Asia Oceania Geosciences Society

AOGS 17th Annual Meeting
28 Jun to 4 Jul 2020
Sono Belle Vivaldi Park, Hongcheon

Session Details

HS37 - Permafrost Changes and Modelling Advances

Section(s)   HS - Hydrological Sciences (Primary)

IG - Interdisciplinary Geosciences

Conveners

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Session Description

Permafrost is defined as ground that remains at or below 0°C for more than two consecutive years. About one quarter of land in the Northern Hemisphere is underlain by permafrost. The Qinghai-Tibet Plateau (QTP) has the most extensive mountain permafrost distribution in the middle latitudes. In past decades, obvious warming in permafrost has been observed and modelled in the QTP and central Asia in response to the changing regional climate. While climate models project strong future warming, continuous changes in permafrost will have major impact on the Earth system, affecting climate system, water cycle and carbon cycle. The implications include impacts to hydrology, ecosystems, carbon cycling, and infrastructure. There is therefore an urgent need to understand the nature of the change of permafrost dynamics in response to climate change.

Many efforts have been made in developing improved modelling tools. Empirical and numeric models have been well developed in recent decades with increasing use of remote sensing data as inputs. The development and use of numerical models to diagnose past change of permafrost and predict future sensitivity and response under various climate and land-cover scenarios is a particular focus. Recently, many advances have been achieved in quantifying permafrost changes, understanding of processes and new modelling techniques. It is therefore timely for a session to bring together studies that address recent advances in understanding, diagnosis and prediction of past and future changes in permafrost regions in Asia as well as improvements in numerical permafrost modelling.

The conveners have successfully organized a number of special sessions in major international academic conferences in recent years. They are also the organization committee members of the upcoming 12th International Conference on Permafrost (Lanzhou, China). To promote the permafrost research and international collaboration, we look forward to a successful permafrost session in AOGS 2020 in Korea.

Keyword(s)

Permafrost Change; Cryospheric Hydrology; Permafrost Modelling;

ABSTRACT SUBMISSION

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Conference Registration	Opens 25 Feb 2020
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