



Session Information

Oral Sessions

Sessions are being held in the **Convention Center (CC)**

Poster Sessions

The eLightning Theater is located in Hall C-D (Poster Hall).

Posters are on display in the following venue throughout the week:

Hall C-D (Poster Hall)

Session & Paper Numbering

Paper Numbers - A paper number designates the section, or other sponsoring group, and chronology of the presentation.

Example: **AI21A-01** = Air-Sea Interactions, Tuesday, AM, concurrent session AI, first paper in that session.

AI	2	1	A	- 01
Discipline	Day	Time	Session	Sequence in Session
Day		Time		
1 = Monday		1 = AM 0800-1000		
2 = Tuesday		2 = AM 1030-1230		
3 = Wednesday		3 = PM 1245-1345 / 1400-1600		
4 = Thursday		4 = PM 1600-1800		
5 = Friday		5 = PM 1830-2030		

The program is current as of 04 February 2020. An omitted abstract ID number in the presentation order indicates that the abstract has been withdrawn by the presenter from the session. Please refer to the online program at

<https://agu.confex.com/agu/osm20/meetingapp.cgi/Home> for updates.

Monday A.M.

AIR-SEA INTERACTIONS

AI11A 14B, Mezzanine

Monday 0800h

Extratropical Air-Sea Interactions and Extreme Events I (joint with PL)

Moderators: **Thomas Spengler**, University of Bergen and Bjerkes Centre for Climate Research; **Arnaud Czaja**, Imperial College London; **Shoshiro Minobe**, Hokkaido University; **LuAnne Thompson**, University of Washington Seattle

0800h **AI11A-01** Covariability of maritime surface wind divergence and vorticity extremes on synoptic timescales: **L W O'Neill**

0815h **AI11A-02** A New Framework for Wind Convergence over Western Boundary Currents: **R Parfitt**, H Seo, Y O Kwon

0830h **AI11A-03** Seasonality and regional characteristics of sea-surface wind responses to mesoscale SST features: **R Masunaga**, N Schneider

0845h **AI11A-04** A cluster analysis of the tracks of North Atlantic wintertime atmospheric rivers and links to extreme precipitation and winds: **C Li**, W Mei, Y Kamae

0900h **AI11A-05** Sea surface temperature perturbations and atmospheric rivers over the western North Pacific: **Y Kamae**, W Mei

0915h **AI11A-06** Testing the trade wind charging mechanism and its influence on ENSO variability: **S Chakravorty**, R C Perez, B T Anderson, B S Giese, S Larson, V Pivotti

0930h **AI11A-07** Interactions between Kuroshio Extension and Central Tropical Pacific lead to preferred decadal-timescale oscillations in Pacific climate: **Y Joh**, E Di Lorenzo

0945h **AI11A-08** Role of mixed layer depth in decadal variability of the Kuroshio Extension region in the western North Pacific: **T Tozuka**, T Toyoda, M F Cronin

AI11B 14A, Mezzanine

Monday 0800h

Toward an Improved Understanding of Indian Ocean Dynamics and Its Role in the Monsoon I (joint with PC, PL)

Moderators: **Aneesh Subramanian**, University of Colorado Boulder; **Hemantha Wijesekara**, Naval Research Lab Stennis Space Center

- 0800h **AI11B-01** Monsoon Intra-seasonal oscillations in the Bay of Bengal: **A Tandon**, E Shroyer, D Sengupta, H W Wijesekera, H J S Fernando, A J Lucas, E A D'Asaro, J T Farrar, J A MacKinnon, A Mahadevan
- 0815h **AI11B-02** The 2018 Monsoon Onset from Ship-based Measurements across the Air-Sea Interface: **E Shroyer**, A Tandon, D Sengupta, A J Lucas, J Fernando, J T Farrar, H W Wijesekera, J A MacKinnon, E A D'Asaro, A Mahadevan
- 0830h **AI11B-03** The Role of South Monsoon Current in the Air-Sea Interactions of Bay of Bengal: **H J Fernando**, A Pirro, H W Wijesekera, T G Jensen, S U P Jinadasa
- 0845h **AI11B-04** Collaborative observations of upper ocean circulation, air-sea interaction, and monsoon variability in the Bay of Bengal: **H W Wijesekera**, E Jarosz, D W Wang, C A Luecke, T G Jensen, A Rydbeck, M K Flatau, J Schmidt, J Perez, I Lozovatsky, H J S Fernando, S U P Jinadasa, J Rajapakshapa, U Wimalasari, W Teague, Z Hallock
- 0900h **AI11B-05** Spatial variability of air-sea interaction in the Indian Summer Monsoon from multi-platform measurements: **A J Lucas**, J T Farrar, E Shroyer, T L Schlosser, R Pinkel
- 0915h **AI11B-06** BoBBLE (Bay of Bengal Boundary Layer Experiment): Impact of the Bay of Bengal on Monsoon Processes: **A J Matthews**, P Vinayachandran, P Amol, D B Baranowski, J George, K J Heywood, B A King, A Nayak, C Neema, S Pargaonkar, B Y Queste, A Sanchez-Franks, P Sheehan, V Thushara, B Webber
- 0930h **AI11B-07** Modeling the Ocean Mixed Layer Response to Atmospheric Monsoon Forcing: **L Johnson**, B Fox-Kemper, Q Li
- 0945h **AI11B-08** Basin-scale Diapycnal Mixing Rates in the Bay of Bengal Inferred from Fresh water Balance: **E Shroyer**, J Sree Lekha, D Sengupta, A Tandon
- 0815h **CP11A-02** Tridimensional Wave-Resolving Modeling of Nearshore Dynamics: **P Marchesiello**, R Benshila, F Auclair, R Almar, J C McWilliams
- 0830h **CP11A-03** Observations of Wind Effects on Shoaling Wave Shape: **F Feddersen**, A Fincham, M S Spyrell, K L Brodie, A Young, D J Grimes, B L Bruder, N Spore, P Dickhudt, A Poirot, G Kubiak, K Lucas
- 0845h **CP11A-04** Predicting the Onset and Strength of Breaking of Surface Gravity Waves from Deep to Shallow Water: **J T Kirby Jr**, M Derakhti, M L Banner, S T Grilli, J Thomson
- 0900h **CP11A-05** Wave-Breaking Modulation by Infragravity Waves: **Y Matsuba**, T Shimozone, S Sato
- 0915h **CP11A-06** Experimental study on the effects of infragravity waves on the merging of multiple bores and the resulting runup: **C Li**, H T Ozkan-Haller, P Lomonaco, T B Maddux, R A Holman, P Ruggiero, G Garcia-Medina
- 0930h **CP11A-07** Numerical wave modeling with a Boussinesq-type model against insitu and LIDAR recorded field data on a sandy beach at Duck, NC: **G Salgado**, M Malej, K L Brodie, S Bak, T Hesser, F Shi
- 0945h **CP11A-08** Laboratory observations of the intermittent growth of edge waves with random incident waves: **X Ding**, G Coco, R T Guza, R Garnier, C Whittaker, R A Dalrymple, Z Wei, P Lomonaco, P Blondeaux, G Vittori

CP11B 9, UL

Monday 0800h

The Dynamics of Buoyancy-Driven Flows in Estuaries, Continental Shelves, and Polar Seas I (joint with HE, PS)

Moderators: Piero Luigi Mazzini, San Francisco State University; Joseph Jurisa, Oregon State University

- 0800h **CP11B-01** Impact of exchange flow on shelf-plume interactions: **E Brasseale**, P MacCready
- 0815h **CP11B-02** Laboratory investigation on the plume-to-plume interaction on a rotating table: **Y Yuan**, J Dai, A Horner-Devine, X Chen
- 0830h **CP11B-03** Submesoscale Dynamics Revealed by Glider Observations in Central New Zealand: **K Jhugroo**, J O'Callaghan, C Stevens, F Elliott, M Hadfield, H Macdonald
- 0845h **CP11B-04** Wind-Modulated Buoyancy Current Pulses Associated with Outflow from San Francisco Bay: **J L Largier**

COASTAL AND ESTUARINE PROCESSES

CP11A 8, UL

Monday 0800h

Nearshore Processes I

Moderators: Jenna Brown, USGS; Ty Hesser, U.S. Army Engineer Research and Development Center, Coastal and Hydraulics Laboratory

- 0800h **CP11A-01** A Detailed Investigation of Surf Zone Hydrodynamics using Smoothed Particle Hydrodynamics Simulations: **R Lowe**, M L Buckley, C Altomare, D Rijnsdorp, Y Yao, T Suzuki, J Bricker

- 0900h **CP11B-05** Subglacial discharge-driven exchange flow over submarine sills in a glacial fjord: LeConte Bay, Alaska: **A Hager**, D Sutherland, R H Jackson, C Kienholz, J D Nash, J M Amundson, R J Motyka
- 0915h **CP11B-06** Numerical and Theoretical Results Exploring the Potential-Vorticity Dynamics of Coastal Outflows: **S Jamshidi**, E R Johnson
- 0930h **CP11B-07** Non-geostrophic baroclinic instability in coastal buoyancy-driven flow: **L Qu**, R D Hetland
- 0945h **CP11B-08** On baroclinic instability over continental shelves: Testing the utility of Eady-type models: **S N Chen**, C J Chen, J A Lerczak

CP11C 10, UL
Monday 0800h
Water Quality Monitoring and Forecasting in Coastal and Inland Waters: Applications and Operational Services I (joint with SI)

Moderators: Steven Greb, University of Wisconsin-Madison; **Guangming Zheng**, University of Maryland; **Benjamin Holt**, Jet Propulsion Laboratory

-
- 0800h **CP11C-01** Characterization of Inherent Optical Properties (IOPs) over Global Coastal and Inland Waters from VIIRS Ocean Color Observations: **W Shi**, M Wang
- 0815h **CP11C-02** Great Lakes Water Quality Products and Assessments using Tuned “Lake” Color Algorithms: **R A Shuchman**, M Sayers, K Bosse, G Fahnenstiel, G Leshkevich, P Chu, S A Ruberg
- 0830h **CP11C-03** A comprehensive suite of remote sensing algal bloom indices for enhanced monitoring of Canadian eutrophic lakes.: **C Binding**, C Zeng, L Pizzolato
- 0845h **CP11C-04** Prediction of the optical water type of lakes from catchment properties: **M K Lehmann**, I Hawes, M Allan, K Muraoka
- 0900h **CP11C-05** Numerical modelling services in support of aquaculture management: **T Dabrowski**, K Lyons, J McGovern Dr, H Nagy, C Cusack
- 0915h **CP11C-06** Adaptive Real-time Forecasting and Monitoring of Water Quality in a Crucial Link to Regional Water Supply: **N Hutley**, M Dunbabin, N Deering, B Gibbes, S Albert, A R Grinham
- 0930h **CP11C-07** Real-time Forecasts of Acidification and Hypoxia in the Chesapeake Bay: Model Setup and Online Visualization: **A J Bever**, M A M Friedrichs, F Da, P St-Laurent, K Hudson, A Morandi

CHEMICAL TRACERS, ORGANIC MATTER AND TRACE ELEMENTS

CT11A 5B, UL
Monday 0800h
Production and cycling of organosulfur and volatile organic carbon compounds: where is the field now and how do we move forward? I (joint with AI, NC, OB)

Moderators: Naomi Levine, University of Southern California; **David Kieber**, State University of New York, College of Environmental Science and Forestry

-
- 0800h **CT11A-01** The quantitative roles of DMSP and DMS in sulfur and carbon cycling in the ocean and the atmosphere: the grand numbers: **R Simo**, M Gali, C Romera-Castillo, M Dall'Osto
- 0815h **CT11A-02** Glass or Teflon: Saga of the Marine Organosulfur Cycle Through Experiments and Measurements: **D J Kieber**, R P Kiene
- 0830h **CT11A-03** Evidence for two independent ecological roles of dimethylsulfoniopropionate (DMSP): **E L McParland**, N M Levine
- 0845h **CT11A-04** Single-Cell Measurements of Marine Bacterial Transcription Reveal the Importance of Dimethylsulfoniopropionate (DMSP) Hotspots in Ocean Sulfur Cycling: **C Gao**, V Fernandez, K S Lee, S Fenizia, G Pohnert, J Seymour, J B Raina, R Stocker
- 0900h **CT11A-05** Continental-scale Temporal Monitoring of Marine Dimethylsulphoniopropionate Degraders: **J O'Brien**, N Siboni, M Ostrowski, T Kahlke, K Petrou, J Seymour
- 0915h **CT11A-06** DMS/P/O dynamics in the Subarctic Pacific: Insights from autonomous sensors and isotope tracer studies: **P Tortell**, A E Herr, Z Zheng, R McCulloch, J W H Dacey, R P Kiene
- 0930h **CT11A-07** A database for carbonyl sulfide (COS) and carbon disulfide (CS₂) measurements in seawater and the marine boundary layer: **C A Marandino**, S Lennartz, M von Hobe
- 0945h **CT11A-08** DMSP-Controlled Diversity and Function of Antarctic Marine Microbial Communities: **P Matrai**, P D Countway

 EDUCATION, OUTREACH AND POLICY

ED11A 11B, UL

Monday 0800h

Adventures, Challenges, and Benefits of Conducting International Collaborative Research I
Moderators: Michael Pace, University of Virginia; Linda Duguay, Organization Not Listed

- 0800h **ED11A-01** *Smelly Mud and Sight-Seeing: Science and Adventuring in Israel Through LOREX*: **A B Cohen**
- 0815h **ED11A-02** Adventures in International Collaboration in Australia Through the LOREX Program: **T McKenzie**
- 0825h **ED11A-03** Building a Global Scientific Community through Meaningful Exchange and Communication: **H Glover**, A S Ogston, C Nittrouer, I M Miller, D Stokes
- 0835h **ED11A-04** How to make garlic soup, and other suggestions for successful international collaboration: **W Wolfe**
- 0845h **ED11A-05** International Research Collaboration Beyond Email and Skype: The Benefits of an In-Person Experience through LOREX: **J R Nielson**
- 0855h **ED11A-06** Living the LOREX through Dalhousie: Lessons Learned, Friendships Made, and Career Development Accomplished: **E Knotts**
- 0905h **ED11A-07** Measuring Copepod Growth Rates in Northern Sweden: Challenges and Rewards of International Collaboration: **S Owens**
- 0915h **ED11A-08** Planning an Experiment for International Collaboration: How I Learned to Be Flexible and Pace Myself: **H Beck**
- 0925h **ED11A-09** Take a Hike: Utilizing Excursions to Create a Positive Work-Life Balance: **M Woodstock**
- 0935h **ED11A-10** “There is No Such Thing as a Failed Experiment” and Other Lessons International Research Taught Me: **E Chua**
- 0945h **ED11A-11** Marine Science Capacity Building in the Marshall Islands: Marshall Islands Nearshore Training (MINT): **S L Colbert**, M Romain, M Cochran, K McDermid, D Melville, M Sudnovsky

ED11B Poster Hall C-D; eLightning Theater

Monday 0800h

Imagining Ocean Science: Education and Outreach Using Visualization, Storytelling, and the Arts I eLightning (joint with SI)
Moderators: Laura Guertin, Pennsylvania State University Brandywine; Kathie Kelly, University of Washington

- ED11B-01** *eLIGHTNING* River Herring Telemetry Tracking and Data Visualization for Research, Management, Education, and Outreach: **R Vincent**, W B Bray, J Sheppard
- ED11B-02** *eLIGHTNING* Mapping Deep Blue Habitat in a Changing Climate: **P L Yager**, J Spivey, J Ebert, J Wenclawiak, C A Deutsch
- ED11B-03** *eLIGHTNING* Interactive website to visualize and study mesoscale eddies: **J J Early**, B J Curtis, P Gaube, J M Lilly
- ED11B-04** *eLIGHTNING* NOAA NCEI: Ocean Data at Your Fingertips: **J Fulford**, G R Hammer, H McCullough, A Allegra, K Palubicki, A Sallis, A R Andersen
- ED11B-05** *eLIGHTNING* Recording, Streaming and Displaying Live Digital Holograms of Ocean Life: **A Hornstein**
- ED11B-06** *eLIGHTNING* Oceanography, Artistry, and Service Learning: Techniques to enhance student engagement in introductory courses: **J L Beauregard**
- ED11B-07** *eLIGHTNING* SCIENCE EDUCATION USING A CLIMATE-FICTION THRILLER: **K A Kelly**, L Thompson
- ED11B-08** *eLIGHTNING* Student-Produced Coastal Optimism Rally Speeches: Going Beyond the Doom and Gloom for Stories of Resilience and Hope: **L A Guertin**, J Berkey, A Jansen
- ED11B-09** *eLIGHTNING* LabOratory Podcast: Documenting Personal Narratives of Scientific Significance: **R Francolini**, S Sewell
- ED11B-10** *eLIGHTNING* Telling ocean science stories on social media: **T Martin**, M S Glessmer, E Darelus, Y S Appelhans
- ED11B-11** *eLIGHTNING* Cool Science: Art as a Vehicle for Intergenerational Learning: **R F Chen**, J Lohmeier, L Hetland, S Schrock
- ED11B-12** *eLIGHTNING* Sculpture and Coral Reefs: Combining Art, Research, Tourism and Education: **D L Marrin**, C Flanigan

HIGH LATITUDE ENVIRONMENTS

HE11A 1B, UL**Monday 0800h****Arctic-North Atlantic Connectivity: Variability, Changes, and Impacts of Freshwater and Heat Exchange I** (*joint with IS, OM, PC*)**Moderators:** **Dmitry Dukhovskoy**, Florida State University; **Laura de Steur**, Royal Netherlands Institute for Sea Research0800h **HE11A-01** A Conceptual Model of Polar Overturning Circulation: **T W N Haine**0815h **HE11A-02** Arctic Ocean Circulation and Nordic Seas Hydrography: Oceanic and Atmospheric Connections: **J S Kenigson**, M L Timmermans0830h **HE11A-03** How Atlantic heat makes Arctic sea ice retreat: **T Eldevik**, I H Onarheim, L H Smedsrud, M Steele, P A Dodd, M Muilwijk, M Årthun0845h **HE11A-04** Impact of the Beaufort Gyre freshwater release on deepwater formation in the North Atlantic: **J Zhang**, W Weijer, W Cheng, M Steele, T Verma0900h **HE11A-05** Influence of the Norwegian Sea Gyre on the heat transports to the Arctic: **H Hátún**, L Chafik, B Hansen0915h **HE11A-06** Role of 'Sea Ice Conveyor' in Arctic Liquid Freshwater Changes: **S Cornish**, H Johnson, Y Kostov0930h **HE11A-07** Springtime Export of Arctic Sea Ice Shapes the Phytoplankton Production in the Greenland Sea: **N Mayot**, P Matrai, A Arjona, S Belanger, C Marchese, T Jaegler, M Ardyna, M Steele0945h **HE11A-08** Time series of freshwater, heat, and volume fluxes through Barrow Strait in the Canadian Arctic Archipelago: **C Richards**, S H Nudds, D Gong0800h **ME11A-01** Linking phytoplankton diversity in the North Atlantic to the annual cycle of ecological disturbance and recovery: **L Karp-Boss**, L M Bolanos, S J Giovannoni, J Graff, C Carbonell-Moore, N Haentjens, A Chase, E Boss, M Behrenfeld0815h **ME11A-02** The Collapse of *Prochlorococcus* Populations in the Transition Between the Subtropical and Subpolar Gyres: **S Dutkiewicz**, C L Follett0830h **ME11A-03** Rapid Adaption of the Microbial Community to Abrupt Environmental Change in the Gulf of Mexico Modeled with the Genome-based EmergeNt Ocean Microbial Ecosystem Model: **J Wang**, V Coles, M R Stukel, O Mason0845h **ME11A-04** Improving the predictability of plankton population dynamics using the portfolio effect: **V Agarwal**, C C James, C E Widdicombe, A D Barton0900h **ME11A-05** Plankton interactions and community compositions in the North Pacific Ocean: **M Dugenne**, A E White, L W Juraneck, N Hawco0915h **ME11A-06** A Modeling Approach to Determine How Prey Size Choice Reveals an Emergent Keystone Predator Effect in Planktonic Communities: **D Taniguchi**, M J Follows, S Menden-Deuer0930h **ME11A-07** Molecular Diversity Among Holopelagic *Sargassum* Morphotypes in the North Atlantic: **S Dibner**, D Goodwin, J M Schell, K Whittaker, A N Siuda0945h **ME11A-08** 25-Year Record of *In Situ* Pelagic *Sargassum* Observations in the Western North Atlantic and Caribbean Reveals a Shift in Distribution and Range Expansion of Three Common Morphotypes: **D Goodwin**, A N Siuda, J M Schell

