

# ARCTIC FUTURES 2050

## Poster Sessions

Posters will be displayed in three separate rooms: East Court, West Court, and Lecture Hall. This guide is organized first by room, and then by theme and day within each room.

### ROOM: EAST COURT

#### THEME: Information Needs

D A Y  1	#	Contact/First Author	Poster Title
	1	Hoermann, S.	What does it take to move a community?
	2	Alvarez, J.	A framework for assessing the economic impacts of Arctic change
	3	Whitecloud, S.	Building Arctic resilience: a case study of plants and their uses in Southern Greenland
	4	Francis, J.	The shrinking Arctic mirror affects us all
	5	Griffin, C.	How do aquatic ecosystems respond to the paired stressors of cultural and climatic eutrophication in the Arctic?
	6	Huntington, H.	Climate change in community contexts
	7	Kirby, P.	Inuit insider-outsider perspectives through the lens of the Indigenous research agenda
	8	Littell, J.	Decision relevant Alaska climate information: from use-inspired toward co-production
	9	Mettiäinen, I.	"Bog there, marshland here": Risk and ethics as challenges in co-producing scientific knowledge on climate geoengineering in the Arctic
	10	Middleton, A.	What is the Arctic value?
	11	Curry, T.	Informal institutions and adaptation
	12	Degai, T.	SDGs: Perspectives from Russia's Indigenous peoples
	13	Druckenmiller, M.	The terminology of local and collaborative Arctic research: Primers from the Exchange for Local Observations and Knowledge of the Arctic (ELOKA) program
	14	Polash, L.	Working together to save Arctic ice
	15	Davidson, S.	Making the case for recognition of traditional Indigenous knowledge as applied science
	16	Ciferno, J.	Expanding resource recovery in Alaska
	17	Gross, D.	Solar energy to take off in the Arctic
	18	Saatova, L.	Arctic hydrocarbons for future energy security (case: Arctic offshore projects).
19	Quitoras, M.	Sustainable and robust energy systems for Indigenous remote communities in Canada's Arctic	

#### THEME: Indigenous Participation Working Group

D A Y  1	#	Contact/First Author	Title
	20-23	Erickson, K.	This photographic series will include four displays from Indigenous contributors covering the following topics: <ul style="list-style-type: none"> <li>• Our resources: Uncertain food security</li> <li>• Our home: Environmental changes</li> <li>• Our families, our future</li> <li>• Ways forward</li> </ul>

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# ARCTIC FUTURES 2050

ROOM: EAST COURT

**THEME: Arctic Answers**

	#	Contact/First Author	Poster Title
<b>D A Y 2</b>	24	Francis, J.	Arctic Meltdowns and Unruly Tropical Storms: Are They Connected?
	25	Francis, J.	How Are Melting Arctic Sea Ice and Land Ice Linked to Sea-Level Rise?
	26	Francis, J.	How is Diminishing Arctic Sea Ice Impacting Lower Latitude Weather Patterns?
	27	Dennehy, C.	How Will Coastal Communities Be Affected by Climate Change?
	28	Hay, C.	How Does Land Motion Influence Sea-Level Rise?
	29	Holland, M.	What Do We Know About the Future of Arctic Sea-Ice Loss?
	30	Holland, M.	When Will the Arctic Ocean Become Ice-Free?
	31	Holland, M.	How Predictable are Arctic Sea Ice Conditions?
	32	Hunt, G.	How Will Diminishing Sea Ice Impact Commercial Fishing in the Bering Sea?
	33	Huntington, H.	How is Diminishing Sea Ice Influencing Coastal Communities?
	34	Kelly, B.	How is Diminishing Sea Ice Impacting Marine Ecosystems?
	35	Scambos, T.	How is Land Ice Changing in the Arctic, and What is the Influence on Sea Level?
	36	Scambos, T.	How Fast is the Greenland Ice Sheet Melting?
	37	Schuur, T.	Climate Change and the Permafrost Carbon Feedback
	38	Trochim, E.	How Is Permafrost Degradation Affecting Ecosystem Services?
	39	Trochim, E.	How Is Permafrost Degradation Affecting Infrastructure?
	40	Abdalati, W.	How Fast is Sea Level Rising?
	41	Williams, D.	Can Extreme Arctic Climate Change Be Avoided with Cost Effective Mitigation?
	42	Carouthers, C.	How is Climate Change Affecting Subsistence (or Traditional) Fisheries in the High Arctic?

