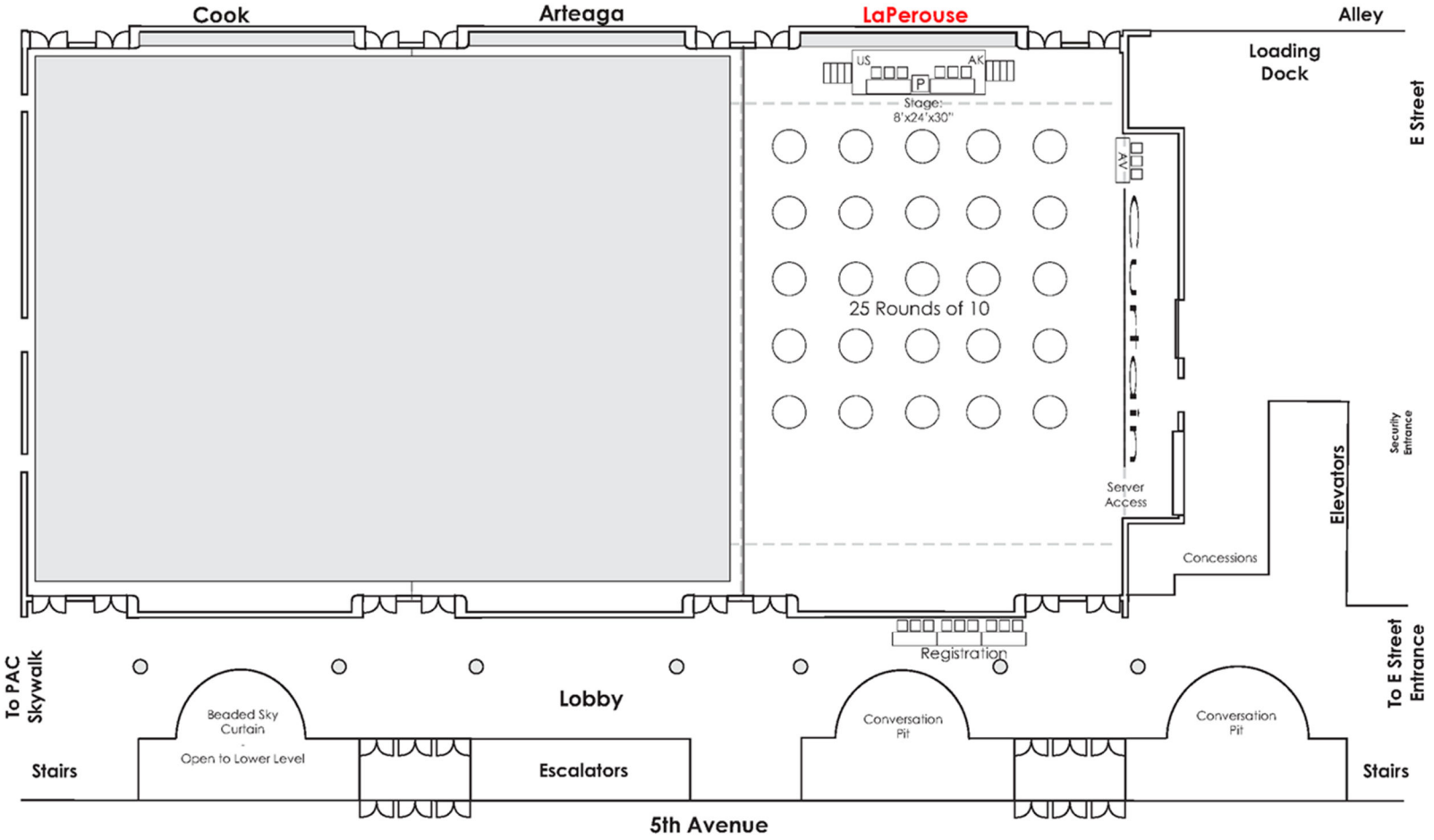
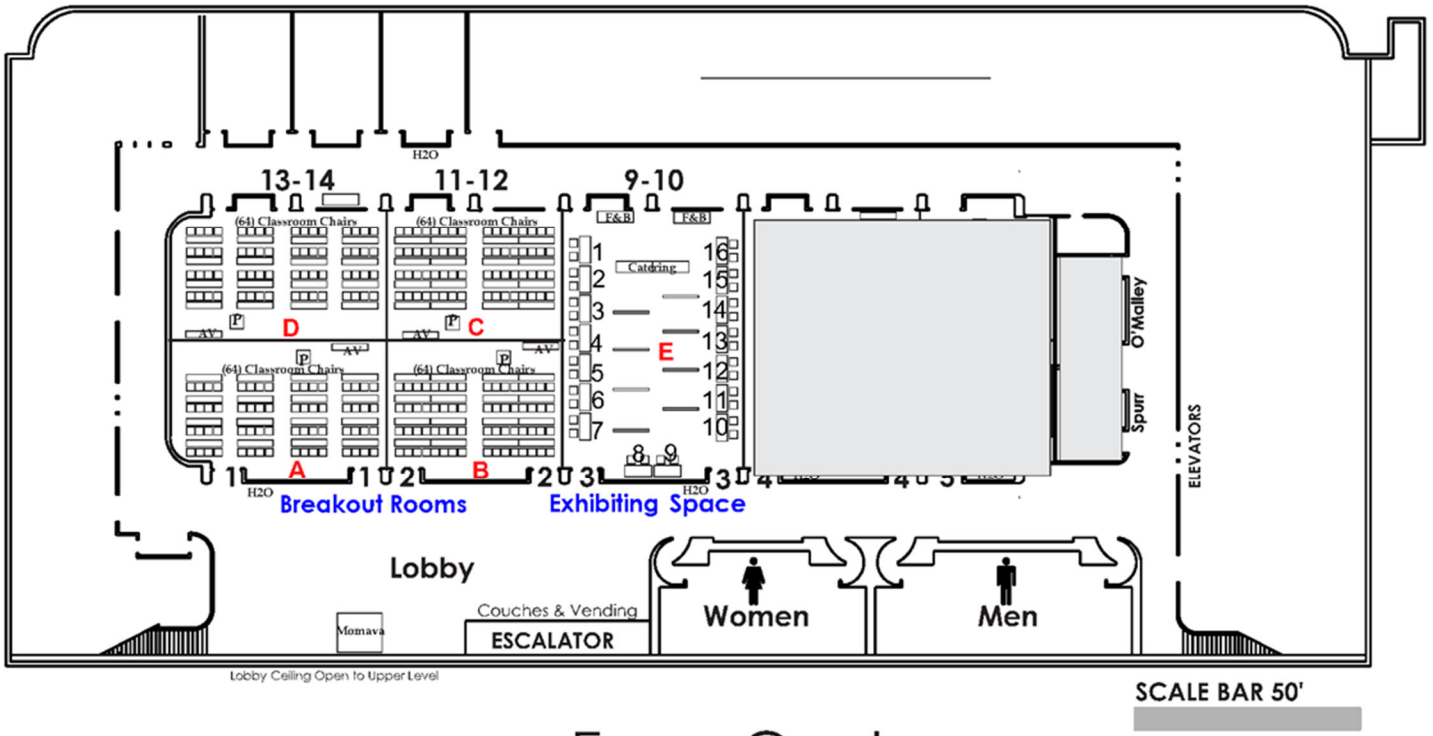
Venue Maps