MICROBIOLOGY AND MOLECULAR ECOLOGY

MM11A 2, UL**Monday 0800h****Marine Microbes in the Omics Epoch: Unveiling Their Critical Roles in the Pelagic and Benthic Environments I****Moderators:** **Linda Kelly**, San Diego State University; **Marilou Sison-Mangus**, University of California Santa Cruz; **Craig Nelson**, University of Hawaii at Manoa0800h **MM11A-01** Omics Informed Ecology of *Prochlorococcus* in the Eastern Tropical North Pacific Oxygen Deficient Zone: **G Rocap**, N A Kellogg, M Carlson, C A Fuchsman

MARINE ECOLOGY AND BIODIVERSITY

ME11A 7A, UL**Monday 0800h****Impacts of Ecological Interactions on Marine Ecosystem Dynamics and Biodiversity: New Insights from Theory, Models, and Field Measurements I** (*joint with OB, OM, PI*)**Moderators:** **Steven Litvin**, Monterey Bay Aquarium Research Institute; **Bingzhang Chen**, University of Strathclyde

- 0815h **MM11A-02** Sulfur and nitrogen metabolisms in the aphotic kleptoplastidic foraminifer *Nonionella stella*: results from metatranscriptomics: **F Gomma**, D R Utter, Y Zhang, J M Bernhard
- 0830h **MM11A-03** Woesearchaeal metagenome-assembled genome informs its role in blue hole water column and sediments: **N Patin**, Z Dietrich, E R Hall, J S Beckler, F J Stewart
- 0845h **MM11A-04** Genomes from Terabase-scale Metagenomic Projects Used to Explore Metabolic Potential of Uncultivated and Novel Microorganisms: **B J Tully**, C Neely, E D Graham
- 0900h **MM11A-05** Cyanophage abundance and infection of picocyanobacteria are defined by environmental gradients in the North Pacific Ocean: **M Carlson**, F Ribalet, Y Hulata, B P Durham, N Baran, S Beckett, N Shamir, S Ferrón, O Sosa, B B Cael, S Goldin, A E White, D M Karl, J S Weitz, E V Armbrust, D Lindell
- 0915h **MM11A-06** Characterization of Dissolved DNA in the North Pacific Subtropical Gyre: **M Linney**, A E Romano, E DeLong, D M Karl
- MM14A-0269 POSTER** Characterization of the first cultivated strain of the SAR86 clade, isolated from the tropical Pacific Ocean: **K C Freel**, O Ramfelt, S J Tucker, M S Rappe
- MM14A-0270 POSTER** Cyanophage Dynamics at the San Pedro Ocean Time Series: Generalists, Specialists, and One-shot-wonders: **E Dart**, J C Ignacio Espinoza, J A Fuhrman, N Ahlgren
- MM14A-0271 POSTER** Temperate infection in a canonically virulent virus-host system: **B Knowles**, J A Bonachela, M Behrenfeld, K Bondoc, B B Cael, C A Carlson, N Cieslik, B Diaz, H L Fuchs, J Graff, J Grasis, K Halsey, L Haramaty, C Johns, F Natale, J I Nissimov, B Schieler, K Thamtrakoln, T F Thingstad, S Våge, C E Watkins, T K Westberry, K D Bidle
- MM14A-0272 POSTER** Towards an understanding of ecosystem effects of viruses in the Eastern Tropical North Pacific Oxygen Minimum Zone: **S Jurgensen**, S Roux, S M Schwenck, F J Stewart, M B Sullivan, J Brum
- MM14A-0273 POSTER** Genome-resolved metagenomics reveals lineage-specific metabolic strategies within marine nitrifier subpopulations: **L Reji**, B B Tolar, J M Smith, F Chavez, C Francis
- MM14A-0274 POSTER** Ecological and Metabolic Strategies of Nitrifying Lineages Across Freshwater Inland Seas: **J Podowski**, S Paver, R J Newton, M Coleman

OCEAN BIOLOGY AND BIOGEOCHEMISTRY

OB11A 4, UL**Monday 0800h**

Energy Metabolism and Calcification in Marine Organisms: Mechanisms and Responses to Environmental Stress I (joint with ME, OC)

Moderators: **Martin Tresguerres**, Scripps Institution of Oceanography; **Frank Melzner**, GEOMAR Helmholtz Centre for Ocean Research Kiel

- 0800h **OB11A-01** Mineral formation in the primary polyps of pocilloporoid corals: **T Mass**
- 0815h **OB11A-02** Thermal stress reduces *Pocilloporid* coral resilience to ocean acidification by impairing control over calcifying fluid chemistry: A combined boron geochemistry and pH microelectrode study: **R Eagle**, M Guillemic, L Cameron, I A DeCorte, S Misra, J Bijma, D de Beer, C Reymond, H Westphal, J B Ries
- 0830h **OB11A-03** Acquisition and allocation of carbon via autotrophic and heterotrophic pathways: Implications for sexual reproduction in corals after bleaching: **L J Rodrigues**, J L Padilla-Gamino
- 0845h **OB11A-04** Fitness and energetic consequences of introducing reef-building corals to reefs with distinct seawater pH regimes: **K Barott**, A Huffmyer, J Davidson, S Matsuda, E Lenz, J Hancock, T Innis, H Putnam, R Gates
- 0900h **OB11A-05** Calcification in the Coralline Algae: A Synthesis and Conceptual Model: **S J Mccoy**, C M Pueschel, S A Kranz, C E Cornwall, S Comeau, N Spindel, M A Borowitzka
- 0915h **OB11A-06** From Cellular Omics to Phenomics: The Role of Sirtuins in the Cellular Stress Response: **L Tomanek**
- 0930h **OB11A-07** Shifts in Allocation of Metabolic Energy Highlight Biochemical Bases of Resilience to Environmental Change: **F Pan**, S Applebaum, D T Manahan
- 0945h **OB11A-08** Oxygen Supply and Demand at the Incipient Lethal Oxygen Level.: **B Seibel**

OB11B 3, UL**Monday 0800h****Quantifying Carbon Export Pathways in the Global Ocean I (joint with CT, OM, PI)**

Moderators: David Siegel, University of California Santa Barbara; Ivona Cetinic, NASA Goddard Institute for Space Studies

- 0800h **OB11B-01** Controls Over Sinking Particle Remineralisation Depth - Initial Results From the COMICS Programme: **R Sanders**, A Martin, S Henson, S L C Giering, T Anderson, R S Lampitt, T C Consortium
- 0815h **OB11B-02** Polonium-210 and Lead-210 as tracers of particle export and attenuation on the first EXPORTS cruise at Station PAPA: **M Roca Martí**, M L Estapa, P Masque, C R Benitez-Nelson, K Buesseler
- 0830h **OB11B-03** Estimates of Global Carbon Flux Using In-Situ Optical Observations of Particulate Organic Carbon and Supervised Learning: **D Clements**, S Yang, D Bianchi
- 0845h **OB11B-04** Transient enhancement and decoupling of carbon export vs opal in cyclonic eddies: overprints of submesoscale interactions and eddy evolution: **M Dai**, K Zhou, H Lin, Z Sun, L Wang, W Chen, J Hu, B Huang, Y Zhang, Z Liu
- 0900h **OB11B-05** MICROBIAL COMMUNITY COMPOSITION ON SINKING PARTICLES AS A FUNCTION OF DEPTH AND PARTICLE TYPE IN THE NORTH PACIFIC: **A Santoro**, J Albers, C A Durkin, M Bressac, M L Estapa, K Buesseler, M Omand, U Passow, P W Boyd
- 0915h **OB11B-06** Role of free-living (or attached to non-sinking suspended particles) versus attached to fast sinking particles heterotrophic prokaryotes in the biological carbon pump at the PAP site (NE Atlantic Ocean): **C Tamburini**, C Baumas, M Garel, F Armougom, A Barani, S Guasco, A Belcher, N Bhairy, C Panagiotopoulos, V Riou, C Santinelli, R S Lampitt, F A C Le Moigne
- 0930h **OB11B-07** Bacterial Respiration as a Major Term in the Mesopelagic Carbon Budget: **R Rayne**, M Hartmann, C A Baker, S L C Giering, R Sanders, C Evans
- 0945h **OB11B-08** Upper Mesopelagic Bacterial Remineralization, an In Situ Perspective Across Diverse Ocean Provinces: **P W Boyd**, M Bressac, A Santoro, E C Laurenceau-Cornec

OCEAN MODELING**OM11A 5A, UL****Monday 0800h****Advances in Coupled Physical-Biogeochemical Modeling: Continental Shelves, Estuaries, and the Coastal Ocean I (joint with CP, OB)**

Moderators: Laura Bianucci, Institute Of Ocean Sciences; Arnaud Laurent, Dalhousie University

- 0800h **OM11A-01** Development of Long Range Hypoxia Forecasts for the Northern Gulf of Mexico: **D Justic**, L Wang, Z G Xue, Z Zang, D S Ko, N N Rabalais, K Maiti
- 0815h **OM11A-02** Climate downscaling projections of estuarine acidification and hypoxia in Chesapeake Bay in the 21st century: **M Li**, Y Guo, W J Cai, J M Testa, C Shen, W Ni, G G Waldbusser
- 0830h **OM11A-03** Ecological (biogeochemical) Predictions for the Inner Salish Sea given Warming Temperatures and Increasing Nutrient and Carbon Levels in Upwelled Ocean Waters: **T Khangaonkar**, A Nugraha, L Premathilake
- 0845h **OM11A-04** Projected Ocean Acidification and Deoxygenation Along the Canadian Northeast Pacific Continental Shelf: **A Holdsworth**, J R Christian, Y Lu
- 0900h **OM11A-05** Short water residence times on the global continental shelves support an efficient cross-shelf transfer of organic matter: Was the pre-industrial coastal ocean already a global CO₂ sink?: **F Lacroix**, T Ilyina, P A G Regnier, G G Laruelle
- 0915h **OM11A-06** Modelling the role of river organic matter loads on hypoxia development off the Pearl River Estuary: **L Yu**, J Gan, M Dai, C W Hui, Z Liu, Z Lu, D LI
- 0930h **OM11A-07** Numerical modeling of the impact of sediment driven processes on bottom water chemistry over the Louisiana continental shelf: **L Cui**, C K Harris, E Aitoro, W J Cai, K Maiti
- 0945h **OM11A-08** Development of a Coupled Ecosystem Model for the Coastal Ocean Environment: **J G Choi**, T C Lippmann

PAST, PRESENT AND FUTURE CLIMATE

PC11A 1A, UL

Monday 0800h

Climate Impacts on Marine Species I (*joint with HE, ME*)

Moderators: Erin Meyer-Gutbrod, University of California Santa Barbara; Kristin Laidre, Applied Physics Laboratory University of Washington

- 0800h **PC11A-01** Marine ecological abrupt shifts in a warming world: from monitoring to predictions: **A Conversi**, G Beaugrand
- 0815h **PC11A-02** Seabirds Signal a Changing Pacific Arctic: **K Kuletz**, D Cushing, F J Mueter, E Labunski, A E Gall
- 0830h **PC11A-03** Timing is Everything: Drivers of Interannual Variability in Blue Whale Migration: **A R Szesciorka**, L T Ballance, A Rice, J Hildebrand, A Sirovic, M D Ohman, P J S Franks
- 0845h **PC11A-04** Climate-induced changes to North Atlantic right whale habitat use and demography: **E Meyer-Gutbrod**, K T A Davies, C H Greene
- 0900h **PC11A-05** Effects of sea-level rise and storm enhanced flooding on Pacific harbor seal habitat: a comparison of haul-out changes at the Russian and Eel River Estuaries in California, USA: **E Hines**, K Backe, K J Nielsen, D A George
- 0915h **PC11A-06** Equatorward shifts of Marine Fishes under Climate Change: A Rule Rather than Exception?: **T Langbehn**, G Ljungström, C Jørgensen
- 0930h **PC11A-07** Implications of climate change to the Harmful Algal Blooms of the toxic dinoflagellate *Alexandrium catenella* in the Gulf of Maine.: **A F Bucci**, A Thomas, I Cetinic, D W Townsend
- 0945h **PC11A-08** Changes in Plankton Community Structure and Trophic Dynamics on Seasonal to Interannual Timescales Throughout the Arctic Ocean: **G Negrete Garcia**, J Y Luo, M C Long, C A Stock, M Manizza, A D Barton

PHYSICAL-BIOLOGICAL INTERACTIONS

PI11A 7B, UL

Monday 0800h

Biological Coupling to Physical Forcing on Shallow-Water Ecosystems: Using Observations to Reveal Patterns and Test Mechanisms I (*joint with CP, ME, PS*)

Moderators: Jesús Pineda, Woods Hole Oceanographic Institution; Nathalie Reynolds, University of San Diego

- 0800h **PI11A-01** Changing phenology and larval transport drive benthic species' wrong-way migrations: **H L Fuchs**, R J Chant, E J Hunter, E Curchitser, G P Gerbi, E Chen
- 0812h **PI11A-02** Diel vertical distribution of barnacle larvae in the nearshore waters of La Jolla, CA.: **G Yamhure**, N Reynolds, J Pineda
- 0824h **PI11A-03** Larval accumulation and transport in the nearshore support the fundamental role of thermal stratification: **N Reynolds**, J Pineda, S J Lentz
- 0836h **PI11A-04** Quantifying the relative importance of various physical mechanisms for plankton and nutrient transport between the shore and the shelf waters: **N Kumar**, J M Pringle, M Moulton, S Suanda, M R Fewings
- 0848h **PI11A-05** Spatial Patterns in Nearshore Juvenile Fish Abundance throughout the California Network of Marine Protected Areas as Revealed by Seabird Diet: **D P Robinette**, N Nur, J Jahncke
- 0900h **PI11A-06** Biophysical interactions between fish larvae and surface slicks enhance a tropical island ecosystem: **J Whitney**, J Gove, K Smith, J Lecky, G Asner, D R Kobayashi, M A McManus
- 0912h **PI11A-07** *Wind-driven circulation and upwelling may enhance particle and nutrient transport by internal waves* : **C D Dibble**, J L Largier, S Morgan, G Fernandez Aldecoa, L B Ladah, A E Filonov
- 0924h **PI11A-08** Three-Way Interaction Between Larval Swimming Behavior, Internal Waves, and the Mean Flow Enhances Cross-Shore Transport: **J C Garwood**, A J Lucas, P Naughton, M H Alford, P L Roberts, J S Jaffe, L deGelleke, P J S Franks
- 0936h **PI11A-09** Response of small sharks to non-linear internal waves: **J Pineda**, S Rouse, V Starczak, K R Helfrich, D Wiley
- 0948h **PI11A-10** Non linear interactions between waves and tides on a coral reef atoll: **C Grimaldi**, R Lowe, J Benthuyssen, R Green

 PHYSICAL OCEANOGRAPHY:
 MESOSCALE AND LARGER

PL11A 15A, Mezzanine**Monday 0800h****Ocean Transport and Eddy Energy I** (*joint with OM, PS*)**Moderators: Laure Zanna**, New York University;
Alistair Adcroft, Princeton University

-
- 0800h **PL11A-01** Extraction of coherent eddy properties from individual particle trajectories, with application to the Gulf of Mexico: **J M Lilly**, P Perez-Brunius, J Sheinbaum, J Zavala-Hidalgo, J Jouanno, J M Azevedo Correia de Souza, S N Estrada-Allis, J J Early
- 0815h **PL11A-02** Diagnosing eddy heat transport variability in the North Atlantic from satellite and in-situ observations: **V Müller**, O Melnichenko
- 0830h **PL11A-03** Observations of Eddy Vertical Structure Variability in the North Atlantic and Energy Partitioning Across Vertical Modes: **J Steinberg**, C Eriksen
- 0845h **PL11A-04** Effects of Horizontal Resolution in Numerical Models on Evolution of Denmark Strait Overflow and Energy Transfers: **D Aydin**, M J Losch, T Kanzow
- 0900h **PL11A-05** Submesoscale Dynamics Strengthen Mesoscale Agulhas Eddies: **R Schubert**, F U Schwarzkopf, B Baschek, J Gula, A Biastoch
- 0915h **PL11A-06** Mesoscale Eddies in the Tropical Atlantic Ocean: **H M A Aguedjou**, A Chaigneau, I Dadou, Y Morel, G Alory, E Baloitcha
- 0930h **PL11A-07** Evidence of Loop Current Frontal Eddy Intensification Through Linear and Nonlinear Interactions with the Loop Current: **L Hiron**, B Jaimes de la Cruz, L K Shay
- 0945h **PL11A-08** Warm-Core Rings Heat Content and Transfers in the Gulf of Mexico: **T Meunier**, E Pallas Sanz, A Ruiz Angulo, M C Tenreiro, J Ochoa, J Sheinbaum, S Cusí, X J Carton, C de Marez, C E Buckingham

 PHYSICAL OCEANOGRAPHY:
 MESOSCALE AND SMALLER

PS11A 15B, Mezzanine**Monday 0800h****Turbulent Mixing of the Ocean Surface Boundary Layer: Observation, Simulation, and Parameterization I** (*joint with AI, OB, OM*)**Moderators: Brandon Reichl**, University of Rhode Island; **Gregory Wagner**, MIT

-
- 0800h **PS11A-01** Detailed Observations of Centimetre-Scale Structures and Entrainment in the Transition Layer: **A Kaminski**, E A D'Asaro, A Y Shcherbina, R R Harcourt
- 0815h **PS11A-02** Turbulence measurements from the SPURS-2 mooring: **S Zippel**, J T Farrar, C A Clayson
- 0830h **PS11A-03** Scaling turbulence in the ocean boundary layer of the Southeast Pacific Ocean stratus region: **U Miller**, C J Zappa, J T Farrar, D A Le Bel, R A Weller
- 0845h **PS11A-04** Fast ice controls on turbulent mixing rates on the West Antarctic Peninsula shelf: **J A Brearley**, M Inall
- 0900h **PS11A-05** Parametrisation of the Ocean Surface Boundary Layer: The OSMOSIS scheme: **S Belcher**, A L Grant, A J G Nurser, N S Lucas, T P Rippeth, B Pearson, J Polton, M D Palmer, G M Damerell, K J Heywood, C E Buckingham, A Naveira Garabato
- 0915h **PS11A-06** The OSMOSIS Parametrisation of the Ocean Surface Boundary Layer (OSBL) in Global Runs of the NEMO Ocean Circulation Model: **A J G Nurser**, A L Grant, S E Belcher, M Bell, A T Blaker, A Megann, C Guivarch
- 0930h **PS11A-07** Eddy-Diffusivity Mass-Flux Parameterization: A new Approach to unify Diffusion and Convection in Ocean Models: **H Giordani**, R Bourdalle-Badie, G Madec
- 0945h **PS11A-08** Quantifying the Uncertainty of Upper Ocean Turbulence Parameterizations: **A Souza**, G L Wagner, R M Ferrari

SOCIAL-OCEAN SCIENCE INTERACTIONS AND SDGS

SI11A 11A, UL

Monday 0800h

What's My Hazard? Meaningful and Actionable Coastal Science for Property Owners, Planners, and Practitioners I (*joint with CP, ED*)

