

58th Eastern Pacific Ocean Conference

Stanford Sierra Conference Center
Fallen Leaf Lake, South Lake Tahoe
11-14 October 2011



EPOC President: Albert Hermann
EPOC Treasurer: Stephen Pierce
Conference Chair: Clarissa Anderson

EPOC 2011 PROGRAM

Agenda-at-a-Glance

Tuesday, October 11

After 300	Arrival and Registration
630-8	Dinner
815-900	Fireside Chat with Dick Dugdale * <i>Bonfire by the Lake</i>

Wednesday, October 12

715-815	Breakfast
830-1210	Morning Session: Connections Between Coastal Zones
1215-4	Lunch and Free Time
415-535	Afternoon Session: Potential Impacts of Climate Change
600-630	Free Time
630-800	Dinner
815-10	Poster Session

Thursday, October 13

715-815	Breakfast
830-1210	Morning Session: General Contributions
1215-4	Lunch and Free Time
4-600	Afternoon Session: Advances in Ecosystem Modeling
600-630	Free Time
630-800	Dinner
815-10	Reception

Friday, October 14

715-815	Breakfast
830-1010	Morning Session: Coastal Ocean-Estuary Transition Zone
1030-11	Business Meeting/Closing
11-12	Free Time
12-1	Lunch & Departure

Wednesday, October 12 - Morning Session

Physical, Chemical, and Biological Connections between Coastal Zones (The Inner, Middle, Outer Shelf and Continental Slope)

Session Chairs: Erika McPhee-Shaw and Melanie Fewings

Moderator: Erika McPhee-Shaw

- 8³⁰ *Diagnosing the physical processes that control primary productivity and phytoplankton community structure over the Southern California Bight continental shelf*
Presenter: Drew Lucas
- 8⁵⁰ *Physical transport pathways between known source regions for harmful algal blooms and the Pacific Northwest U.S. Coast*
Presenter: Sarah Giddings
- 9¹⁰ *Spatio-temporal variability in cross-shelf exchange across Monterey Bay, CA*
Presenter: Brock Woodson
- 9³⁰ *High- to low- frequency variability of moored temperature, currents, and dissolved oxygen on central Oregon's mid-shelf to inner-shelf and intertidal regions*
Presenter: Kate Adams
- 9⁵⁰ *Turbulent mixing and exchange with interior waters on sloping boundaries*
Presenter: Eric Kunze
- 10¹⁵ **BREAK**
- 10³⁰ *Sub-regional ocean color variability in the California Current System*
Presenter: Nate Mantua
- 10⁵⁰ *Nearshore larval retention among years and between regions of varying upwelling intensity*
Presenter: Jennifer Fisher
- 11¹⁰ *Coastal velocity gradients reduce dispersal distances and enhance self-replenishment of coastal populations*
Presenter: Kerry Nickols
- 11³⁰ *How do convergent and divergent fronts structure the cross-shore gradients of physical, chemical, and ecosystem properties in Monterey Bay?*
Presenter: Sergey Frolov
- 11⁵⁰ *Amplification of hypoxic and acidic events by La Niña conditions on the continental shelf off California*
Presenter: SungHyun Nam

EPOC 2011 PROGRAM

Wednesday, October 12 - Afternoon Session

Potential Impacts of Climate Change on California Current Ecosystems: Physics, Chemistry, and Biology

Session Chairs: Ryan Rykaczewski and Bill Peterson

Moderator: Ryan Rykaczewski

- 4⁰⁰ *A region of hypoxia on the British Columbia Shelf*
Presenter: Bill Crawford
- 4²⁰ *The NPGO and regional variation in Coho salmon growth: 47° N to 54° N*
Presenter: Brian Beckman
- 4⁴⁰ *Oceanographic influences on the growth of Coho (*Oncorhynchus kisutch*) and Chinook (*O. tshawytscha*) salmon along the coast of British Columbia, Canada*
Presenter: Bridget Ferriss
- 5⁰⁰ *Seasonal and inter-annual variability in copepod species composition and egg production related to climate and upwelling dynamics in the northern California Current*
Presenter: Jay Peterson
- 5²⁰ *Relationships among interannual climate variability, latitude of the North Pacific Current bifurcation, and nutrient supply to the California Current*
Presenter: Ryan Rykaczewski
- 5⁴⁰ *The Ocean Observatories Initiative's Endurance Array: Preliminary results and future research opportunities*
Presenter: Michael Vardaro
- 6⁰⁰ BREAK for DINNER
- 8¹⁵ POSTER SESSION*

* Please join us in the Angora Room from 8:15 to 10 pm to view posters and *drink beer*.