Egan Center - Explorers Hall - Street Level

UAA - 20th International Conference on Cold Regions Engineering
Monday-Thursday, May 13-16, 2024



UAA - 20th International Conference on Cold Regions Engineering
Monday, May 13, 2024



Egan Center
Summit Hall - Lower Level

Conference Program Overview

Monday, May 13	8:30 am - 4:00 pm **CRED Committee** Meetings; 6:00 pm - 8:00 pm Ice Breaker @ Orso			
Tuesday, May 14	7:30-8:30 Continental breakfast @ Venue			
	8:45	10:15	Welcome and Key Note	Dr. Joey Yang - welcome
				College of Engineering Dean - Welcome
				UAA Chancellor - Welcome
				Tom Marchesani P.E., Sr. VP. Of Engineering & Risk Alyeska Pipeline
				"Trans-Alaska Pipeline - Past, Present and Future"
				Dr. John Thornley - Technical Sessions, Poster Sessions
	10:15	10:30	Coffee BREAK @ Venue	
	10:30	12:00	**Parallel Technical Sessions (3)**	
	12:00	1:30	**Lunch & Speaker @ Venue**	
				Dr. Michael Sfraga U.S. Arctic Research Commission Chair, Distinguished Fellow, Polar Institue, Wilson Center
				"Current Activitities and International Collaboration to Address Challenges of a Changing Arctic"
	1:30	2:45	**Parallel Technical Sessions (3)**	
	2:45	3:00	Coffee BREAK	
	3:00	5:00	**Parallel Technical Sessions (3)**	
Wed., May 15	7:30-8:30 Continental breakfast			
	8:45	10:15	**Key Note**	**Dr. Peter Bieniek -Research Professor International Arctic Research Center**
				"Data & Tools Supporting Engineering Solutions Alaska's Changing Climate"
				Randy "Church" Kee - Senior Advisor for Arctic Security, Ted Stevens Center for Arctic Security
				"Geopolitics, Climate and Russia: Security in a Changing Arctic"
	10:15	10:30	Coffee BREAK	
	10:30	11:45	**Parallel Technical Sessions (4)**	
	12:00	1:30	**Award Lunch**	**Hal Payton Award, CanAM Award, Eb Rice Lecture, Tribute to Tom Krzewinski**
	1:45	3:15	**Parallel Technical Sessions (4)**	
	3:15	3:30	Coffee BREAK	
	3:30	5:00	**Parallel Technical Sessions (4)**	
	6:00	**8:30**	**Banquet at 49th State Brewing**	
Thursday, May 16	7:30-8:30 Continental breakfast			
	8:45	10:15	Key Note	**Dr. Joseph Corriveau - Senior Advisor for R&D, CRREL**
				"U.S. Army needs in the Arctic, R&D mission and CRREL Capabilities and Recent Achievements"
				Dr. Pearl K. Brower, President/CEO of Ukpeagvik Iñupiat Corporation
				"Changes in the region surrounding Utqiagvik, the challenges & the approach
				and vision toward addressing these challenges in the future"
	10:15	10:30	Coffee BREAK	
	10:45	12:00	**Parallel Technical Sessions (4)**	
	12:00	1:15	**Lunch with Exhibitors**	
	1:30	2:45	**Parallel Technical Sessions**	
	3:15	3:30	Coffee BREAK	
	1:15	6:00	**Field Trips**	
Friday, May 17	**Post Conference Tour to Permafrost Tunnel and Cold Climate Housing Research Center at Fairbanks**			