Moderators: **Erika Lentz**, U.S. Geological Survey; **Hilary Stockdon**, U.S Geological Survey; **Greg Dusek**, NOAA National Ocean Service

-
- 0800h **SI11A-01** National, operational forecasts of shoreline total water levels: A coordinated Federal response to users' questions about coastal change and inundation hazards: **H F Stockdon**, J W Long, K S Doran, A J Van der Westhuysen, R Snell
- 0815h **SI11A-02** Co-Creating Adaptive Solutions to Gradual-Onset Coastal Hazards in New Zealand: **E Ryan**, M E Dickson, P S Kench, S Owen
- 0830h **SI11A-03** Lessons from the field – translating sea-level rise science into coastal decision making in the northern Gulf of Mexico: **R Collini**, M Hanisko, J Harper, D Kidwell, M J Osland, T Sempier, J Tirpak
- 0845h **SI11A-04** User needs in hazard mitigation planning: Examples from coastal South Carolina: **N Elko**
- 0900h **SI11A-05** Hurricane Dorian: Collaborative Science to Inform National Park Service Decision-Making at Cape Lookout and Cape Hatteras National Seashores: **R L Beavers**
- 0915h **SI11A-06** Preparing for coastal flooding: A warning system for Imperial Beach, CA: **M A Merrifield**, L Engeman, M Johnson, S Dedina, C Helmer, J Behrens, E Terrill, A Young, J W Fiedler, B C Ludka, C Henderson, M Okihiro, W C O'Reilly, R T Guza
- 0930h **SI11A-07** The NASA Sea Level Change Team and Challenges of Generating Useful Sea Level Information: **B Hamlington**
- 0945h **SI11A-08** Why Location Matters: How Smarter Decision-Making by Renters and Homebuyers Will Increase Coastal Resilience: **T Wahl**, C T Emrich, J Baggio, S L Cutter, S Alvarez, M Gall, C Freidland, K Lewis, K Klima, W O'Dell, B Preston, M Miro, C Polsky, M Daigle, J Wilkins, T L Sheldon, N Pace, M Farris, S H Stephens, N Mendoza

AIR-SEA INTERACTIONS

AI12A 14B, Mezzanine

Monday 1030h

Extratropical Air-Sea Interactions and Extreme Events II (*joint with PL*)

Moderators: **Thomas Spengler**, University of Bergen and Bjerknnes Centre for Climate Research; **Arnaud Czaja**, Imperial College London; **Shoshiro Minobe**, Hokkaido University; **LuAnne Thompson**, University of Washington Seattle

-
- 1030h **AI12A-01** Asymmetry and Seasonality of the Atmospheric Circulation Response to a Meridional Shift of the Oyashio Extension Sea Surface Temperature Front: **Y O Kwon**, C Frankignoul, M Newman, M A Alexander
- 1045h **AI12A-02** Mechanisms of reemergence in the central North Pacific revealed by a mixed layer heat budget analysis: **K Murata**, S Kido, T Tozuka
- 1100h **AI12A-03** Uncertainty and resolution dependence of the atmospheric response to decadal variability of the Kuroshio Extension: **H Nakamura**, B Taguchi, K Nishii
- 1115h **AI12A-04** Influence of the Kuroshio Interannual Variability on the Summertime Precipitation over the East China Sea and Adjacent Area: **Y O Kwon**, B Gan, T M Joyce, K Chen, L Wu
- 1130h **AI12A-05** An AGCM assessment of oceanic impacts on a heat wave over Japan in July 2018: **H Nakamura**, K Nishii, B Taguchi
- 1145h **AI12A-06** The Role of Extratropical Air-Sea Interaction in the Autumn Subseasonal Variability of NAO: **H L Ren**
- 1200h **AI12A-07** Key role of western boundary currents in wintertime Euro-Atlantic blocking: **A Yamamoto**, M Nonaka, A Yamazaki, P Martineau, Y O Kwon, H Nakamura, B Taguchi
- 1215h **AI12A-08** Provinces of air-sea interaction in the North Atlantic Ocean: **L Thompson**, P D Lavin, C Proistosescu

AI12B 14A, Mezzanine

Monday 1030h

Toward an Improved Understanding of Indian Ocean Dynamics and Its Role in the Monsoon II (*joint with PC, PL*)

Moderators: **Anesh Subramanian**, University of Colorado Boulder; **Harindra Fernando**, University of Norte Dame

- 1030h **AI12B-01** Upper Ocean Temperature and Salinity Variability and Compensation in the Arabian Sea: **J E Anderson**, S R Jayne, A Y Shcherbina, C Lee, L Rainville
- 1045h **AI12B-02** Variability of mixed layer turbulence in the Bay of Bengal during a MISO event: an LES study: **H T Pham**, S Sarkar, L Johnson, Q Li, B Fox-Kemper, P P Sullivan
- 1100h **AI12B-03** Air-sea Interactions During Monsoon Season in the Bay of Bengal: **J Perez**, H J S Fernando, E Creegan, H W Wijesekera, G S Bhat, D Sengupta
- 1115h **AI12B-04** Atmospheric Cold Pools in the Bay of Bengal: A Fuzzy Logic Approach: **A Tandon**, J Buckley
- 1130h **AI12B-05** The Role of Salinity in Determining Southwest Monsoon Variability: **H L Roman-Stork**, S Bulusu
- 1145h **AI12B-06** Equatorial Indian Ocean Westward Jets: Intraseasonal Variability, and Impact on Salinity: **E S Nyadjro**, A Rydbeck, T G Jensen, J G Richman, J F Shriver
- 1200h **AI12B-07** Intraseasonal responses of sea surface and deep oceanic temperature anomalies in the northern Indian Ocean–western Pacific to the 30–60-day boreal summer atmospheric intraseasonal oscillation: **J MAO**, M Wang
- 1215h **AI12B-08** Rapid foundation SST Warming Captured by Alamo Floats during the Suppressed Phase of the MJO: **J Y Hsu**, M Feng, S Wjiffels

- 1115h **CP12A-04** Effects of Wave Breaking Formulations and Wave Nonlinearity on XBeach Performance for Onshore and Offshore Sediment Transport Event: **T Suzuki**, D T Cox
- 1130h **CP12A-05** A Large-Eddy Simulation Study on the Flow Structure of a Solitary Wave Breaking in the Inner-Surf and Swash Zones: **B Tsai**, Y Kim, T J Hsu
- 1145h **CP12A-06** Observations of Vertical Pressure Gradients on an Intertidal Beach Face: **D L Foster**, G Frohman, C Gudinas
- 1200h **CP12A-07** A Eulerian Two-Phase Modeling of Ripple Dynamics: **A Salimi Tarazouj**, Z Cheng, T J Hsu, P Traykovski, J Chauchat
- 1215h **CP12A-08** Bedform Erosion and Roughness: Decoupling Biological and Physical Processes: **C DuVal**, A C Trembanis, D Miller

CP12B 9, UL

Monday 1030h

The Dynamics of Buoyancy-Driven Flows in Estuaries, Continental Shelves, and Polar Seas II (joint with HE, PS)

Moderators: **Rebecca Jackson**, WHOI; **Sarah Giddings**, Scripps Institution of Oceanography

-
- 1030h **CP12B-01** Connectivity in Coos Bay, OR: do changes in physical dynamics lead to changes in eelgrass habitat?: **M J Marin Jarrin**, D Sutherland, B Dye
- 1045h **CP12B-02** Geometric and Atmospheric Controls on Warm Water Access to Glacial Fjords: **K Zhao**, A Stewart, J C McWilliams
- 1100h **CP12B-03** The Evolution of Water Column Hydrography Beneath Landfast Sea Ice Near Prudhoe Bay, Alaska During the Spring Freshet: **S R Okkonen**, S R Laney
- 1115h **CP12B-04** Topographic effect on the rate of heating of radiatively-forced ice-covered waterbodies: **H Ulloa**, K B Winters, A Wuest, D Bouffard
- 1130h **CP12B-05** Dispersion by tidal trapping is enhanced by stratification: **A M P Garcia**, W R Geyer
- 1145h **CP12B-06** Tidal, Fortnightly, Seasonal, and Interannual Variability of Hydrodynamics in an Intermittently Open Estuary: **M Harvey**, S N Giddings, G R Pawlak, J Crooks
- 1200h **CP12B-07** Impact of Evaporation on Estuarine Mixing Estimates: **M Lorenz**, K Klingbeil, H Burchard
- 1215h **CP12B-08** Estuarine Circulation of the Salish Sea: **P MacCready**, R M McCabe

COASTAL AND ESTUARINE PROCESSES

CP12A 8, UL

Monday 1030h

Nearshore Processes II

Moderators: **Sylvia Rodriguez-Abudo**, University of Puerto Rico Mayaguez; **Allison Penko**, US Naval Research Laboratory

-
- 1030h **CP12A-01** Asymmetric Wave Shape Parameterization Estimates From Fire Island Observations: **T S Kalra**, S E Suttles, C R Sherwood, J C Warner
- 1045h **CP12A-02** A simplified method to predict sandbar migration: The Duck, NC case: **V H Hewageegana**, A Canestrelli
- 1100h **CP12A-03** Wave-induced sediment transport in a coupled berm-dune system: a near prototype experiment.: **M Pontiki**, J A Puleo, R A Feagin, M E Wengrove, T J Hsu, D T Cox

 CHEMICAL TRACERS, ORGANIC MATTER AND TRACE ELEMENTS

CT12A 5B, UL

Monday 1030h

Revealing Biogeochemical Processes on Basin Scales through Ocean Transects I (*joint with NC, OB, OM*)

Moderators: **Rob Middag**, Royal Netherlands Institute for Sea Research; **Karen Casciotti**, Stanford University

- 1030h **CT12A-01** Large scale patterns and size distributions of marine particles across the African and Pacific Sectors of the Southern Ocean: **S O'Daly**, B K Irving, R M Lekanoff, J Pretty, A M P McDonnell
- 1045h **CT12A-02** Basin-scale variations of particulate organic matter stoichiometry in the global ocean: **Y Xiang**, P J Lam
- 1100h **CT12A-03** Controls of dissolved carbon fractions along a meridional transect through the South Pacific Ocean: **H Osterholz**, D P A Kilgour, J Niggemann, T Dittmar
- 1115h **CT12A-04** Decadal changes of anthropogenic and total carbon in the Atlantic Ocean: **R Steinfeldt**, M Rhein, D Kieke
- 1130h **CT12A-05** Constraining the oceanic hydrothermal iron flux using iron isotopes: **A J M Lough**, W Wang, R H James, M C Lohan, A Tagliabue
- 1145h **CT12A-06** Hydrothermal Fe flux analysis of Loihi Seamount using size partitioning and Fe isotopes: **N T Lanning**, M Sieber, J Steffen, B A Summers, G Weiss, C R German, P S John, W J Jenkins, R Schlitzer, M Hatta, A Tagliabue, T M Conway, J N Fitzsimmons
- 1200h **CT12A-07** Significant Biological Uptake of Trace Metals in the Mertz Glacier Polynya, East Antarctica: **D Janssen**, M Sieber, M J Ellwood, T M Conway, P M Barrett, C Hassler, S Jaccard
- 1215h **CT12A-08** To the North Pole and Back: A Pan-Arctic Barium Synthesis: **L M Whitmore**, T J Horner, R Rember, Y Xiang, P J Lam, F Dehairs, H Thomas, A M Shiller, C Mears

 EDUCATION, OUTREACH AND POLICY

ED12A Poster Hall C-D; eLightning Theater

Monday 1030h

Imagining Ocean Science: Education and Outreach Using Visualization, Storytelling, and the Arts II eLightning (*joint with SI*)

Moderators: **Laura Guertin**, Pennsylvania State University Brandywine; **Kathie Kelly**, University of Washington

- ED12A-01** *eLIGHTNING* *Kye and the Cephalopod*©: **N Meyers**
- ED12A-02** *eLIGHTNING* Aligning Innovative Science Communication with the NGSS: **J Magnusson**
- ED12A-03** *eLIGHTNING* Ganimals: The Underwater Sea Creatures of Our Computational Dreams: **O Boulais**, M Groh, Z Epstein
- ED12A-04** *eLIGHTNING* Using grand scale media to drive conservation: Protecting the Last Ocean: **C M Brooks**, J Weller
- ED12A-05** *eLIGHTNING* Innovations in Coastal Management Technology communicated through Water Pistols and Poetry: **J Burgess**, M Payo Payo, L Eastwood, D Jones, M J Yelland, R Pinnell, R W Pascal, C Cardwell, A Broderick, J M Brown
- ED12A-06** *eLIGHTNING* A Sea of Glass: A Quest for Ocean Biodiversity: **D Harvell**, D O Brown, G Tremblay, P Fried
- ED12A-07** *eLIGHTNING* ASKXXI Research Network: Reimagining Ecology and Art for the XXI Century: **G Tremblay**, F Oyarzun, B Gallardo, N Pohl
- ED12A-08** *eLIGHTNING* Painting the Deep: expanding the reach of ocean sciences through art: **L Simonson**
- ED12A-09** *eLIGHTNING* "The Blob" in 3D: portable immersive 3D visualization of the warm anomaly: **A J Hermann**
- ED12A-10** *eLIGHTNING* Plankton like you've never seen it: using Augmented Reality to show what can't be seen: **M A Galeron**
- ED12A-11** *eLIGHTNING* The Effectiveness of Visual Storytelling in Science Communication: **A Curington**
- ED12A-12** *eLIGHTNING* Lessons from the Victorian Rehabilitation of Disgusting Microorganisms: **J R Dolan**

HIGH LATITUDE ENVIRONMENTS

HE12A 1B, UL

Monday 1030h

Arctic-North Atlantic Connectivity: Variability, Changes, and Impacts of Freshwater and Heat Exchange II (*joint with IS, OM, PC*)**Moderators:** **Igor Yashayaev**, Bedford Institute of Oceanography; **Kristina Brown**, Institute of Ocean Sciences

- 1030h **HE12A-01** Arctic Ocean Response to Greenland Sea Wind Anomalies in a Suite of Model Simulations: **M Muilwijk**, M Ilicak, S Cornish, S Danilov, R Gelderloos, R Gerdes, V Haid, T W N Haine, H Johnson, Y Kostov, T Kovács Sr, C Lique, J Marson, P G Myers, J R Scott, L H Smedsrud, C Talandier, Q Wang
- 1045h **HE12A-02** Nordic and Barents Seas Cooling – Where Does the Heat Go?: **L H Smedsrud**, O Skagseth, A Brakstad, T Eldevik, M Muilwijk, M Årthun
- 1100h **HE12A-03** History of Labrador Sea Water Production Revisited: **I Yashayaev**, D Kieke
- 1115h **HE12A-04** Deconstructing the seasonality of the West Greenland boundary current system: **A Pacini**, R S Pickart, F Bahr, A Ramsey, D J Torres, J Karstensen, M Oltmanns, J Holte, F de Jong, I A A Le Bras, F Straneo, K Moore
- 1130h **HE12A-05** Investigating freshwater pathways from the East Greenland Current to deep convection regions: Drifters deployment in the shelfbreak East Greenland Current.: **E Duyck**, F de Jong
- 1145h **HE12A-06** Sources and sinks of N₂O in the subpolar and polar North Atlantic: **D L Arévalo-Martínez**, C R Löscher, D Bastian, I Brown, V A Kitidis, A Rees, J Schaffer, S Torres-Valdes, H Bange
- 1200h **HE12A-07** The cooling of the Atlantic inflow toward the Arctic in a global warming perspective – from hourly current and temperature records 1995-2019: **K A Orvik**
- 1215h **HE12A-08** Tracking Atlantic Water heat content anomalies from the sub-polar Atlantic to the Arctic: **Y D Lenn**, C Lique, N P Holliday, B I Barton

OCEAN OBSERVATORIES,
INSTRUMENTATION AND SENSING
TECHNOLOGIES

IS12A 11A, UL

Monday 1030h

From Catchments to Open Ocean: Advances in Remote Sensing for Supporting Sustainable Oceans I (*joint with CP, OB, PI*)**Moderators:** **Frode Vikebø**, Institute of Marine Research; **Kevin Turpie**, University of Maryland Baltimore County

- 1030h **IS12A-01** Evaluation of Sea State Products from the Sentinel-3A and Sentinel-3B Tandem Phase: **C Banks**, C Gommenginger, F M Calafat, N Dayoub, H M Snaith, W Wimmer, M Hammond, B Timmermans
- 1045h **IS12A-02** The great Atlantic *Sargassum* belt: **C Hu**, M Wang, B B Barnes, G T Mitchum, B Lapointe, J P Montoya
- 1100h **IS12A-03** Overcoming Dimensionality Barriers in Satellite Data to Elucidate Spectral-Spatial-Temporal Trends in the Ocean: **R Vandermeulen**, A Mannino, S E Craig, J Werdell
- 1115h **IS12A-04** A New High-Resolution Sea Surface Temperature Blended Analysis: **E Maturi**, A Harris, J Sapper
- 1130h **IS12A-05** Cross-calibration of MODIS and VIIRS long near infrared bands: **B B Barnes**, C Hu, S W Bailey, N Pahlevan, B A Franz
- 1145h **IS12A-06** Bio-Optical Variability in Tropical Peatland-Influenced Coastal Waters of South-East Asia, and Implications for Remote Sensing of CDOM and DOC: **P Martin**, N R Cherukuru, N Sanwlani, J M C Wong, S Chen, E W S Wong, S C Liew, M Müller
- 1200h **IS12A-07** *Sea ice detection with GNSS-Reflectometry Data from TechDemoSat-1*: **J Cartwright**, C Banks, M A Srokosz
- 1215h **IS12A-08** Towards a Method for Detecting Macroplastics Floating in Coastal Waters using Sentinel-2 Earth Observation Data.: **L Biermann**, D Clewley, V Martinez-Vicente

IS12B 11B, UL**Monday 1030h****Moving Beyond Technology: How Quantitative Image-Based Methods Help Reveal Ocean Ecology I (joint with ME, OB)****Moderators: Mark Ohman**, University of California San Diego; **Heidi Sosik**, Woods Hole Oceanographic Institution

-
- 1030h **IS12B-01** Characterizing zooplankton vertical distribution in the Sargasso Sea using an Underwater Vision Profiler: **J Stone**, B D Turley, R R Rykaczewski
- 1045h **IS12B-02** 'Community Composition and Size Distribution of Mesozooplankton in the Upper Kilometer of the Global Ocean': **Y Soviadan**, L Stemmann
- 1100h **IS12B-03** Typology of Plankton Communities seen by *In Situ* Imaging, from the Epi to the Mesopelagic Layers of the Global Ocean: **T Panaiotis**, M Babin, T Biard, F Carlotti, L Coppola, L Guidi, H Hauss, L Karp-Boss, R Kiko, F Lombard, A M P McDonnell, M Picheral, A Rogge, A M Waite, J O Irisson, L Stemmann
- 1115h **IS12B-04** Morphological diversity increases with oligotrophy along a zooplankton time series: **J O Irisson**, C Cailletton, C Desnos, L Jalabert, A Elineau, L Stemmann, S D Ayata
- 1130h **IS12B-05** High-resolution time series of plankton to understand trait-based community and food-web dynamics: **E Merz**, J S Jaffe, P L Roberts, P D Isles, M Reyes, T Lormier, T Kozakiewicz, N Stevens, S Dennis, F Pomati
- 1145h **IS12B-06** Quantitative Imaging Flow Cytometry Reveals Pigment-Based Overestimation of Diatoms and Microplankton in the North Atlantic: **A Chase**, N Haentjens, E Culhane, S J Kramer, E Boss, L Karp-Boss
- 1200h **IS12B-07** In-situ Dynamics of Marine Snow: Assessment by an Autonomous Zooglider: **J S Ellen**, M D Ohman
- 1215h **IS12B-08** Megafauna community assessment with cameras: Platform, annotator and methodology comparison: **T Schoening**, A Purser, D Langenkämper, I Suck, J Taylor, D Cuvelier, L Lins, E Simon-Lledó, Y Marcon, D Jones, T W Nattkemper, K Köser, M Zurowietz, J N Gomez-Pereira, J Greinert

