using Sediment Reconstructions to Determine the Relative Importance of Nutrients and Temperature on CyanoHABs in Maine Lakes**  
*Avery Lamb*

**12:00 PM: Reducing Uncertainty in Alpine Glacier Ice Thickness Predictions Using In-Situ Ground Penetrating Radar Measurements**  
*Mari Fromstein*

**12:12 PM: Using Photogrammetry to Create Virtual Permanent Plots in Rare and Threatened Plant Communities**  
*Andrea J. Tirrell*

**12:24 PM: PFAS Remediation in Maine: The Climate Impacts of Environmental Contamination**  
*Charity H. Zimmerman*

**12:30 PM – 1:00 PM: BUFFET LUNCH – ROOM 307**

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## **SESSION 7 Session Moderator: Samantha Baumgartner – Faculty Talks**

**1:00 PM: Partial Additionality**

*Anthony Moffa*

**1:12 PM: COP28**

*Ashley Brown, Geeta Talpade, Bryant Wolff*

**1:24 PM: Tropical Endothermy in a Changing World: the Energetics of Small Mammals from Sarawak, Malaysia**

*Danielle L. Levesque*

**1:36 PM: Centering Indigenous Knowledges in Climate Change Research through the Center for Braiding Indigenous Knowledges and Science**

*Bonnie Newsom*

**1:48 PM: Origin of Ice in the Medusae Fossae Formation, Equatorial Mars**

*James L. Fastook*

**1:52 PM: Feeding a Chariot of Fire and Lightning: Pricing Fuel-Electric Vehicle Operations**

*Sudarshan S. Chawathe*

**1:56 PM: Alpine Plants as a Model System for Biodiversity Dynamics in a Warming World: Integrating Genetic, Functional, and Community Approaches**

*Jacquelyn L. Gill*

## **SESSION 8 – INVITED UNIVERSITY OF MAINE ALUMNUS LECTURE**

**2:00 PM:**

**Dan Dixon, Sustainability Director and Research Associate Professor, University of Maine.**

*Mathematics, Engineering, Geology, Oceanography, Quaternary Studies, Climate Change, Sustainability: Taking Advantage of Life's Myriad Opportunities*

**2:45 PM:**

**CLOSING REMARKS – Dr. Dan Sandweiss**

**AWARDS -- AWARD PICTURES -- GROUP PHOTO**

**Thank you to all the CCI graduate students who participated in moderating sessions, taking photographs, and assisting with event setup and clean up activities.**

**Special Thanks to Andrei Kurbatov for his assistance with the audio-visual component for this event.**

**A big thank you to our Borns Symposium judges, Karl Kreutz, Dan Sandweiss, Danielle Levesque, Kirk Maasch, and Matthew Magnani.**

**THANK YOU!!**