Technical Program Overview

(Ver. 4/18/2024)

Day	Time	Room	Session #	Session Name	Session Chairs	Presenters (Paper No.)				
Tuesday (May 14)	10:30 - 12: 00	A	1	**Aerospace Engineering**	Olga Bannova, Nick Zhou	Olga Bannova	Nick Zhou	Pooneh Maghoul	Nima Farzadnia	
		B	2	**Pavement Design 1**	Joel Ulring, Steve Kari	Abaza, Osama	Barman, Manik	Liu, Leo (#166)	Fareed, Ayyaz	
		C	3	**Communities in Cold Regions**	D. Nichols, V. Groeschel	Kuhlke, Olaf	Joyner, Matthew	Affleck, Rosa	Michaels, Michelle	
		D	4	**Cold Regions Stuctures**	S. Hamel; J. Langmann	Oreskovic, Christopher	Hamel, Scott E	Dabas, Maha		
	1:30 - 2:45	A	5	**Ethics 1**	David Prusak	Wade Ellis	Ryan Anderson	Rebecca Bowman		
		B	6	**Laboratory, Geophysical, Remote Sensing**	J. Thornley, E. Babcock	Joseph Vantassel	Tedesche, Molly	Lin, Chuang	Gienko, Gennady	
		C	7	**Frozen Ground and Permafrost 1**	H. Brooks, Z. Wang	Frye, James	Md Fyaz Sadiq	Fortin, Connie	Kong, Xiangbing	
		D	8	**Sustainable Infrastruct. in Cold Regions 1**	F. Zhang, L. Wang	Uduebor, Micheal (#101)	Zhao Yue (#63)	Wang, Di	Goozen, Annika	
	3:00 - 5:00	A	9	**Pavement Design 2**	Hannele Zubeck, Di Wang	Banerjee, Aritra	Khan, Ali Raza	Uduebor, M. (#158)	Lin, Chuang	
		B	10	**Cold Regions Construction 1**	J. Holland, J. Vantassel	Ahn, Il Sang	FRIGO, BARBARA (#17)	Gastrock, Brian	Rooney, James	
		C	11	**Cold Regions Transportation**	V. Vasudevan, J. Zhou	Vasudevan, V. (#153)	Vasudevan, V. (#152)	Arthurs, James	Zhang, Feng (#88)	
		D	12	**Cold Regions Utilities**	J. Drage, B. Barber-Wiltse	Eckhardt, Bridget	Johnson, Kenneth	Ouazia, Boualem	Wang, Xin	
Wednesday (May 15)	10:30 - 11:45	A	13	**ASCE/NOAA Partnership**	Dan Walker, Jaci Overbeck					
		B	14	**Cold Regions Oil and Gas**	D. Prusak; H. Brooks	Kinney, Gregory	Thornley, John	Kinney, Gregory	Lai, Alexandre (#105)	
		C	15	**Coastal and Maritime Topics**	B. Conner, T. Ravens	GROESCHEL, V. (#5)	Stark, Nina	Ravens, Tom	Langmann, Jasmine	
		D	16	**Pavement Design 3**	Steve Kari, Joel Ulring	Rahat, Md Hasibul Hasan	Saleh, Mohamed	Ghafoori, Nader	LOAIZA MONSALVE, D.	
	1:45 - 3:15	A	17	**Natural and NBS in Alaska and the Arctic 1**	Jaci Overbeck, Tom Dougla	Midgley, Taber	Biedka, Kamil	Osborne, Phil	Kent, KC	Ferguson, Sean
		B	18	**Cold Regions Construction 2**	A. Steiner, W. Presler	Tao, Yong	Zapel, Ed	ZHOU, JIE	Ban, Chao	
		C	19	**Frozen Ground and Permafrost 2**	H. Zubeck, X. Kong	Murray, Nicholas	Darrow, Margaret	Saboundjian, Steve	Wang, Ziyi (#95)	
		D	20	**Sustainable Infrastruct. in Cold Regions 2**	G. Kinney, D. Wang	Brooks, Heather	Mukhopadhyaya, P.	Wagner, Natalie	Fraser, William	
	3:30 - 5:00	A	21	**Natural and NBS in Alaska and the Arctic 2**	J. Overbeck, T. Douglas	Overbeck, Jaci	Bosche, Lauren	Jessup, Ellen	Poe, Aaron	
		B	22	**Cold Regions Hydrology and Hydraulics**	J. Zufelt, M. Harrison	Picard, Zakary	Le, Trung	Stuefer, Svetlana	Li, Zoe	
		C	23	**Performance of Materials**	S. Saboundjian, Ch. Lin	Wang, Hao	FRIGO, BARBARA (#21)	Wei, Shijun	De, Subhabrata	
		D	24	**Frozen Ground and Permafrost 3**	M. Darrow, N. Stark	Zhao, Yue (#64)	Kong, Xiangbing	Wang, Ziyi (#94)	Rooney, James	
Thursday (May 16)	10:45 - 12:00	A	25	**Arctic EDS**	Scott Rupp	Margret Darrow	Stuefer, Sveta	Parr, Charles		
		B	26	**UFC Manuals of Practice**	Rosa Affleck	Bjella, Kevin	Musial, Mark			
		C	27	**AI in Cold Regions**	John Thornley; Leo Liu	Slone, Scott	Liu, Leo (#165)	Rana, Md Shohel	Amare, Mulugeta	
		D	28	**Cold Regions Construction 3**	Ed Yarmak, Jr.; S. Xiao	Whitney, Austen	Towell, Kiera	Lai, Alexandre (#66)	Xiao, Suguang	
	1:30 - 2:45	A	29	**Community Engineering (Silver Jacket)**	Kevin Bjella					
		B	30	**Ethics 2**	David Prusak	Rebecca Bowman				
		C	31	**Cold Regions Construction 4**	Wang, Lei; Zheng, Hao	Wang, Lei	Zhou, Huade	Zheng, Hao	Wu, Hanli	