DAY 3 – Friday, 6 September

All presenters are welcome to attend their posters during the Day 3 lunchtime poster session.

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# ARCTIC FUTURES 2050

**ROOM: WEST COURT**

**THEME: Policy Initiatives, Activities, and Methods**

D A Y  1	#	Contact/First Author	Poster Title
	50	Bowden, S.	U.S. Arctic research policy: myths and realities
	51	Bowden, S.	Revised principles for conducting research in the Arctic: Respecting local culture and knowledge
	52	Marchenkov, M.	WITHDRAWN: Make the Arctic sustainable together?
	53	Farrell, J.	How the US Arctic Research Commission informs Arctic policy
	54	Rachold, V.	How the German Arctic Office informs Arctic policy
	55	Boere, R.	Better policy through meaningful youth inclusion
	56	Kilbourne, J.	Early Sami play and games: Sustainability and peace
	57	Everett, L.	How the Polar Research Board informs Arctic policy
	58	Auad, G.	A socio-ecological system framework for effective and efficient natural resource management
	59	Birkhold, M.	Who owns icebergs?
	60	Min, K.J.	Making good infrastructure decisions and policies in Arctic regions under global warming
	61	Petrov, A.	Future scenarios for Russia's Arctic
	62	Pic, P.	What is 'Arctic' about Arctic security?
	63	Retter, G.B.	How the Saami Council informs Arctic policy
	64	Sankar, R.D.	Integrating knowledge mobilization with evidence-based approaches to inform policy in Canada's northern regions.
	65	Seo, H.	The study on the priority on the Arctic challenges in policy perspectives of Korea
	66	Tweedie, C.	The Arctic Research Mapping Application (ARMAP): A geoportal for visualizing project-level information about US-funded research in the Arctic
	67	Uhlig, K.	NOAA in the Arctic

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# ARCTIC FUTURES 2050

ROOM: WEST COURT

THEME: The Arctic Environment

#	Contact/First Author	Poster Title
68	Yurganov, L.	Arctic Ocean as a significant source of atmospheric methane: Year-round satellite data
69	McFarlane, S.	Atmospheric Radiation Measurement (ARM) user facility
70	Johnson, N.	The Exchange for Local Observations and Knowledge of the Arctic (ELOKA): Supporting Arctic communities in stewarding Indigenous Knowledge and data
71	Hauser, D.	Community-based observations of coastal Alaskan Arctic change
72	Divine, L.	What we know, how we know it, and how we document it: Case studies from the Indigenous Sentinels Network
73	Overeem, I.	Sand resources are running out worldwide, except in Greenland
74	Shuman, C.	Detailing Glacier Bay National Park ice cover changes - 1972 to 2018 from Landsat
75	Navari, M.	Quantifying changes in the surface mass balance of the Greenland ice sheet via a novel data assimilation and modeling approach
76	Leidman, S.	Hydrologic modeling of supraglacial streams and their impact on albedo
77	Moore, J.	Greenland ice sheet response to stratospheric aerosol injection geoengineering
78	Moore, J.	Geoengineer the ice sheets to stop sea level rise
79	Moon, T.	Arctic land ice loss is directly affecting US coasts now, with growing future impacts
80	Moon, T.	Observing Arctic land ice change must be a scientific priority
81	Moon, T.	Rapid cryospheric change in the Arctic intimately linked to complex Earth and life systems
82	Goliber, S.	Characterization of heterogeneity in marine-terminating glaciers in Greenland
83	Wiggins, H.	Towards reducing the gap between stakeholder needs and seasonal sea ice outlooks
84	Pilcher, D.	Modeling ocean acidification in the Bering Sea
85	Droghini, A.	Are invasive species a threat to the Bering Sea?
86	Nweeia, M.	Narwhal: Revealing an Arctic legend
87	Raymond-Yakoubian, J.	We depend on the sea: The importance of walrus to Little Diomedede
88	Reigstad, M.	The Nansen Legacy
89	Tabisola, H.	Innovative technologies to advance ocean observation
90	Zdor, E.	Changing sea and hunting communities
91	Molodtsova, T.	Tracing freshwater in the Arctic Ocean
92	Cooley, T.	Combining satellite remote sensing and traditional knowledge to understand mechanisms of shorefast ice breakup in the Arctic
93	DuVivier, A.	Going with the floe as Arctic sea ice variability increases
94	Khan, A.	Refractory black carbon and spectral albedo observations of a range sea ice surface types of the Chukchi Sea
95	Moses, W.	Optical characterization of coastal Arctic waters – An NRL research endeavor
96	Aderhold, K.	Sea ice and the Alaska Transportable Array
97	Aderhold, K.	A multidisciplinary Arctic observatory: Seismic, meteorological, and environmental observations of the Alaska Transportable Array

