A Brief Introduction to the Arctic Research Consortium of the United States

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ARCUS: Connecting Arctic Research since 1988
ARCUS: Connecting Arctic Research

1. Arctic research is important.

2. Arctic research is timely.

3. Arctic research is hard.

4. Arctic research is rewarding.

And...
The Arctic is a Complex, Interdependent System

Source: SEARCH, 2005
Understanding the Arctic Requires Connecting Across Boundaries

Sector Boundaries
• Academic
• Government
• Industrial
• Indigenous
• Non-Governmental Organizations
• Public and Society

Disciplinary Boundaries
• Physical Science
• Life / Natural Science
• Engineering
• Social Science
• Education
• Community Development

Geographic Boundaries
• International / Circumpolar (National Boundaries)
• Arctic Residents / Global Population (Regional Perspectives)

Photo by Robyn Staup (PolarTREC 2007)
Understanding the Arctic Requires Connecting Across Boundaries

Arctic research in the Federal government

Source: John Farrell, USARC, 2011

Budget figures, in million $, are for FY05, as self-reported by IARPC members and reported in "Arctic Research of the US" vol. 20, published by NSF in 2006
ARCUS History

1958
First suggestion of a university polar consortium

1984
USARC and IARPC established

January 1988
A dozen institutions met in Boulder to begin organizing ARCUS

1989
First ARCUS grant from NSF resulting in ARCSS

9 October 1988
ARCUS officially inaugurated as nonprofit, first part-time executive director hired

1991
ARCUS Testimony to Congress results in $6.3 million added to NSF budget for Arctic science

1994
First ARCUS cooperative agreement with NSF

1991
ARCUS Testimony to Congress results in $6.3 million added to NSF budget for Arctic science

2002
First SEARCH funding

2005
PolarTREC begins

The Arctic Council planning a search for Sir John Franklin by Stephen Pearce, 1851
ARCUS Vision

ARCUS envisions strong and productive linkages among international Arctic researchers, educators, communities, and other stakeholders that promote discovery and understanding of the Arctic and inform sound decisions related to the Arctic.
What Does “Connecting Arctic Research” Mean?

- Communication
- Coordination
- Collaboration
Key ARCUS Partners in the U.S.

ARCUS

NSF
USARC
IARPC
NAS PRB
NSSI
Key ARCUS Global Partners

IASC

APECS

ARCUS

AINA

Bilateral
Rannis, IACN, Isaaffik, Arctic Portal, etc.
Communication: Electronic

ArcticInfo
Community job, meeting, and resource announcements
More than 6,000 subscribers – You could be one

Witness the Arctic
Publication issued 3 times per year
More than 12,000 subscribers – You could be one

Directory of Arctic Researchers
Online resource for scientific contacts and collaborators
Contains more than 4,000 individuals – Are you included?

Arctic Calendar
Community events schedule
More than 350 events annually posted – Is your event listed?

Other ARCUS Communication Vehicles
Twitter: @ArcticResearch
Polar Education Email List, Web-Based Resources, Images, Videos
You can subscribe and explore

Photo by Tech. Sgt. Donald L. Wetterman, USAF
Communication: Meetings

• Anchorage Arctic Research Day
• Arctic Science Summit Week 2017
  Panel: Multiple knowledge systems to understand a dynamic Arctic
  Model Project Management for Arctic Research and Decision Making
• Arctic Research D.C. Seminar/Webinar Series
  April 14 – Mia Bennett, University of California, Los Angeles
  May 3 – Robert Corell, University of Tromso
  Sign up at www.arcus.org/research-seminar-series
• AGU Fall Meeting:
  Arctic Community Meeting Rooms
  ARCUS Annual Meeting and Arctic Research Community Reception
• International Workshop to Reconcile Northern
  Permafrost Region Methane Budgets
At ARCUS, we work to:

• Promote communication, coordination, and collaboration
• Apply resources to advance the research
• Connect organizations, individuals, and activities
• Inform participants about other related activities
• Trigger creativity and innovation
• Support IARPC awareness, capacity to engage
• Help in outreach and education
• Understand concerns and challenges, bring other resources to bear

