



August 9 – 14, 2026

Organizing Committee

Kimberly Huguenard - University of Maine, USA
Jack McSweeney - Stony Brook University, USA
Preston Spicer - Pacific Northwest National Laboratory, USA

Sponsors



The Idea Behind PECS

PECS (Physics of Estuaries and Coastal Seas) is an independent organization whose sole purpose is to organize the PECS biennial conferences. The objectives of these conferences are to:

- Promote exchange of information on recent developments in physics of estuaries and coastal seas
- Stimulate cooperation between coastal engineers and coastal oceanographers
- To provide a forum for graduate students and young scientists and engineers where they feel comfortable to interact with experienced scientists

Emphasis is on the results of field and laboratory measurements, and theoretical and numerical analysis, with the aim of better understanding the underlying physical processes. Other relevant topics are also acceptable. This conference series emphasizes informal exchanges in a collegial environment. All sessions are plenary and attendance is limited to one hundred and fifty participants.

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- Lauren Ross (University of Maine, USA)
- Florent Grasso (Ifremer, France)

Acknowledgments

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General Program

	Sun	Mon	Tues	Wed	Thurs	Fri
7:00 - 8:00	Arrival	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
8:00 - 9:30		Estuarine Hydrodynamics I	River Plumes	Turbulence and Mixing	Estuarine Hydrodynamics IV	Anthropogenic & Climate Influences
9:30 - 11:00		Estuarine Hydrodynamics (P1)	River Plumes (P3)	Turbulence & Mixing/ Wave & Shelf Dynamics (P5)	Water Quality (P6)	Anthropogenic, Climate, and Weather Influences (P8)
11:00 - 12:15		Estuarine Hydrodynamics II	Physical and Biogeochemical Interactions	Estuarine Hydrodynamics III	Water Quality	Estuarine Hydrodynamics V
12:15 - 1:30		Group Photo	Lunch	Excursions	Lunch	(ends at 12:30)
		Lunch				Close
1:30 - 3:00		Coastal Flooding and Extreme Water Levels	Sediment Transport and Coastal Morphology		Wave and Shelf Dynamics II	Attendees Depart
3:00 - 4:30		Coastal Flooding and Extreme Water Levels (P2)	Sediment Dynamics & Biogeochemical Processes (P4)		Estuarine Hydrodynamics (P7)	
4:30 - 6:00		Refreshments	Wave and Shelf Dynamics I		Break	
		5:00 PM Retirement Celebration			5:00 Bus to Ferry	
6:00 -	Welcome Mixer	Evening Free	Evening Free	Evening Free	Banquet Dinner	

General Information

WiFi: MaineEDU-Guest

Oral Presentations: 15 min. total per presentation. Plan for a 12-minute talk with 3 minutes for questions.

Poster Presentations: All posters presented on Monday or Tuesday should be put on the correct posterboard number (# next to presentation) by Monday at 9:30a and should be removed by the end of the day on Tuesday. Posters presented on Wednesday, Thursday and Friday should be put on the correct posterboard number by Wednesday at 9:30a and removed at the end of the conference. Maximum poster dimensions: 36" tall by 60" wide.

Events

Welcome Mixer at Bayside Bowl Rooftop

- Sunday, 6:00 – 9:00 pm
- 58 Alder Street, Portland, ME. Appetizers and limited drinks provided. Food and additional drinks will be available for purchase.

Retirement Celebration for Rocky Geyer, Parker MacCready, and Hans Burchard

- Monday at 5:00 - 6:00 pm
- Hannaford Hall (same location as presentations)

Banquet Dinner

- Thursday 5:30 -10:00 pm
- Bus transport from Hannaford Hall to Casco Bay Lines (Ferry) departing at 5:00p
- Ferry departure from Portland at 5:45p
 - Ferry location: 56 Commercial Street, Portland, ME. Attendees not taking bus transport should arrive at the ferry 15 minutes before departure. The ferry will not wait for late arrivals. Ferry tickets will be distributed to attendees during the Thursday lunch hour.
- Conference dinner at Diamond's Edge Restaurant 6:30p-9:00p
 - This will be a classic Maine Lobster Bake. Note: not just lobster will be served. Options will be available for Gluten Free, Vegetarian, and Vegan attendees.
- Ferry departure from Great Diamond Island at 9:30p
 - Attendees should arrive at the ferry 15 minutes before departure. The ferry will not wait for late arrivals.
- There will be a bus for return to Hannaford Hall, which has a 45-person capacity and will run on a loop until all interested users are transported.

