

APECS International Online Conference 2022

All hands on deck!

Inclusive knowledge on polar regions as a pathway for sustainable future

Call for abstracts

Theme

The idiom “All hands on deck” reflects the efforts currently needed to address the major environmental challenges of the current century. Knowledge in all forms and of all natures represents an essential component for designing a desirable and sustainable future for Mankind and the Earth, along with the means to achieve such horizons. Knowledge inclusiveness, however, has not always been a concern in scientific and academic circles, although this could improve the ways we do research and interact with the rest of society.

For the 2022 edition of its International Online Conference, the Association of Polar Early-Career Scientists (APECS) has thus chosen to dedicate a 24-hour online conference, on 18th May 2022, for sharing experiences and knowledge on Polar and Alpine regions from various perspectives.

The conference contains five sessions drawing on multiple disciplines from the social to the natural sciences:

- Voices from Alpine and Polar regions
- Bridging knowledge from Polar ocean beneficiaries
- Polar regions in motion
- Methods and ethics in polar research
- Advances in cryospheric sciences

We decided to make natural, humanities and social sciences meet in three of the five sessions (i.e, bridging knowledge from Polar ocean beneficiaries; polar regions in motion; methods and ethics in polar research and retained transversal, open themes so as to allow a wide array of discussions. We also dedicated sessions to particular realms such as the ocean, the coasts and the cryosphere.

Moreover, the APECS International Online Conference 2022 is giving room for alternative ways for expressing self through **a call for stories and art contributions** that, we believe, will considerably enrich the experience of the participants.

Submissions can thus take the form of three different formats:

- *Stand-alone presentation*
- *Oral narrative*
- *Artwork*

Stand-alone presentations and stories should fit in the session topics while art contributions can be submitted freely as long as they are linked to the Alpine and/or Polar realms and can be presented in a digital format.

1 - Voices from Alpine and Polar regions

The purpose of this session is twofold. First, it showcases the daily lives of people through perceptions and ways of inhabiting the environment whilst also exploring knowledge, practices and places of indigenous groups. This session also invites submissions that document any form of life experiences and trajectories of individuals or social groups who live, work and visit the polar regions, on various temporalities, whatever their statuses and social milieu. Second, this session interrogates the place of people in the global world taking, for instance, the perspectives of geopolitics, economics, mass media and cultural products. One specific example of topics includes the imaginaries and narratives on Polar and Alpine regions. Submissions from researchers in the social sciences, humanities and arts as well as residents of Polar regions that combine various scales of analysis and attempt to join the Local and the Global are highly encouraged.

- Human-nature relationship
- Indigenous knowledge, practices, and places
- Experiences from living in the polar regions
- De-construction of narratives on Polar and Alpine regions
- The global world and transnational phenomena
- Geopolitics and international relations

2 - Bridging knowledge from Polar ocean beneficiaries

Polar oceans are of great importance for the Earth system and humans, but remain largely unknown to us. In light of the UN ocean decade, this session aims to gather speakers willing to explore the multiple facets of the polar oceans and coastal regions, thereby contributing to our understanding of physical properties and dynamics of the ocean, marine ecosystem functioning and investigating the anthropogenic nature of changes to the oceans and coasts of the polar regions, as, for instance, pollution and climate change effects. This transdisciplinary session welcomes studies and oral accounts from a variety of Ocean beneficiaries that depend on the same - not only for their research but also for their living and other ocean-related activities. Submissions that draw on the notion of “marine resources” and provide insights on livelihoods, ocean-related conflicts and tensions as well as governance are also encouraged.

- Oceanography
- Marine ecosystems
- Marine pollution and water quality
- Ocean changes and hazards
- Ocean as source of incomes and ocean productivity
- Conflictuating oceans and seas

3 - Polar regions in motion

Polar regions are known to be both fragile environmental and social ecosystems, and areas where climate change is amplified. In addition, some natural components of those regions are crucial for the Earth climate system and its evolution. Since a few decades, important changes at various scales have been observed in the biosphere, the cryosphere, the atmosphere, the ocean but also in human societies. In this context, this transdisciplinary session investigates the environmental changes in polar regions, their impacts and consequences, and to what extent humans themselves contribute to these changes. It seeks a better understanding of the impact of human activities on Polar regions (e.g, increased tourism, resources exploitation, transport, urbanization) in the age of the Anthropocene and

how human societies respond to this changing world. Sustainable approaches to adapt or mitigate climate change in polar regions are encouraged.

- Ecosystem changes
- Paleoenvironments
- Evolution of the cryosphere related to climate change
- Mitigation and adaptation to climate change
- Human societies in transition
- Intensification of human activities in Polar regions

4 - Methods and ethics in polar research

This transdisciplinary session sheds light on innovative and alternative ways to do polar research. Studying either natural processes or social phenomena in the Polar regions can be challenging and can lead to the development of novel approaches such as those that combine in-situ and remote sensing data. Drawing on collective feedback, reflections and fieldwork experiences, this session addresses methodological and ethical problems that can be encountered by researchers from multiple disciplines at all stages of the scientific process. As examples, the delimitation of field sites are of particular interest, especially for some research areas that seek for special conditions (e.g, clean sky in astrophysics), as well as the scales of analysis. Submissions on the societal and the environmental impact of polar research are also welcome so as to enrich the methodological discussions. This session will thus explore how interdisciplinarity, instrument development and methodologies can shape sustainable ways of conducting research.