Note: 1. Light blue shade indicates student presentation.

DAILY PROGRAM OVERVIEW
TUESDAY (May 14)

TIME	SESSION#	TITLE	ROOM
8:45-10:15	**Opening Remarks & Keynote**		LaPerouse
10:15-10:30	**Coffee Break**		E
10:30 - 12:00	1	Aerospace Engineering	A
	2	Pavement Design 1	B
	3	Communities in Cold Regions	C
	4	Cold Regions Structures	D
12:00 – 13:30	**Lunch**		LaPerouse
1:30 - 2:45	5	Ethics 1	A
	6	Laboratory, Geophysical, Remote Sensing	B
	7	Frozen Ground and Permafrost 1	C
	8	Sustainable Infrastructure in Cold Regions 1	D
2:45 - 3:00	**Coffee Break**		E
3:00 - 5:00	9	Pavement Design 2	A
	10	Cold Regions Construction 1	B
	11	Cold Regions Transportation	C
	12	Cold Regions Utilities	D

DAILY PROGRAM OVERVIEW
WEDNESDAY (May 15)

TIME	SESSION#	TITLE	ROOM
8:45-10:15	**Keynote**		LaPerouse
10:15-10:30	**Coffee Break**		E
10:30 - 11:45	13	ASCE/NOAA Partnership	A
	14	Cold Regions Oil and Gas	B
	15	Coastal and Maritime Topics	C
	16	Pavement Design 3	D
12:00 – 13:30	**Lunch**		LaPerouse
1:45 – 3:15	17	Natural and NBS in Alaska and the Arctic 1	A
	18	Cold Regions Construction 2	B
	19	Frozen Ground and Permafrost 2	C
	20	Sustainable Infrastructure in Cold Regions 2	D
2:45 - 3:00	**Coffee Break**		E
3:30 - 5:00	21	Natural and NBS in Alaska and the Arctic 2	A
	22	Cold Regions Hydrology and Hydraulics	B
	23	Performance of Materials	C
	24	Frozen Ground and Permafrost 3	D

DAILY PROGRAM OVERVIEW
THURSDAY (May 15)

