

PHISHING ALERT - GRC SPEAKERS AND DISCUSSION LEADERS ARE BEING TARGETED BY PHISHING ATTEMPTS DESIGNED TO COLLECT PAYMENT FOR REGISTRATION OR LODGING.

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Geochronology
Gordon Research Conference

Timing, Tempo and Drivers of Lithospheric Evolution

August 13 - 18, 2023

Chairs

Blair Schoene and Leah Morgan

Vice Chairs

Ann Bauer and Klaudia F. Kuiper

Mount Snow

89 Grand Summit Way
West Dover, Vermont, United States

Venue and Travel Information

Conference Description

The Geochronology GRC is a premier, international scientific conference focused on advancing the frontiers of science through the presentation of cutting-edge and unpublished research, prioritizing time for discussion after each talk and fostering informal interactions among scientists of all career stages. The conference program includes a diverse range of speakers and discussion leaders from institutions and organizations worldwide, concentrating on the latest developments in the field. The conference is five days long and held in a remote location to increase the sense of camaraderie and create scientific communities, with lasting collaborations and friendships. In addition to premier talks, the conference has designated time for poster sessions from individuals of all career stages, and afternoon free time and communal meals allow for informal networking opportunities with leaders in the field.

Geochronology quantifies geological time as a means for integrating diverse geological records, establishing cause and effect, constraining the rates and durations of fundamental geological processes and phenomena, and testing time-dependent models for system evolution. The sessions explore the timing, tempo, and drivers of lithospheric evolution at the interface of Earth system topics, over a range of geological timescales and throughout Earth's history. The aim of the conference is to foster interactions among scientists and formulate strategies for synergistically exploiting opportunities and reducing limitations of current technology, infrastructure and scientific culture. We invite contributions that exploit and apply geochronology to a wide range of topics in Earth system and lithospheric evolution, describe novel approaches, highlight geochronologic needs, and foreshadow future developments.

Related Meeting



This GRC will be held in conjunction with the "Geochronology" Gordon Research Seminar (GRS). Those interested in attending both meetings must submit an application for the GRS in addition to an application for the GRC. Refer to the associated [GRS program page](#) for more information.

