

## SCAR 2020 Open Science Conference - Draft List of Sessions

Below is a draft list of parallel session titles for SCAR Open Science Conference 2020. This has been put together by the International Scientific Organising Committee based on ideas submitted by the wider SCAR community. You will see that each session title is linked to a top level topic; other interdisciplinary themes where relevant and to relevant SCAR groups. We identified and included our own suggestions in a few gap areas (highlighted in grey) where no proposals were submitted by the community.

Please send any comments to [info@scar.org](mailto:info@scar.org) by the 28th of June 2019. We would welcome comments on the following:

- Additional session proposals to cover the identified gaps or any other areas missing from this list
- Suggestions for sessions which can be merged together.
- Suggestions for changes - e.g. where we have misunderstood your original suggestion or assigned it to the wrong overarching theme.

Note that some proposals for keynotes, colloquia and mini-symposia were submitted - these have been included although decisions on these sessions will be made at a later date.

Colour Key:
Physical Sciences
Interdisciplinary geosciences - physical sciences
Geophysical Sciences
Interdisciplinary Technology
Interdisciplinary all domains
Life Sciences
Interdisciplinary including Life Sciences
Social Sciences and Humanities
Interdisciplinary including Social Science

Top level topic	Number	Title of submitted session	Interdisciplinary with	SCAR Group
<b>Astronomy and Astrophysics in Antarctica</b>				
	4	Space weather from Antarctica: recent advancements and future challenges		
	5	Astronomy and space research from the poles		AAA
	6	Co-relation between deep blue sea and deep space as mediums at the margins of Antarctica as an (inter)planetary space	ocean	
<b>Atmosphere, snow and climate</b>				
aerosols	7	Atmospheric ice - hexagonal, cubic, or other?		
	8	Atmospheric Aerosols in the Polar regions: Chemical, Physical and Biological properties	Life Sciences	
Snow and interactions with atmosphere	28	The role of snow in the past and future of Antarctica: physical, chemical and biological aspects	Life Sciences	SNOWANT
processes	10	Antarctic gravity waves: observations, modelling, and impacts		ANGWIN
Past Climate variability	11	Past climate variability in Antarctic and the sub-Antarctic captured in paleoclimate archives including ice cores		IPICS, PAIS
Short term climate variability	181	weather including forecasting and numerical weather prediction and short-term climate variability.		
	45	Polar Climate Variability and Tropical Teleconnections	Teleconnections	
		Present variability, local to hemispheric dynamical insights: from cyclones to tropical teleconnections		
Climate projections and predictions	9	From AntClim21 to AntClim now - projections for the Antarctic/Southern Ocean region for the next decades to century		AntClim21, Antclimnow
<b>Understanding and observing the oceans</b>				
sea ice variability and trends	14	Antarctic sea ice processes, variability and trends.		
	15	Antarctic sea ice variability and ice sheet processes		
interactions sea ice/ocean, polynias	17	Ocean processes and ice-ocean interactions: from the Antarctic coast to the open Southern Ocean		
	16	Ice-ocean boundary layers		
	12	Polynya mechanics		
sea ice / biology	18	Sea ice exposed - key processes at margins and interfaces	Life Sciences	
	19	Antarctic sea ice mass balance, or, Sea ice as a rich blanket of bio-geochemical processes on top of the Southern Ocean: mass balance variations and their role for ocean and atmosphere	Life Sciences	
Observing the ocean		a session focusing on processes occurring at the continental margin, such as heat flow exchange, salinity and temperature change and influence on circulation, water masses, mixing and cascading/intrusion of bottom water in the continental shelf up to the cavity below the ice sheet		SOOS
<b>Ocean - ice sheet - ice shelves (sea ice ?) interactions</b>				
	24	Antarctic ice shelf and sea ice	Antarctic Ice sheet evolution sea ice	
	29	The Future for Ice Shelves		FRISP
	32	The stability of East Antarctic ice shelves in hot and cold ocean		
	20	Dynamics of the Antarctic Coast and its interaction with the Ocean.		
	27	Predicting and detecting tipping points and regime shifts in Antarctic and Southern Ocean systems		
ice - ocean feedbacks		ice-ocean feedbacks: (coupled) modelling and observations		
<b>Antarctic Ice Sheet, evolution and future, sea level rise</b>				
Peripheral Glaciers and Subantarctic glaciers	36	Antarctica Peripheral Glaciers	earth sciences - physical sciences	
History of the Antarctic Ice Sheet and the Southern Ocean	25	The Antarctic Ice sheet during interglacials		PAIS
	26	Integrating marine and terrestrial records of Antarctic ice sheet behaviour		IQDP, PAIS, IPICS