IS12C 4, UL**Monday 1030h****New Technologies and Methods in Fisheries Science II (joint with ME)****Moderators: Camille Pagniello; Katherine Wilson**, NOAA Fisheries Office of Science and Technology

-
- 1030h **IS12C-01** Advanced Camera Technologies and Artificial Intelligence to Improve Marine Resource Surveys: **B Richards**, A Hoogs, M D Dawkins, J Taylor, S G Smith, J S Ault, M P Seki
- 1044h **IS12C-02** Predation Event Recorders: Mapping Fine-scale Biophysical Processes to Sources of Mortality: **B Chasco**
- 1058h **IS12C-03** Exploring species dynamics within spiny lobster traps in the Florida Keys using a customizable, trap-deployable video camera system: **J Butler**, E Hutchinson, C Sweetman, T R Matthews
- 1112h **IS12C-04** Using a passive acoustic-optical imaging system to monitor fish presence and behavior in marine protected areas: **C Pagniello**, J Butler, A Sherwood, A Rosen, P Roberts, E Parnell, J S Jaffe, A Sirovic
- 1126h **IS12C-05** Managing the critically endangered totoaba (*Totoaba macdonaldi*) population: pairing passive acoustic and camera technologies as a first step towards passive acoustic density estimation (PADE) of this species in the Gulf of California.: **G Phillips**, G D'Spain, C López-Sagástegui, O Aburto-Oropeza, D Guevara, M A Cisneros-Mata, D Rimington, D Price
- 1140h **IS12C-06** Accounting for spatiotemporal variability in somatic growth in age composition data estimation for stock assessment models: **G M Correa**, L Ciannelli, L Barnett, S Kotwicki
- 1154h **IS12C-07** Using DNA barcoding to describe the diversity of sharks found in the fishery in Puerto Rico: **G Franqui-Rivera**
- 1208h **IS12C-08** Uncovering causal interaction networks between target species in a multispecies recreational fishery.: **K Blincow**, B Semmens
- 1222h Lightning Poster Talks:

MARINE ECOLOGY AND BIODIVERSITY

ME12A 7A, UL

Monday 1030h

Impacts of Ecological Interactions on Marine Ecosystem Dynamics and Biodiversity: New Insights from Theory, Models, and Field Measurements II (joint with OB, OM, PI)**Moderators: Vittoria Roncalli; Clifton Woodson,**
University of Georgia

- 1030h **ME12A-01** Energy allocation in a diapausing copepod: a transcriptomics analysis: **V Roncalli**, M C Cieslak, P H Lenz, R R Hopcroft
- 1045h **ME12A-02** The Importance of Incorporating Planktonic Temporal Strategies in Marine Ecosystem Models: **J J Vallino**, I Tsakalakis
- 1100h **ME12A-03** Avoiding Hypoxia and Escaping Predators: Examining Behavior Trade-Offs with an Individual Based Model: **W K Liu Slater**, J J Pierson, A W Leising
- 1115h **ME12A-04** Community-based estimates of crustacean zooplankton production rates and ecological efficiencies in the NE Pacific: **T A Venello**, J Dower, K Suchy, A R Sastri
- 1130h **ME12A-05** The Next Phase of Ctenophore Diversity, Taxonomy, and Phylogenetics: **S H D Haddock**, S Johnson, L M Christianson, W R Francis, J Winnikoff, D T Schultz, W Patry, E V Thuesen, C E Mills, J F Ryan
- 1145h **ME12A-06** Insights into reproductive isolation within highly divergent copepod *Pleuromamma abdominalis* using genome-wide SNP data: **J Hirai**
- 1200h **ME12A-07** Characterizing the Diets of Siphonophores (Cnidaria:Hydrozoa) in the Offshore Central California Current Ecosystem using DNA Metabarcoding: **A Damian-Serrano**, E Hetherington, A Choy, S H D Haddock, C W Dunn
- 1215h **ME12A-08** Moving beyond medusae: integrating siphonophores into marine food web ecology: **E Hetherington**, S H D Haddock, E V Thuesen, A Damian-Serrano, C W Dunn, A Choy

MICROBIOLOGY AND MOLECULAR ECOLOGY

MM12A 2, UL

Monday 1030h

Marine Microbes in the Omics Epoch: Unveiling Their Critical Roles in the Pelagic and Benthic Environments II**Moderators: Marilou Sison-Mangus**, University of California Santa Cruz; **Linda Kelly**, San Diego State University; **Craig Nelson**, University of Hawaii at Manoa; **Shady Amin**, New York University Abu Dhabi

- 1030h **MM12A-01** *Unifying Paradigms Across the Salinity Divide: Pico cyanobacteria in the Laurentian Great Lakes as a Case Study*: **M Coleman**, S Paver, J Podowski
- 1045h **MM12A-02** Global Whale Shark (*Rhincodon typus*) microbiome: regional taxonomic flexibility and functional stability: **E A Dinsdale**, M P Doane, A Turnland, T Dillion, L Lima, A Goodman, M Peterson, S Peirce, C Rohner, D Ramirez, G Araujo, R Pillans, R Edwards, M Morris
- 1100h **MM12A-03** Holobiont Variability and the ecosystem impact of coral bleaching: lessons learned from a molecular time series: **A Thurber**, S Seabrook, K McConnell, E Schmeltzer, A Correa, R Vega Thurber
- 1115h **MM12A-04** Protist plankton seasonality and community structure in the epi- and mesopelagic at BATS: **L Blanco Bercial**, R J Parsons, L M Bolanos, N McDonald, S J Giovannoni, R Curry
- 1130h **MM12A-05** Defining seasonal patterns of SAR11 viruses in the Western English Channel via long-read sequencing and viral isolation: **B Temperton**, J L Warwick-Dugdale, H Buchholz, M Michelsen, N Solonenko, A C Gregory, M Allen, M B Sullivan
- 1145h **MM12A-06** Osmolyte synthesis and utilization in the marine bacterium *Vibrio natriegens*: **W Johnson**, E E Kelly, G A Ellis, D H Leary, G J Vora
- MM24A-0301** *POSTER* A marine bacterium produces three different factors that stimulate animal metamorphosis: **A T Alker**, N Delherbe, T Purdy, B S Moore, N Shikuma
- MM24A-0305** *POSTER* Population dynamics of SAR11 marine bacteria across a temporally-sampled nearshore to open ocean transect: **S J Tucker**, K C Freel, E A Monaghan, C E S Sullivan, O Ramfelt, E G Hoffman, Y M Rii, M S Rappe

MM24A-0304 *POSTER* Diel Gene Expression of Eukaryotic Microplankton in the North Pacific Subtropical Gyre: Metatranscriptomic Windows into Temporal Function, Ecology, and Evolution of Uncultured Microbes: **R D Groussman**, S Coesel, B P Durham, R Morales, V Armbrust

MM24A-0303 *POSTER* *De novo*-assisted peptidomics helps in the study of marine carbon flux and protein degradation: **M E Duffy**, J Adams, J A Neibauer, C A Fuchsman, R G Keil

MM24A-0302 *POSTER* Prophages in Host-Associated Microbes: The Most Abundant Symbiosis on Earth and Its Relevance in Marine Holobionts: **M Little**, M I Rojas, F Rohwer

MM24A-0306 *POSTER* Specific marine bacteria enhance the sexual reproduction and auxospore production of a marine diatom: **M Sison-Mangus**, M Kempnich

OCEAN BIOLOGY AND BIOGEOCHEMISTRY

OB12A 3, UL

Monday 1030h

Quantifying Carbon Export Pathways in the Global Ocean II (*joint with MM, OM, PI*)

Moderators: **Deborah Steinberg**, College of William and Mary; **Stephanie Henson**, National Oceanography Center

1030h **OB12A-01** Directly Observing and Quantifying Mechanisms of the Biological Pump Through Particle-resolved Imaging and DNA Sequencing: **C A Durkin**, A Santoro, K Buesseler, I Cetinic, M L Estapa, M Omand

1045h **OB12A-02** Evaluation of particle sinking velocities near South Georgia using four independent approaches: **M Villa-Alfageme**, M H Iversen, N Briggs, K Pabortsava, E Ceballos-Romero, F C de Soto, S L C Giering

1100h **OB12A-03** Sinking Cells in the Twilight Zone and Their Contribution to Carbon Export: **A Bodel**, C A Durkin, K Buesseler, M L Estapa, M Omand

1115h **OB12A-04** Particle Flux to Abyssal Depths: Hourly to Seasonal Variability Over an Eight Month Period (October 2014–June 2015): **C Huffard**, C A Durkin, S J Wilson, P McGill, R Henthorn, K Smith

1130h **OB12A-05** The role of mesozooplankton community structure in fecal pellet carbon production in the subarctic northeast Pacific Ocean: **K Stamieszkin**, D K Steinberg, A E Maas

1145h **OB12A-06** Deep zooplankton rely on small particles in response to low fluxes and poor nutritional quality of large sinking particles from the surface ocean: **S Romero-Romero**, C A Ka'apu-Lyons, B Umhau, C R Benitez-Nelson, C C Hannides, H G Close, J Drazen, B N Popp

1200h **OB12A-07** Northeast Pacific mesopelagic zooplankton feed increasingly on small (1-51 μm) particles with depth at Station Papa (EXPORTS): **C Shea**, V Evrard, N Wallsgrove, T Allen, J S Cope, D K Steinberg, A E Maas, K Stamieszkin, H G Close, B N Popp

1215h **OB12A-08** Development of an agent-based model to assess the role of mesozooplankton community structure and diel vertical migration in fecal pellet carbon flux: **C E Countryman**, A Burd, D K Steinberg

OCEAN MODELING

OM12A 5A, UL

Monday 1030h

Advances in Coupled Physical-Biogeochemical Modeling: Continental Shelves, Estuaries, and the Coastal Ocean II (*joint with CP, OB*)

Moderators: **Jeremy Testa**, University of Maryland Center for Environmental Science; **Chunqi Shen**, University of Maryland Center for Environmental Science

1030h **OM12A-01** Ecoregions in the Mediterranean Sea through the reanalysis of phytoplankton functional types and carbon fluxes: **J Skakala**, S Ciavatta, S Kay, R J W Brewin, R Cox, A Di Cicco, F Nencioli, L Polimene, M Sammartino, R Santoleri, M Tsapakis

1045h **OM12A-02** Can pCO₂ observation help constrain predator-prey interactions in a biological model?: **K E Rutherford**, K Fennel, A Laurent, H Thomas

1100h **OM12A-03** A modeling study of the initiation of harmful algal blooms (HABs) in an estuary-subestuary system: **Q Qin**, J Shen

1115h **OM12A-04** Biogeochemical simulation of San Francisco Bay using an unstructured-grid model: **Z Wang**, F Chai, H Xue

1130h **OM12A-05** Controls of High Silicic Acid in a Semi-enclosed Coastal Sea: Inferences from a Coupled Physical-Biological Ocean Model and Data: **E Olson**, S Allen, D Ianson, R Francois, D Latornell

1145h **OM12A-06** Modeling the Florida Bay Ecosystem Using a Coupled Physical-Biogeochemical-Seagrass Model: **T Liu**, Z Lee, S Shang, T S Kalra, C J Madden, B T Furman, M Jiang

- 1200h **OM12A-07** Influence of River Inputs and Diurnal Sea Breeze on the Tidal Inlet Exchanges that control the Marine Ecosystem and Biogeochemical Processes of the Mississippi Sound and Bight: **J D Wiggert**, C Bouchard, M S Dinniman, M K Cambazoglu, P J Fitzpatrick, B N Armstrong, E E Hofmann
- 1215h **OM12A-08** Modelling the Impact of Macronutrients on the Eutrophication Status of Small Estuaries: **R Huggett**, D A Purdie, I D Haigh

PAST, PRESENT AND FUTURE CLIMATE

PC12A 1A, UL

Monday 1030h

Climate Impacts on Marine Species II (joint with HE, ME)

Moderators: Vincent Saba, NOAA National Marine Fisheries Service, Northeast Fisheries Science Center; **Barbara Muhling**, NOAA-Fisheries

- 1030h **PC12A-01** *The Synergistic Effect of Climate Change and Fishing on Multiple Populations of Atlantic Cod (Gadus morhua)*: **C Sguotti**, S Otto, R Frelat, T Langbehn, M Plambech Ryberg, M Lindegren, J Durant, N C Stenseth, C Möllmann
- 1045h **PC12A-02** Changes in Stock Productivity: a Tale of Two Coasts: **R Bell**, A Tableau, J Collie
- 1100h **PC12A-03** Climate Change Decreases in Global Fisheries Production Vary by Size And Functional Type: **C M Petrik**, C A Stock, K H Andersen, P D van Denderen, J R Watson
- 1115h **PC12A-04** How Do Changes in Species-Specific Habitat Affect Predator-Prey Overlap?: **M E Henderson**, J Nye
- 1130h **PC12A-05** Impacts of temperature changes in the Northwest Atlantic on apparent distribution shifts of Atlantic bluefin tuna (*Thunnus thynnus*): **K Oliveira**, L A Kerr, A Allyn, A J Pershing
- 1145h **PC12A-06** Past and future shifts in the distribution of fisheries for juvenile albacore in the eastern North Pacific Ocean: **B Muhling**, D Tommasi
- 1200h **PC12A-07** The devil is in the details: The effect of spatial scale of fishery and environmental data on the performance of fish habitat models: **I Núñez Riboni**, A Akimova, A Sell
- 1215h **PC12A-08** The influence of climate and habitat on the distribution and ecology of coastal and pelagic fish species in the North Atlantic using joint modeling: **S Roberts**

PHYSICAL-BIOLOGICAL INTERACTIONS

PI12A 7B, UL

Monday 1030h

Biological Coupling to Physical Forcing on Shallow-Water Ecosystems: Using Observations to Reveal Patterns and Test Mechanisms II (joint with CP, ME, PS)

Moderators: Heidi Fuchs, Rutgers University; **James Leichter**, Scripps Institution of Oceanography, University of California at San Diego

- 1030h **PI12A-01** The role of ocean currents in modulating coral bleaching susceptibility: **T M DeCarlo**, H Harrison, J Ellis, L Gajdzik, D Coker, M L Berumen
- 1042h **PI12A-02** TIDAL FORCING OF NUTRIENT UPTAKE ON CORAL REEFS: FIELD AND MODELLING STUDY FROM A TIDE-DOMINATED SYSTEM: **R Gruber**, R Lowe, J Falter
- 1054h **PI12A-03** Biophysical coupling over coral reef ecosystems due to internal waves: **A Wyatt**, J Leichter, L T Toth, T Miyajima, R B Aronson, T Nagata
- 1106h **PI12A-04** The Effect of Temporal Scale in Evaluating Physical Forcing of Shallow Coral Reef Communities: **P Edmunds**
- 1118h **PI12A-05** Kelp Forest Hydrodynamics around an Island: **M Daly**, S G Monismith, C B Woodson, A Valle-Levinson, F Micheli, D Sancho, M Jones
- 1130h **PI12A-06** Measuring hydrodynamics and sediment resuspension in seagrass meadows: **N Neto**, A W M Pomeroy, M A Reidenbach, M Ghisalberti, R Lowe
- 1142h **PI12A-07** *Offshore-centered Phytoplankton Bloom Formation, Probably Triggered by Subterranean, Freshwater Runoff in the Southern Gulf of Mexico*: **J E Sampedro-Avila**, J A Kurczyn, E G Valdéz-Silva, H Maske
- 1154h **PI12A-08** Formation of thin layers of phytoplankton in the upwelling region off NW Iberia: biological growth versus physical accumulation: **E Broullón**, E Crespo, P Chouciño, A Comesaña, B Fernández-Castro, E Fernández, A Fuentes-Lema, M Gilcoto, E Nogueira, M Pérez, R Reboreda, B Reguera, C Souto, E Velasco, M Villamaña, S Villar, B Mouriño
- 1206h **PI12A-09** An Enhanced Biological Plume on the Continental Slope of the West Florida Shelf: **S deRada**, B Penta, S C Anderson

1218h **PI12A-10** Rainfall Pattern Drives Green *Noctiluca scintillans* Bloom in Tropical Estuary Mandovi-India : **L Gawade**, S Pednekar

PHYSICAL OCEANOGRAPHY: MESOSCALE AND LARGER

PL12A 15A, Mezzanine

Monday 1030h

Ocean Transport and Eddy Energy II (*joint with OM, PS*)

Moderators: **Sylvia Cole**, Woods Hole Oceanographic Institution; **Ian Grooms**, University of Colorado at Boulder

-
- 1030h **PL12A-01** Energetically Consistent, Resolution Aware, Parameterization of Mesoscale Eddies in the Ocean: **M Jansen**, A Adcroft, S Khani, H Kong
- 1045h **PL12A-02** Acute sensitivity of ocean circulation to mesoscale eddy energy dissipation time-scale: **J Mak**, D P Marshall, G Madec, J R Maddison
- 1100h **PL12A-03** Bathymetry-aware parameterizations of eddy buoyancy fluxes: **Y Wang**, A Stewart
- 1115h **PL12A-04** Evaluating Diffusive Parameterizations of the Effects of Mesoscale Eddies based on Linear Stability Analysis: **A Griesel**, C Eden
- 1130h **PL12A-05** An eddy-energy based parameterization of subgrid variance contributions to resolved density: **M Illicak**, A Adcroft
- 1145h **PL12A-06** Deep Learning to Infer Eddy Heat Fluxes from Sea Surface Height Patterns of Mesoscale Turbulence: **T George**, G Manucharyan, A F Thompson
- 1200h **PL12A-07** Scale Dependent Surface Horizontal Eddy Diffusivity and Its Linkage to Kinetic Energy Spectra: **T W N Haine**, A Nummelin, J J M Busecke, R Abernathey
- 1215h **PL12A-08** Absolute vs. Relative Wind Stress in an Eddy-Resolving Model of the Southern Ocean: **D R Munday**, X Zhai

PHYSICAL OCEANOGRAPHY: MESOSCALE AND SMALLER

PS12A 15B, Mezzanine

Monday 1030h

Turbulent Mixing of the Ocean Surface Boundary Layer: Observation, Simulation, and Parameterization II (*joint with AI, OB, OM*)

Moderators: **Ivan Savelyev**, US Naval Research Laboratory; **Qing Li**, Los Alamos National Laboratory

-
- 1030h **PS12A-01** Multi-vehicle coordinated measurements of meteorology, surface waves, and upper ocean turbulence in the Icelandic Basin: **S Merrifield**, L C St Laurent, J Shapiro, H L Simmons, E Terrill
- 1045h **PS12A-02** Observations of coherent structures in the mixed layer: **E Jarosz**, H W Wijesekera, D W Wang
- 1100h **PS12A-03** Parameterization of gas transfer velocity at a gas-liquid interface in the presence of counter-rotating roller vortices, such as Langmuir Circulation.: **K Adler**, E A Cowen
- 1115h **PS12A-04** Turbulence, mixing, and nutrient fluxes in kelp farms: **M Chamecki**, Y Chao, J C McWilliams
- 1130h **PS12A-05** Turbulence Reduction and the Langmuir Circulation: **Y Fan**, Z Yu, I Savelyev, P P Sullivan, J Liang, T Haack, E Terrill, T de Paolo, R K Shearman
- 1145h **PS12A-06** Nonlocal Fluxes in Second Moment Closures of Langmuir Turbulence and Convection: **R R Harcourt**, E A D'Asaro, A Y Shcherbina, Z Zheng
- 1200h **PS12A-07** On the Physical Mechanisms of the Two-Way Coupling between a Surface Wave Field and a Circulation Consisting of a Roll and Streak: **N Suzuki**, Y Fujiwara
- 1215h **PS12A-08** Diffusion of surface gravity waves by submesoscale turbulence at the sea surface: **W R Young**, A B Villas Boas

SOCIAL-OCEAN SCIENCE INTERACTIONS AND SDGS

SI12A 10, UL

Monday 1030h

Sustainable Food from the Sea: Challenges and Solutions I

Moderators: **Antoine de Ramon N'Yeurt**, University of the South Pacific; **Rebecca Gentry**

- 1030h **SI12A-01** The Geography of Climate Challenges and Solutions for National Food Systems: **S Gaines**, C Free, R Cabral, E Ojea, T Mangin
- 1043h **SI12A-02** A call to reframe the sustainable seafood narrative to maximize contributions to food systems: **M Tlusty**, P Tyedmers, M Bailey, F Ziegler, P H Henriksson, C Béné, S Bush, R Newton, F Asche, D C Little, M Troell, M Jonell
- 1056h **SI12A-03** Tuna Trade-offs: Balancing Profit and Social Benefits in one of the World's Largest Fisheries: **C Willis**, M Bailey
- 1109h **SI12A-04** Characterizing commercial and artisanal fishing vessel catch composition using environmental DNA and satellite-based tracking data: **D Willette**, G Navarrete-Forero, G Sotil, A M Lizano, Z Gold
- 1122h **SI12A-05** Increasing South Pacific aquaculture with complete ecosystems: **M E Capron**, R Prasad, A de Ramon N'Yeurt, K Hopkins, J R Stewart, M A Hasan, D Piper, G Harris
- 1135h **SI12A-06** OPEN OCEAN FARMS IN U.S. FEDERAL WATERS: RECENT PERMITTING AND TECHNOLOGICAL DEVELOPMENTS: **D Kent**
- 1148h **SI12A-07** An Ecosystem Approach to Kelp Aquaculture in the Americas and Europe: **G Grebe**, C J Byron, A St Gelais, D M Kotowicz, T K Olson
- 1201h **SI12A-08** Temporal Patterns of Mariculture Production: Implications for Sustainable Development: **R Gentry**, S Lester, B Ruff
- 1214h **SI12A-09** Sustainable seafood and sustainable seas? Global trajectories and patterns of mariculture, fisheries, and marine protected areas: **S Lester**, R Gentry, B Ruff, A Dubel

Monday P.M.