Conference Program

2:00 pm - 9:00 pm	Arrival and Check-in
6:00 pm - 7:00 pm	Dinner
7:30 pm - 7:40 pm	Introductory Comments by GRC Staff / Welcome and Introduction from the Chairs
7:40 pm - 9:30 pm	Growth and Stabilization of Continents Discussion Leader: Ann Bauer (University of Wisconsin-Madison, United States)
7:40 pm - 7:55 pm	Introduction by Discussion Leader
7:55 pm - 8:25 pm	Chris Spencer (Queen's University, Canada) "Biases and Challenges in Constraining Crustal Evolution"
8:25 pm - 8:35 pm	Discussion
8:35 pm - 9:05 pm	Jun Korenaga (Yale University, United States) "Comparing Apples with Apples: How to Align Modeling with Observations in the Study of Continental Growth"
9:05 pm - 9:15 pm	Discussion
9:15 pm - 9:30 pm	General Discussion
Monday	
7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	Tectonics and Paleogeography Discussion Leader: C. Brenhin Keller (Dartmouth College, United States)
9:00 am - 9:20 am	Introduction by Discussion Leader
9:20 am - 9:55 am	David Evans (Yale University, United States) "Four Billion Years of Global Paleogeography"
9:55 am - 10:05 am	Discussion
10:05 am - 10:40 am	Coffee Break
10:40 am - 11:15 am	Craig O'Neill (QUT, Australia) "The Tempo of Tectonics Through the Proterozoic"
11:15 am - 11:25 am	Discussion
11:25 am - 12:00 pm	Adrian Castro (Wellesley College, United States) "Monazite Petrochronology of the Manhattan Prong: Merits and Pitfalls of Metamorphic Geochronology"
12:00 pm - 12:10 pm	Discussion
12:10 pm - 12:30 pm	General Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
3:00 pm - 4:00 pm	The GRC Power Hour™ <i>The GRC Power Hour™ is designed to address diversity and inclusion in the scientific workplace by providing a safe environment for informal and meaningful conversations amongst colleagues of all career stages. The program supports the professional growth of all members of our communities, including ethnicity, race and/or gender identity by providing an open forum for discussion and mentoring.</i> Organizer: Rebecca Flowers (University of Colorado Boulder, United States)
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Collisional Orogens Discussion Leader: Clare Warren (Open University, United Kingdom)
7:30 pm - 7:45 pm	Introduction by Discussion Leader
7:45 pm - 8:20 pm	Nadine McQuarrie (University of Pittsburgh, United States) "Uplift Rates, Cooling Rates and Horizontal Translation: Rethinking Permissible Upper Bounds of Erosional Exhumation"
8:20 pm - 8:30 pm	Discussion
8:30 pm - 9:05 pm	Chris Mark (Swedish Museum of Natural History, Sweden) "Mountains from Sand Grains: Advances in Detrital Provenance Applied to Orogenic Systems"
9:05 pm - 9:15 pm	Discussion
9:15 pm - 9:30 pm	General Discussion
Tuesday	
7:30 am - 8:30 am	Breakfast
8:30 am - 9:00 am	Group Photo
9:00 am - 12:30 pm	Landscape Evolution Discussion Leader: Marissa Tremblay (Purdue University, United States)
9:00 am - 9:20 am	Introduction by Discussion Leader
9:20 am - 9:55 am	Paulo Vasconcelos (The University of Queensland, Australia) "Frontiers in Noble Gas Geochronology and Thermochronometry in Weathering and Landscape Evolution"
9:55 am - 10:05 am	Discussion
10:05 am - 10:40 am	Coffee Break
10:40 am - 11:15 am	Georgina King (University of Lausanne, Switzerland) "Luminescence and ESR to the Rescue: Solving Long-Standing Geomorphological Debates Using Trapped-Charge Dating Methods"
11:15 am - 11:25 am	Discussion
11:25 am - 12:00 pm	Lindsay Schoenbohm (University of Toronto, Canada) "Applications of Thermochronology and Cosmogenic Dating in Understanding the Evolution of the Puna Plateau"
12:00 pm - 12:10 pm	Discussion
12:10 pm - 12:30 pm	General Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Basin Evolution Discussion Leader: George Gehrels (University of Arizona, United States)
7:30 pm - 7:45 pm	Introduction by Discussion Leader
7:45 pm - 8:20 pm	Julie Fosdick (University of Connecticut, United States) "Challenges and Opportunities for Sediment Recycling During Basin Evolution"
8:20 pm - 8:30 pm	Discussion
8:30 pm - 9:05 pm	Francis Macdonald (UCSB, United States) "Challenges and Opportunities for Calibrating the Cryogenian"
9:05 pm - 9:15 pm	Discussion
9:15 pm - 9:30 pm	General Discussion
Wednesday	
7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	Subduction Zones Discussion Leader: Karl Cooper (University of California Davis, United States)
9:00 am - 9:20 am	Introduction by Discussion Leader
9:20 am - 9:55 am	Whitney Behr (Department of Earth Sciences, ETH Zürich, Switzerland) "How Temporal and Spatial Variations in Seafloor Sediment Distributions Affect Large-Scale Subduction Dynamics"
9:55 am - 10:05 am	Discussion
10:05 am - 10:40 am	Coffee Break
10:40 am - 11:15 am	Benjamin Klein (University of Lausanne, Switzerland) "Tracing the Role of Zircon through Subduction Zones"
11:15 am - 11:25 am	Discussion
11:25 am - 12:00 pm	Andrea Goltz (Arizona State University, United States) "I Shall Be Released: Magma Flux, Evolution, and Ascent Rates in Continental Subduction Zones"
12:00 pm - 12:10 pm	Discussion
12:10 pm - 12:30 pm	General Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Mantle Lithosphere Discussion Leader: Janina Czas (Carnegie Institution for Science, United States)
7:30 pm - 7:45 pm	Introduction by Discussion Leader
7:45 pm - 8:20 pm	Sonja Aulbach (Goethe University Frankfurt, Germany) "Obtaining and Interpreting Lithospheric Mantle Ages"
8:20 pm - 8:30 pm	Discussion
8:30 pm - 9:05 pm	Emily Chin (UCSD, United States) "The Mantle Deformation Cycle: Unraveling Craton Growth and Reshaping from Merging Geochemical and Textural Observations"
9:05 pm - 9:15 pm	Discussion
9:15 pm - 9:30 pm	General Discussion
Thursday	
7:30 am - 8:30 am	Breakfast
8:30 am - 9:00 am	Business Meeting <i>Nominations for the Next Vice Chair(s); Complete the GRC Evaluation Forms; Discuss Future Dates and Venue; Election of the Next Vice Chair(s)</i>
9:00 am - 12:30 pm	Batholiths and Super Eruptions Discussion Leader: Jorge Vazquez (U.S. Geological Survey, United States)
9:00 am - 9:20 am	Introduction by Discussion Leader
9:20 am - 9:55 am	Drew Coleman (University of North Carolina, United States) "The Pace of Plutonism"
9:55 am - 10:05 am	Discussion
10:05 am - 10:40 am	Coffee Break
10:40 am - 11:15 am	Xiaolei Wang (Nanjing University, China) "Making Huge Batholiths Using Diverse Recipes in Dynamic Magmatic Systems"
11:15 am - 11:25 am	Discussion
11:25 am - 12:00 pm	Madison Myers (Montana State University, United States) "No Single Model for a Supereruption"
12:00 pm - 12:10 pm	Discussion
12:10 pm - 12:30 pm	General Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Large Igneous Provinces Discussion Leader: Sean Gaynor (Princeton University, United States)
7:30 pm - 7:45 pm	Introduction by Discussion Leader
7:45 pm - 8:15 pm	Jill VanTongeren (Tufts University, United States) "Timescales of Crystallization and Cooling in Shallow Magma Reservoirs Associated with Large Igneous Provinces: Case Studies from the Bushveld Complex, South Africa and Dufek Intrusion, Antarctica"
8:15 pm - 8:25 pm	Discussion
8:25 pm - 8:55 pm	Leif Karlstrom (University of Oregon, United States) "Intercalibrating Thermochronometers to Understand the Mechanics of a Major Columbia River Basalt Feeder Dike, with Implications for the Life Cycle of Large Igneous Provinces"
8:55 pm - 9:05 pm	Discussion
9:05 pm - 9:20 pm	General Discussion
9:20 pm - 9:30 pm	Closing Remarks
Friday	
7:30 am - 8:30 am	Breakfast

Contributors



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