Special Issue in Estuarine and Coastal Shelf Science

Physics of Estuaries and Coastal Seas: Advances in Tidal Dynamics, Mixing, and Coastal Circulation

Submission deadline: **01 March 2027**

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This Special Issue brings together contributions from the Physics of Estuaries and Coastal Seas Conference 2026, spanning the continuum from estuaries to the coastal ocean. It will showcase advances in estuarine, coastal, and shelf-sea physics. Topics include estuarine circulation, stratification and mixing, river plumes, sediment transport, turbulence, wave–current interactions, coastal dynamics, and emerging research on high-latitude systems, extreme events, and climate change. Contributions span field observations, remote sensing, laboratory studies, theory, and numerical modeling, highlighting new insights into the physical processes governing estuarine and coastal environments.

Manuscript submission information:

- Open for Submission:
01-Sept-2026 to 01-Mar-2027
- Submission Site: [Editorial Manager®](#)
- Article Type Name: "VSI: PECS 2026"- please select this item when you submit manuscripts online



Program Details

MONDAY

M1 - Estuarine Hydrodynamics I (Chair - Cristian Rojas)

8:00 - Estuarine Control

W. Rockwell Geyer, David K. Ralston, Malcolm Scully, Robert Hetland, Jilian Xiong

8:15 - A critical Review of the efflux-reflux Theory for Estuaries

Torben Arne Voß, Hans Burchard, Knut Klingbeil, Xiangyu Li

8:30 - Salt structure and flux in the oligohaline reach of the Delaware River

Robert Chant, Dave Ralston, Dongxiao Yin, Elias Hunter, Benson Ossai

8:45 - Wind pumping dominates landward salt transport in a weakly tidal estuary

Dongxiao Yin, David K. Ralston, John C. Warner, Neil K. Ganju, Courtney K. Harris

9:00 - 3D circulation and multi-channel connectivity in the St. Lawrence Estuary

Maëlys Le Mouel, Abdelkader Hammouti, Damien Pham Van Bang

9:15 - Spatial variability of residual circulation in a hypersaline coastal lagoon

Braulio Juarez, Rubi Galván-Ramos, Angelica San Pedro-Granados, Katherine Daza, Lauren Ross, Arnoldo Valle-Levinson

P1 Posters: Estuarine Hydrodynamics (9:30 – 11)

Introduction by Dongxiao Yin

M2 - Estuarine Hydrodynamics II (Chair - Cody Benton)

11:00 - Subsurface flow driven hydrodynamics of semi-arid coastal lagoons

Megan E. Williams, Lino Yovan, Rodolfo Gómez, Sebastián Vicuña, Sarah Leray

11:15 - Tidal and supratidal variability at a low-inflow estuarine inlet and the adjacent inner shelf

Isaac Rodríguez-Padilla, Braulio Juárez

11:30 - Hydrodynamic variability in a hypersaline lagoon

Katherine Daza, Elias Pinilla, Lauren Ross, Braulio Juarez, Arnoldo Valle-Levinson

11:45 - Temperature dynamics in the Yaquina Bay estuary, Oregon, USA

Margaret M. Conley, James A. Lerczak, Robert Hetland

12:00 - Beyond Potential Energy Anomaly: Learning the Stratification State Space of Western Long Island Sound with a Physics-Guided Autoencoder

Reza Badpa, Kamazima M.M. Lwiza

Lunch 12:00 - 1:30 PM

M3 - Coastal Flooding and Extreme Water Levels (Chair - Tam Trinh)

1:30 - Controls on Inundation Time in Two Louisiana Deltaic Estuaries

Madeline Foster-Martinez, Abigail Eckland, Vitalii Sheremet

1:45 - Nature-based strategies and mechanisms that mitigate coastal floods and minimize induced flooding

P.M. Orton, S.L. Dykstra, S.A. Talke

2:00 - How tidal properties influence the duration of coastal flooding and time over critical stress thresholds

Stefan Talke, P.M. Orton, S.B. Lee

2:15 - Exploring Estuarine Sea Level Fluctuations and Dynamics Using the Surface Water and Ocean Topography (SWOT) Mission

Joanna L. Carter, Sarah N. Giddings, Angelica Rodriguez, Agata Piffer Braga, Iury Simoes-Sousa

2:30 - Landfast ice and ice floe effects on tides and storm surges in estuaries

Steven L. Dykstra, Arnoldo Valle-Levinson, Henk Schuttelaars, Mary Pontbraind, Eliah Gomez

2:45 - Marsh Shoreline Protection with Coral Atoll Structures

Robert L. Jenkins III, Davina L. Passeri

P2 Posters: Coastal Flooding and Extreme Water Levels (3:00 – 4:30)