	31	Significant successes of geological drilling in and around Antarctica and ideas for future IODP/ICDP implementations		IODP, PAIS,IPICS
	35	Paleo-constraints for Antarctic contribution to sea-level change		PAIS, SERCE,ISMASS
Modelling Ice sheet evolution	33	Ice sheet modelling and geological constraints for the timing, size and dynamics of Antarctic ice sheets		PAIS, SERCE, ISMASS
	37	How to quantify uncertainty (not sensitivity) in future projections of Antarctica's contribution to sea level		ISMASS
	21	Ice rheology: linking laboratory and field observations to ice sheet models		
<b>Teleconnections</b>				earth sciences- physical sciences
	30	Southern Ocean circulation and it's impact on the carbon cycle and ice sheets: Past, Present, and Future	ocean	
	34	Beyond IPCC: the long term changes in south and north poles linkages		
	13	Antarctica and the Global Thermohaline Circulation		
	46	Past teleconnection between the Southern High-latitude and Tropical Climate Variability		
<b>Antarctic solid earth structure and interactions with cryosphere</b>				
GIA modelling, ice-sea level-solid Earth feedbacks		GIA modelling, ice-sea level-solid Earth feedbacks	Antarctic Evolution	PAIS, SERCE, ISMASS
Earth structure and rheology			Ice rheology	
Landscape evolution		Long-term feedbacks between ice dynamics, erosion, isostasy; topographic reconstruction		PAIS, SERCE
surficial processes	39	Surficial Processes: Geomorphology, Chemical Weathering and their Relationships to Cryospheric Loss		
geothermal heat flux	40	Sensor fusion (Seismic, Magnetics, Radar, Gravity) to constraint GHF		
	44	Antarctica geothermal heat flux		SERCE
subglacial environment	23	Recent Advances in the Hydrology and Biochemistry of Subglacial Environments	also tagged in Life Sciences	
	22	Exploration of Antarctic subglacial environments: recent events and future opportunities		
<b>Geology, geophysics</b>				
Continental evolution of Antarctica	41	The Kuunga Orogeny in Antarctica and adjacent continental blocks - from Australia to southern Africa.		
	43	Antarctica and its neighbours in supercontinent cycles		
general geophysics		imaging of the ice, bed, and interior of the Earth via a range of methods		<b>Antarchitecture, PAIS, IPICS</b>
	42	Exposure dating and sediment tracing using cosmogenic <sup>10</sup> Be, <sup>26</sup> Al, and <sup>14</sup> C in Antarctic sciences - methodologies and processes		
<b>Harnessing emerging technologies for Antarctic Science</b>				
Remote sensing	96	Near-target remote sensing, under theme Harnessing emerging technologies for Antarctic science - from robotics to remote sensing		
	99	Using snow in Antarctic (and Greenland) to calibrate optical satellite sensors	Atmosphere, snow	
	100	Remote Sensing of the Polar Atmosphere	Atmosphere	
	63	Remote sensing for ecology of Southern Ocean predators	Life Science	
data management and geoinformation	94	Emergent Frontiers in Earth Observation and Geoinformation (EO/GI) in Antarctic Sciences: Cross-disciplinary Advances		EOAG (Earth Observation Action Group)
	95	Data Management, preservation and interoperability		
other	97	Name tbc. Proposed theme - research into and use of renewable sources of energy in Antarctic.		
	101	Technological determinism and Antarctic science and exploration		
<b>Choosing the Future of Antarctica</b>				
	162	Antarctica and the Southern Ocean under the Paris Climate Agreement and an even warmer world - local changes and global consequences		
	131	History of Antarctic futures — what can we learn from past attempts to forecast future trends in Antarctica? (mini-symposium or roundtable)		
	155	Antarctic futures in the Anthropocene		
	38	Can, and should, intervention (glacier geoengineering) be used to slow down the Antarctic contribution to sea level?		
	156	Speculative Antarctic Futures		
	157	Integrated Antarctic futures: A view across the natural sciences, social sciences and humanities		
	176	The role of education in building a better future for Antarctica or Education: the key to build a better future for Antarctica		
	159	Planning and implementing collaborative and integrated Antarctic research: A workshop		
<b>Antarctic and Southern Ocean Ecosystems Describing the system</b>				
Bioregionalisation & Connectivity in Antarctica & Southern Ocean Ecosystems	54	Antarctic regionalisation, implications of increased understanding of Antarctic bio- and phylogeography		EGABI, SO-CPR, ANTOS, BEPSII, Remote Sensing
	56	The changing distribution of land, and life on land, in Antarctica		
	57	Biological dispersal and controls on distribution - connections at continental and inter-continental scales		
	61	Mapping and monitoring biological distributions		
	66	Environmental factors driving diversity and composition of Antarctic microbial communities		
	73	Ecological connectivity between Antarctic marine regions		
	179	Circumpolar distributions of top predators		
Paleoecology		56, 57 ? link with Glacial history of Antarctica and the Southern Ocean	Antarctic Ice sheet evolution parallel session	happy to help
	50	Antarctic and austral past life		
New Technologies: from Genomics to Teledetection	67	Genomics insight into the past and present of Antarctic Biodiversity		

