# Bathymetry and Topography at the Land-Ocean Interface COSEG Spring 2023 Meeting

# THURSDAY, MAY 11, 2023, 2-5 PM EDT

#### BOARD ON EARTH SCIENCES AND RESOURCES COMMITTEE ON SOLID EARTH GEOPHYSICS



High resolution bathymetry and topography are required for a diverse array of Earth science studies and applications. They provide crucial data for studying tectonic processes, assessing and utilizing geological resources, ensuring safe marine navigation, understanding natural hazards and mitigating their impacts, and much more. Measuring bathymetry and topography near coastlines presents special challenges and opportunities, including linking topography and bathymetry to a common spatial reference system for accurate water flow modeling in the near-shore and across the shoreline. This meeting will feature an examination of novel and emerging topographic and bathymetric measurement technologies and an exploration of their use in basic and applied research.

# 2:00–2:10 Welcome and introductions

Jeff Freymueller, Michigan State University, COSEG member

## 2:10–3:30 Measurements from sea, air, and space

Moderated by Steve Nerem, University of Colorado Boulder, COSEG member 20-minute presentations followed by 20-minute Q&A with all panelists

2:10–2:30	Christopher Parrish, Oregon State University "Remote Sensing Methods for Nearshore Bathymetry and Topography"
2:30–2:50	Lori Magruder, University of Texas at Austin "Bathymetric laser altimetry: current measurement capabilities and data quality"
2:50–3:10	Steve Murawski, University of South Florida "Bathymetric Mapping in the Coastal Zone: Approaches, Opportunities and Application to Real-World Problems"
3:10–3:30	Panel discussion

## 3:30–3:40 Break

## 3:40–4:55 Applications to coastal hazards

Moderated by Diego Melgar, University of Oregon, COSEG member 20-minute presentations, 5-minute Q&A

3:40–4:05 Jenna Hill, U.S. Geological Survey "Submarine landslides and earthquake records in the Cascadia Subduction Zone"
4:05–4:30 Susheel Adusumilli, Scripps Institute of Oceanography "Monitoring and Predicting Coastal Flooding Using Satellite Observations of Shoreline Changes"
4:30–4:55 Michael Motley, University of Washington "Applicability of bare earth models in the assessment of the built environment during inundation events"