Introduction by Steven Dykstra

Refreshments and Retirement Celebration (4:30- 6:00)

TUESDAY

T1 - River Plumes (Chair - Bob Chant)

8:00 - Drivers of Cross-Shore Freshwater Transport in the Surf Zone

Alexander R. Horner-Devine, Yingzhong Lou, Sarah N. Giddings, Morteza Derahkti, Matthew Spydell, Sierra M. Byrne, Alexandra J. Simpson

8:15 - The intra-tidal evolution of turbulence in the near- to mid-field of a frictional river plume

Lucas Warmuth, Wouter Kranenburg, Arjen Luijendijk, Julie Pietrzak

8:30 - Momentum balance on a large surface-advected river plume based on field measurements

Óscar Álvarez-Silva, Marius Becker, Raúl Flores, Christian Winter

8:45 - Mapping and Investigating Barotropic Pressure Gradients of River Plumes Using SWOT

Ágata Piffer Braga, Iury Simoes-Sousa, Sarah N. Giddings, Angelica Rodriguez, Joanna L. Carter, Matthew Alford, Sophia Merrifield, Juliana Costi, Tamlin Pavelsky

9:00 - Introducing the Coincidence Index: A Novel Diagnostic and Production-Based Framework for Water Body Interaction Analysis and Its Application to Study the Interaction of River Plumes

Xiangyu Li, Knut Klingbeil, Hans Burchard

9:15 - Small Plume Behaviors and Fates in Coastal Seas

Sierra M. Byrne, Sarah N. Giddings, Mark Merrifield, Matthew Spydell, Xiaodong Wu, Yingzhong Lou, Alexander Horner-Devine

P3 Posters: River Plumes (9:30 – 11)

by Ágata Piffer Braga

T2 - Physical and Biogeochemical Interactions (Chair - Lily Engel)

11:00 - Physical controls of macro-nutrient distribution in a moderate discharge coastal river plume

D.B. Friboance, A.M. Gossman, T. Dishon, A. Hannides, G. Voulgaris, A.E. Yankovsky

11:15 - The influence of remote river flow on carbon cycling in a low inflow estuary

Marisa Viola, Catherine Clark, Erika McPhee-Shaw, Sam Kastner

11:30 - Physical and biogeochemical drivers of oxygen responses to episodic river-dominated conditions and mouth closures in a low-inflow estuary

Victoria Boatwright, Sarah N. Giddings, Colleen Petrik, Matthew Spydell, Sierra Byrne, Helen Zhang

11:45 - Influence of Suspended Particulate Matter on the Distribution and Transport of Metal and Organic Pollutants in the Elbe estuary

V. Ortiz Gutierrez, B. Fricke, T. Zimmermann, D. Pröfrock, P. Hoppe, J. Kelln

12:00 - Tidal Timing and Environmental Stressors to the Intertidal Zone: A Case Study of Cook Inlet

Mary Pontbriand, Stefan A. Talke, Steven L. Dykstra

Group Photo - 12:15

Lunch 12:30 - 1:30 PM

T3 - Sediment Transport and Coastal Morphology (Chair - Julia Moriarty)

1:30 - Sediment dynamics in a dredged river channel and adjacent restored marsh

Daniel Nowacki, Jessie Lacy, Samantha McGill, Karen Thorne, Michelle D'Aguillo

1:45 - Near-bed sediment entrainment from granular and cohesive beds

Rodrigo Mosquera, Francisco Pedocchi

2:00 - Phase-resolved shear stress and sediment flux profiles in the wave bottom boundary layer: observations from South San Francisco Bay

Galen Egan

2:15 - How does uncertainty aggregate in sediment transport models with flocculation dynamics?

Sienna White, Galen Egan, Oliver Fringer, Mark Stacey

2:30 - Will sea level rise lead to stronger/weaker sediment resuspension in Galveston Bay?

