

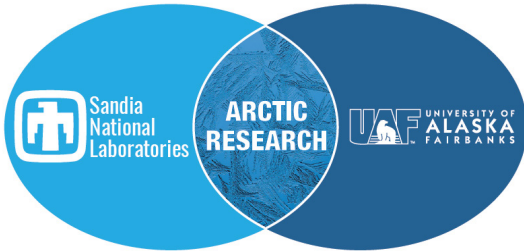


Sandia National Laboratories

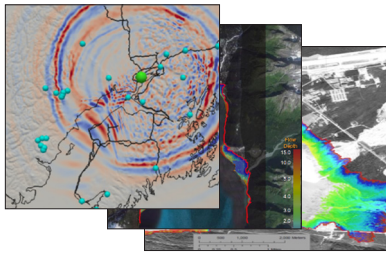


ENERGY & HOMELAND SECURITY

Arctic Infrastructure Simulation Analysis Center



The Arctic Infrastructure Simulation Analysis Center (Alaska Arctic ISAC) is a collaboration between the University of Alaska and Sandia National Laboratories to increase resilience through modeling and analysis across infrastructure and natural systems.



NATURAL HAZARD MODELING

- Permafrost Melt Planning & Response
- Coastal Erosion Planning & Response
- Earthquake Hazards Planning & Response

CALCULATE IMPACTS

- Scenario Sets
- FASTMap Spatial Analysis

- Technical Reports
- Public Web Interface
- Impact Comparison

COMMUNICATE FINDINGS

- State of Alaska
- Community Leaders
- Community Members



TOOLS

- Infrastructure Asset Data
- Asset Fragilities
- Network Modeling



The Arctic ISAC will enhance disaster planning and response for Alaska and the Arctic.

Based at the University of Alaska Fairbanks (UAF) and supported by Sandia National Laboratories, the center will join Sandia's infrastructure modeling and analysis capabilities with UAF's expertise in Alaskan and Arctic environments, hazards, communities, emergency management, and engineering.



- By leveraging academic research programs and operational centers, the collaboration will improve understanding of the risks and adaptations necessary to increase the resilience of natural, engineered, and social systems in Alaska and the Arctic.
- This center will further the application of resilience concepts pioneered at Sandia by developing resilience metrics and resilience-related research areas for further collaboration that cross the natural, engineered, and social systems present in the Arctic.
- This effort will aid long-term planning for adaptation to changing climate and environmental conditions, new activities and land uses, and community transitions.
- It will also strengthen U.S. and North American infrastructure analysis capabilities by providing novel test conditions and expansion of infrastructure models.



- The Alaska Arctic Infrastructure Simulation Analysis Center will focus on the complex relationships among hazards, engineered infrastructures, and socio-cultural systems

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