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# ARCTIC FUTURES 2050

ROOM: WEST COURT

## THEME: The Arctic Environment (continued)

#	Contact/First Author	Poster Title
98	Douglas, T.	Ongoing expansion of the Cold Regions Research and Engineering Laboratory's permafrost tunnel
99	Douglas, T.	Identifying risk factors for permafrost thaw and degradation on US Army Alaska training lands
100	Schuur, T.	The vulnerability of permafrost carbon to climate change: Key findings from a decade of synthesis
101	Thurston, A.	Not all permafrost microbiomes are created equal: Divergent microbial diversity and metabolic pathways during permafrost thaw
102	Turetsky, M.	The cultural and climate importance of abrupt permafrost thaw
103	Liew, M.	Permafrost coastal erosion controls and remediations in the Arctic - Synthesis of the state of the practice and exploration of potential solutions
104	Nicolosky, D.	High-resolution permafrost modeling and mapping in Alaska
105	Romanovsky, V.	Detecting and forecasting Alaskan permafrost degradation in a warming climate
106	Yu, Z.	Understanding peat expansion in Arctic tundra in a warming climate (TundraPEAT)
107	Farquharson, L.	Long term monitoring of permafrost degradation highlights two key forms of landscape response
108	Kling, G.	Causes of environmental change near Toolik Lake, Arctic Alaska
109	Phillips, C.	Managing boreal wildfires as a climate mitigation strategy
110	Turner, K.	How much mercury is in the Yukon-Kuskokwim Delta and does fire influence its release?
111	Zhang, Z.	The prediction of climate-CH <sub>4</sub> feedback from the Arctic wetlands during the 21st century
112	Zhou, J.	Climate change increases habitat connectivity in Arctic Alaska
113	Hollister, R.	Why we need to document and understand terrestrial ecosystem change in the New Arctic
114	Oberbauer, S.	Using the power of daily observations to understand the timing, patterns, and triggers of plant life history events over the short Arctic growing season
115	Hill, A.	Collaboration of the NWS and rural communities to improve weather and climate decisions in southwest Alaska
116	Francis, J.	If you like extreme weather, you'll love 2050
117	Andrews, L.	Numerical reanalyses as a gateway to Arctic synthesis
118	Coon, C.	Better decision-making: Knowledge, analysis, awareness
119	Dewey, S.	Physical changes in air-ice-ocean interaction in the western Arctic
120	Ravens, T.	Arctic coastal risks - what we need to know and how we need to communicate
121	Brigham-Grette, J.	Learning from Earth's history: What the paleoclimate record says about Earth's climate at ~410+ ppm with global temperatures > 1.5°C

DAY 2

### DAY 3 – Friday, 6 September

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# ARCTIC FUTURES 2050

ROOM: LECTURE ROOM

## THEME: SEARCH Scenarios Project - Arctic Futures 2050

D A Y  1	#	Contact/First Author	Poster Title
	125–131	Lovecraft, A.	What information is needed to successfully respond to changes in Arctic environments by 2050?  <i>This is a special series of seven posters</i>