Imran Hossain Newton, Jiabi Du, Timothy M. Dellapenna

2:45 - Hysteresis and adaptation time scales of salt intrusion and the Turbidity Maximum Zone in a tidal estuary

Carolina Consuegra, Marius Becker, Frank Kösters, Christian Winter

P4 Posters: Sediment Dynamics & Biogeochemical Processes (3:00- 4:30)

Introduction by Sienna White

T4 - Wave and Shelf Dynamics I (Chair - Shuwen Tan)

4:30 - Dynamics of coastal ocean fronts revealed by ocean gliders

Charitha Pattiaratchi

4:45 - Frontogenesis by material convergence in an estuary and its adjacent coastal ocean

Jing Chen, Robert H. Weisberg, Lianyuan Zheng, Chuanmin Hu, Yingjun Zhang, Alexander K. Nickerson, Jeffrey C. Donovan, and Yonggang Liu

5:00 - Cross-shelf heat transport by horizontal stirring

Gregory Gerbi, Anthony Kirincich

5:15 - Characterizing Seasonal Acoustic Ducts on the Washington Shelf

J. B. Mickett, R. R. Harcourt, G. Xu, E. Thorsos, D. Tang, J. Osborne, T. Hefner

5:30 - Climatology and Synoptic Evolution of a Thermal Front Associated with a central California Upwelling Bay

Nathan P. Shunk, Piero L. F. Mazzini, Ryan K. Walter, Thomas P. Connolly, April Thibodeau

5:45 - Superinertial trapped waves driven by shoaling internal solitary waves

G. Pawlak, Y. Chang, S. Tan, J. Rogers, K. Davis, O. Fringer

WEDNESDAY

W1 - Turbulence and Mixing (Chair - Erika McPhee-Shaw)

8:00 - Estuarine Mixing

Hans Burchard, Knut Klingbeil, Xiangyu Li, Lloyd Reese, W. Rockwell Geyer

8:15 - The structure and lifecycle of stratified mixing by shear instabilities in continuously forced flows

Adrien Lefauve, C. Bassett, D.S. Plotnick, A.C. Lavery, W.R. Geyer

8:30 - Nonlocal improvements for turbulence closures near boundaries: Extension to rigid boundaries and forced free surfaces

R.R. Harcourt, B. Tian, C.C. Chickadel

8:45 - Sounding Out Complexity: Broadband Acoustic Insights into Estuarine Thermohaline Structure and Mixing

Elizabeth Weidner, Cloé Mueller, Thomas Blanford, Grant Deane, Larry Mayer

9:00 - Asymmetries in currents and turbulent kinetic energy dissipation rates within a coastal salt marsh creek

Molly M. James, James O'Donnell

9:15 - Variability of internal wave driven mixing on a broad stratified shelf over multiple timescales

Joseph Jurisa, Jacqueline McSweeney

P5 Posters: Turbulence & Mixing / Wave & Shelf Dynamics (9:30 – 11)

Introduction by Elizabeth Weidner

W2 - Estuarine Hydrodynamics III (Chair - Arnoldo Valle-Levinson)

11:00 - Remote Sensing based Hydrodynamic Modeling in Data-Scarce Regions: Integrating ICESat-2 Sentinel-2 and SWOT for Coastal Monitoring in Langebaan Lagoon, South Africa

Ali Reza Payandeh, Marc Simard, Anthony Campbell, Daniel Jensen, Heidi van Deventer

11:15 - Modeling and Monitoring Driftwood Transport and Remobilization in an Urban Coastal Inlet

Brielle Biehn, Danker Kolijn, Enda Murphy

11:30 - Bathymetry-induced Internal Wave Generation at the Mouth of a Macrotidal Estuary

Nicolas Cyr, Kimberly Huguenard, Arnoldo Valle-Levinson

11:45 - Characterization of hydrodynamic environments in coastal wetlands: the SWOT and NISAR era

Marc Simard, Cecilia Lopez-Gamundi, Alexandra Christensen, Ali Payandeh, Pascal Matte

12:00 - External Forcing Effects on Estuarine Overtides

Nalika Lakmali, Kimberly Huguenard, Preston Spicer

Excursions or Free Time

THURSDAY

Th1 - Estuarine Hydrodynamics IV (Chair - Salme Cook)

8:00 - Seeking the sources of shelf water causing salt intrusion in a salt wedge estuary under extreme drought conditions

J.D. Pietrzak, T. Wegman, A.R. Horner-Devine, D.K. Ralston, W. Kranenburg

8:15 - Offshore storminess and seawater intrusion in the Sacramento-San Joaquin Delta

Jenna Israel, Eli Ateljevich, Dan Cayan, Laurel Larsen

8:30 - Salt intrusion in two contrasting estuaries

Carlos Schettini

8:45 - Topographic complexity and tidal influences on salt flux in the oligohaline zone

David K. Ralston, Dongxiao Yin, Robert Chant, Elias Hunter, Benson Ossai

9:00 - Quantifying the role of winds on estuarine residence time during floods in a Patapsco estuary model

Carisa J. De Santos, Tina Geller, Julia Moriarty

9:15 - Exchange flow, eh?