TIME	SESSION#	TITLE	ROOM
8:45-10:15	**Keynote**		LaPerouse
10:15-10:30	**Coffee Break**		E
10:45 - 12:00	25	Arctic EDS	A
	26	UFC Manuals of Practice	B
	27	AI in Cold Regions	C
	28	Cold Regions Construction 3	D
12:00 – 13:30	**Lunch**		LaPerouse
1:30 - 2:45	29	Community Engineering (Silver Jacket)	A
	30	Ethics 2	B
	31	Cold Regions Construction 4	C

Tuesday (May 14) | 10:30 am - 12:00 pm				
Session	**Aerospace Engineering**	**Pavement Design 1**	**Communities in Cold Regions**	**Cold Regions Structures**
Room	A	B	C	D
Moderator	*Olga Bannova and Nick Zhou*	*Joel Ulring, Steve Kari*	*D. Nichols, V. Groeschel*	*S. Hamel; J. Langmann*
Presenters	**Planning and design in space and extreme environments on Earth** *Olga Bannova*	**Alaskan Pavement Resilience: Navigating Climate Change in Cold Regions** *Abaza, Osama*	**Assessing the use, utility, and spatial accuracy of 3-D camera tools for the measurement and visualization of permafrost thaw impact on road and bridge infrastructure in rural Alaskan Communities** *Kuhlke, Olaf*	**Quantifying Structural Snow Loads using the Finite Area Element Method: A comparison between Physical Wind Tunnel and Computational Fluid Dynamics Input Data** *Oreskovic, Christopher*
	Autonomous construction (3D printing): From ex-terrestrial to terrestrial applications *Nick Zhou*	**Effective Mitigation Strategies for Tenting of Transverse Cracks in Asphalt Pavement** *Barman, Manik*	**Accounting for Permafrost Degradation in Site-Specific Ground Motion Procedures for Building Design** *Joyner, Matthew*	**Creep Performance of High R-value Structural Insulated Panels (SIPs)** *Hamel, Scott E*
	Seismic geophysics for permafrost characterization in space and on earth *Pooneh Maghoul*	**Model and Tool for Location-Specific Seasonal Load Restriction** *Liu, Leo*	**Analytical Methodologies for Cold Regions Installations and Community Resilience** *Affleck, Rosa*	**Evaluation of the Impact of Weather Shocks on Roofing Materials Properties** *Dabas, Maha*
	Alkali activation of locally sourced Alaskan fly ash for arctic construction *Nima Farzadnia*	**Evaluating the Impact of using Microencapsulated Phase Change Materials on Low Temperature Cracking Resistance of Asphalt Binder** *Fareed, Ayyaz* ***(S)***	**Analysis for Arctic Climatic Typing (ACT)** *Michaels, Michelle*	

Tuesday (May 14) | 1:30 pm - 2:45 pm				
Session	**Ethics 1**	**Laboratory, Geophysical, Remote Sensing**	**Frozen Ground and Permafrost 1**	**Sustainable Infrastructure in Cold Regions 1**
Room	A	B	C	D
Moderator	*David Prusak*	*J. Thornley, E. Babcock*	*H. Brooks, Z. Wang*	*F. Zhang, L. Wang*
Presenters	*Wade Ellis* *Ryan Anderson* **The Ethics of Competence: A Moving Target** *Rebecca Bowman*	**Measuring Depth to Ice-Bonded Permafrost using Surface Waves: Challenges and Recommendations from Field Measurements in Eagle Summit, Alaska** *Joseph Vantassel* **Snowpack Strength and Micromechanics on Grand Mesa, Colorado via the 2017 NASA SnowEx SnowMicroPen dataset** *Tedesche, Molly* **3D Coordinates Determination for the Featured Points Based on close-up photogrammetric Method** *Lin, Chuang* **Mapping coastal bluff erosion. Case study at Pt. Woronzof, Alaska** *Gienko, Gennady*	**Climate Change Impacts on Arctic Airfields** *Frye, James **(S)*** **Effect of Salt Concentrations on the Freeze-Thaw Susceptibility of Soils** *Md Fyaz Sadiq* **Designing a Lower Salt Future** *Fortin, Connie* **Case study of the thermal regime of permafrost underneath the airstrips in Nunavik, Quebec, Canada** *Kong, Xiangbing*	**Impact of Engineered Water Repellency on Mechanical Properties of Frost-Susceptible Soils under Repeated Freeze-Thaw Cycles** *Uduebor, Micheal **(S)*** **Pile Pinning Effects in Ground Lateral Spreading: A Case Study of the Slana River Bridge, AK** *Zhao, Yue **(S)*** **Fabrication and characterization of multiphase bituminous materials for cold region pavements** *Wang, Di* **Vibration Characteristics of Degrading Warm Permafrost from the Analysis of Ambient Noise Data: A Case Study from Bethel, Alaska** *Goozen, Annika **(S)***