	68	Omic in Antarctic organisms biology or Genomics and Transcriptomics in Antarctic organisms biology	
	70	Antarctic Genomics	
Microbial biology & ecology	58	Microbial adaptation and biogeography	
	62	Microbial Ecosystem in Antarctic and Southern Ocean	
	69	Biotic and abiotic factors driving Antarctic microbial communities	
Miscellaneous	53	Overwintering ecology of Antarctic marine organisms	COULD BE IN UNDERSTANDING PROCESSES
	76	Seafloor environments and characteristics	
<b>Antarctic and Southern Ocean Ecosystems</b>			
<b>Understanding processes</b>			
Eco-sentinels [ANTOS, EGBAMM, ISSA, SKAG]	78	Biodiversity and the Resilience of Ecosystem Function	
	75	The effects of change on Southern Ocean ecosystems: understanding, modelling, projecting, and managing change in Southern Ocean species and ecosystems	
	154	Managing the effects of change on Southern Ocean ecosystems: the nature and role for Marine Ecosystem Assessments	
	3	Sub-Antarctic Islands: Sentinels of Change. physical or biology ?	
aerobiology, sea ice, snow, life & chemosynthetic	51	Chemosynthetic marine communities in Antarctica - past and present', under the Antarctic and Southern Ocean Ecosystems theme.	
	47	Aerobiology over Antarctica	
	60	Snow, ice, and sub-ice ecosystems	
	71	Biomonitoring of the Antarctic sea-ice ecosystem	
	77	Biogeochemical Exchange Processes at the Sea-ice interface	
	49	Photosynthetic slow algae communities (and their importance in polar ecosystems)	
Trophic interactions [BEPSII, EGBAMM, SO-CPR]	179	Squids, Seabirds and Marine Mammals biology	
	74	The role of fish in Southern Ocean Ecosystems	
Plasticity and individual variability [BEPSII, EGBAMM, SKAG]			
Physiological mechanisms [SKAG, BEPSII, EGBAMM]	180	Physiology and Adaptation of Antarctic and Southern Ocean life	
	72	Climate change and marine ecosystems: physiology, evolutionary adaptations and ecological functions	
<b>Assessing the impacts (interdisciplinary)</b>			
Human footprint	83	Sustainability of Antarctica Icy Peninsula: The Human Interventions	
	91	Defining thresholds of wilderness	
	89	Environmental narratives for the 21st century: stories that focus on the importance of human-environmental relationships in the Antarctic region (continent, ice, ocean, atmosphere)	
	124	Histories of environmental impact assessments	
	138	and other groups	
Pollution [imPACT, PLASTIC]	82	Persistent Organic Pollutants in Antarctica	
	84	Human microbial pollution of Antarctic wildlife	
	87	Contaminant Impacts and Remediation in Antarctica	
	93	What the Antarctic Community are doing to understand plastic use and plastics in the Antarctic region	
	79	Biogeochemical response of Antarctic biomass to climate change	
Fisheries and bioprospection	90	Extractive industries and Antarctic environmental governance - from whaling to bioprospecting	
	81	Bioprospection of Antarctic organisms	
	88	State of Fisheries - our tagging program and what we know about Dissotichus eleginoides and D. Mawsoni	
	80	Effects of Japan's recent whaling policy changes on the whales and ecology of the Southern Ocean International Whale Sanctuary	
Loss of biodiversity [ANTOS, EGABI, ISSA]	85	Human impacts on microbial diversity in its multiple roles - basis of food chains, threat for animal and humans, asset for applied research	
Miscellaneous	92	Impacts of noise on marine life	
	86	Title tbc. Theme: Polar Wildlife Health and Disease. Summary: This workshop will focus on sharing information on the threats that face wildlife health and discussions on developing monitoring programs and how to prevent future threats.	
Ice humanities	103	Ice humanities	
<b>The Changing face of Antarctic Tourism</b>			
	115	The intersection of science and tourism in Antarctica, co-benefits, concerns and the future value of citizen science in Antarctica.	
	116	The refining and re-classification of adventure tourism in Antarctica with regard to better representing the history, geography and media representation of human activity in the Antarctic	
	118	Tourism and Antarctic heritage processes	
	125	Chinese tourists in polar region - their profile, motivation and interpretation	
	160	Antarctic tourism development and governance	
<b>Two centuries of Humans in Antarctica?</b>			
	114	200 years of humans in Antarctica - the history and archaeology of human interactions	
	123	Knowing the Antarctic past: epistemological challenges of historical research in an extreme environment	
	144	History of interdisciplinary research in Antarctica (panel session)	
Issues and challenges in Antarctic Heritage	112	Revisiting Antarctic heritage: Challenging conventional definitions and management approaches	
	113	Critical issues in Antarctic heritage	
	117	Heritage processes in Antarctica - dealing with the material remains of human activities in Antarctica	
	119	Environmental protection and Antarctica's natural and cultural heritage - waste not, want not?	
	134	Critical Issues in Antarctic Heritage: reviewing the field, considering the future	
Antarctic Science and Technology Histories	122	Using historical research in Antarctic science	