Parker MacCready, Erin M. Broatch, W. Rockwell Geyer

Poster Session P6: Water Quality (9:30 – 11)

Introduction by Megan Williams

Th2 - Water Quality (Chair - Maia Heffernan)

11:00 - Fecal Bacteria Exposure at Shellfish Beds in Dyes and Sinclair Inlets in the Salish Sea – a Modeling Study

Aditi Mitra, Wenfei Ni, Tarang Khangaonkar, Merita Trohimovich, Trevor Swanson

11:15 - Modeling the impact of wastewater discharge on oxygen in Puget Sound
Aurora J. Leeson, Dakota Mascarenas, Kathryn M. Hewett, Alexander R. Horner-Devine, Parker MacCready, Michael T. Bretty

11:30 - Flushing and hypoxia development in a salty, shallow, terminal inlet
Dakota Mascarenas, Aurora J. Leeson, Kathryn M. Hewett, Alexander R. Horner-Devine, Parker MacCready

11:45 - The Pathogen Forecast Model: Forecasting Nearshore Water Quality and Swimmer Illness Risk for the US-Mexico Border Region
Matt Spydell, Falk Feddersen, Akanksha Gupta, Sarah N. Giddings, Amaia Ruiz de Alegria-Azaburu, Ian Brunjes, Corey Olfe, Clarissa Anderson, Andrew D. Barton, Katherine Berman, Jeff Bowman, Bruce Cornuelle, Ganesh Gopalakrishnan, Shelby Marhoefer-Jess, Uwe Send, Mathias Lankhorst, Nathali Cordero Quiros

12:00 - Advection versus Local Processes: What Drives Warming and Deoxygenation in Massachusetts Bay?
Stendert Laan, Lauriane Vilmin, Claudia Mazur, Christopher Goodwin, Francesca Di Paola, Jos van Gils

Lunch 12:00 - 1:30 PM

Th3 - Wave and Shelf Dynamics II (Chair - Greg Gerbi)

1:30 - Hydrodynamics of kelp farms
Kristen A. Davis, Cameron Hallett, Madolyn Kelm, Andrew Olivero, Rob Dunbar, Stephen Monismith, Geno Pawlak

1:45 - The Internal Surf Zone: Analyzing the Dynamics of an Inner Shelf Subjected to Energetic Internal Tides
Andrea Rodriguez-Marin-Freudmann, Amy F. Waterhouse, Mark A. Merrifield, Sutara H. Suanda, Jennifer A. Mackinnon, Peter J.S Franks

2:00 - Potential mechanisms of near-bottom offshore export off Long Bay, SC
Catherine R. Edwards, Harvey E. Seim

2:15 - Atlantic Water Upwelling Beneath Landfast Ice, Utqaġvik, Alaska
Nawal S. O'Keefe, Steven Louis Dykstra, Andrew R Mahoney, Laura Crews

2:30 - Surface currents and coastal connectivity: Drifter-base insights for a Mid-Atlantic Bight offshore wind project

Meg Shah, Michael M. Whitney

2:45 - Wind waves and boat wakes: A case study of relative shoreline and bed impacts on East Pond, Maine

Alejandra Ortiz, Danielle Wain, Alison Bates

P7 Posters: Estuarine Hydrodynamics (3:00- 4:30)

Introduction by Sarah Giddings

Banquet Dinner at Diamond's Edge 5:00 - 10:30

FRIDAY

F1 - Anthropogenic and Climate Influences (Chair - Rob Hetland)

8:00 - Improving representation of coastal processes in earth system models

Emma Shie Nuss, Rob Hetland, Hannah Klion, Vijay Mahadevan, Kyle Hinson

8:15 - Anthropogenic Influence on the Dynamics of Mobile Bay: Effects of Mild to Severe Ship Channel Deepening and Widening

Harikrishnan Sreeshylam, Zhilong Liu, Brian Dzwonkowski, John Lehrter, Jeff Coogan

8:30 - Assessing Impacts of Sea-Level Rise on Albemarle-Pamlico Sound: Foundations for Ecological Implications

Katherine Boot, Qianqian Liu

8:45 - Atmospheric drivers of change in an Australian inverse estuary

Yasha Hetzel, Chari Pattiaratchi

9:00 - Tidal evolution along a macro-tidal estuary from multidecadal in situ data

Juliette Pénicaud, Capucine Sourit, Isabel Jalon-Rojas, Aldo Sottolichio

9:15 - Impacts of Channel Dredging on Hypoxia in a Microtidal Stratified System: Mobile Bay, Alabama, U.S.A