- Field sites and scales of polar research
- Interdisciplinarity as method
- Modeling based on remote sensing and in situ data
- Remote sensing opportunities, constraints and methods
- Innovation and instrument development
- Societal and environmental impact of polar research

5 - Advances in cryospheric sciences

This session aims to understand the natural processes of the cryosphere: solid precipitation, permafrost, glaciers, ice caps and ice sheets, snow, and sea, river and lake-ice. It invites submissions drawing on a variety of techniques and engineering, and from all cryospheric-related fields of natural sciences. Dedicated to advances in the study of the cryosphere, this session aims to enlarge the scope of snow and ice by multidisciplinary works that attempt to document complex interactions between the cryosphere and other components of the Earth system. Snow research is for example a place for multidisciplinary collaborations and innovations. As recently shown, the snowpack constitutes a significant driver of change in terrestrial ecosystems so presentations that attempt to build bridges with disciplines outside the cryospheric sciences are also appreciated. Finally, approaches that include remote sensing techniques, lab experiments, fieldwork and modeling are encouraged.

- Linking the cryosphere, biosphere and atmosphere
- Permafrost evolution and processes
- Interactions between ice sheets, ice shelves, sea ice, ocean and solid Earth
- Dynamics and physics of ice bodies (e.g., glaciers, ice sheets etc.)
- Geomorphology of glacierized regions
- Snow research (i.e., physics, chemistry, life on snow/ice and microbiology)
- Snow and ice-related hydrology

Practical information

The APECS International Online Conference gives priority to Early-Career Researchers (ECRs), including master students, for the stand-alone presentations but also welcomes those interested in Polar regions to submit a proposal in the categories “oral narrative” and “art”.

Stand-alone presentation

The proposal should contain a maximum of 500 words and refer to one of the five sessions.

Oral narrative

The proposal (stories from the Arctic, Antarctic and Alpine regions) must contain 300 words and refer to one of the five sessions.

All proposals must be sent to Nicolas Champollion and Sophie Duveau by **20 March 2022 at 10:00 AM (UTC)**. The abstracts will be selected by a scientific committee that gathers scholars from multiple disciplines from across the world. Their research areas cover all sessions as well as Antarctica, the Arctic and Alpine regions.

Contact: Nicolas.champollion@univ-grenoble-alpes.fr / Sophieamelia.duveau@ehess.fr

Call for art contributions

The art contributions should be submitted in .pdf, image, audio or video formats via Google form with key information including author/artist name, year, location and title of the art piece. The file with the artwork should be named as follows: name_IOC2022_ART. Please also include a short introduction to the artwork and how it relates to the polar/alpine regions (max. 1000 characters, including spaces). If you would like to give a complementary oral presentation (max. 10 min) during the conference, please indicate this in the form. All forms of arts are encouraged.

Please note that we accept only one art contribution per person. With file sizes larger than 1GB or other formats, please contact info@apecs.is

All proposals must be submitted via Google form by **1 April 2022 at 10:00 AM (UTC)**. The selection committee for the art contributions consists of APECS Art project group members. Submit your art contribution via this [form](#).

Scientific committee (alphabetic order)

Tesfaye BERHANU, Picarro Inc, Switzerland

Nicolas CHAMPOLLION, Institut des Géosciences de l'Environnement, France

Tommy CLAY, University of California, United-States

Sophie DUVEAU, Centre Alexandre Koyré, EHESS, France and Svalbard

Gwenaëlle GREMION, Institut des Sciences de la Mer, Université du Québec à Rimouski, Canada

Caroline HERVÉ, Université Laval, Canada

Gestur HOVGAARD, Roskilde University, Greenland

Simon JUNGBLUT, Bremen University, Germany

Vivek KUMAR, North-Eastern Hill University, India

Dariusz IGNATIUK, University of Silesia, Poland

Timo KOIVUROVA, Arctic Centre, University of Lapland, Finland

Lennart NILSEN, University of Tromsø, Norway

Frank PATTYN, Laboratoire de glaciologie, Université libre de Bruxelles, Belgium

Archita RANA, Indian Institute of Science Education and Research Kolkata, India

Andrei ROGATCHEVSKI, University of Tromsø, Norway

Katie SIPES, Aarhus University, Denmark

Peter SKÖLD, Arctic Council & Umeå University, Sweden

Carla TAPIA BALDIS, Institute of Nivology, Glaciology and Environmental Sciences, CONICET, Argentina

Divyesh VARADE, Indian Institute of Technology, India

Daniela WALCH, Université du Québec à Rimouski, Canada

Organizing committee (alphabetic order)

Nicolas Champollion, Sophie Duveau, Joana Fragão, Gwenaëlle Gremion, Ljuba Günther, Anika Happe, Kirsi Keskitalo, Vivek Kumar, Akin Kuye, Prashant Pandit, Geetha Plackal, Carla Tapia Baldis, Ashishkumar Upadhyay, Divyesh Varade, Deniz Vural, Daniela Walsh, Dhanendra Singh.

With the participation of APECS Art project group.