



SCAR 2022

Antarctica in a Changing World



SCAR BUSINESS MEETINGS

27-29 JULY, 2022

ONLINE

10th SCAR OPEN SCIENCE CONFERENCE

1-10 AUGUST, 2022

ONLINE

XXXVIII SCAR DELEGATES MEETING

5-7 SEPTEMBER, 2022

(IN-PERSON WITH LIMITED
ONLINE FACILITATION OF REPORTING)

www.scar2022.org

ABOUT SCAR 2022

The National Centre for Polar and Ocean Research (NCPOR), an autonomous organization under the Ministry of Earth Sciences (MoES), Government of India, takes pride and pleasure in hosting the Scientific Committee on Antarctic Research (SCAR) Meetings of 2022.

The 10th SCAR Open Science Conference of 2022 will feature a comprehensive schedule of meetings, symposia, virtual side events and social activities, daily plenary lectures and poster sessions in an innovative online format. The theme of the SCAR Open Science Conference, “Antarctica in a Changing World,” reflects not only the significance of ongoing changes in Antarctica and their impact on the Earth System, but also symbolizes the interconnections of global earth system processes. The 2022 version of the biennial science conference provides a platform for the Antarctic science community to share the latest outcomes of Antarctic research and foster new paradigms of collaborative research as our planet witnesses accelerating climate change that is often first expressed in the cryosphere, especially in Antarctica and the Southern Ocean.

The Open Science Conference, which began 20 years ago from Bremen in Germany, has become the premier activity of SCAR that supports its mission to promote and facilitate international Antarctic and Southern Ocean science. These biennial meetings provide fertile

ground for the exchange of the latest and most impacting Antarctic research outcomes and a place where future collaborations are born. The structure and format for the conference has evolved over the years to enhance attendees' experiences and interactions. Recent global events have necessitated innovation and a re-thinking of the delivery and format for the Conference as most of the world's meeting places went online. At the same time, SCAR is committed to ensuring that its activities are conducted in a manner that minimizes its carbon footprint by example as a lead scientific advisor on global climate change. To this end this year's conference will once again be online.

ABSTRACT SUBMISSION CLOSES

1 JUNE, 2022

REGISTRATION OPENS

2 JUNE, 2022

EARLY BIRD REGISTRATION

2-30 JUNE, 2022

REGULAR REGISTRATION

AFTER 1 JULY, 2022

Guidelines for Abstract Submission

- The Abstract Submission Portal closes on June 1, 2022.
- The Submitting author must be the corresponding author and she/he will be contacted if any issues arise with the abstract.
- The author and co-authors must be entered in the order you wish for them to appear in the conference citation.
- It is highly recommended that you create your abstract offline and cut and paste into the portal, so that you retain a copy of your submission. Special characters and formatting in the abstract may be lost during the copying process.
- There is no limit on the number of abstracts submitted by an author.
- Do not submit multiple versions of the same abstract. If there are multiple versions, the one with the latest timestamp will be used and the others deleted.
- All material must be the work of the listed author(s).
- Before entering your abstract, you will be asked to choose a parallel session type and then a parallel session. A link to the full list of proposed parallel sessions is available [here](#).
- The final set of parallel sessions in the Conference Science Program will be determined by the abstracts submitted. Parallel sessions may be added and/or deleted at the discretion of the International Science Organizing Committee and affected abstracts re-assigned as necessary after

the abstract submission closes.

- Authors other than the submitting author are added via the “add co-author” function. There is no limit on the number of co-authors.
- Indicate the presenting author by ticking the box “presenting author”. Only one presenting author is allowed.
- The abstract title is limited to 30 words. Capitalize names and proper nouns (words that name a specific person, place, organization, or thing) in the title.
- The abstract text is limited to 250 words.
- Once you have submitted your abstract, you can edit, preview, download, or delete your abstract by navigating to “Abstract Status” in the portal. These functions are available until the close of abstract submissions on June 1, 2022.
- Once deleted, your abstract is not recoverable. After the deadline all submitted abstracts will be reviewed, and accepted abstracts will only be included in the conference programme provided that you have registered for the conference.
- Contact scar2020@elbonmeetings.com should you wish to withdraw your abstract after the submission deadline.
- Please get in touch with us at scar2020@elbonmeetings.com if you have any questions or need assistance.

