

SEA ICE MODELING WORKSHOP Agenda

University of Colorado, Boulder

Sustainability, Energy and Environment Community Building (SEEC), Room C120

4001 Discovery Drive | Boulder, CO

https://psl.noaa.gov/events/2023/sea-ice_workshop/

25-27 April 2023

Workshop Themes	Model Development	Novel Ways of Evaluating the Models	Targeting Models Applications	New Opportunities for Advancing the Models
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**Denotes Remote Presenter*

DAY 1 - Tuesday, 25 APR 2023

8:30 am - 9:00 am Check-in and Coffee

9:00 am - 10:00 am **Welcome & Introductions** (Janet Intrieri)

- Workshop Welcome / Logistics / Overview (Janet) (~5 mins)
- OAR Project Perspective & Kick-Off Comments (Ginny Selz) (~5 mins)
- Attendee Introductions - 1 Intro (line up at mic) slide (1 min) on why you are here and what you want to get out of this (~45 mins)

10:00 am - 10:15 am Break

10:15 am - 11:45 pm **OAR Round-Up on Sea Ice Modeling** (Ginny Selz)
(~12 mins ea + QA)

- Sea Ice & Coupled Modeling at PSL - Amy Solomon (PSL)
- Seasonal Sea Ice Modeling at GFDL - Mitch Bushuk (GFDL)
- Sea Ice & Lake Ice Modeling at GLERL -Jia Wang (GLERL)
- High Latitude Modeling at GSL - Curtis Alexander (GSL)

11:45 pm - 12:45 pm Lunch

12:45 pm - 2:00 pm **Academic Partner Round-Up on Modeling** (Amy Solomon)
(~12 mins + QA)

- Challenges in Modeling Sea Ice Processes in Coupled Climate Systems - Alice Duvivier (NCAR)
- Environment Canada Perspectives on Coupled Modeling System - Mathieu Plante (Environment Canada)

- Integrating Remote Sensing into Ice Forecasting - Eric Anderson (Colorado School of Mines)
- Advances in Understanding Sea Ice Dynamics - Jenny Hutchings (Oregon State University)
- Modeling the seasonal and interannual variations of sea ice floe size distribution using the Pan-arctic Ice-Ocean Modeling and Assimilation System (PIOMAS) - Jinlun Zhang* (UW)

2:15 pm - 2:30 pm Break

2:30 pm - 2:35 pm **New Tools & Joint Efforts Round-Robin Tee Up** (Mitch)

- *Curtis Alexander (Lead), Chris Cox (Notes) for GSL*
- *Amy Solomon (Lead), Janet Intriери (Notes) PSL*
- *Jia Wang (Lead), Ayumi M-F (Notes) for GLERL*
- *Mitch Bushuk (Lead), Yong Fei Zhang (Notes) for GFDL*

2:35 pm - 3:45 pm **Integration Round-Robin**

- Pairing groups round-robin style (switch every ~15 mins) to discuss OAR efforts and possible research synergies

3:45 pm - 4:00 pm Break

4:00 pm - 4:45 pm **Report out on Round-Robin/Daily Send-Off** (Janet)

5:00 pm **HAPPY HOUR (TBD)**

DAY 2 - Wednesday, 26 APR 2023

8:30 am - 9:00 am Check-in and Coffee

9:00 am - 10:15 am **Highlight Novel Modeling Approaches** (Chris Cox)
(~12 min each +QA)

- **Novel modeling presentations - 1**
 - Sea Ice / Wave Interactions - Lettie Roach* (GISS/Columbia)
 - Arctic ice-ocean circulation modeling: recent improvements and applications - Kate Hedstrom (UAF)
 - UFS - Arctic Regional Forecast Model Development - Aaron Wang (PSL)
 - Subseasonal Arctic Sea ice predictions in a UFS-based System - Yanyun Liu* (CPC)

10:15 am - 10:40 am Break

10:45 am - 11:45 pm **Highlight Novel Modeling Approaches** (Mathieu Plante)
(~12 min +QA)

- **Novel modeling presentations - 2**

- Advances in Sea Ice Modeling at LANL - Andrew Roberts (LANL)
- New Strategies for Modeling Sea Ice Lead Formation - Nils Hutter* (UW/AWI)
- Numerical Instabilities of the Coupled Ice-Ocean System - Robert Hallberg* (GFDL)
- Improving subseasonal-to-seasonal predictions of Arctic summer sea ice by assimilating satellite sea ice concentration and thickness observations into the GFDL ocean and sea ice model - Yong-Fei Zhang (GFDL)

11:45 pm - 12:45 pm Lunch

12:45 pm - 2:30 pm **Highlight Novel Evaluation Activities** (Jia Wang)
(~12 min each +QA)

- Arctic salinity, focusing on its impact on sea ice - Sarah Hall (NESDIS)
- Satellite sea-ice observations available/pending to support modeling - Eric Bayler (NESDIS)
- SCM & opportunities - Phil Pegen/Amy Solomon (PSL)
- Using obs in GL for ice evaluation - Ayumi Fujisake-Manone (CIGLR)
- Satellite Products - Walt Meier (NSIDC)
- Satellite Ice Floe Tracking - Daniel Watkins (Brown University)

2:30 pm - 2:45 pm Break

2:45 pm - 4:00 pm **Highlight Novel Applications Activities** (Ayumi Fujisake)
(~12 min + QA)

- Overview of sea ice model applications in coupled ocean-ice modeling systems - Dmitry Dukhovshoy (NCEP/EMC)
- Perspectives from NWS Alaska-Region - Sam Shea (NWS)
- Presenter TBD (NMFS)
- Presenter TBD (NIC)
- Oil in Ice - Amy McFayden (OR&R)

4:00 pm - 4:45 pm Discussion & Daily Send-Off (Moderator - Jenny)

DAY 3 - Thursday, 27 APR 2023

- 8:30 am - 9:00 am** Check-in and Coffee (30 mins)
- 9:00 am - 9:05 am** New Opportunities - Tee Up for Round-Robin (Mitch)
Sam Shea (Lead), Amy Solomon (Notes) for NWS
Sarah Hall (Lead), Walt Meier (Notes) for NESDIS
Dmitry Dukhovskoy (Lead), Ayumi F-M (Notes) for NOS
Amy McFayden (Lead), Janet Intrieri (Notes) for NMFS & OR&R
- 9:05 am - 10:15 am** New Opportunities Round-Robin
- 10:15 am - 10:30 am** Break
- 10:30 am - 11:15 am** Plenary Discussion (Sandy Starkweather)
● Report-out from Round-Robin on New Opportunities / Discussion time
- 11:15 am - 12:15 pm** Workshop Wrap-Up (Janet Intrieri)
● Next steps
● Individual (volunteer) “so-long/take-away”
● Collabathon action-items
● Adjourn
- GROUP PHOTO (TBD)**
- 12:15 pm - 2:30 pm** Box Lunch and room available for Flex-Time
Closed PI/Co-I meeting
- 3:00 pm** **HAPPY HOUR (TBD)**

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