Swathy Krishna Manoharan Chennakkattu, Zhilong Liu, Brian Dzwonkowski, John Lehrter

P8 Posters: Anthropogenic, Climate, and Weather Influences (9:30 – 11)

by Yasha Hetzel

F2 - Estuarine Hydrodynamics V (Chair - Joe Jurisa)

11:00 - Observations of Internal Tide in Greenland Fjord Generated by Subglacial Freshwater Discharge

Robert Sanchez, *Fiamma Straneo, Ken Zhao, Jennifer Mackinnon*

11:15 - Estuarine salinity climatology and variability from five-decade model hindcast in Mobile Bay, Alabama, U.S.A

Zhilong Liu, *Brian Dzwonkowski, John Lehrter*

11:30 - Annual deepwater renewal in a double-sill fjord estuary

Jilian Xiong, *W. Rockwell Geyer, Parker MacCready*

11:45 - A unified dynamical framework for semi-enclosed basins

Juan Torres-Cordoba, *Oscar Alvarez-Silva, Arnoldo Valle-Levinson*

12:00 - A global estimate of estuarine diel hypoxia due to tidal phasing

Nicholas J. Nidzieko

12:15 - Across estuary classifications reveals patterns in exchange and stratification

Sarah N Giddings, *Robert Sanchez, David Ralston, Oscar Alvarez Silva, Julie Chen, Yi-Ju Chou, Brian Dzwonkowski, Emily Lemagie, Zhilong Liu, Parker MacCready, Charles Seaton, David Sutherland, Xiaodong Wu*

Poster Program Details

MONDAY

P1 - Estuarine Hydrodynamics - 9:30 to 11:00 AM

1 - Mechanism Controlling Secondary Circulation and Dispersion in the Oligohaline Reach of Delaware River Estuary

Benson Ossai, Robert Chant

5 - Investigating Tidally Driven Flows in Multi-Inlet Lagoons

Cody Benton, Robert Chant

9 - The importance of salinity-velocity covariance in a macrotidal well-mixed estuary

Cristian Rojas, Lauren Ross, Isabel-Jalón Rojas, Aldo Sottolichio, Nicolas Huybrechts

12 - Quantifying Estuarine-Wetland Connectivity via SWOT and Hydrodynamic Modeling: The Komo Estuary

Alexandra Christensen, Solomon Kica, Marc Simard

16 - Dynamics-based classification of momentum balances in a salt-wedge estuary: Penobscot River (Maine, USA)

Elias Pinilla, Lauren Ross

18 - Comparison of Tidal and Subtidal Advective Heat Fluxes in the Delaware Estuary

Fatemeh Najafian, Jacqueline McSweeney

21 - Ice-Tide Interactions in a Macrotidal Estuary

Nicolas Cyr, Kimberly Huguenard, Nalika Lakmali

23 - Salinity and Temperature Changes in a Back Barrier Lagoon over the Full Lifecycle of a Breach

Lang (Maggie) Ming, Jack McSweeney, Charlie Flagg

P2 - Coastal Flooding and Extreme Water Levels - 3:00 to 4:30 PM

2 - Storm Surge and Coastal Inundation Nowcasts/Forecasts During Hurricanes Helene and Milton

Yonggang Liu, Haibo Xu, Kaili Qiao, Sebin John, Sieu-Cuong San, Robert H. Weisberg, Jing Chen, Lianyuan Zheng, Sherryl Gilbert, Steven A. Murawski, Gary T. Mitchum, and Thomas K. Frazer

6 - Physical drivers of water level variability and flooding in back-barrier estuaries

N.A. Nwogwu, P. Orton, and R. Marsooli

10 - Complicated tides contribute to spatiotemporal variability in Salish Sea extreme sea levels

Preston Spicer, Hannah Baranes, Stefan A. Talke, and Ning Sun

13 - A US Northeast Collaborative Approach to Supporting Maine's Coastal Resilience Priorities

Taylor Bailey Spencer, Jessica Jansujwicz, Lauren Ross, and Kimberly Huguenard

19 - Role of Coastal and Shelf Geometry in the Characteristics of Continental Shelf Seiches

Tam T. Trinh, Philip M. Orton, Mahmoud Ayyad, and Stefan A. Talke

TUESDAY

P3 - River Plumes - 9:30 to 11:00 AM

3 - End-Member Mixing Analysis of Winyah Bay and Santee River Plumes

Jordan Small and Diane B. Fribance

7 - Momentum Driven Plume Region Classification: Winyah Bay, SC

Payton Merica and Diane B. Fribance

14 - Wind effects on colliding plumes in a northern Icelandic Fjord

Luke C. Glass and Michael M. Whitney

17 - Satellite-based observations and wind response of two river plumes on Iceland's Arctic coast