COASTAL AND ESTUARINE PROCESSES

CP13A 8, UL

Monday 1400h

Nearshore Processes III

Moderators: **Margaret Palmsten**, Naval Research Lab Stennis Space Center; **Andre Amador**, University of California San Diego

- 1400h **CP13A-01** Wave Dissipation by Bottom Friction on a Rough Rocky Reef: **E B Thornton**, C J Gon, J MacMahan
- 1415h **CP13A-02** Wave Energy Reflection from a Rocky Shoreline: **L Dorantes**, K O'Brien, C J Gon, J H MacMahan
- 1430h **CP13A-03** Investigating the Link Between Three-dimensional Wave Transformation Patterns and Shore Platform Morphology.: **R Krier-mariani**, W J Stephenson, S Wakes, M E Dickson
- 1445h **CP13A-04** Seismic spectral signatures of individual wave impacts on coastal cliffs: **C Thompson**, M E Dickson, A Young
- 1500h **CP13A-05** Interaction of combined waves and current with high-relief bottom roughness: **J H Rosman**, X Yu, J L Hench
- 1515h **CP13A-06** Sediment transport and wave attenuation behind patches of flexible aquatic vegetation: Findings from a full-scale laboratory experiment: **E R Holzenthal**, M E Wengrove, D Hill

- 1530h **CP13A-07** Do munitions move in mud? Field observations of munition surrogate mobility in cohesive sediment within an energetic estuarine setting.: **A C Trembanis**, C DuVal
- 1545h **CP13A-08** Ocean Waves, Sea Ice, and Coastal Protection Along Alaska's North Slope: **L Hosekova**, N Kumar, W E Rogers, J M Thomson

CP13B 10, UL

Monday 1400h

The Dynamics of Buoyancy-Driven Flows in Estuaries, Continental Shelves, and Polar Seas III (joint with HE, PS)

Moderators: **Piero Luigi Mazzini**, San Francisco State University; **Sarah Giddings**, Scripps Institution of Oceanography

- 1400h **CP13B-01** River plume mixing and transport in the surf zone: **S E Kastner**, A R Horner-Devine, J Thomson
- 1415h **CP13B-02** Scaling wave-plume interactions in two coastal river discharges: **A Horner-Devine**, R Flores Audibert, M E Williams, S E Kastner, J M Thomson
- 1430h **CP13B-03** Quantifying the Contribution of Fronts to the Mixing Budget of a Tidally Pulsed River Plume Using the T-REMUS Autonomous Underwater Vehicle (AUV): **N Delatolas**, D G MacDonald, J H Leidhold, Á Piffer Braga, K L Cole, K Huguenard, M M Whitney, P Spicer

- 1445h **CP13B-04** Dynamics in the near-field region of the Rhine ROFI: a multiple front system: **L Keyzer**, S Rijnsburger, J Pietrzak, F Zijl, M Verlaan, M Snellen, C Slobbe, R Flores Audibert, A J Souza, A Horner-Devine
- 1500h **CP13B-05** Multiple Tidal Plume Fronts, Internal Waves and Near Shore Sediment Resuspension: **J Pietrzak**, S Rijnsburger, R Flores Audibert, Z Safar, A R Horner-Devine, A J Souza, K G Lamb, N L Jones, C Chassagne
- 1515h **CP13B-06** How Much Plume Water Released During an Ebb Pulse Interacts with the Plume Front?: **K Cole**, D G MacDonald, M M Whitney, K Huguenard, P Spicer, N Delatolas, Á Piffer Braga, J H Leidhold
- 1530h **CP13B-07** Variability of turbulence in a tidal intrusion front: **J T Jurisa**, W R Geyer, D K Ralston, A C Lavery, C Bassett, D Honegger
- 1545h **CP13B-08** Dynamics of Tidal Intrusion Fronts: **W R Geyer**, A C Lavery, J T Jurisa, D K Ralston, M E Scully, D Honegger, C Bassett

CP13C 11A, UL
Monday 1400h
Water Quality Monitoring and Forecasting in Coastal and Inland Waters: Biogeochemistry of Urban Systems I
Moderators: Cedric Fichot, Boston University; **Karl Kaiser**, Texas A&M University at Galveston

-
- 1400h **CP13C-01** Biogeochemical Controls on Pelagic Respiration Rates in Long Island Sound: **L Barrett**, P Vlahos, J M Vaudrey, M M Whitney
- 1415h **CP13C-02** Water quality impacts from tidal flooding in the Southern Chesapeake Bay.: **A Macias-Tapia**, D Loftis, C Selden, P W Bernhardt, Y Zhu, M A Echevarria, I R Flefel, E Perez Vega, M R Mulholland
- 1430h **CP13C-03** Submarine Groundwater Discharge is a Source of Contaminants of Emerging Concern to the Coastal Ocean (Sydney, Australia): **T McKenzie**, C Holloway, J Tucker, R Sugimoto, T Nakajima, K Harada, H Dulai, I R Santos
- 1445h **CP13C-04** Surface and groundwater influence on spatial distribution of geochemistry and water quality in Maunaloa Bay: **P Moehlenkamp**, K A Falinski, C E Nelson, M A McManus, D Harper, N Silbiger, H Dulai, C M Comfort, G Walker, M Donahue
- 1500h **CP13C-05** Towards *‘āina momona*: Tracking biological response to changes in sediment and nutrient flow through restoration of an urban estuary in He‘eia, O‘ahu: **Y M Rii**, K A Falinski, J A Robertson, R Alegado, A H Kawelo, K Kotubetey, K Kukea-Shultz, R J Toonen, K B Winter

- 1515h **CP13C-06** Rapid nutrient consumption and high respiration rate prevent anthropogenic nutrient accumulation in the northwestern Arabian (Persian) Gulf of Kuwait.: **T Al-Said**, A Sarkar, S W A Naqvi, R Madhusoodhanan, L Fernandes, A Ahmed, F Y Al-Yamani
- 1530h **CP13C-07** Distribution of Per- and Polyfluorinated Alkyl Substances (PFAS) in Galveston Bay, TX: **Y Liu**, G X Walsh, L J Kuo, A Pavia, T Fulton, S T Sweet, T Wade, A Knap, S A Yvon-Lewis
- 1545h **CP13C-08** Distribution of Halogenated Volatile Organic Compounds (VOCs) in Galveston Bay, TX: **G X Walsh**, S A Yvon-Lewis, Y Liu

CHEMICAL TRACERS, ORGANIC MATTER AND TRACE ELEMENTS

CT13A 5B, UL
Monday 1400h
Revealing Biogeochemical Processes on Basin Scales through Ocean Transects II (joint with NC, OB, OM)
Moderators: Gregory Cutter, Old Dominion University; **Phoebe Lam**, University of California Santa Cruz

-
- 1400h **CT13A-01** Insights into carbon export and remineralization fluxes using ^{234}Th distribution along the GEOTRACES Pacific Meridional transect: **J A Kenyon**, K Buesseler, P J Lam, S M Pike, N Carracino, S Rojas
- 1415h **CT13A-02** Distributions of Dissolved Iron along the 2018 U.S. GEOTRACES GP15 Pacific Meridional Transect: **G Weiss**, M Hatta, C I Measures, J N Fitzsimmons, N T Lanning, T M Conway, M Sieber
- 1430h **CT13A-03** Dissolved cobalt speciation along the GEOTRACES Pacific meridional transect (GP15): **R Chmiel**, K L Casciotti, G A Cutter, P J Lam, M A Saito
- 1445h **CT13A-04** A multi-element perspective on Pacific dissolved trace metal cycling from the GEOTRACES GP15 PMT cruise: **J N Fitzsimmons**, N T Lanning, D Halbeisen, C P Till, M Hatta, G A Weiss, T M Conway, M Sieber, P S John, S C Yang, X Bian
- 1500h **CT13A-05** Dissolved Al during GEOTRACES Pacific Meridional Transect in the North Pacific Ocean: **M Hatta**, C I Measures, G A Weiss
- 1515h **CT13A-06** Mercury and Trace Metal Cycling in the Surface North Pacific Ocean: **E Seelen**, N Hawco, R M Bundy, J W Park, R P Mason, P S John
- 1530h **CT13A-07** Biogeochemical cycling of hydrogen sulfide in the oxic Pacific Ocean: **N Buckley**, G A Cutter

1545h **CT13A-08** Anthropogenic Asian Aerosols provide Fe to the North Pacific: **P Pinedo-Gonzalez**, N Hawco, R M Bundy, V Armbrust, M J Follows, B B Cael, A E White, S Ferrón, D M Karl, P S John

1400h **IS13A-01** Advancing Ocean Satellite Data into Research, Applications, Information and Decisions: NOAA Coastwatch/Oceanwatch/Polarwatch: **V P Lance**, H Gu, P M DiGiacomo

EDUCATION, OUTREACH AND POLICY

ED13A 11B, UL

Monday 1400h

ASLO Multicultural Program Student Symposium I

Moderators: Benjamin Cuker, Hampton University; **Carolina Bonin**, Hampton University

1415h **ED13A-02** The Influence of Ciliates on the Growth of *Macrocystis pyrifera* (Giant Kelp): **A Munoz**, D Y Kim, A C Jones

1430h **ED13A-03** Exploring Microbial Food Web Dynamics Across Transition Zones in Aquatic Systems: **E Herrera**, S K Hu, J A Huber

1445h **ED13A-04** Upper Delaware Bay Microplastic Distribution in Relation to the Estuarine Turbidity Maximum Zone: **I Johnson**, J Cohen

1500h **ED13A-05** A Small Foray into the Realm of Giants: Investigating the Movement Ecology of Giant Sea Bass (*Stereolepis gigas*): **Y Doss**, B Semmens, K Blincow

1515h **ED13A-06** Testing Direct Setting of *Crassostrea virginica* larvae: **S Hildebrandt**, J Spires, S Westby, C N Steppe

1530h **ED13A-07** Remote Sensing in the Chesapeake Bay: A Focus on Harmful Algal Blooms: **N De La Cruz**, G Silsbe

1545h **ED13A-08** The Impact of Marsh Impoundment on Methane Production in a Phragmites Wetland: **J McLean**, M E Gonnee, K D Kroeger

OCEAN OBSERVATORIES, INSTRUMENTATION AND SENSING TECHNOLOGIES

IS13A 14B, Mezzanine

Monday 1400h

Operational Satellite Oceanography I (joint with OB, PL, SI)

Moderators: Christopher Brown, NOAA; **Veronica Lance**, NOAA (CICS UMD)

1415h **IS13A-02** Advancing Discovery and Usability of Operational-Ready Satellite Oceanographic Big Data within a NASA WDS-Trusted Repository: **D F Moroni**, E M Armstrong, J C Klose, S Vannan, J Hausman, C Oaida

1430h **IS13A-03** Estimation of Sea Surface Salinity Around the Korean Peninsula Using Machine Learning: **E Jang**, J Im, Y Kim, S SIM

1445h **IS13A-04** Near-Real-Time Multi-Sensor Global Ocean Color Data and Applications: **M Wang**, L Jiang, X Liu, S Son, K Mikelsons, W Shi, L Tan, X Wang, V P Lance

1500h **IS13A-05** Oceanic surface currents monitoring from the synergy of multiple satellite observations: **D Ciani**, M H Rio, H Etienne, Y Faugere, S Guinehut, E Charles, B Buongiorno Nardelli, S Marullo, V Brando, R Santoleri

1530h **IS13A-07** Operational products, based on satellite-forced model, to support marine debris search in the North Pacific.: **J Hafner**, N A Maximenko, L R Centurioni, M Crowley, L Haram, A Shcherbina, G Ruiz, J T Carlton, C Murray

1545h **IS13A-08** Satellite remote sensing of Cyanobacteria: Success stories of management taking action and the CyAN data sharing app.: **B Seegers**, B A Schaeffer, J Werdell, R P Stumpf

IS13B Poster Hall C-D; eLightning Theater

Monday 1400h

Emerging Ocean Technologies: A Snapchat of New Sensors and Observing Platforms I eLightning

Moderators: Sophie Chu, NOAA Pacific Marine Environmental Laboratory; **Kersey Sturdivant**, Duke University

IS13B-01 *eLIGHTNING* SCUID - a Platform for In-Situ Dissolved Gas Measurement of N₂O and NO: **A Nawaz**, M A Barry, P Colosimo, S Kahle, J Li, C McNeil

IS13B-02 *eLIGHTNING* Acid-free continuous alkalinity measurement by equilibration with CO₂ gas across a silicone membrane: **S Liu**, R Byrne

IS13B-03 *eLIGHTNING* An autonomous *in situ* total Dissolved Inorganic Carbon sensor miniaturised utilising microfluidic lab-on-chip technology: **S Monk**, M Arundell, S Papadimitriou, S Loucaides, A Schaap, M C Mowlem

IS13B-04 *eLIGHTNING* A New Lidar Capability to Map Littoral Zones: **A Gisler**, C Nderson, J P Thayer, G Thompson

IS13B-05 *eLIGHTNING* Automating Coastal Citizen Science with a High-Tech Surfboard Fin: the Smartfin: **P J Bresnahan Jr**, T R Martz, T Cyronak, A J Andersson, R J W Brewin, G Schmid, A Stern

IS13B-06 *eLIGHTNING* PlanktonScope : Affordable modular imaging platform for citizen oceanography: **T Pollina**, A G Larson, A Molina, S Colin, C de Vargas, H Li, M Prakash

IS13B-07 *eLIGHTNING* The OpenCTD: A low-cost open-source CTD for research and outreach: **S Sturdivant**, R Neches, A D Thaler

IS13B-08 *eLIGHTNING* Development and Evaluation of the New RBR*Legato*³ CTD on Glider Platforms: **E Siegel**, M Halverson, R Zhang, J M Leconte, G Johnson

IS13B-09 *eLIGHTNING* A Fast Biophysical Towed Profiler: the EcoCTD: **M Dever**, C Smith, A Mahadevan

IS13B-10 *eLIGHTNING* How a sailing drone became an oceanographic tool to explore the US Arctic: **H M Tabisola**, C Mordy, J N Cross, C Meinig, C Zhang, C Kuhn, A De Robertis, E D Cokelet, N Lawrence-Slavas, C L Gentemann, R Jenkins

IS13B-11 *eLIGHTNING* Low-cost technologies for coastal monitoring: **M Marcelli**, V Cafaro, A Madonia, L Pasculli, V Piermattei, A Terribili, R Valentini

IS13B-12 *eLIGHTNING* Development and Testing of Remote Monitoring System for Hawaiian Monk Seals: **J Magi**

1430h **ME13A-03** Assessing Ecosystem Services of Oyster Culture in Hiroshima Bay; Result of Prey-predator Numerical Model: **W Wahyudin**, T Yamamoto

1445h **ME13A-04** Ocean Acidification Reversal by Self-Replicating Biomass Cultivation and Processing Systems: Prospects and Questions: **E Rabani**

1500h **ME13A-05** Negative Impact of Kelp Crab on Released Juvenile Sea Cucumber *Apostichopus japonicus*: **N Inaba**, R Kajihara, H Kawai, M Ohashi, Y Anaguchi, K Ishii

1515h **ME13A-06** Environmental Controls on Withering Syndrome in Abalone: A Modeling Study: **E E Hofmann**, C S Friedman, E Powell, J M Klinck II, M Neuman, J Moore, I Taniguchi, D Kushner, C M Miner, K Hemeon, L Poussard, L Solinger

1530h **ME13A-07** Environmental effects of mussel farming in the Hauraki Gulf, New Zealand: A coupled physical-biogeochemical modelling approach.: **C Collins**

1545h **ME13A-08** SALMON LICE (*LEPEOPHTHEIRUS SALMONIS*) INDUCED MORTALITY OF ATLANTIC SALMON (*SALMO SALAR*) SURING POST-SMOLT MIGRATION IN NORWAY: **I A Johnsen**, A Harvey, P N Sævik, A D Sandvik, O Ugedal, B Ådlandsvik, V Wennevik, K Glover, Ø Karlsen

ME13B 7A, UL

Monday 1400h

Impacts of Ecological Interactions on Marine Ecosystem Dynamics and Biodiversity: New Insights from Theory, Models, and Field Measurements III (*joint with OB, OM, PI*)

Moderators: Clifton Woodson, University of Georgia; Steven Litvin, Monterey Bay Aquarium Research Institute

1400h **ME13B-01** Size-selective cod predation: impact on prey, implications for pelagic fisheries: **N Kulatska**, P J Woods, B Þ Elvarsson, U Beier, H Wennhage, V Bartolino

1415h **ME13B-02** Moving Ecological and Biogeochemical Transitions Across North Pacific: **G Forget**, C L Follett, S Dutkiewicz, B B Cael, M J Follows

1430h **ME13B-03** *Environmental and Ecological Drivers of Growth in Demersal Fishes Across the Depth Continuum:* **J Black**, J Drazen, A B Neuheimer, P Horn

1445h **ME13B-04** Non-indigenous Assemblages Cannot Buffer Lost Ecological Functions of Declining Native Biota in the Eastern Mediterranean Sea: **J Steger**, M Bosnjak, J Belmaker, B S Galil, M Zuschin, P G Albano

MARINE ECOLOGY AND BIODIVERSITY

ME13A 7B, UL

Monday 1400h

Ecosystem Impacts and Ecosystem Services of Aquaculture I (*joint with OB, OC, SI*)

Moderators: Janet Kubler, CSUN; Charles Yarish, University of Connecticut

1400h **ME13A-01** A Modeling Platform to Evaluate Offshore Macroalgal Farming: **C Frieder**, K A Davis, M Chamecki, J C McWilliams, M Sutula, R M Kudela, J Infante, C Yan, F Kessouri, D Dauhajre, M L McPHERSON