Scientific Themes & Sessions

The core of the SCAR Open Science Conference is a series of a parallel sessions populated by brief presentations proposed by the community via abstract submissions. Parallel sessions include both oral and poster presentations. An initial list of parallel sessions is generated by the International Science Organizing Committee in consultation with the community. The final program of sessions is assembled based on abstract submissions. During this process, depending on community response, proposed sessions may be omitted or combined. Sessions are led by convenors and concluded with an opportunity for the audience to ask presenters questions. In organizing the parallel sessions, conflicts in timing amongst similar or related topics will be minimized to allow for participation by attendees.

Physical Sciences

- Astronomy and geo-space observations from Antarctica
- Polar atmospheric processes: water cycle, snow, clouds, aerosols, radiation and gravity waves
- Polar meteorology: short term climate variability
- Geomagnetic, geoelectric and geo-electromagnetic observations from Antarctica
- Past polar climate variability and their teleconnections with the tropics
- Polar climate variability, teleconnections, and global monsoon; past, present, and future
- Southern Ocean circulation: change and consequences

- Physical drivers and climate implications of Antarctic sea ice variability and change
- Radio sciences for Arctic and Antarctica: from the atmosphere to the geospace

Geosciences

- Surficial processes-geomorphology, chemical weathering, exposure age dating, and permafrost dynamics
- Permafrost dynamics and relations with climate change
- Antarctica and its neighbours in supercontinent cycles
- Antarctic ice sheet behaviour from marine and terrestrial records
- Polar environmental studies along the Antarctic margin: past & present perspectives
- Deformation of the Antarctic: influence of tectonic, volcanic, hydrological, and climate change processes

Life Sciences

- Birds and marine mammals
- Southern Ocean plankton diversity, food web ecosystem and biogeochemical cycle
- Management implications of Southern Ocean ecosystem dynamics and biodiversity thresholds
- Sea ice in the atmosphere-ice-ocean-biosphere system: how, where and why is it changing, and what are the effects?
- The role of atmospheric microorganisms in Antarctica

- Chemicals of emerging Antarctic concern; a rising tide in a warming climate
- Solutions to pollution: contaminant impacts and remediation in Antarctica
- Sub-Antarctic islands: sentinels of change
- Environmental factors driving diversity and composition of fossil and living Antarctic communities
- Biological dispersal: connections at continental and inter-continental scales
- Genomic insights into past and present Antarctic biodiversity
- Ecological implications and adaptations of microorganism in the Polar environments
- Microbial diversity of the polar oceans and their role in the biogeochemical cycles under the global warming scenario
- The Antarctic seafloor: ecosystem interactions and environmental drivers of change
- Informatics approaches to Antarctic biodiversity science
- Antarctic expeditioners and spaceflight: lessons learned in health and medicine off the grid

Humanities and Social Sciences

- The changing face of Antarctic tourism
- Antarctic heritage
- The ATS, international law, and governance
- Understanding 'The Ice' through the humanities, arts and social sciences
- Antarctica and the arts
- New approaches to Antarctic and Southern Ocean histories

- Values in Antarctica: identification and vulnerability to anthropogenic impacts
- Living and working in Antarctica

Cross-Disciplinary Topics

- Emerging technologies and their applications from the depth of the ocean, to the deep Antarctic field and space
- Predicting and detecting tipping points and regime shifts in Antarctic and Southern Ocean systems
- Air-sea interaction and its linkages with ecosystem response in the Southern Ocean
- Emerging frontiers in Earth observation (EO) and geoinformation (GI) science in Antarctica
- Sub-ice geology and east Antarctic Ice Sheet (EAIS) stability
- The co-relation between deep blue sea and outer space as an (inter) planetary space at the margins of Antarctica
- The resilience of the Antarctic Treaty System in the Anthropocene
- Inclusive collaborations in Antarctic research
- Public engagement with Antarctica in a changing climate
- Rethinking Antarctic environments & conservation
- Human impacts on Antarctica
- Workshop: Sharing science data fairly to support interdisciplinary research collaborations



International Science Organising Committee (ISOC)

PROF. STEVEN L CHOWN

Chair; Monash University, Australia

PROF. DENEK KARENTZ

Deputy; University of San Francisco, USA

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Deputy until March 2021;
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Alfred Wegener Institute, Germany

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OGS, Italy

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British Antarctic Survey, UK

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For more Information

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CONFERENCE MANAGER

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