Tuesday (May 14) | 3:00 pm - 5:00 pm				
Session	**Pavement Design 2**	**Cold Regions Construction 1**	**Cold Regions Transportation**	**Cold Regions Utilities**
Room	A	B	C	D
Moderator	*Hannele Zubeck, Di Wang*	*J. Holland, J. Vantassel*	*V. Vasudevan, J. Zhou*	*J. Drage, B. Barber-Wiltse*
Presenters	**Uncovering the Impact of Freeze-Thaw Cycles on Resilient Modulus of Cement-Stabilized Sulfate-rich subgrade soil** *Banerjee, Aritra*	**Concrete creep and shrinkage at cold temperatures and their implications to PC girder design** *Ahn, Il Sang*	**Life-cycle analysis of LED traffic lights in Alaska** *Vasudevan, V.*	**History and update of the Cold Regions Utilities Monograph: a time-honored reference manual** *Eckhardt, Bridget*
	Thermal and Fatigue Cracking Performance of Fiber-Reinforced Asphalt Mixtures (FRAM) *Khan, Ali Raza **(S)***	**Forensic Engineering in Snow Avalanche Science** *FRIGO, BARBARA*	**Development of a smart-light system for remote rural areas** *Vasudevan, V.*	**Emergency water reservoir refill for Northern Village of Kangiqsualujjuaq, Nunavik Region, Northern Quebec, Canada** *Johnson, Kenneth*
	Impact of Engineered Water Repellency on Mechanical Properties of Frost-Susceptible Soils under Repeated Freeze-Thaw Cycles *Uduebor, M. **(S)***	**Sliplining a Failing 54-inch Stormwater with 42-inch FRP in Anchorage AK** *Gastrock, Brian*	**Geotechnical Design of Permafrost and Wetland Mitigation for Colorado State Highway 5 (Mt. Evans Road)** *Arthurs, James*	**Performance assessment of a CO2-based demand-controlled frost resilient dual core energy recovery ventilation system for northern housing** *Ouazia, Boualem*
	Wicking geotextile application for mudstone solid waste utilization in cold regions *Lin, Chuang*	**Encounters with Relict Permafrost in the Anchorage Alaska Area** *Rooney, James*	**Identification Method of Permafrost Table Based on Ground-Penetrating Radar** *Zhang, Feng*	**Thermal-stress response analysis and applicability study of energy shaft in winter** *Wang, Xin **(S)***

Wednesday (May 15) | 10:30 am - 11:45 am				
Session	**ASCE/NOAA Partnership**	**Cold Regions Oil and Gas**	**Coastal and Maritime Topics**	**Pavement Design 3**
Room	A	B	C	D
Moderator	*Dan Walker, Jaci Overbeck*	*D. Prusak; H. Brooks*	*B. Conner, T. Ravens*	*Steve Kari, Joel Ulring*
Presenters		**SHALLOW BURIED FUEL GAS LINE: STABILITY MAINTENANCE IN THE ARCTIC** *Kinney, Gregory* **Foundation Performance Evaluation of an At-Grade LNG Storage Tank on Warm Permafrost in Fairbanks, Alaska** *Thornley, John* **SLIPSTREAM HEAT ADDITION ON THE TRANS-ALASKA PIPELINE: THERMAL RISK MITIGATION STRATEGIES AND LESSONS LEARNED** *Kinney, Gregory* **Impact of Glacier Outburst Floods on Stream Stability at the Tazlina River Trans-Alaska Pipeline Crossing** *Lai, Alexandre*	**Navigating the New Arctic: Advancing Research in Ice-Structure Interactions for Safer Marine Operations** *GROESCHEL, V.* ***(S)*** **Variability of Geotechnical Properties in Arctic Coastal and Shelf Regions with regards to Sediment Dynamics** *Stark, Nina* **Controlling Arctic Coastal Erosion with Thermal and Mechanical Measures** *Ravens, Tom* **Preliminary Finite-Element Modeling of Floating Sea Ice Impacting Vertical Piles with Accreted Ice** *Langmann, Jasmine* ***(S)***	**Investigating the Impact of Freeze-Thaw Damage on Chloride Ingress in Concrete** *Rahat, Md Hasibul Hasan* ***(S)*** **Development of a High-performance Asphalt Concrete with Enhanced Low-Temperature Performance** *Saleh, Mohamed* **Role of Aggregate Type on De-Icing Salt Resistance of Ultra-High-Performance Concrete** *Ghafoori, Nader* **Quantification of influence factors in the studded tire wear using the Prall device** *LOAIZA MONSALVE, D.* ***(S)***

