

# Arctic Researchers and Informal Science Education (ARISE) Workshop

October 10-12, 2018  
University of Rhode Island  
Graduate School of Oceanography  
Narragansett, RI

THE  
UNIVERSITY  
OF RHODE ISLAND  
GRADUATE SCHOOL  
OF OCEANOGRAPHY



## Day One, October 10, 2018

- 8:30 Shuttle to GSO (entrance of Hampton Inn)
- 9:00 **Registration**
- 9:30 **Welcome and Opening Remarks**  
Gail Scowcroft, University of Rhode Island
- 9:45 **Participant Introductions**
- 10:00 **Plenary One: Importance of Informal Science Broader Impact Activities**  
Presenter: Valentine Kass, National Science Foundation  
*Goal: Provide an overview of strategies, methods, and evaluation*
- 10:20 **Plenary Two: What do students and the public know and/or want to know about the Arctic? Results of two baseline studies**  
Presenter: Gail Scowcroft  
*Goal: To establish a rationale and lay a foundation for the workshop*
- 10:40 **Break**
- 11:00 **Plenary Three: Lessons from IPY Education and Outreach**  
Presenter: Elena Sparrow, International Arctic Research Center, University of Alaska  
*Goal: Explore how IPY education and outreach outcomes can inform future broader impact activities*
- 11:25 **Breakout Group One: Arctic Science - Setting Content Priorities**  
*Goal: Identify content priorities for broader impact activities and educational programming*
- 12:15 **Breakout Group One Report Out**
- 12:35 **Lunch**
- 13:30 **Plenary Four: Polar Literacy Principles**  
Presenter: Liesl Hotaling, Eidos Education  
*Goal: Introduce content of the Polar Literacy Principles*
- 13:45 **Polar Literacy Gallery**  
*Goal: Gain knowledge about the new Polar Literacy Principles and how they can inform proposal broader impact activities and education programming*
- 14:45 **Plenary Five: Integrating Broader Impact Activities and Advancements in Learning Sciences**  
Presenter: Oludurotimi Adetunji, Brown University  
*Goal: Explore how developments in the learning sciences can be effectively used to improve Arctic science and education partnerships*
- 15:05 **Break**
- 15:25 **Breakout Group Two: Developing Key Arctic Messages for the Public**  
*Goal: Develop a set of consistent messages that can be used across research and education activities*
- 16:10 **Breakout Group Two Report Out**
- 16:25 **Plenary Six: Using Arctic Data in Broader Impact Activities**  
Presenter: Kathryn Meyer, Arctic Data Center  
*Goal: Provide a context for how Arctic scientists and ISE professionals can work together to affect change*
- 16:45 **Reflection**
- 17:00 **Adjourn**
- 17:05 Shuttle to Hampton Inn

## Day Two, October 11, 2018

- 8:45 Shuttle to GSO (entrance of Hampton Inn)
- 9:15 **Review of Day One**
- 9:30 **Panel One: Leveraging Existing Networks for Successful Broader Impacts**  
Presenters: Lauren Frisch, University of Alaska, Stephanie Pfirman, Arizona State University, Judy Fahnestock, ARCUS  
*Goal: Provide examples of existing networks that can assist researchers with Broader Impact activities*
- 10:10 **Plenary Seven: Using the U.S. R/V *Sikuliaq* as a Broader Impacts Platform**  
Presenter: S. Bradley Moran, University of Alaska  
*Goal: Explore options for broader impact plans*
- 10:30 **Break**

## Day Two, cont.

- 10:50 **Panel Two: Case Studies of Successful Broader Impact Partnerships**  
Presenters: Jason Cervenec, Byrd Polar and Climate Research Center, Anne Gold, Cooperative Institute for Research in Environmental Sciences, Amy Lovecraft, University of Alaska Fairbanks, Holly Morin, University of Rhode Island Graduate School of Oceanography  
*Goal: Share examples of tested models for achieving broader impacts*
- 11:40 **Breakout Group Three: Effective Scientist Engagement in Informal Science Education Activities**  
*Goal: Identify common elements and effective practices in the engagement of Arctic scientists in broader impact activities and the successful transfer of the scientists' expertise and resources to public audiences*
- 12:20 **Breakout Group Three Report Out**
- 12:40 **Lunch**  
Tours of the Inner Space Center (12:30-1: Groups 1&2; 1:00-1:30: Groups 3&4)
- 13:35 **Plenary Eight: Reaching Informal Science Education Audiences**  
Presenter: Jamie Bell, CAISE  
*Goal: Set the stage for the following breakout group discussions*
- 14:00 **Breakout Group Four: Reaching Informal Science Education Audiences**  
*Goal: Provide pathways for broadening the impacts of NSF-funded Arctic research and assist principal investigators in disseminating the results of their research; Discuss strategies for and differences and similarities in reaching families, school groups, community leaders and decision makers, and the general public*
- 14:40 **Group Session One: Tools for Successful Scientist/Educator Partnerships** (four groups)  
A. Concept Map Builder, Presenter: Carla Companion, ODYSEA LLC  
B. Broader Impacts Wizard, Presenter: Janice McDonnell, Rutgers University  
C. Effective Practices in Delivering Webinars, Presenter: Chris Knowlton, University of RI  
D. Effective Educator Research Experiences, Presenter: Janet Warburton, ARCUS
- 15:10 **Break**
- 15:30 **Group Session Two: Tools for Successful Scientist/Educator Partnerships** (four groups)  
A. Concept Map Builder, Presenter: Carla Companion, ODYSEA LLC  
B. Broader Impacts Wizard, Presenter: Janice McDonnell, Rutgers University  
C. Effective Practices in Delivering Webinars, Presenter: Chris Knowlton, University of RI  
D. Effective Educator Research Experiences, Presenter: Janet Warburton, ARCUS
- 16:00 **Breakout Group Five: Partnerships and Proposal Opportunities**  
*Goal: Provide time for participants to work in small groups to further develop existing broader impact activities and/or partnerships for future proposals*
- 16:50 **Breakout Group Five Report Out**
- 17:10 **Reflection**
- 17:25 **Adjourn**
- 17:30 Shuttle to Hampton Inn

## Day Three, October 12, 2018

- 8:45 Shuttle to GSO (entrance of Hampton Inn)
- 9:15 **Review of Day Two**
- 9:30 **Open Space Session:** Orientation to Process, Topic Identification  
Suggested Topics: Capabilities and/or services needed to further promote Arctic science research to public audiences; Key partnerships that could be enhanced and/or established to promote Arctic science literacy more broadly; Integrating Arctic data into education programming; etc.
- 10:00 **Break**
- 10:20 **Open Space Session: Break Out Groups Meet**
- 11:00 **Open Space Session: Break Out Reports**
- 11:30 **Large Group Discussion: Final Reflections**
- 12:00 **Adjourn**  
Box lunches available