Michael M. Whitney and Luke C. Glass

20 - Identifying the Impacts of Vertical Stratification in Setting the Ocean Climate in a Region of Fresh Influence: Mississippi Bight, U.S.A

Brian Dzwonkowski, Devanarayana R. M. Rao, Aravind Puzhankara, Zhilong Liu, Grant Lockridge, and Kyeong Park

P4 - Sediment Dynamics and Biogeochemical Processes - 3:00 to 4:30 PM

4 - Identifying Patterns in Chesapeake Bay Biogeochemistry During Hurricane Isabel
Julia M. Moriarty and Carisa J. De Santos

8 - Dynamics of Estuarine Air-Sea Carbon Dioxide Flux
Justin Cai and Malcolm Scully

11 - Investigation of input reduction methods for process-based, morphologically accelerated modelling of estuaries and river deltas
Ewan Sloan, Nicholas Dodd, and Riccardo Briganti

15 - Towards quantification of the Fraser Delta, Canada sediment budget
Noa Randall, Danker Kolijn, and Enda Murphy

22 - Using real-world data and network analysis to inform larval dispersal modelling for invasive species management
Lily Engel, Abigail Keller, Benjamin Makhlouf, Emily Grason, Thomas Therriault, Lakshitha Premathilake, Tarang Khangaonkar, and Lysel Garavelli

WEDNESDAY

P5 - Turbulence and Mixing / Wave and Shelf Dynamics - 9:30 to 11:00 AM

1 - Residual Circulation Driven by Obliquely Incident Shoaling Internal Waves
Shuwen Tan and Walter Torres

5 - Wave-Tide-Surge Interactions in an Idealized Estuary Shelf System
Malavika Sudhakaran and Kimberly Huguenard

8 - Improving Significant Wave Height Forecasts with Optimized Attention-Based LSTM Models
Zheng Ren, Marc de Vos, Nalini Ravishanker, Namitha Viona Pais, and James O'Donnell

12 - Internal waves in the Mid Atlantic Bight
Jacqueline McSweeney and Joe Jurisa

16 - Drivers of Interannual Variability of the Seasonal Evolution of Water Properties in New York Bight
Haocheng Yang and Jacqueline McSweeney

20 - Objective Detection of the Shelf-Slope Front North of the Gulf Stream
Shiliang Shan, *Francois Rivest, and Blair Greenan*

THURSDAY

P6 - Water Quality - 9:30 to 11:00 AM

2 - The Pathogen Hindcast Model: Effects of Wastewater Inputs and Bottom Friction on the Model Skill along the USA - Mexico Border Coastline

Akanksha Gupta, *Falk Feddersen, Matthew Spydell, and Sarah N. Giddings*

6 - Sub-seasonal physical processes on dissolved oxygen dynamics during summer 2019 in Mississippi Bight, Gulf of America

Aravind Puzhankara, *Brian Dzwonkowski, John Lehrter, Zhilong Liu, Grant Lockridge, and Devanarayana R.M. Rao*

9 - Diagnostic Tool Development for Assessment of Estuarine Wastewater Discharge Impacts

Bea E. Van Dam and *Sean M.C. Smith*

13 - Field measurements for understanding the development of hypoxia in a terminal inlet in Puget Sound

Maia Heffernan, *Alex Horner-Devine, and Jim Thomson*

19 - Ventilation in the Hypoxic Zone of Western Long Island Sound

Mehrnoosh Abbasian, *Alejandro Cifuentes-Lorenzen, and James O'Donnell*

23 - Coupled Hydrodynamic and Biogeochemical Assessment of Eutrophication Vulnerability in North Biscayne Bay: The Role of Nutrient Fluxes, Wind-Driven Circulation, and Residence Time

Luis H. Bordin, *Kassidy Troxell, Henry Briceño, Reinaldo Garcia, Valentina G. Caccia, and Pierro R. Gardinali*

P7 - Estuarine Hydrodynamics - 3:00 to 4:30 PM

3 - Impact of horizontal density gradients on tidal residual flows in scour pits

Arnoldo Valle-Levinson and *Xinyu Guo*

7 - Tidal dynamics in spring-fed subtropical estuary

Xavier Sanchez, *Juan Torres-Cordoba, and Arnoldo Valle-Levinson*

10 - Mapping Salinity Intrusion: A Satellite Remote Sensing Approach Linking Estuarine Turbidity Maxima To Low Salinity Zones