	136	The history of technological innovation in Antarctic and Southern Ocean exploration and science
	137	History of Antarctic logistics and science support — the hidden part of the iceberg? (panel session)
	143	History of Antarctic science from Russia/the former Communist world: how did science collaboration appear from the east? (panel session)
	145	Critical Issues in the History of Antarctic Science and Technology.
Southern Ocean Histories	108	Exploring the history and heritage of human-environmental relationships in the Southern Ocean through material culture and places (coasts, ice, seabed, ships)
	109	Cross-disciplinary HASS panel discussion on strategies for raising broader public awareness of environmental issues and research in the Southern Ocean
	135	HASS in deep: how historians and scientists can collaborate in studies of the ocean depths
	141	New perspectives on the history of Antarctic whaling — and its legacies in contemporary culture and politics (panel session)
<b>The ATS, international law and governance</b>		
	151	Revisiting CRAMRA: political and legal histories of CRAMRA and its legacy
	165	Political Philosophy Looks to Antarctica
	149	Has the Antarctic Treaty a future after 2048? Development before 1959 and the future of the ATS beyond 2048
<b>New ways of thinking globally about Antarctica</b>		
gateway cities	132	No specific title: general theme of Antarctic gateway cities, from historical/cultural/economic/geographic/sociological perspectives
History of applying Antarctic science structures to the Arctic	139	History of attempts to apply Antarctic science structures to the Arctic (panel session)
<b>Antarctica and Art</b>		
	111	Antarctica and Art
	129	Leaving footprints for the future: entertainment and literature of Antarctica
	146	Workshop to share knowledge of Antarctica through new and ancient arts, sciences and technologies
<b>Science/policy interface</b>		
	142	The shifting roles of state and private sponsors in Antarctic science through time — are there lessons for the present? (mini-symposium or roundtable)
	150	Towards a more effective science-policy nexus on Antarctic issues
	164	Connecting policy needs with research relevant to climate change in Antarctica
<b>Living and working in Antarctica</b>		
	104	Human Performance issues related to Antarctica as a work place
	133	Human biology: adaptive changes to ICE (isolated, cold, extreme) environments
	130	Healthcare in Remote and Extreme Environments Colloquium: Day 1. SCAR Open Science Human Biology and Medicine Theme (Full Day) —Operational Polar Medicine- Digital Health/Telehealth- Physiology, Psychology, Behavioural Science (Thursday 6th August 2020)
		Day 2. Healthcare in Remote and Extreme Environments Colloquium- From Underwater Medicine to Space Medicine including site visits- Hyperbaric/Hypobaric Chamber ( Friday 7th August 2020) – Offsite Location ? nearby UTAS School of Medicine