Bottom Line: The community is often fragmented and ARCUS can provide connections across boundaries.
Coordination: Sea Ice Prediction Network
Sea Ice Outlook & Sea Ice for Walrus Outlook

- Ever-increasing record numbers of submissions each month to Sea Ice Outlook
- Produces reports in June, July, and August each year

- SIWO: Collaborative project with NWS, NOAA, coastal Arctic communities
- Pursuing expansion to other places
Collaboration: Study of Environmental Arctic Change (SEARCH)

• Generates and synthesizes research findings
• Identifies emerging issues in Arctic environmental change.
• Provides scientific information to stakeholders
• Facilitates research activities, supports decision-makers.
• Collaborates with national and international programs.
• Regularly solicits research community input.

Current SEARCH Focus Areas

• Sea Ice
• Land Ice/Glaciers/Greenland Ice Sheet
• Permafrost: Carbon, Infrastructure, and Ecosystems
• Coastal Resilience
• Arctic Future Scenarios

Photo by Ute Kaden (TREC 2005)
Study of Environmental Arctic Change (SEARCH) Arctic Answers

- Bringing research to bear on the key questions affecting policy and resource management
- Different levels designed for various stakeholder audiences

![Diagram showing levels of information]

- **Briefs**: Concise, non-technical answers to specific questions based on the state of the science
- **Summaries**: Accessible summaries of science’s main findings, critical questions, and societal importance
- **Syntheses**: Resources for a comprehensive understanding of the issue and how different concepts interrelate
- **Building Blocks**: Technical studies that offer in-depth and foundational information about individual concepts

Photo by Ute Kaden (TREC 2005)
Collaboration: Educational

**PolarTREC**
- Connecting teachers and researchers to build educational leaders
- Bringing K-12 educators and polar researchers together
- More than a decade of positive impact on researchers, teachers, students, the public

**The Arctic in the Classroom**
- Connecting Arctic Alaska teachers, their students and communities with research
ARCUS: By the Numbers

• **35** Arctic research organizations worldwide
  ▪ Universities
  ▪ Government Agencies
  ▪ Companies
  ▪ Not-for-Profits
  ▪ Indigenous Organizations
  ▪ Colleges, Departments

• **93** Individual members

• **15** professionals in seven U.S. states

• A grantee of the U.S. National Science Foundation and other agencies

• Dedicated to “**Connecting Arctic Research**” since 1988
ARCUS Key Competencies

General

• Longstanding relationships across Arctic stakeholder groups
• Core of participating academic research organizations
• Neutral third-party who can bring people together
• Strong ties/respect with indigenous groups
• Excellent project management
• History of successful programs
• Educational leadership position within Polar educators community

Photo by Robert Rich, 2017
ARCUS Key Competencies

Collaboration
• Collaborative Project Management
• Facilitation

Coordination
• Project Office Support & Administration
• Federal Grants Management
• Workshop, Conference & Meeting Planning

Communication
• Electronic Communications
• Website/Social Media Management

Photo by Robert Rich, 2017
ARCUS Anchorage Area Members

- University of Alaska, Anchorage
- ABR, Inc. Environmental Research and Services
- Fairweather Science, LLC
- North Slope Science Initiative
- U.S. Arctic Research Commission
- University of Alaska, Fairbanks
- University of Alaska System

- Carolina Behe, Russell Hood, Gunnar Knapp, Veronica Padula, Robert Seitz, Robert Winfree

Broadening the ARCUS Network

• All Organizations and Individuals Can Join!
  o You can join, becoming a connector of Arctic research

• We are seeking collaborative partners to leverage our impact
  o We can be your partner in efforts connecting Arctic research and education

• We’d like to know about your related activities, and to help promote them
  o Our communication networks are available to help

See www.arcus.org for more details
Scientific Cooperation

• The Arctic research community needs to work across all of the many boundaries
• ARCUS is here to support this communication, coordination, and collaboration

• You are invited to join with us in “Connecting Arctic Research”
How can we help you to connect?
You are invited to join our global consortium

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www.arcus.org

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