Wednesday (May 15) | 1:45 pm – 3:15 pm				
Session	**Natural and NBS in Alaska and the Arctic 1**	**Cold Regions Construction 2**	**Frozen Ground and Permafrost 2**	**Sustainable Infrastructure in Cold Regions 2**
Room	A	B	C	D
Moderator	*J. Overbeck, T. Douglas*	*A. Steiner, W. Presler*	*H. Zubeck, X. Kong*	*G. Kinney, D. Wang*
Presenters	**Improving Coastal Resilience with Nature-Based Solutions in Point Hope** *Midgley, Taber*	**Modeling a Composite Pore Model for Chlorinated Silty Clay under Load Influence during Freeze-Thaw Cycles Based on NMR Fractal Theory** *Tao, Yong **(S)***	**How climate change is changing bridge design in Alaska** *Murray, Nicholas*	**Conceptual Design of Quantitative Risk Algorithms for a Geohazard and Geo-asset Management System for Roadway Networks in Permafrost Regions** *Brooks, Heather*
	Erosion Mitigation Design in the Arctic Considering Climate Change Impacts *Biedka, Kamil*	**Small Scale Hydropower in Alaska - From Construction to Operations; Challenges in Harsh Conditions** *Zapel, Ed*	**Can't Stop This: Documenting the Collision of Frozen Debris Lobe-A with the Dalton Highway, Alaska** *Darrow, Margaret*	**Temperature Effects on CT in Un-Baffled Water Storage Tanks** *Fraser, William*
	Spit Recycling: the Default Nature-based Solution at Shaktoolik, Alaska *Osborne, Phil*	**Analysis on pore-fissure extension and evolution mechanism of one-dimensional clay column under unidirectional freezing conditions** *ZHOU, JIE*	**Long-Term Performance of Permafrost Passive Cooling Systems in Interior Alaska** *Saboundjian, Steve*	**Funding for Sustainable Infrastructure Efforts in Alaska and Related Challenges** *Wagner, Natalie*
	Rock Solid: Engineering Coastal Structures in Ice-Prone Zones *Kent, KC*	**Shear characteristics and microstructure of cemented soil-concrete interface after artificial freeze-thaw under vibration loading** *Ban, Chao **(S)***	**Cryostructure and Uniaxial Compressive Strength of Ice-rich Permafrost in Northern Alaska** *Wang, Ziyi **(S)***	**Predicting Long-term Performance of Vacuum Insulation Panels in Building Envelope Constructions** *Mukhopadhyaya, P.*
	Towards development of guidelines for Nature-based Solutions using findings from several pilot projects in Canadian river systems *Ferguson, Sean*			

Wednesday (May 15) | 3:30 pm – 5:00 pm				
Session	**Natural and NBS in Alaska and the Arctic 2**	**Cold Regions Hydrology and Hydraulics**	**Performance of Materials**	**Frozen Ground and Permafrost 3**
Room	A	B	C	D
Moderator	*J. Overbeck, T. Douglas*	*J. Zufelt, M. Harrison*	*S. Saboundjian, Ch. Lin*	*M. Darrow, N. Stark*
Presenters	**A Brief History of Federal Policy, Programs, and Guidance for Natural and Nature Based Solutions Engineering with Applications to Alaska and the Arctic** *Overbeck, Jaci*	**Preliminary Numerical Analysis of the Impact of Heterogeneity on Seepage in Frozen Soils** *Picard, Zakary* ***(S)***	**A simple technique for measuring soil pore structure in frozen soils using the nuclear magnetic resonance method** *Wang, Hao* ***(S)***	**Seasonal frost and permafrost impact in liquefaction-induced lateral spreading** *Zhao, Yue* ***(S)***
	Engineering With Nature® and Progressing Natural and Nature-Based Solutions in Alaska and the Arctic *Bosche, Lauren*	**Estimation of bed shear stress distribution using ADCP data in ice-covered streams** *Le, Trung*	**Temperature effect on the Relationship between flexural strength and compressive strength of ice** *FRIGO, BARBARA*	**Study on the thermal regime of permafrost underneath the Tasiujaq airstrip near Ungava Bay coast, Northern Quebec** *Kong, Xiangbing*
	Nature-based Solution Design: the Value of a Process-Based Definition to Identify NBS in Any Environment, as Demonstrated by a Case Study to Enhance Coastal Resilience in Point Hope, Alaska *Jessup, Ellen*	**Overview of NASA SnowEx Alaska field campaign in 2022-2023** *Stuefer, Svetlana*	**Freezing Mechanism of Water in Clay Nanopores using Molecular Dynamics** *Wei, Shijun* ***(S)***	**Experimental Investigation of Thermal and Hydraulic Properties of Ice-rich Permafrost near Point Barrow, Alaska** *Wang, Ziyi* ***(S)***
	Building connections and capacity for community-led coastal resilience in Alaska *Poe, Aaron*	**Prediction of Mid-Winter Breakup of Ice Cover on Canadian Rivers** *Li, Zoe*	**Development of Biofiltration Process for the treatment of Acid Mine Drainage in Cold region** *Subhabrata Dev*	**Personal Career Experiences with Permafrost** *Rooney, James*