EPOC 2011 PROGRAM

Poster Presentations

Physical, Chemical, and Biological Connections between Coastal Zones (The Inner, Middle, Outer Shelf and Continental Slope)

Contrasting HAB-susceptible upwelling shadows: the influence of latitude and resonant atmosphere/ocean interactions

Presenter: Andrew Lucas

The tattered curtain hypothesis revisited

Presenter: Cheryl Harrison

Currents and Suspended Sediment in the Near-Bottom Stratified Turbulent Layer of the Monterey Submarine Canyon

Presenter: Erika McPhee-Shaw

Sub-regional ocean color variability in the California Current System

Presenter: Piero Mazzini

Declining oxygen in the Northeast Pacific

Presenter: Stephen Pierce

Advances in Ecosystem Modeling in the Northeast Pacific

Harnessing your GPU for interactive immersive Individual-Based Modeling

Presenter: Albert Hermann

The role of coupled physical-biological models for HAB prediction in California

Presenter: Clarissa Anderson

General Contributions

Community bloom dynamics and related toxins along the Oregon coast

Presenter: Anita McCulloch

Coastal variability and Lagrangian circulation in Todos Santos Bay and off Baja California during Spring-Summer 2007

Presenter: David Rivas

Oceanographic Processes in the Coastal Ocean-Estuary Transition Zone

The influence of coastal nutrients on phytoplankton blooms in a low-inflow estuary

Presenter: Christina Buck

Thursday, October 13 - Morning Session

General Contributions

Moderator: Clarissa Anderson

- 8³⁰ *Development of the Eastern Pacific Ocean Prediction Forum (ePOPf)*
Presenter: Chris Mooers
- 8⁵⁰ *Intraseasonal variability of coastal winds and ocean conditions along the US Pacific coast in summer*
Presenter: James Johnstone
- 9¹⁰ *Subthermocline eddies over the Washington Continental slope as observed by Seaglider, 2003-09*
Presenter: Noel Pelland
- 9³⁰ *Coastal trapped waves and the California Undercurrent*
Presenter: Thomas Connolly
- 9⁵⁰ *The influence of stratification, shelf slope, and wind stress curl on nutrient supply in a coastal upwelling system*
Presenter: Chris Edwards
- 10¹⁵ **BREAK**
- 10³⁰ *Modeling the impact of watershed management policies on marine ecosystem services with application to Hood Canal, WA, USA*
Presenter: Dave Sutherland
- 10⁵⁰ *Scales, sources and implications of short-term oxygen and pH variability on the continental shelf off southern California*
Presenter: Christina Frieder
- 11¹⁰ *Linking otoliths and oceanography to elucidate environment-growth relationships for early life history stages of rockfishes off Central California*
Presenter: Kathryn Crane
- 11³⁰ *Growing in the flow: Modeling circulation, production, and early life history ecology to develop recruitment indices for rockfishes*
Presenter: Eric Bjorkstedt
- 11⁵⁰ *Event profiling reveals larval advection and behavior in a recruitment-limited upwelling system*
Presenter: Steven Morgan

Thursday, October 13 - Afternoon Session

Advances in Ecosystem Modeling in the Northeast Pacific

Session Chairs: Albert Hermann and Dick Dugdale

Moderator: Al Hermann

- 4⁰⁰ *Modeling the effects of decadal-scale climate variability across trophic levels*
Presenter: Kelly Kearney
- 4²⁰ *Assessing the biodiversity necessary to maximize modeled phytoplankton productivity in the California Current System*
Presenter: Nicole Goebel
- 4⁴⁰ *Modeling the interaction of different forms of nitrogen, freshwater flow and phytoplankton growth to predict estuarine blooms*
Presenter: Dick Dugdale
- 5⁰⁰ *Model robustness in estimating larval transport and connectivity in the coastal ocean*
Presenter: Rachel Simons
- 5²⁰ *An ecosystem perspective for quantifying the dynamics of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) and prey in the central California coastal region*
Presenter: Brian Wells
- 5⁴⁰ *A multivariate EOF analysis of modeled vs. observed modes of biophysical variability on the Bering Sea shelf*
Presenter: Al Hermann
- 6⁰⁰ BREAK for DINNER
- 8⁰⁰ RECEPTION*

* Please join us in the Dining Hall for a reception with entertainment, 8 – 10 pm.

EPOC 2011 PROGRAM

Friday, October 14 - Morning Session

Oceanographic Processes in the Coastal Ocean-Estuary Transition Zone

Session Chairs: Dave Sutherland and Jim Lerczak

Moderator: Dave Sutherland

- 8³⁰ *Modeling slope, shelf, and river plume flow interactions in the coastal ocean*
Presenter: John Osborne
- 8⁵⁰ *Freshwater inputs and coastal productivity in the Pacific Northwest*
Presenter: Kristen Davis
- 9¹⁰ *Effect of coastal ocean on suspended particle dynamics in a southern California urban estuary during the dry season*
Presenter: Nikolay Nezlin
- 9³⁰ *Excessive silicic acid supply leads to increased silicification in coastal diatoms*
Presenter: Colleen Durkin
- 9⁵⁰ *Using Lagrangian particle tracking to quantify ocean/estuary exchange rate*
Presenter: Jim Lerczak
- 10¹⁰ Final Wrap-Up and BREAK
- 10³⁰ BUSINESS MEETING*

* We welcome everyone still present to attend the business meeting where we'll discuss the pressing issues of the day, e.g. *where should the upcoming 60th EPOC Anniversary take place??*