1415h **ME13A-02** Deposition of Detritus From Near- and Offshore Kelp Farms as a Contribution to CO₂ Sequestration Deposition of Detritus From Near- and Offshore Kelp Farms as a Contribution to CO₂ Sequestration: **O J Broch**, I Ellingsen, K Hancke

- 1500h **ME13B-05** Community composition and nutrient contributions of coral exosymbionts in Moorea, French Polynesia: **K Landfield**, K Munsterman, J Allgeier, D E Burkepile
- 1515h **ME13B-06** Integrative Taxonomy of Cones Snails (Conidae, Gastropoda) Giving new Insight Into The Role of Ecosystem in Speciation: **S Ameri**, L P, L K a, R L, K A
- 1530h **ME13B-07** Effects of Interspecific Competition Between Increasingly Dominant Peyssonnelid Algal Crust and Juvenile Massive *Porites* spp.: **M Williams**, P Edmunds
- 1545h **ME13B-08** Marine food web complexity counters size-based constraints on pyramids of life: consequences for ecosystem structure and fisheries: **C B Woodson**, J Schramski, S B Joye

OCEAN BIOLOGY AND BIOGEOCHEMISTRY

OB13A 4, UL

Monday 1400h

Benthic and Benthic-Pelagic Community Connectivity from Coastal to Deep-Ocean Environments I (*joint with ME, MM, OM*)

Moderators: Amanda Netburn, Cooperative Institute for Ocean Exploration, Research & Technology; **Jeroen Ingels**, Florida State University

- 1400h **OB13A-01** Fish community structure and benthic-pelagic coupling by fish from shelf to open ocean environments: **P D van Denderen**, C M Petrik, C A Stock, K H Andersen
- 1412h **OB13A-02** Oxygen Minimum Zones Impact Benthic-Pelagic Coupling on Upwelling Margins with Implications for Demersal Fisheries Productivity: **N D Gallo**, J Wolfe, M Beckwith, R Swalethorp, B Semmens, L A Levin
- 1424h **OB13A-03** Suprabenthos community is a key link for both benthic-pelagic and estuarine-marine ecosystems coupling at the Gulf of Cadiz.: **C Vilas**, E Corona, R F Sanchez Leal, E Gonzalez-Ortegon, M P Jimenez, P Drake, F Baldo, S V Bergeijk, J P Cañavate
- 1436h **OB13A-04** Abundance and Composition of Available Zooplankton for Cold-water Coral Nutrition in Comau fjord, Chile: **N Garcia-Herrera**, A Cornils, B Niehoff, J Laudien, G M Schmidt, V Häussermann, H E Gonzalez, C Richter

- 1448h **OB13A-05** Consideration of midwater ecosystems is required to fully evaluate the environmental risks of deep-sea mining: **J Drazen**, C R Smith, K Gjerde, S H D Haddock, G S Carter, M R Clark, A Choy, P Dutrieux, E Goetze, C Hauton, M Hatta, J A Koslow, A B Leitner, A Pacini, T Peacock, J N Perelman, T Sutton, L Watling, H Yamamoto
- 1500h **OB13A-06** Linking pelagic production and sea scallop energy requirement on the Northeast U.S. Shelf: A model-based assessment: **R Ji**, Z Feng, D Hart, C Chen, L Zhao, C Davis
- 1512h **OB13A-07** Meiofauna life on loggerhead and hawksbill sea turtles: **J Ingels**, G dos Santos, Y Vazquez, L Pontes, I Silver-Gorges, A Silva, Q Bergman, M Fuentes, S Zarate
- 1548h **OB13A-10** Diversity and Metabolic Spectrum of Metazoans in Dead Zone Sediments of the Baltic Sea: **F Nascimento**, E Broman, S Bonaglia, U Marzocchi, P O J Hall

OB13B 2, UL

Monday 1400h

Marine Snow and Associated Small-Scale Processes with Large-Scale Implications I (*joint with PI*)

Moderators: Jennifer Prairie, University of San Diego; **Kai Ziervogel**, University of New Hampshire

- 1400h **OB13B-01** A Path Towards Modeling Marine Particle Disaggregation through In-Situ Measurements of Fragmentation Strength: **M Rau**, Y Song, S G Ackleson
- 1415h **OB13B-02** The SNOWMAN: a new experimental device to study quantitatively the link between phytoplankton community structure, the dynamics of marine snow formation and export time lag.: **E C Laurenceau-Cornec**, A Henderson, C Young, M Bressac, R F Strzepek, L T Bach, B Moriceau, J Toullec, P W Boyd
- 1430h **OB13B-03** Unravelling the dynamics of pelagic ecosystems by quantitative observation of morphological attributes of marine snow: a case study in the Arctic.: **E Trudnowska**, L Lacour, A Rogge, J O Irisson, A M Waite, M Babin, L Stemmann
- 1445h **OB13B-04** Sinking vs. remineralisation: Active controls of zooplankton on marine snow dynamics: **K O Moeller**, M H Iversen
- 1500h **OB13B-05** The effect of phytoplankton properties on the ingestion rate of marine snow by *Calanus pacificus*: **G F Cawley**, J C Prairie, M Décima
- 1515h **OB13B-06** Are Traditional Lab Experiments Biasing Our Understanding Of Microbial Processes On Organic Matter Particles?: **M Bizic**, D Ionescu, H P Grossart

1530h **OB13B-07** The Sedimentation and Lateral Transport of Oil-Associated Marine Snow During and After the Deepwater Horizon Oil Spill: **K L Daly**, A C Vaz, C B B Paris

1545h **OB13B-08** Transcriptome-wide responses of marine snow aggregates of the diatom *Odontella aurita* to oil: **L Bretherton**, Y Liang, C M Brown, D Nanjappa, U Passow, A Quigg, A J Irwin, Z Finkel

OB13C 3, UL

Monday 1400h

New Tools and Approaches to Constrain the Marine Nitrogen Cycle: From the Surface to the Sediments I (joint with IS, MM, PI)

Moderators: Christopher Somes, GEOMAR Helmholtz Centre for Ocean Research Kiel; **Mar Benavides**, Mediterranean Institute of Oceanography

1400h **OB13C-01** Introducing the Argon-Hydrogen Method to Measure Biological Nitrogen Fixation: **S T Wilson**, M Caffin, A E White, D M Karl

1415h **OB13C-02** Phosphate availability as a key factor controlling nitrogen fixation and the BCP in the iron rich Western Tropical South Pacific: **T Moutin**

1430h **OB13C-03** Molecular diagnosis of *Trichodesmium* nutrient limitation in the oligotrophic North Atlantic: **E Cerdan**, D Polyviou, A J Baylay, C Mahaffey, M C Lohan, M Woodward, M M Moore, J Robidart, T S Bibby

1445h **OB13C-04** Effects of water mass mixing on diazotrophy at the New England shelfbreak front: **C Selden**, M R Mulholland, P D Chappell, S Clayton, A Macias-Tapia, P W Bernhardt, D J McGillicuddy Jr

1500h **OB13C-05** Nitrogen fixation by the UCYN-A/haptophyte symbiosis in coastal waters of the southern California Current System: **K A Turk-Kubo**, M M Mills, K R Arrigo, G van Dijken, B A Henke, B Stewart, S Wilson, J P Zehr

1530h **OB13C-07** Predicting how O₂ characterizes the niche of marine unicellular diazotroph *Crocospaera*: **K Inomura**, C A Deutsch, S T Wilson, T Masuda, E Lawrenz, B Lenka, R Sobotka, J Gauglitz, M A Saito, O Prášil, N Takahata, T Shiozaki, Y Sano, K Furuya, M J Follows

1545h **OB13C-08** Identifying active diazotrophs in deep-sea sediment: **A E Dekas**, B J Kapili, S E Barnett, D H Buckley

OCEAN MODELING

OM13A 5A, UL

Monday 1400h

Advances in Coupled Physical-Biogeochemical Modeling: Regional to Global Scales I (joint with OB)

Moderators: Jessica Luo, National Center for Atmospheric Research; **Kristen Krumhardt**, University of Lausanne; **Fanny Monteiro**, University of Bristol

1400h **OM13A-01** One size fits all? - Optimising ocean biogeochemistry for different circulations: **I Kriest**, P Kähler, S Khatiwala, W Koeve, K Kvale, V Sauerland, A Oschlies

1415h **OM13A-02** Evaluation of an online grid-coarsening algorithm in a global eddy-admitting ocean-biogeochemical model: **S Berthet**, R Sférian, C Bricaud, M Chevallier, A Voldoire, C Ethe

1430h **OM13A-03** Addition of Pico-phytoplankton with Variable Nutrient Stoichiometry to the Biogeochemical Elemental Cycling Component of the Community Earth System Model: **R T Letscher**, J K Moore

1445h **OM13A-04** Tracking solar radiation doses in moving aquatic organisms and particles: a novel irradiance Lagrangian module of the Connectivity Modeling System: **R Faillettaz**, A C Vaz, C B B Paris

1500h **OM13A-05** Detecting and attributing change in net primary production using carbon and nitrogen isotopes.: **P Buchanan**, O Aumont, L Bopp, A Tagliabue

1515h **OM13A-06** Light Induced Physical-biogeochemical Implications in the Arctic Ocean: a Coupled Sea-ice – Ocean – Ecological Modeling Study: **V Pefanis**, S Loza, M J Losch, M A Janout, A Bracher

1530h **OM13A-07** Implementation of Antarctic Krill into the Ocean-Ecosystem Model FESOM-REcoM-2 and its Effects on Southern Ocean Biogeochemistry: **O Karakus**, J Hauck, C D Voelker, B Fach, W Hagen

1545h **OM13A-08** Stirring, Mixing, Growing: Modeling Microscale Processes that Change Larger Scale Phytoplankton Dynamics.: **F Paparella**, M Vichi

PAST, PRESENT AND FUTURE CLIMATE

PC13A 1A, UL

Monday 1400h

Climate Impacts on Marine Species III (joint with HE, ME)

Moderators: Vincent Saba, NOAA National Marine Fisheries Service, Northeast Fisheries Science Center;
Barbara Muhling, NOAA-Fisheries

- 1400h **PC13A-01** Defining indices of ecosystem variability using biological samples of fish communities: a generalization of empirical orthogonal functions: **J Thorson**, L Ciannelli, M Litzow
- 1415h **PC13A-02** Energetic Costs of Acidification, Hypoxia, and Warming in Early Life Stages of a Coastal Fish: **T G Schwemmer**, H Baumann, C S Murray, J Nye
- 1430h **PC13A-03** Climate change impacts on growth and migration of Japanese anchovy (*Engraulis japonicus*) in the East China Sea and its uncertainties.: **S I Ito**, T Setou, M Yoneda, M Nakamura, H Kitano, M Matsuyama, C Guo, M Enomoto, T Aono, T Kitagawa, M Takahashi, T Hashioka
- 1445h **PC13A-04** A Regional Assessment of Dungeness Crab Vulnerability to Global Change: Insights from Model Projections: **H Berger**, S Siedlecki, C Matassa, S R Alin, I Kaplan, E Hodgson, D Pilcher, J A Newton
- 1500h **PC13A-05** The brighter side of climate change: How local oceanography amplified a lobster boom in the Gulf of Maine: **A Goode**, D C Brady, R Steneck, R Wahle
- 1515h **PC13A-06** Climate Change and Diversity of Fishes and Invertebrates along a Subtropical Coast: **M Fujiwara**, F Martinez-Andrade
- 1530h **PC13A-07** Climate-driven collapse of mussel beds (*Mytilus californianus*) in the Southern California Bight and the twilight of a keystone interaction.: **C Garza**
- 1545h **PC13A-08** Intertidal predator-prey interactions within the context of a changing coastal ocean: **B Jellison**, K Bacall, B Hernandez, M LaVigne, D Carlon

PHYSICAL-BIOLOGICAL INTERACTIONS

PI13A 9, UL

Monday 1400h

Cross-Shore Fluxes in Ocean Boundary Currents: Biogeochemical and Ecological Consequences I (joint with CP, ME, OB)

Moderators: Julie Keister, Organization Not Listed;
Michael Stukel, Florida State University

- 1400h **PI13A-01** Iron Limitation and Macronutrient Dynamics Associated with Cross-shore Filaments in the California Current System: **K Barbeau**, K Forsch, L Manck, K Fulton, M Fenton, T Coale, S M Schwenck, R H Lampe, M R Stukel, A E Allen
- 1415h **PI13A-02** Productivity and Export along an Upwelling Filament in the California Current Ecosystem using a Multi Method Approach: **S A Kranz**, T B Kelly, S Wang, N Cassar, M R Stukel
- 1430h **PI13A-03** Dynamics of phytoplankton growth and microzooplankton grazing during cross-shelf filament transport in the California Current Ecosystem: **M R Landry**, M R Stukel, T B Kelly, S Dovel
- 1445h **PI13A-04** Insights into Viral-Induced Mortality of the Microbial Food Web Within the California Current Ecosystem Through a Series of Modified Dilution Experiments: **S M Schwenck**, S Dovel, A Levesque, M R Stukel, M R Landry, A Allen, L A Zeigler
- 1500h **PI13A-05** Assessment of frontal gradients in zooplankton communities across a coastal upwelling filament by an autonomous *Zooglider*: **S Gastauer**, M D Ohman
- 1515h **PI13A-06** Investigating the biogeochemical impact of an across-shore filament: **T B Kelly**, R Goericke, M D Ohman, H Song, S A Kranz, M R Landry, M R Stukel
- 1530h **PI13A-07** US west coast variability of low-oxygen conditions: **P Damien**, F Kessouri, D Bianchi, J C McWilliams, L Renault, C A Deutsch
- 1545h **PI13A-08** Modelled across-shore transport and connectivity in the coastal seas east of Yucatan.: **C G Mayorga Adame**, J T Holt, J Polton

 PHYSICAL OCEANOGRAPHY:
 MESOSCALE AND LARGER

PL13A 15A, Mezzanine**Monday 1400h****Ocean Transport and Eddy Energy III** (*joint with OM, PS*)**Moderators:** Ian Grooms, University of Colorado at Boulder; **Laure Zanna**, New York University

-
- 1400h **PL13A-01** Southern Ocean eddy-induced overturning and circumpolar transport inferred from eddy energy and its residence time: **D P Marshall**, X Zhai
- 1415h **PL13A-02** Circumpolar variations in Southern Ocean eddy dynamics: An ensemble approach: **A M Hogg**, T Penduff, S E Close, W K Dewar, N Constantinou, J Martínez Moreno Sr
- 1430h **PL13A-03** A simple scaling for the total transport and the vertical shear of the Antarctic Circumpolar Current: **L P Nadeau**, A Venaille, D Straub, R M Ferrari
- 1445h **PL13A-04** A Stochastic Model of the Isopycnal Slope for Use in the Gent-McWilliams Parameterization: **Z Stanley**, A Adcroft, S D Bachman, F S Castruccio, I Grooms, W Kleiber
- 1500h **PL13A-05** Global Detection and Regional Characterization of Anticyclonic Submesoscale Coherent Vortices using Argo Float Profiles.: **D McCoy**, D Bianchi, A Stewart
- 1515h **PL13A-06** Dynamics of layered circulation inferred from energy pathway in the South China Sea: **J Gan**, Z CAI
- 1530h **PL13A-07** The Multiscale Nature of Potential to Kinetic Energy Conversion in the Ocean: **M M Sadek**, H Aluie, M W Hecht, G Vallis
- 1545h **PL13A-08** Generation mechanisms of mesoscale eddies in the Eastern Tropical North Atlantic Ocean.: **F A Dilmahamod**, J Karstensen, H Dietze, U Löptien, K Fennel

 PHYSICAL OCEANOGRAPHY:
 MESOSCALE AND SMALLER

PS13A 14A, Mezzanine**Monday 1400h****Multiscale Topographic Effects on Large-Scale Flow: From Wakes and Lee Waves to Small-Scale Turbulence and Mixing I** (*joint with PL*)**Moderators:** Jody Klymak, University of Victoria; **Ruth Musgrave**, Dalhousie University

-
- 1400h **PS13A-01** The impact of the broad-shallow Seychelles Plateau into the Southwestern Tropical Indian Ocean circulation.: **A C Castillo-Trujillo**, S N Giddings, G R Pawlak, I B Arzeno
- 1415h **PS13A-02** Observations of Broad-band Vorticity Generation around the Island of Palau: **K Zeiden**, J A MacKinnon, D L Rudnick, M Alford, G Voet, H W Wijesekera
- 1430h **PS13A-03** Near-inertial surface currents at Palau: Island blocking, flow enhancement, and wake formation: **M N Siegelman**, M A Merrifield, E Firing, R C Musgrave, J A MacKinnon, J M Becker
- 1445h **PS13A-04** Bottom boundary layer dynamics and vorticity generation on sloping three dimensional topography: **A Jagannathan**, K Srinivasan, J C McWilliams, M J Molemaker, A Stewart
- 1500h **PS13A-05** Generation of lee waves and submesoscale vortices in the wake of the Charleston Bump: **J Gula**, C de Marez, N Lahaye, T M Blacic, R E Todd
- 1515h **PS13A-06** Observations of Lee Waves Generated by Topographic Form Drag on Tides and Low-Frequency Flow over a Tall Submarine Ridge near Palau: **G Voet**, M H Alford, J A MacKinnon, J D Nash
- 1530h **PS13A-07** High-Resolution Turbulence Observations of Non-Tidal Stratified Flow Over a Steep Sill in the Baltic Sea: **J Muchowski**, L Umlauf, L Arneborg, E F Weidner, P L Holtermann, J P Peng, C Humborg, C Stranne
- 1545h **PS13A-08** Interdependence of internal tide and lee wave generation at abyssal hills: **C J Shakespeare**

PS13B 15B, Mezzanine**Monday 1400h****Turbulent Mixing of the Ocean Surface Boundary Layer: Observation, Simulation, and Parameterization III** (*joint with AI, OB, OM*)**Moderators:** Leah Johnson, Brown University; Jacob Wenegrat, Stanford University1400h **PS13B-01** Global Geography of Submesoscale Density Fronts: **C B Whalen**, K Drushka, P Gaube1415h **PS13B-02** Direct Observations of Submesoscale Modulation of Ocean Surface Boundary Layer Turbulence: **A Y Shcherbina**, E A D'Asaro1430h **PS13B-03** Constraining the Surface Boundary-Layer Stratification Budget in the Eastern North Pacific Subtropical Front: **J Mickett**, E L Kunze, J B Girton, J T Farrar1445h **PS13B-04** Frontal Instability and Energy Dissipation in a Submesoscale Upwelling Filament: **J P Peng**, P L Holtermann, L Umlauf1500h **PS13B-05** Impacts of centrifugal/inertial/symmetric instabilities on ocean fronts: **N Grisouard**, V Zemskova1515h **PS13B-06** Equilibration of Symmetric Instability and Inertial Oscillations at a Finite-Width Submesoscale Front: **A Wienkers**, L N Thomas, J R Taylor1530h **PS13B-07** Simulation of Inertial Currents and Enhanced Mixing in Ocean Fronts: **E D Skyllingstad**, R M Samelson1545h **PS13B-08** Langmuir Turbulence and Cold Filaments: Do they Couple?: **P P Sullivan**, J C McWilliams, B Fox-Kemper**TUTORIAL TALKS****TT13A 1B, UL****Monday 1400h****Easy Access to Satellite and Other Oceanographic Data Sets Using the ERDDAP Data Server** (*joint with IS, OD, PI*)**TT13B 1B, UL****Monday 1430h****How Do We Make High-Resolution Ocean Simulations Useful to the Community?** (*joint with OD, OM*)**TT13C 1B, UL****Monday 1500h****Finding Just the Data You Need: New Developments in Online Oceanographic Data Discovery Tools** (*joint with HE, IS, OD*)**TT13D 1B, UL****Monday 1530h****Pangeo: A Community Platform for Big-Data Geoscience** (*joint with OD, OM, PC*)**AIR-SEA INTERACTIONS****AI14A Poster Hall C-D****Monday 1600h****Extratropical Air-Sea Interactions and Extreme Events III Posters** (*joint with PL*)**Moderators:** Hisashi Nakamura, University of Tokyo; Masami Nonaka, Japan Agency for Marine-Earth Science and Technology (JAMSTEC); LuAnne Thompson, University of Washington Seattle**AI14A-2234 POSTER** The Agulhas retroreflection impact on the climate variability: **Y Zhu**, F Wang, B Qiu, Z Zhang, Y Li**AI14A-2235 POSTER** On the Importance of a Midlatitude Oceanic Frontal Zone for the Baroclinic Annular Mode: **M Nakayama**, H Nakamura, F Ogawa**AI14A-2236 POSTER** Impact of Northern Atlantic Ocean warming on the North Pacific subtropical gyre: **Y F Lin**, J Y Yu, N S Keenlyside**AI14A-2237 POSTER** Far-reaching effects of sea ice extent in the Sea of Okhotsk on sea-surface turbulent heat flux and their possible influence: **T Nakamura**, Y Takahashi, T Nakanowatari**AI14A-2238 POSTER** The identification of Borneo vortex against the dynamics of sea surface temperatures in the Java sea: **Y D Haryanto**, N F Riama, S Prayuda, R Agdialta, F Alfahmi, A Suryo, B E Pratama**AI14A-2239 POSTER** Southern Ocean mixed layer depth change in winter influenced by wind variability: **J Choi**, H Song**AI14A-2240 POSTER** Wintertime Surface Heat and Momentum Fluxes in the Gulf Stream from Saildrone Observations: **M Diard**, S Bishop, K A Donohue**AI14A-2241 POSTER** Ocean Fog Detection using Himawari-8 data over the Yellow sea with Machine Learning Approaches: **S SIM**, J Im, E Jang Ms, Y Kim