Thursday (May 16) | 10:45 am – 12:00 pm				
Session	**Arctic EDS**	**UFC Manuals of Practice**	**AI in Cold Regions**	**Cold Regions Construction 3**
Room	A	B	C	D
Moderator	*Scott Rupp*	*Rosa Affleck*	*John Thornley; Leo Liu*	*Ed Yarmak, Jr.; S. Xiao*
Presenters	*Margret Darrow*	*Kevin Bjella*	**Improved Prediction of Frost Depth Penetration using Recurrent Neural Networks** *Slone, Scott*	**Retrofitting a Passively Cooled At-Grade Foundation at Nunam Iqua, AK, USA** *Whitney, Austen*
	Sveta Stuefer	*Mark Musial*	**Data-Driven AI-Powered Snow and Ice Removal for Winter Road Maintenance** *Liu, Leo*	**3D Printing Ice Composites for Construction in Cold Regions** *Towell, Kiera*
	Charles Parr		**Advancing Cold Region Engineering through Machine Learning for Robust Infrastructure Resilience Based on Historical Weather Data Analysis** *Rana, Md Shohel*	**Low Impact Sustainable Gravel Mining on the Sagavanirktok River Floodplain** *Lai, Alexandre*
			Assessing Traffic Safety in Cold Regions for Sustainable and Resilient Infrastructure: A Hybrid Approach of Association Rule Mining and Spatial Analysis *Amare, Mulugeta* ***(S)***	**Laboratory Investigation on Load Transfer of Pile Foundations in Frozen Sandy Soils** *Xiao, Suguang*

Thursday (May 16) | 1:30 pm – 2:45 pm			
Session	**Community Engineering (Silver Jacket)**	**Ethics 2**	**Cold Regions Construction 4**
Room	A	B	C
Moderator	*Kevin Bjella*	*David Prusak*	*Wang, Lei; Zheng, Hao*
Presenters		**The Ethics of Competence: A Moving Target** *Rebecca Bowman*	**Discrete element modeling of bio-inspired drilling for optimal design of new drilling tools into lunar regolith** *Wang, Lei* **Quantitative analysis of unfrozen water content of muddy clay under extremely low temperatures freezing conditions** *Zhou, Huade **(S)*** **A meso-investigation of the skeleton structure of segregated ice lenses in frozen soil** *Zheng, Hao* **Reasonable Height of Cellular Concrete Aggregate Interlayer for Air Convection Embankment in Alaskan Permafrost Regions** *Wu, Hanli*

Poster Session (Exhibition Room E, all Coffee Breaks)		
No.	**Author**	**Title**
1	Padinhare Purakkal	Design of Electrically Conductive Asphalt Pavement for Self-Deicing Applications in Cold Regions
2	Bray, Matt	Frost Susceptibility and Strength of Cement-Treated Fine-Grained Soils
3	Ma, Jianmin	Multiscale characterization of cracking resistance in asphalt: Link between binder and mixture tests
4	Ma, Jianmin	Comparative analysis of tension-compression and shear oscillatory loading on the rheological response of asphalt binders from a Northern Ontario pavement trial
5	Zhang, Yu	Investigation of Pavement Diseases and Pavement Structure Design for Urban BRT Lanes in Cold Areas
6	Zhang, Yu	Analysis of slope stability and evaluation of reinforcement effect under seismic forces
7	Zhang, Zhenhao	Identification and parameter estimation of the stochastic process of concrete strength degradation caused by freeze-thaw cycles
8	Wan, Xusheng	A theoretical model on unfrozen water content in soils and verification
9	Knarr, Cooper	The Lone Peak Tram: a Heat Transfer Analysis
10	Rong, Chuanxin	Laboratory Model Test Study on Formation Mechanism of Artificial Frozen Wall in Permeable Stratum with High Seepage Velocity
11	Shang, Zihao	Volumetric behavior of unsaturated silty soil subject to freezing-thawing cycles
12	Lin, Bo	Experimental study on structural anisotropy of subgrade soil induced by freeze-thaw cycles
13	Du, Qingsong	Acquisition of mountain DEMs using D-InSAR and using for UAV aerial survey route planning
14	Chen, Dun	Research on permanent strain of frozen soil under traffic loading
15	Wang, Yapeng	Analysis and control of complex cyclic stress paths for frozen soil
16	Yin, Pingbao	Analysis of the evolution law of hysteresis curve morphological characteristics of polyurethane-bonded rubber particle-sand mixture under cyclic loading
17	Sopko, Joseph	Ground Freezing for Deep Shaft Excavation in New York City
18	Payne, Geoge	Arctic Flume for Natured-Based Coastal Protection Experiments