PARCA 2019
Thursday, January 31
8:30 AM – 5:00 PM
ESSIC Room 4101 (4th floor)

Allow approximately 20 minutes to park and make your way to the conference room. No badges are necessary.

8:30 Welcome & Logistics
Brooke Medley, NASA GSFC & Linette Boisvert, NASA GSFC (NESOSI)

8:40 Update on ICESat-2
Lori Magruder, ICESat-2 Science Team Lead, University of Texas at Austin

8:50 Update on IceBridge
Joe MacGregor, IceBridge Project Scientist, NASA GSFC

9:00 The View from Headquarters
Tom Wagner, NASA Headquarters
Colene Haffke, NASA Headquarters

Session 1 Chairs: Thomas Overly, Tyler Sutterley

9:15 Presentations on the Greenland GNSS Network (GNET) - status, development, and some science
Jennifer Mercer, NSF
Finn Bo Madsen, DTU Space
Kelly Brunt, NASA GSFC

9:35 News from PROMICE
Liam Colgan, Geological Survey of Denmark and Greenland

9:45 Greenland mass changes by multiple-satellite data
Rene Forsberg, DTU Space

9:55 Greenland Climate Network (GC-Net) 1995-2018
Konrad Steffen, CIRES, CU Boulder & Swiss Federal Research Institute

10:05 Remote Sensing of Sea Ice Thickness and Ice Sheet Internal Temperatures Using Ultra-Wideband Microwave Radiometry
Joel Johnson, The Ohio State University

10:15 Discussion

10:30 BREAK
COFFEE/TEA

Session 2 Chairs: Joe MacGregor, Catherine Walker

10:50 Alaska/Yukon Glacier Change During the OIB Decade
Mark Fahnestock, University of Alaska, Fairbanks

11:00 Evolving Centennial-Scale Accumulation Rates in Greenland from Operation IceBridge Accumulation Radar
Indrani Das, Lamont-Doherty Earth Observatory, Columbia University

11:10 Evaluation of Greenland Ice Sheet accumulation using CloudSat
Jonathan Ryan, Brown University

11:20 Hidden Water: Investigating the Greenland firn aquifer and implications for sea level
Lynn Montgomery, CU Boulder

11:30 Retrieval of firn aquifer thickness and englacial water volume with radar data and laser altimetry
Winnie Chu, Stanford University

11:40 Surface melting and elevations changes over the Greenland ice sheet: trends, processes and new tools
Marco Tedesco, Lamont-Doherty Earth Observatory, Columbia University & NASA GISS

11:50 Discussion

12:10 LUNCH 🍽 (on your own)

Session 3 Chairs: Lauren Andrews, Tri Datta

1:30 Renewed focus on the Greenland bare ice ablation zone
Laurence Smith, UCLA

1:40 Greenland ice sheet runoff in models and pro- and supraglacial observations
Asa Rennermalm, Rutgers, The State University of New Jersey

1:50 **Towards Understanding Supraglacial River Networks in Southwest Greenland**
Rohi Muthyala, Rutgers, The State University of New Jersey

2:00 **Subglacial meltwater export from the Greenland Ice Sheet observed during winter**
Lincoln Pitcher, UCLA

2:10 **Subglacial hydrology of Store Glacier, a tidewater glacier in west Greenland: Application of the SHAKTI Subglacial Hydrology Model**
Harihar Rajaram, Johns Hopkins University

2:20 **Discussion**

2:40 **BREAK**
COFFEE/TEA

Session 4 Chairs: Denis Felikson, Isabel Nias

3:00 **Quantifying the strength and limitations of seasonal meltwater runoff in driving faster ice flow at Greenland tidewater glaciers**
Michalea King, The Ohio State University

3:10 **Bathymetry of SE and NW Greenland using 'Oceans Melting Greenland' (OMG) high-resolution airborne gravity and other data**
Lu An, UC-Irvine

3:20 **Modeling the response of Northwest Greenland to enhanced ocean thermal forcing and subglacial discharge**
Mathieu Morlighem, UC-Irvine