AI14A-2242 *POSTER* Winter Extreme Mixed Layer Depth South of the Kuroshio Extension: **J Yu**, B Gan, L Wu

AI14A-2243 *POSTER* Heat and Salinity Transport between the Mixed Layer and the Permanent Pycnocline Estimated from Argo Data: **Y Kawai**

AI14A-2245 *POSTER* Decadal Variations of North Pacific Subtropical Mode Water and Their Influence on the Downstream Region Observed at the 137°E Repeat Hydrographic Section: **F Kobashi**, T Nakano, N Iwasaka

AI14A-2246 *POSTER* World ocean thermocline weakening and climate impact: **P C Chu**, C Fan

AI14A-2247 *POSTER* Wind-driven and intrinsic interannual-to-decadal variability in eddy activity in the Kuroshio Extension: **M Nonaka**, H Sasaki, B Taguchi, N Schneider

AI14A-2248 *POSTER* *Eddy and Wind Forced Spiciness Variability in OFES – Formation, Propagation, and Predictability of density compensated anomalies in the Pacific Ocean Thermocline*: **A Miranda**, N Schneider, R Furue

AI14A-2249 *POSTER* Two pathways of subsurface spiciness anomalies in the subtropical South Pacific: **Y N Sasaki**

AI14A-2250 *POSTER* Observation of Upper Ocean and Lower Atmosphere Characteristics over the Western North Pacific in Summer 2018: **H Na**, S Y Lee, Y G Park, D G Kim, S Seo, A J Noh

AI14A-2251 *POSTER* Sensitivity of Heavy Precipitation to coastal SST near the Kuroshio: A Case Study in the Sea of Japan area on early July, 2018: **S Iizuka**, A Manda

AI14A-2252 *POSTER* Why do explosive cyclones frequently occur over warm ocean currents?: An answer to this mystery: **H Hirata**

AI14A-2253 *POSTER* The role of air-sea interactions in atmospheric river events: Case studies using the SKRIPS regional coupled model: **R Sun**, A Subramanian, B D Cornuelle, M R Mazloff, A J Miller, H Seo, I Hoteit

AI14A-2254 *POSTER* The role of coastal ocean surface fluxes during landfalling Atmospheric Rivers along the US West Coast: **S Bartusek**, H Seo, C Ummenhofer, J Steffen

AI14A-2255 *POSTER* Seasonal to interannual variability of upper ocean temperature and salinity: the role of Atmospheric Rivers: **D Giglio**, V Lyubchich, S T Gille

AI14A-2256 *POSTER* Sporadic low salinity signals (SLSS) in the mixed layer observed by the KEO buoy: identification and characterization: **K Kameyama**, H Aiki

AI14A-2257 *POSTER* A Rain Accumulation Timeseries at Ocean Weather Ship Papa in the Northeast Pacific Ocean: **M Talebi**, M F Cronin, N A Bond

COASTAL AND ESTUARINE PROCESSES

CP14A Poster Hall C-D

Monday 1600h

Methane Emissions from Coastal and Ocean Environments Posters (*joint with OB*)

Moderators: **Judith Rosentreter**, Southern Cross University; **Bradley Eyre**, Southern Cross University

CP14A-1023 *POSTER* Methane dynamics along the Southeast U.S. Atlantic Margin: **S B Joye**, H Choi, A Bracco, K Hunter, R Karns, J D Chaytor, A W Demopoulos, E E Cordes

CP14A-1024 *POSTER* Zooplankton methane production in the oxic surface waters of the Baltic Sea and its contribution to the methane efflux: **O Schmale**

CP14A-1025 *POSTER* Methane emissions from Australian estuaries: **J Yeo**, J A Rosentreter, J Oakes, B Eyre

CP14A-1026 *POSTER* Factors Regulating Sediment Methane and Nitrous Oxide Production and Consumption in Northern Temperate Estuaries: **N Ray**, R W Fulweiler

CP14A-1027 *POSTER* Source of methane released from the subtropical coastal area of southern Texas, USA: mangrove or seagrass?: **H Yu**, R B Coffin, P S Rose

CP14A-1028 *POSTER* Methane Fluxes from Temperate Eelgrass Meadows: **A Al-Haj**, R W Fulweiler

CP14A-1029 *POSTER* Pathways for methane transport and atmospheric exchange in a coastal floodplain system: **N D Ward**

CP14A-1030 *POSTER* Aquatic Ecosystems are the Largest Source of Methane on Earth: **J A Rosentreter**, A Vieira Borges Sr, P A Raymond, B R Deemer, M Holgerson, S Liu, C Song, C M Duarte, G H Allen, D Olefeldt, B Tom, J M Melack, B Eyre

CP14A-1031 *POSTER* Variations of dissolved methane in mountainous river networks and its estuaries in Taiwan: **H C Tseng**, C T A Chen, T H Huang, Y C Chang

CP14A-1033 *POSTER* Bubble-mediated transport of benthic microorganisms into the water column at methane releasing seep sites (Coal Oil Point Seep field): Identification of methanotrophs and implication of seepage intensity on transport efficiency: **O Schmale**, S Jordan, T Treude, I Leifer, J Werner, H Schulz-Vogt, R Janßen

CP14A-1034 *POSTER* Methane air-sea fluxes in two fjords in West Spitsbergen: **E D Santin**

CP14A-1036 *POSTER* Design of a Laboratory-controlled, Flow-through System for Measuring Microbial Methane Production in Marine Sediments: **J Dale**, J DeJli, W T Wood, K T Holland

CP14A-1037 *POSTER* Enhanced Methane Oxidation Capacity of Cold Seep and Hydrothermal Plume Communities in the Gulf of California: **H Choi**, R Karns, A Montgomery, S B Joye

CP14B Poster Hall C-D

Monday 1600h

Nearshore Processes VIII Posters

Moderators: **Christie Hegermiller**, Woods Hole Oceanographic Institution; **Jenna Brown**, USGS

CP14B-1038 *POSTER* Relative Dispersion Over the Inner Shelf: Wave Forcing, Anisotropy and Variations with Offshore Distance: **C Ohlmann**, L Romero, E Pallas Sanz, P Perez-Brunius

CP14B-1039 *POSTER* Inter-annual variability in the stratification regime off the Mid-Atlantic Bight shelf.: **A Kumar**

CP14B-1040 *POSTER* Observed modifications to the Northwest Luzon Coastal Current from the interaction of wind and eddy fields: **L Solera**, C Villanoy, C L A Repollo, O C Cabrera

CP14B-1041 *POSTER* Statistical and dynamical descriptions of submesoscale wave-current interactions in a coastal region: **S Y Kim**, L Ou

CP14B-1042 *POSTER* Nearshore Bathymetry and Surface Current Retrieval from Moving Wave Patterns Observed by Spaceborne Radar: **R Romeiser**, H C Graber

CP14B-1044 *POSTER* Coherent interference of ocean swell over submarine canyons: **H Tamura**

CP14B-1045 *POSTER* Explicit Relaxation Technique for Solving the Green-Naghdi Equations for Dispersive Waves: **E Tovar**, J L Guermond, B Popov, C E Kees, A Dimakopoulos

CP14B-1046 *POSTER* Numerical Simulations of Nearshore Wave Processes using the Phase-Resolving SWASH Model in Tres Palmas and Isla Verde Marine Reserves, Puerto Rico: **C Evans**, M Canals, P Chardon-Maldonado, S R Harrison, O M Cheriton, J B Logan, K J Rosenberger, D J Nowacki, C D Johnson, C D Storlazzi

CP14B-1047 *POSTER* Predicting Nearshore Hydrodynamics Using the Coupled Ocean Atmosphere Prediction System (COAMPS): **K L Edwards**, T J Campbell, J Veeramony

CP14B-1048 *POSTER* Wave-Driven Coastal Processes Through the Eyes of Three Phase-Resolving Models: **A Azouri**, V Roeber, M D Guiles, D S Luther, M Iwamoto, T Owens, J M Becker

CP14B-1049 *POSTER* Feature extraction of coastal waves based on phase-resolved simulation and bidimensional empirical mode decomposition: **X Hao**, L Shen

CP14B-1050 *POSTER* Simulation-based study of wind effect on shoaling waves: **H Liu**, L Shen

CP14B-1051 *POSTER* The Effect of Wind on Wave Shape in Shallow Water: **T Zdyrski**, F Feddersen

CP14B-1052 *POSTER* New stochastic and deterministic wave evolution models in coastal waters: **T Vrecica**, Y Toledo

CP14B-1053 *POSTER* Infragravity wave generation by nonlinear interaction between wind waves and wind gusts: **T Vrecica**, Y Toledo, R Soffer

CP14B-1054 *POSTER* Effect of Tidal Range on Undertow Distributions Based on Exceedance Probability Analysis: **K Borribunnangkun**, T Suzuki

CP14B-1056 *POSTER* Acoustical measurements and modeling of mixed-grainsize sediment under breaking waves: **N Harris**, G Wilson, P Dickhudt

CP14B-1057 *POSTER* A Numerical Study of Swash Driven by a Plunging Solitary Wave Over a Permeable Sandy Beach: **Y Kim**, M P Delisle, T Gallien

CP14B-1059 *POSTER* Preliminary Assessment of Scalar Transport across the Sediment-Water Interface of Rippled Beds: **S Rodriguez-Abudo**, J C Vargas Martinez, E Aponte, B Santaliz

CP14B-1060 *POSTER* Resolving the Role of Dynamic Pressure on Positional State Changes of Submerged Objects: **A Sarni**, D L Foster

CP14B-1061 *POSTER* The influence of vegetation and wind waves on the distribution of bed shear stress on estuarine mudflats.: **S Cook**, T C Lippmann

CP14B-1062 *POSTER* Wave-induced Mean Currents Flowing Through Submerged Vegetation: **S M Henderson**

CP14B-1063 *POSTER* Numerical Framework for Interacting Flexible Submerged Aquatic Vegetation Blades: **Y Zhang**, X Yu, M T Davidson

CP14B-1064 *POSTER* Examining Wave Attenuation Rates and Subsurface Pore Pressures Across Three Marsh Restoration Sill Structures on a Sandy Bed.: **J Converse**, T W Miesse, M E Wengrove

CP14B-1065 *POSTER* Impact of Oyster Reefs on Wave Climate along a Marsh Edge: **J Bushey**, M A Reidenbach, S Hogan, W Kearney

CP14C Poster Hall C-D

Monday 1600h

The Dynamics of Buoyancy-Driven Flows in Estuaries, Continental Shelves, and Polar Seas IV Posters (joint with HE, PS)

Moderators: Sarah Giddings, Scripps Institution of Oceanography; **Joseph Jurisa**, Oregon State University

CP14C-1066 *POSTER* Ambient Water Circulation Near a River Discharge: Investigating the Formation of a Topographic β -Plume.: **A Sanchez-Rios**, S N Chen, J X Chang, S Kida

CP14C-1067 *POSTER* Coastal river plumes: Collisions and coalescence: **J A Warrick**, K L Farnsworth

CP14C-1068 *POSTER* Dynamics of Thermally-Driven Exchange Modified by Coriolis, Winds, and Currents.: **A Safaie**, K A Davis, G R Pawlak

CP14C-1069 *POSTER* Impact of compounding atmospheric events on shelf heat content in a river-influenced shelf system: Potential implications for Hurricane Michael: **B Dzwonkowski**, J Coogan, G Lockridge, K Park

CP14C-1070 *POSTER* Observations from a 24-hour survey examining exchange between a deep shipping channel and shallow estuary in a microtidal system, Mobile Bay, AL.: **J Coogan**, B Dzwonkowski, J C Lehrter

CP14C-1072 *POSTER* Interaction between an inclined gravity current and a pycnocline in a two-layer stratification: **Y Tanimoto**, N T Ouellette, J R Koseff

CP14C-1073 *POSTER* Monitoring the Congo River Plume with the Oceanic currents derived from the AIS messages: **I Dadou**, C Le Goff, Y Morel, H Dieng

CP14C-1074 *POSTER* Influence of Estuarine Tidal Mixing on Structure and Spatial Scales of Large River Plumes: **A Osadchiv**

CP14C-1075 *POSTER* Numerical modeling of the Columbia River plume dynamics: **T Karna**

CP14C-1076 *POSTER* Predictability of ROMS-Ocean State Ocean Model using Information Theory: **A Sane**, B Fox-Kemper, D S Ullman, L M Rothstein, C R Kincaid

CP14C-1079 *POSTER* Using seasonality to trace water masses in a coastal ocean: **S Stevens**, R Pawlowicz

CP14C-1080 *POSTER* Interior fronts in a coastal buoyant plume: scaling theory and observations: **A E Yankovsky**, G Voulgaris, N Hasan

CP14C-1081 *POSTER* The Consequences of Altered Phase in Near-Inertial Variability in Submesoscale Eddies in a Plume Front: **R D Hetland**

CP14C-1082 *POSTER* Implications of Shifting Stratification Dynamics on Phytoplankton Blooms in San Francisco Bay Under Future Climate Scenarios: **E S Nuss**, C D Holleman, J Zhou, D B Senn

CP14C-1083 *POSTER* Observing fortnightly variability of San Francisco Bay turbid plume from MODIS imagery: **P L F Mazzini**, C Pianca

CP14C-1084 *POSTER* Seasonal to interannual variability of San Francisco Bay Plume from space: **P L F Mazzini**, C Pianca

CP14C-1085 *POSTER* The evolution of the vertical salinity variance in a river plume.: **R J Chant**, P L F Mazzini, J Wilkin, E J Hunter, M E Scully, N Nidzieko

CP14C-1086 *POSTER* Modeling Along Front Instabilities of a River Plume Modulated by a Cross Tidal Flow: **F Shi**, M C Haller, T J Hsu, J T Jurisa, J T Kirby Jr, W R Geyer

CP14C-1087 *POSTER* Spatial and Temporal Variability in Vertical Mixing in the Core of a Tidally Energetic River Plume: **P Spicer**, K Huguenard, K L Cole, D G MacDonald, M M Whitney, N Delatolas, J H Leidhold

CP14C-1088 *POSTER* Evolution of Frontal Structure in a River Plume Subject to Strong Alongshore Tidal Currents: **D G MacDonald**, Á Piffer Braga, N Delatolas, J H Leidhold, L Goodman, M M Whitney, K L Cole, K Huguenard, P Spicer

CP14C-1089 *POSTER* Gull's-eye View: Evolution of the Surface Expression of a River Plume Front: **J H Leidhold**, D G MacDonald, N Delatolas, Á Piffer Braga, L Goodman, M M Whitney, K Huguenard, K L Cole, P Spicer

CP14D Poster Hall C-D**Monday 1600h****Water Quality Monitoring and Forecasting in Coastal and Inland Waters: Applications and Operational Services II Posters (joint with SI)****Moderators: Steven Greb**, University of Wisconsin-Madison; **Guangming Zheng**, University of Maryland

CP14D-1091 POSTER Water Clarity (Secchi Depth): Closure between Theory and Century-old Measurements: **Z Lee**, S Shang, K Du, J W Wei, G Lin, M Shanguan

CP14D-1092 POSTER Strong linkage between phytoplankton and oxygen suggest the value of satellite data for hypoxia forecasting: **G Zheng**, P M DiGiacomo

CP14D-1093 POSTER Get Involved in GEO AquaWatch!: **M Neely**, S Greb, P M DiGiacomo, E Smail, A Dekker

CP14D-1094 POSTER Designing an Optimal Monitoring Network of Water Quality Variable in the Semi-Enclosed Estuary: **N H Kim**, J H Hwang

CP14D-1095 POSTER Are existing pollution matrices sufficient in characterizing coastal environment quality in Macajalar bay, Southern Philippines?: **V R K Galarpe**, C M Jaraula

CP14D-1097 POSTER Urban development and wastes management systems in Lagos State, Nigeria: **A E Ndimele**, B U Ndimele

CP14D-1098 POSTER Integrating satellite data analysis into a water quality monitoring program: **D Gurlin**

CP14D-1100 POSTER Searching for hyperspectral optical proxies to aid Chesapeake Bay resource managers in the detection of poor water quality: **S Schollaert Uz**, R Del Vecchio, J McKay, J Wolny, C Cartisano, S McDonnell

CP14D-1101 POSTER Controls on light attenuation and Secchi depth as a function of water column suspended particle properties and other water column constituents: Insights from the York River estuary, Virginia, USA: **C T Friedrichs**, K Fall, G Massey, K Moore, B Neikirk, D Parrish, W Reay, E Shields

CP14D-1102 POSTER A fast, accurate, physically-based, nonlinear and nonsteady method to obtain freshwater discharges, from hourly to climatic timescales, using water-level measurements in a tidal river: **D Bourgault**, P Matte

CP14D-1103 POSTER A novel approach for recreational water quality along the Texas beaches: Implication of a predictive neural network model for real-time nowcasting: **J Kim**, C Y Hsu

CP14D-1104 POSTER Autonomously Mapping the Evolution of an Introduced Dye Tracer for Water Resource Management in Regions of Frequent Drought: **P Rogowski**, S Merrifield, L Ding, E J Terrill, G Gesirich

CP14D-1105 POSTER Assessing Black Sea Water Transparency Using Satellite and In Situ Measurements: **I Serban**, Z Lee

CP14D-1106 POSTER Comparison of Methods to Sample Abundance of Estuarine Subtidal Macroalgae: Novel Core Sampling Method, Using Multi-SUBstrate Subtidal (SUBS) Sampler, Versus Standardized Methods: **K Carlin**, C Sosa, D Shultz, K C Sorensen, M Sutula, I Rivera

CP14D-1107 POSTER Effects of biostimulation on the phytoremediation of crude oil-polluted aquatic ecosystem by water hyacinth (*Eichhornia crassipes* [Mart.] Solms): **F E Ndimele**, P E Ndimele, A S Sunmoni

CP14D-1109 POSTER Maryland's Efforts on Consolidating, Analyzing, And Improving Stormwater Monitoring: Lessons Learned and Next Steps: **K Slater**, A Nagel, R Jepsen, D Caraco, J White

