

IAG WEBINAR CENTRAL AND SOUTH AMERICA



March 5 2024; 1:00 PM Argentina/Brazil (GTM-3; CET-4)

Coordinators: Andrea Coronato - Grace B. Alves
CADIC-CONICET, Argentina - UFBA, Brazil

13:10 - 13:40



Using electromagnetic induction to model the internal structure-hydrological flow connection, Upper Camp Bird Rock Glacier, San Juan mountains, Colorado, USA

Inducción electromagnética para el modelado de estructura interna y flujo hidrológico del glaciar de roca Upper Camp Bird, San Juan, Colorado, Estados Unidos

Raquel Granados Aguilar, Texas A&M University, Estados Unidos-Costa Rica

The intricate ways in which terrestrial systems are interconnected can be approached from a Critical Zone perspective, comprising interdisciplinarity, as well as multitemporal studies across spatial scales. A case study exemplifies the use of non-invasive methods in characterizing a rock glacier, a significant water source in the periglacial Critical Zone, where water resources are limited and severely impacted by climate change.

How simple geomorphic variables can improve our understanding on megarivers evolution and dynamics in Amazonia?

Como variáveis geomórficas simples podem melhorar nossa compreensão sobre a evolução e dinâmica de mega-rios na Amazônia?

João Paulo Soares de Cortes, Universidade Federal do Oeste do Pará (UFOPA), Brazil

The Tapajós Megariver is one of the planet's major river systems. It will be presented how channel morphometry integrated with other geomorphological techniques were used to understand its evolution and current dynamics. We'll discuss the implications of the results for resource management in the Amazon.



13:40 - 14:10

14:10 - 14:40



**Landscapes, Geoarchaeology and Climate Change, Marajó Island, Brazilian Amazon
Geoambientes, Gearqueologia e mudanças climáticas; Ilha de Marajó, Amazônia brasileira**

Renata Jordán Henríquez, Universidade Federal de Minas Gerais (UFMG), Brazil

Marajó Island, at the mouth of the Amazon River, Brazil, is part of an archipelago that preserves legacies of ancient indigenous occupations. Pedogeomorphological geodiversity and strong susceptibility to climate change and sea level rise are its more important geomorphological characteristics, but they threaten communities and Terra Preta de Índio soils.

Human-induced earthflows in Northern Patagonia, Argentina

Flujos de tierra inducidos por la actividad humana en el norte de Patagonia, Argentina

Damián Groch, Universidad Nacional del Comahue, Argentina

This research focuses on determining the anthropogenic influence on the triggering of earth flows by long-term intensive irrigation in Northern Patagonia (Argentina). Excessive water input for transhumant pastoralism has been observed to create favorable conditions for the triggering and evolution of earth flows, even under water deficit conditions. Recent collapses have produced economic losses, which are expected to increase if irrigation amounts remain at the same level.



14:40 - 15:10

15:10 - 15:40



Lake outburst flood hazard in the Central Andes of Argentina (31°-36°S)

Peligrosidad de crecida abrupta por colapso de lagos en los Andes Centrales de Argentina (31°-36°S)

Mariana Correás González, CONICET-CCT Mendoza, Argentina

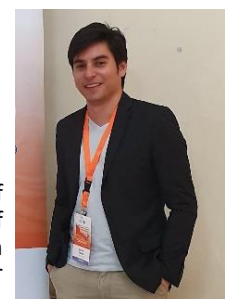
What types of lakes exist in the Central Andes of Argentina (ACA) and how are they distributed? Do current lakes represent a hazard associated with their potential collapse and consequent flooding? An inventory and classification of the high-mountain lakes and some historical cases of lake outburst floods that occurred in the ACA (31°-36°S) will be presented.

Temporal analysis of 4D rockfall activity and cliff erosion from automated hourly-resolution laser scanning monitoring and the potential applications in Chile

Análisis temporal de la actividad de caídas de roca y erosión de acantilados en 4D mediante monitoreo láser escáner automatizado de resolución horaria y potenciales aplicaciones en Chile

Ignacio Ibarra Cofré, Durhan University and Universidad de Chile, Chile

Using a unique, extensive, and high-resolution 3D dataset based on 1 h change detections of the cliff topography undertaken on a vertical cliff we examined the timing of rockfall activity during three years of monitoring (2017 – 2019). Our results hold implications for the understanding of the 4D geomorphic evolution of rock-slopes and cliff erosion, rockfall activity and hazard. We also will discuss potential applications of our research in Chile.



15:40 - 16:10

INTERNATIONAL GEOMORPHOLOGY WEEK 2024