## THEME: Toward Successful Collaboration

D A Y  1	#	Contact/First Author	Poster Title
	132	Warburton, J.	Expanding the reach of polar research
	133	Boere, R.	Students on Ice: Building the next generation of leaders in the Arctic
	134	Raymond-Yakoubian, J.	Understanding the Arctic through a co-production of knowledge
	135	Jeffries, M.	Cold Regions Convergence Research: Science and engineering for innovative solutions to hard problems and informed decisions and policy
	136	Larson, E.	Scientific community engagement for the Arctic-Boreal Vulnerability Experiment (ABOVE) to facilitate interdisciplinary collaboration
	137	Eicken, H.	Fostering international research in the Arctic
	138	John, D.	Right to self-determination: coproduction of knowledge
	139	Dahl, J.	The Swedish Polar Research Process: Linking science, society and technology through research design
	140	Rohde, J.	The Interagency Arctic Research Policy Committee: Facilitating communication and collaboration across boundaries.
	141	Kettle, N.	Creating actionable science in Alaska
	142	Timm, K.	Climate change in the eyes of Alaska's media
	143	Sokol, J.	Co-development of knowledge: Creating a collaborative environment to create new knowledge from Indigenous and science perspectives
	144	Wee, B.	A values-Focused approach to science-informed decision-making for Arctic communities
	145	Wullschleger, S.	Embracing interdisciplinary collaboration: Lessons learned from the NGEE Arctic Project
	146	Hardesty, J.	Opportunity to plan and develop a comprehensive US Arctic Research Infrastructure Network Hub at the Prudhoe Bay area
	147	Petty, A.	Extreme events in the Arctic: An IASC focus group discussion
	148	Moon, T.	Responding to sea level rise requires more active engagement between scientists and stakeholders
	149	Sedholm, O.	One way to success is cooperation with local communities

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# ARCTIC FUTURES 2050

ROOM: LECTURE ROOM

## THEME: Toward Successful Collaboration (continued)

D A Y  1	#	Contact/First Author	Poster Title
	150	Baker, B.	To excel at interdisciplinary research, dedicate resources for collaboration and communication
	151	Rohde, J.	Enabling effective communication and collaboration across boundaries through online science communication training
	152	Myers, B.	Collaboration across disciplines, geographies, and knowledge systems: Case studies from the Arctic Research Consortium of the US
	153	Hemsath, J.	Multiparty collaborative approach to projects in the high latitudes
	154	Donnelly, K.A.	Sharing what we know - Arctic Research Collaboration The FRAM – High North Research Centre for Climate and the Environment - an effective novel approach?

## THEME: Sharing Information

D A Y  2	#	Contact/First Author	Poster Title
	155	Eerkes-Medrano, L.	Understanding and responding to changing sea ice conditions in northern communities
	156	Divine, L.	Piloting sUAS for marine mammal monitoring: A collaboration between tribal and federal governments
	157	Tweedie, C.	The Arctic Observing Viewer: A tool for data discovery, visualization, strategic planning, and decision support for Arctic observing
	158	Cross, J.	Successes and challenges of interdisciplinary ocean acidification research and monitoring in Alaska: An integrated approach for supporting the Alaskan Blue Economy
	159	Loisel, J.	Application of a Bayesian network framework for assessing the vulnerability of integrated Arctic systems
	160	Pigford, A.A.	From scientific excellence to social impact: Mapping the public values associated with a multi-disciplinary Arctic science network in Canada
	161	Serreze, M.	NSIDC: A key resource for Arctic decision makers
	162	Singh, S.	Smart educative tools for climate change action: A case study
	163	Uhlig, K.	NOAA's Arctic Report Card - 15 years of Arctic change
	164	Curry, T.	Images as information: Context-rich images and the cognition of place-based information in the management of social-environmental change
	165	Aiken, K.	Arctic Answers: Informing policy with science in a rapidly changing Arctic
	166	Brady, M.	Coastal resilience mapping with local communities in Alaska's North Slope
	167	Delgado Arias, S.	NASA mission applications: Enabling an effective use of Ice, Cloud and land Elevation Satellite-2 data for a changing Arctic environment
	168	Lemay, M.	ArcticNet IRIS Portal: A tool to accelerate knowledge mobilization in support to decision and policy making
	169	Sayedi, S.	Expert assessment of organic carbon stocks and vulnerability in subsea permafrost
	170	Elizarde, T.	Connecting youth empowers Arctic change
171	Gray, S.	Providing science to support communities across Arctic Alaska	