Dana R. Myers and Nicholas J. Nidzieko

14 - Flash drought and salt intrusion in the Hudson River Estuary, USA

Salme Cook and Liv Herdman

17 - Relative impact of inlet reconfiguration and seagrass decline on the hydrodynamics of a mesotidal inlet-lagoon system

Arnaud Le Pevedic, Aldo Sottolichio, Florian Ganthy, Alexandre Nicolae Lerma, Paul Bayle

21 - Rapid response sampling of historic Skagit River flood into a Puget Sound basin: Effect on mixing

Erika McPhee-Shaw, Sam Kastner, Marisa Viola, and Amelia Bourne

24 - Comparing measurements of eddy viscosities to parameterizations in a salt wedge estuary

Lauren Ross and Arnoldo Valle-Levinson

FRIDAY

P8 - Anthropogenic, Climate, and Weather Influences - 9:30 to 11:00 AM

4 - Finding Middle Ground: Using Transient Response to Anthropogenic Morphologic Changes to Inform Sediment Transport and Hydrodynamic Modelling in the Hampton-Seabrook Estuary

Liam Hanley and Matthew Fleming

11 - Adaptive mesh refinement in the REMORA ocean model

Robert Hetland, Hannah Klion, Emma Nuss, Kyle Hinson, and Ann Almgren

15 - Spatio-temporal variability of the Rio de la Plata turbidity front and its links to climate forcing

F. Pedocchi, F Maciel, and Rodrigo Mosquera

18 - The role of upwelling dynamics in restraining the coastal impacts of the 2023 marine heatwave in the northern Gulf of America

Devanarayana R.M. Rao, Brian Dzwonkowski, Aravind Puzhankara, Severine Fournier, Zhilong Liu, Uchenna Nwankwo, and Stephen Howden

22 - Impacts of Wave-Current Interactions on Ocean Waves during Hurricanes Ian and Idalia

Sieu-Cuong San and Yonggang Liu

Excursion Details

Kayak Tour

Wednesday, August 12

2:00 - 4:00p

1 Cutter St. Portland, ME 04101



This trip will provide kayakers an up-close and personal tour of beautiful Casco Bay. Attendees will enjoy views of some of the bay's most fascinating landmarks, including lighthouses and historic forts. And be sure to keep an eye out for wildlife like seals, eider ducks, herons and osprey! There are endless options for exploration, so the exact route will depend on the weather conditions, tide cycles and the pace of the group.

- Eat lunch beforehand!
- Arrive at least 15 minutes early
- Fill out waiver: <https://mono.wherewolf.co.nz/9xnvwy>
- What to bring:
 - Water Bottle
 - Footwear that can get wet (sandals are great!)
 - Non-cotton clothing that can get a little wet
 - Sun protection
 - Phone and/or Camera (they will provide dry bags)
- Gratuity has already been paid. No need to tip!



- Parking: All parking around the site is free and most spots have no time restrictions during the daytime. All-day parking is available in the areas circled in orange above. The lot halfway down Cutter Street (circled) is generally the best place to park, but when that lot is full there is street parking along Cutter Street and most residential streets in the neighborhoods nearby. The parking spaces right beside Portland Paddle, along the waterfront, are limited to 5 minutes or two hours, and some are reserved for vehicles with boat trailers. Feel free to park in those spots, or the loading zone spots to unpack your boat.

Portland Discovery Harbor Cruise



Wednesday, August 12

2:15 - 4:15 PM

Long Wharf, 170 Commercial Street, Portland, ME

Enjoy a relaxing cruise through beautiful Casco Bay while taking in Portland's iconic waterfront, historic forts, lighthouses, islands, and marine wildlife. Your guide will provide narration throughout the cruise, highlighting the area's history and points of interest.

- Arrive 20–30 minutes early
- What to Bring:
 - Sunglasses and sunscreen
 - A light jacket or sweater (it can be cooler on the water, even in summer)
 - A camera or phone for photos
 - Comfortable shoes
- A full cash bar is available onboard offering beer, wine, cocktails, soft drinks, and light snacks. Outside food is welcome.
- Gratuity has already been paid. No need to tip!
- Parking: Portland Discovery does not offer parking, so they recommend allowing extra time (30 minutes – 1hr) to park since it can be busy downtown. There are many public parking lots near their ticket booth (170 Commercial Street). The best parking options are the Ocean Gateway Lot at 2 Commercial Street, Angelo's Acre Lot at 441 Commercial Street, and Simba Parking Lot at 216 Fore Street (all a 7- to 20-minute walk)