		Day 3 and 4 ( potentially half days). Healthcare in Remote and Extreme Environments Colloquium- Maritime Medicine-Survival Medicine-Expedition Medicine including site visits- RSV Nuyina/ Medical lab simulation/ training workshops (e.g. Sat 8th and/Sun 9th August) Offsite Location - ? nearby UTAS School of Medicine
	128	Religion and spirituality of people in Antarctica
	152	The Antarctic Demos
	177	No specific title proposed: Suggests a stream on human resources or the head office experience of non-deployed personnel supporting programmes
Logistic and infrastructure	106	No specific title proposed: Architecture and the built environment
	120	Histories of Antarctic logistics and infrastructures, including the role infrastructure development plays in Antarctic politics
	126	Antarctica deep field operation development and trend
	173	Identifying and Improving Weather, Water, and Ice Information Services for Safe Antarctic Operations
<b>Valuing and protecting Antarctica</b>		
	127	Antarctica's value for humans
	153	Approaches to quantifying the conservation value of large Marine Protected Areas (MPA) in the Southern Ocean
	163	Achieving conservation outcomes through Antarctic and Southern Ocean science
	158	Perspectives on advocacy and ambassadorship on Antarctic issues
	161	Changing spaces and places: Landscape dynamics, values and place attachment
<b>Public Engagement with Antarctica in a Changing Climate</b>		
	147	The real potential of citizen science in Antarctic research
	168	Communicating Change in Antarctica to the public
	174	Communicating Antarctic climate change futures
Polar museums	105	Heritage and Educators at Polar Museums
Citizen Science	172	Polar Education/Outreach and Citizen Science
Education and Outreach	167	Creatively communicate your polar story on camera
	170	Connecting Antarctica to the public: education and public outreach
	178	Antarctic education, outreach and engagement: 10 years on from IPY, how far have we come and where to next?

Training early career scientists	171	No specific title proposed - interdisciplinary session for early career researchers
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Diversity and Inclusion in Antarctic Research,  
Mini Symposium ?

	169	No specific title proposed - diversity and inclusion theme
	107	No specific title proposed - marginalised and/or underrepresented people in polar science throughout history
	121	Gender, race, and class in Antarctica
	175	Babel workshop: under the form of the so-called "cadavre exquis" (exquisite corpse)
	140	Antarctica and the developing world — what can we learn from the historical experiences of national programs from newer AT signatories? (mini-symposium or roundtable)
	110	Antarctica and Africa, or, Antarctica and the Global South: Considering inequality and race in history and literature
	166	Decolonizing Antarctica