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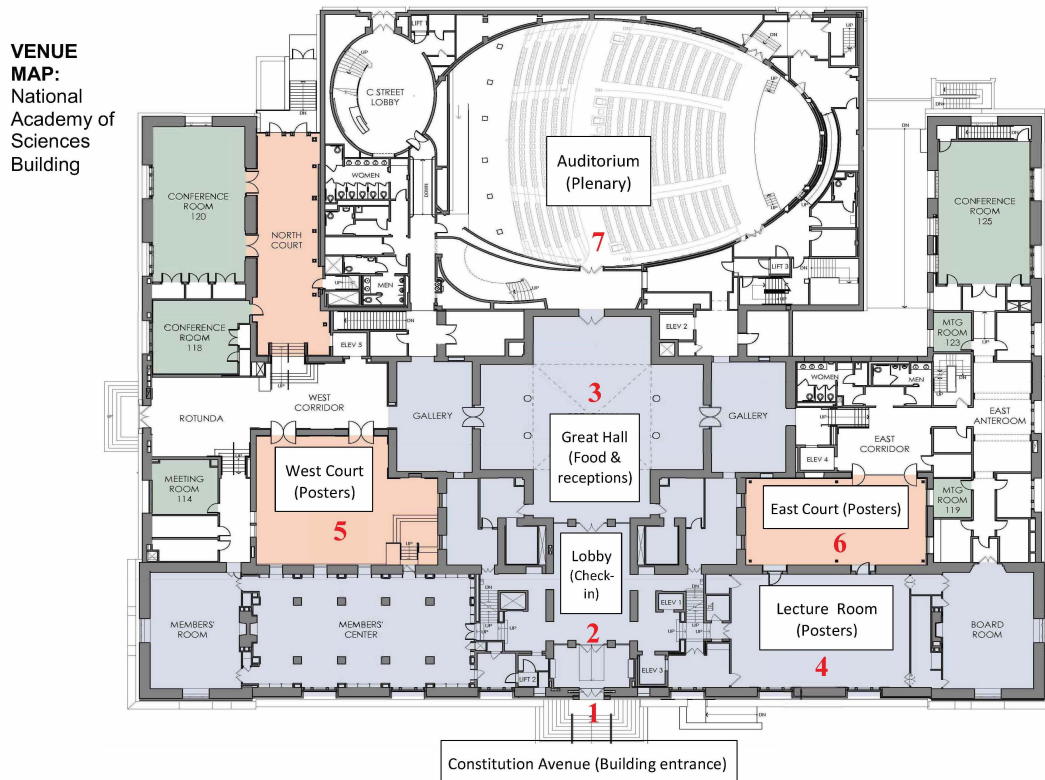


# ARCTIC FUTURES 2050

## ROOM: LECTURE ROOM

### THEME: Sharing Information (continued)

	#	Contact/First Author	Poster Title
<b>D A Y  2</b>	172	Stickman, D.	Landscape Conservation Cooperatives in Alaska and northwest Canada
	173	McCammon, M.	Using real-time vessel tracking information and subsistence harvest area data for decision support
	174	Wilson III, V.	Arctic Indigenous voices amidst increased polar north shipping
	175	Ahmasuk, A.	Examining Alaska Native concerns about vessel waste discharges in the northern Bering Sea and Bering Strait
	176	Baroud, H.	Navigating the Arctic: Understanding and evaluating uncertainties in infrastructure systems
	177	Robbins Gisclair, B.	Charting a path forward: A vision for safe Arctic shipping
	178	Pomerance, R.	The Arctic 21 Network
	179	Wassmann, P.	ARCTOS: Creating synergies for research, training, and dissemination to end-users at the cutting edge of Arctic marine ecosystem studies
	180	Pope, A.	Connecting across Arctic barriers: The International Arctic Science Committee



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