3:30 **Validation of modeled crevasse depths using OIB lidar and WorldView DEMs for Greenland's marine-terminating glaciers**
Ellyn Enderlin, University of Maine & Boise State University

3:40 **Validation of iceberg calving models against observed Greenland outlet glaciers**
Timothy Bartholomaus, University of Idaho

3:50 **Semi-periodic Dynamic Thickening of a Tidewater Glacier in Køge Bugt, Greenland**
Ryan Cassotto, CIRES, CU Boulder

4:00 **Preliminary Assessments of the Path of Atlantic Originating Boundary Currents, a Driver in Mass Ice Loss of the Devon Ice Cap's Croker Glaciers**
Nicole Trenholm, University of Maryland Baltimore County

4:10 **Discussion**

4:30 **PARCA Wrap-up Discussion**

5:30 **POSTER SESSION & COCKTAIL HOUR(S) & LITE FARE** 🍸

PARCA POSTERS
Thursday, January 31
5:30 PM
ESSIC Lounge Area

Controls on simulation of snow and firn density in the regional climate model MAR
Patrick Alexander, Lamont-Doherty Earth Observatory, Columbia University & NASA GISS

Physically based and stochastic models for Greenland moulin formation, longevity, and spatial distribution
Lauren Andrews, NASA GSFC

Estimates of deformation associated with basal channels on the Getz Ice Shelf from InSAR-derived velocity grids
Allison Chartrand, The Ohio State University

Striking Influence of Subglacial Topography on Geothermal Flux
Liam Colgan, Geological Survey of Denmark and Greenland

Melt detection over Greenland and Antarctica from NASA MeASUREs enhanced spatial resolution passive microwave data
Paolo Colosio, Università degli Studi di Brescia & Lamont-Doherty Earth Observatory, Columbia University

High-resolution satellite imagery monitoring of Greenland Ice Sheet supraglacial hydrologic features
Samira Daneshgar Asl, UC-Santa Barbara

Sentinel-1 SAR Observations of the Greenland Perennial Firn Aquifer Regions
Rick Forster, University of Utah

Impact of a Warming Climate on Shear Margins of Greenland's Marine-Terminating outlet Glaciers: Summary of Recent Work
Derrick Lampkin, University of Maryland College Park

Improving Image Classification of Supraglacial Features with a DEM-Based Shadow Modeling
Sasha Leidman, Rutgers, The State University of New Jersey

A New Robotic Platform for Ground Based Measurements in the Polar Regions
Austin Lines, Dartmouth College

Automated terminus detection of Greenland's peripheral marine-terminating glaciers
Julia (Jukes) Liu, University of Maine

The FirnCover Compaction Dataset – Results and Conclusions
Mike MacFerrin, CU Boulder

The age of ice exposed along the northern margin of the Greenland Ice Sheet
Joe MacGregor, NASA GSFC

Greenland Ice Sheet Climate Change Indicators from Reanalysis and Multi-channel Ground-penetrating Radar Derived Firn Density and Snow Accumulation
Tate Meehan, Boise State University

Firn density from IceBridge radar extinctions
Thomas Overly, NASA GSFC

Improvements in the representation of surface climate within the Ice Sheet System Model altimetry assimilation framework
Nicole-Jeanne Schlegel, NASA JPL

Developments in Multi-Static Radar Sounding Using a Stationary Phase Sensitive Ice Penetrating Radar and Software Defined Radios
Dustin Schroeder, Stanford University

Physical Radiative Transfer Models for Remote Sensing of Ice Sheet Temperature Profiles, Sea Ice Thickness and the Salinity of Polar Oceans
Leung Tsang, University of Michigan

Small-scale variability of meltwater refreezing in Southwest Greenland Ice Sheet firn
Jing Xiao, Rutgers, The State University of New Jersey

Multi-Task Spatiotemporal Neural Networks for Structured Surface Reconstruction
Mingze Xu, Indiana University