CP14D-1110 POSTER Monitoring of environmental impact of marine aquaculture farms using satellite-derived water quality parameters: **M Darecki**, M Konik

CP14D-1111 POSTER Mapping & modeling coastal wastewater circulation and dispersion around Boracay Island, Aklan Philippines: **P H T Bilgera**, C Villanoy, S M T Rodrigo

CP14D-1112 POSTER Operational Beach Water Quality Nowcasts using Weather Radars and the Weather Forecasting Model (WRF): **I J Acevedo**, S Rodríguez-Abudo, P Vargas, P Chardon-Maldonado, J Nieves, J M Morell

CP14D-1113 POSTER Remote Sensing Analysis and Classification of Stormwater and Sewage Runoff in the Tijuana River: **M Ayad**, J Li, B Holt, C M Lee

CP14D-1114 POSTER Stormwater runoff in coastal Southern California – Comparing satellite plumes with in situ bacteria measurements: **E Ortiz-Villa**, B Holt, C M Lee, L Ginger

CP14E Poster Hall C-D**Monday 1600h****Water Quality Monitoring and Forecasting in Coastal and Inland Waters: Biogeochemistry of Urban Systems II Posters****Moderators:** Cedric Fichot, Boston University; Karl Kaiser, Texas A&M University at Galveston

CP14E-1116 *POSTER* Modeling Pathways of PFAS from Sources to Drinking water in the Great Lakes: **A Pugh**, M Rowe, E J Anderson, S L Morey, C Jagoe

CP14E-1117 *POSTER* Testing for Water and Sediment Contamination in the Monterey Peninsula and Salinas Watershed for Select Persistent Organic Pollutants: **S Champ**, T Greathouse, A Haffa

CP14E-1118 *POSTER* Loadings, Transformations and Remobilizations of Silver in a Hypoxia Urban Estuary: **P Y Lin**, C P Lee, C S Lee, T L Yu, L S Wen, K T Jiann, C C Shen

CP14E-1119 *POSTER* Preliminary Environmental Assessment of Apalachicola Bay, Florida: **M Bayron Arcelay**, E Bourque, J Garwood, A Rosa-Marín, M Martínez-Colon

CP14E-1120 *POSTER* An improved fluorescence-based tracer of wastewater effluent for use in urban coastal waters: **C G Fichot**, K Sun, K Kaiser, C L Cash

CP14E-1121 *POSTER* Role of Freshwater Inflows and Nutrients on Phytoplankton Community Composition in a Subtropical Estuary: Insights from a Decade Long Study: **J L Steichen**, R Windham, T Booe, L Allyson, A Williams, A McAmis, H Lee, M S Allison, S Dorado, A Quigg

CP14E-1122 *POSTER* Recent trends of carbonate parameters in a mariculture area of Bolinao, Pangasinan, Philippines: **M C T Lagumen**, M L San Diego-McGlone, J M N Aguilar

CP14E-1124 *POSTER* Surface Water Injection into the Floridan Aquifer: Biogeochemical Transformations and Ramifications: **C Reid**, M Conley, R T Masserini Jr, A M McKenna, J Lisle

CP14E-1125 *POSTER* Extreme weather events accelerate carbon cycling in coastal ecosystems: **K Kaiser**, J Labonté, A Quigg, G Yan

CP14E-1126 *POSTER* Seawater quality at the brine discharge site from two mega size seawater desalination plants in Israel (Eastern Mediterranean): **N Kress**, Y Gertner, E Shoham-Fridner

CHEMICAL TRACERS, ORGANIC MATTER AND TRACE ELEMENTS**CT14B Poster Hall C-D****Monday 1600h****Production and Cycling of Organosulfur and Volatile Organic Carbon Compounds: Where Is the Field Now, and How Do We Move Forward? II Posters (joint with AI, NC, OB)****Moderators:** Rafel Simo, Institut de Ciències del Mar, CSIC; Patricia Matrai, Bigelow Laboratory for Ocean Sciences

CT14B-0846 *POSTER* Cycling of volatile organic compounds by marine bacterial isolates.: **J Dinasquet**, C Petersen, J S Sauer, A N Moore, F Azam, K A Prather

CT14B-0848 *POSTER* An HPLC Method to Quantify S-Methylmethionine in Marine Samples: **K Halstead**, R P Kiene, D J Kieber, J W Krause

CT14B-0851 *POSTER* Biological Contribution of VOCs in a Warming Ocean: Observations from a Coastal Mesocosm Experiment: **S Amiri**, J S Sauer, A N Moore, J Dinasquet, G Novak, K A Prather

CT14B-0852 *POSTER* Dimethylsulfoniopropionate concentrations in Mediterranean coastal water and ambient aerosols during *Ostreopsis* cf. *ovata* blooms: **L Chen**, D J Kieber, F Amato, M Vila, L Viure, A Alastuey, X Querol, E Berdalet

CT14B-0853 *POSTER* Global ocean dimethyl sulfide climatology estimated from observations and an artificial neural network: **W Wang**, F Primeau, E S Saltzman, J K Moore

CT14B-0854 *POSTER* Influence of marine microbes on atmospheric organosulfur during an induced phytoplankton bloom in a large wave flume system: **J Dinasquet**, J S Sauer, A N Moore, T Price, S Amiri, F Azam, K A Prather

CT14B-0855 *POSTER* Measuring the Pulse of the Great Barrier Reef and the Coral Reef-Climate Feedback: **G Jones**, H B Swan, E Deschaseaux

CT14B-0856 *POSTER* Retrieval of isoprene concentration from satellite data in the Southern Ocean: **P Rodriguez Ros**, M Gali, P Cortés, C Wohl, M Yang, C M Robinson, D Antoine, R Simo

CT14B-0857 *POSTER* Surface Ocean and Atmospheric Measurements of Volatile Organic Compounds in the Southern Ocean: **C Wohl**, M Yang, P D Nightingale, W T Sturges, A E Jones

CT14B-0859 *POSTER* Biogeochemical processes control the transport of organic pollutants in the upper Arctic Ocean: **M Liu**, M Cai, M Duan, M Chen, P Huang, H Ke

CT14C Poster Hall C-D

Monday 1600h

Revealing Biogeochemical Processes on Basin Scales Through Ocean Transects IV Posters (*joint with NC, OB, OM*)

Moderators: Gregory Cutter, Old Dominion University; **Rob Middag**, Royal Netherlands Institute for Sea Research

CT14C-0860 *POSTER* On using Si to unravel potential sources of dissolved Al to the deep Arctic: **C I Measures**, M Hatta

CT14C-0861 *POSTER* The Influence of Water Mass Mixing and Particle Dissolution on the Silicon Cycle in the Central Arctic Ocean: **C Ehlert**, B T P Liguori, K Pahnke

CT14C-0862 *POSTER* Variations in Salinity and Oxygen Isotopes in the Southern Indian Ocean: **H Courser**, N R Waring, A J Wagner, E L Sikes, T Williams, S A Murty

CT14C-0863 *POSTER* Mapping Oxygen Isotopes in the North Pacific Ocean: **K Jenkins**, A J Wagner

CT14C-0864 *POSTER* Dissolved Organic Phosphorus (DOP) Distributions in the Eastern Indian Ocean and Subtropical South Pacific Ocean: **Z Liang**, R T Letscher, K McCabe, D Marconi, D M Sigman, A N Knapp

CT14C-0865 *POSTER* Anthropogenic CO₂ accumulation in the Indian Ocean (1995 to 2018). Results from the GO-SHIP I07N repeat-hydrography transect.: **C Rodriguez**, F J Millero Jr

CT14C-0866 *POSTER* The Distribution of Size-Fractionated Particulate Organic Carbon Concentrations along a Meridional Transect in the Pacific: **N Carracino**, P J Lam, S Rojas, J K B Bishop

CT14C-0867 *POSTER* Autonomous Optics of the Ocean Biological Carbon Pump: PIC and particle birefringence along the GEOTRACES GP15 transect.: **J K B Bishop**, V J Amaral, P J Lam, C Orrico, T Wood, T Stezelberger

CT14C-0868 *POSTER* The Distribution of Particulate Trace Elements along a Meridional Transact in the Pacific: **A Laubach**, J M Lee, P J Lam

CT14C-0869 *POSTER* Biogeochemical Dynamics of Particulate Trace Metals in the South-East Atlantic along the GEOTRACES GA08 Section Cruise: **A Al-Hashem**, A J Beck, S Krisch, T Steffens, E P Achterberg

CT14C-0870 *POSTER* Carbon export and particulate trace metal cycling across the Western Arctic Ocean: **E E Black**, M A Charette, P J Lam, R F Anderson, L E Kipp, Y Xiang, S M Vivancos, S Kienast, K Buesseler

CT14C-0871 *POSTER* Dissolved And Particulate ²²⁶Ra Along GEOTRACES Pacific Meridional Transect: **E Le Roy**, M A Charette, T J Horner, P Henderson, P van Beek, M Souhaut

CT14C-0872 *POSTER* Following the Trail of Fukushima Tracers: Introducing Part II – Seven Years of North Pacific Mode Water Evolution: **S Yoshida**, A M Macdonald, I Rypina

CT14C-0873 *POSTER* ²²⁷Ac along the GEOTRACES Meridional Pacific Transect: Preliminary Results: **D E Hammond**, N J Kemnitz, P Henderson, E Le Roy, M A Charette, W S Moore, R F Anderson, M Q Fleisher

CT14C-0874 *POSTER* Near-bottom ²³⁰Th and ²³¹Pa Scavenging and Anomalous ²³⁰Th Burial Rates in the South Pacific: **F J Pavia**, M Q Fleisher, R F Anderson, S M Vivancos, J Abell, G Winckler

CT14C-0875 *POSTER* Nd isotopic composition and REE concentrations in the Bering Sea and the North Pacific: **H Obata**, T Hara, H Tazoe

CT14C-0876 *POSTER* GEOTRACES GP15 Meridional Section: Preliminary Results for REEs, Ba, V, methane, and Other Dissolved Trace Elements: **A M Shiller**

EDUCATION, OUTREACH AND POLICY

ED14A Poster Hall C-D

Monday 1600h

ASLO Multicultural Program Student Symposium II Posters

Moderators: Benjamin Cuker, Hampton University; **Carolina Bonin**, Hampton University

ED14A-3531 *POSTER* Predicting future coral survival: The effect temperature and ocean acidification have on soft coral physiology.: **S Wilson**, N Price, E Rockow

ED14A-3532 *POSTER* *E ola i ka wai*: A survey of two microbial pathogens within Hawai'i's *kahawai* along the *abupua'a*: **K Takushi**, K Oshiro, K Camacho, K Aina, M Steadmon, M Setzer, K L Frank

ED14A-3533 POSTER Ocean Acidification for the Nation: Congressional Briefs for Communication: **L Anderson**, J Mintz, E Jewett, A Cheripka

ED14A-3534 POSTER Visualizing the Hidden World: Utilizing CARD-FISH to Detect Microbes Exposed to Oil: **M Mills**, A Achberger, J B Sylvan

ED14A-3535 POSTER Driven factors of sexual reproduction in *Noctiluca scintillans*: **J Lee**, K P Chiang, S F Tsai

ED14A-3536 POSTER Effects of Microplastic Fibers on American Lobster Larvae (*Homarus americanus*): **T Hong**, M N Woods, D Fields, P Matrai

ED14A-3537 POSTER Exposure to Polychlorinated Biphenyl 153 Affects Circadian Rhythm Behavior and Gene Expression in Zebrafish: **A M McDonald**, N Aluru

ED14A-3538 POSTER Distribution of Non-native Red Lionfish (*Pterois volitans*) and Devil Firefish (*Pterois miles*) Throughout Georgia's Coastal Waters: **T Barry**, T Cox, K Roberson

ED14A-3539 POSTER DO SEAGRASS BEDS CREATE LESS STRESS ON RESTORATION OF THE HARD CLAM *MERCENARIA CAMPECHEIENSIS*?: **O Silvera**, E R Hall

ED14A-3540 POSTER Exploring Plasticity-Associated Traits Across an Intertidal Gradient: Variation in Adult DNA Methylation and Maternal Effects in California Mussels (*Mytilus californianus*): **J Chamorro**, L Kozal, G Hofmann

ED14A-3541 POSTER The Effects of Different Antibiotics on Pseudo-nitzschia Diatoms and their Microbial Communities: **C McDonald**, R E Diner, P Brunson, A E Allen

ED14A-3542 POSTER Global Phylogeography of Delphinine Dolphins Using Mitogenomics: **M Becker**, K Murphy, C Potter, I Ndong, L Keith-Diagne, M R McGowen

ED14A-3543 POSTER Secondary Simplification of the Tardigrade Gut Patterning Mechanism: **A Rojas**, F W Smith

ED14A-3544 POSTER To Swim, or Not To Swim, That Is the Question: An Ancestral State Reconstruction Based on Benthic Behaviors Across Medusozoa: **K Walls**, A Collins

ED14A-3545 POSTER Detecting Surface Melt Events on the West Antarctic Ice Sheet Via Passive Microwave Remote Sensing: **E R Robertson**, D Lubin

ED14A-3546 POSTER Effects of Oyster Aquaculture and Tidal Conditions on the Movement of Horseshoe Crabs, *Limulus polyphemus*: **S Estrada**, D Munroe, J Caracappa

ED14A-3547 POSTER Development of Sex Markers for Rockfishes, *Sebastes*, inhabiting the Northeast Pacific Ocean: **H Aycock**, F Vaux, K O'Malley, S Bohn

ED14A-3548 POSTER Small-Scale Physical Processes and Mixing in Coastal Oceans: **B Hosselkus**

ED14A-3549 POSTER Are Worms Eating Our Mussels? The Presence of Infectious *Proctoecees maculatus* Detected in *Mytilus edulis*: **A Figueroa**

ED14A-3550 POSTER Pre- and Post-Tunnel Comparison of Nitrogen Dynamics and Microbial Community of the Anacostia River, D.C.: **T Mitchell**, R Q Officer, G Arora, C Solomon

ED14A-3551 POSTER Optimizing an Immune Function Assay for Sablefish (*Anoplopoma fimbria*), an Emerging Aquaculture Species: **S Moheed**, J Dietrich, M B Rew, C Schubiger, M Arkoosh

ED14A-3552 POSTER Phenotypic and Genome Editing Analysis of Stickleback Morphology: **J Wilson**, C T Miller

ED14A-3553 POSTER Distribution and habitat characteristics of *Chloropyron maritimum palustre* (bird's beak) in the South Slough estuary: **S Suesue**, A Helms

ED14A-3554 POSTER Climate shifts and global spatio-temporal variation in albacore tuna (*Thunnus alalunga*) diets: **C Matuch**, N Hardy, S Green, L Crowder

ED14A-3555 POSTER The Influence of Concrete Formulation on Short Term Marine Biofouling in Savin Hill Cove, Massachusetts: **S Soin-Voshell**, L Lockwood, M Tlusty

ED14A-3556 POSTER Abundance of the Diamondback Terrapins (*Malaclemys terrapin*) in Coastal Georgia: **W Muniz**, K Howard, D Hoskins-Brown

ED14A-3557 POSTER TESTING PASSIVE SAMPLERS FOR EMERGING CONTAMINANTS OF ENVIRONMENTAL CONCERN IN NARRAGANSETT BAY: **J Olmo Classen**, J Becanova, S Vojta, R Lohmann

ED14A-3587 POSTER Quantifying zooplankton biodiversity and abundance in He'eia Fishpond: **I Mareko**, R Alegado, H Thomas

ED14A-3588 POSTER The Impact of Algal Biofilms on the Microenvironment of Concrete Substrates: **T Regan**

ED14B Poster Hall C-D

Monday 1600h

Capacity Development: A Key Need for Global Ocean Observing Systems I Posters (joint with IS, S/)

Moderators: **Brian Arbic**, University of Michigan Ann Arbor; **Alexis Valauri-Orton**, The Ocean Foundation

ED14B-3558 POSTER "GOA-ON In A Box": A Suite of Cost-Effective Equipment Designed to Remove Barriers to Ocean Acidification Monitoring in Resource-Limited Environments: **A Puritz**, A Valauri-Orton

ED14B-3559 POSTER *Community Fishers: Citizen Science for Sustainable Coastal Marine Monitoring*: **L M Marshall**, R Flagg, C L Tolmie, M Kot, D J Riddell, M Hoeberechts

ED14B-3560 POSTER "The Beach Like You Have Never Seen It Before": The Challenge Of Ecosystem-Based Management Of Beaches And Coastal Areas: **L R Goncalves**, A Turra, L Y Xavier, H H Checon, G Corte, Y Shah Esmaili, M R Corrêa, M N Ragagnin, I R Laurino, N Malinconico, T Rech, B Debastiani

ED14B-3561 POSTER Capacity Building for Global Ocean Observations - Training Early Career Scientists at Sea; *RV Polarstern* as an Open Ocean teaching platform: **P L Croot**, E M Brodte, P Lemke, K Wiltshire

ED14B-3562 POSTER The Marine and Maritime Monitoring Network (RM³): A contribution to the sustainable development of the Macaronesia archipelagos through improvement of their observational capacities.: **A Cianca**, L Cardona Díaz, C Barrera, M Villagarcia, E Brito de Azevedo, R Caldeira, V Ramos, M J Rueda, O Llinás

ED14B-3563 POSTER Towards the development of a regional observing/modeling system in Vietnam: Lessons from a short-term training in the use of the Regional Ocean Modeling System (ROMS): **J Zavala-garay**, J Wilkin, C Nguyen Kim, D Dang Dinh

ED14B-3564 POSTER Addressing Oceanographic Scientific Gaps through International Capacity Development in Vietnam: **P Rogowski**, J Zavala-garay, R K Shearman, E J Terrill, T H Lam

ED14B-3565 POSTER Establishing A Marine Environmental Monitoring Network in the Caribbean: **J C Hendee**, J C Halas, A Jones, J Bishop, N Amornthammarong, M Jankulak, L Gramer, M Soden, P Fletcher

ED14B-3566 POSTER The Gulf of Mexico Coastal Ocean Observing System (GCOOS): An arsenal of tools to build ocean observing system capacity: **C Simoniello**, G Craig, R D Currier, F Gayanilo, B A Kirkpatrick, S Kobara, M M Stoessel, J Vreeland

ED14B-3567 POSTER Enhancing Oceanographic Education and Research in West Africa-Lessons from the COESSING Summer School: **E S Nyadjro**, B K Arbic

ED14B-3568 POSTER The Master's Program in Oceanography and Applications in Benin : 10 Years of Training West and Central African Oceanographers: **G Alory**, N M Hall, N Hounkonnou, A Chaigneau, E Baloitcha, Y Morel

ED14B-3569 POSTER The need for a hydrographic science education program in West Africa and building the capacity to deliver it.: **S D Howden**, E Nyarko, J Adjetey, B Connon, B K Arbic, S Tsei, I Yirenkyi

ED14C Poster Hall C-D

Monday 1600h

Imagining Ocean Science: Education and Outreach Using Visualization, Storytelling, and the Arts III Posters (joint with SI)

Moderators: **Laura Guertin**, Pennsylvania State University Brandywine; **Kathie Kelly**, University of Washington

ED14C-3570 POSTER Technology, Exploration, and Clay: The Artistic Process of an Artist-at-Sea Residency: **F Oyarzun**

ED14C-3571 POSTER Voice of the Sea TV: Broadening Science Communication: **K Duncan Seraphin**, J Philippoff, T T Seraphin

ED14C-3572 POSTER Creating Authentic STEM Experiences in Schools to Meet the Challenges Facing our Planet: **K Schafer**, C Spenner

ED14C-3573 POSTER How young ocean scientists from different fields gathered to create a kid's book series to raise awareness: **A E A Hasson**, D Kalenitchenko, C Petetin, C Grillet

ED14C-3574 POSTER NCEI Story Maps: Bringing Data to Life: **A Sallis**, H McCullough, B Ambrose, M Cromwell, K Palubicki, J D Varner

ED14C-3575 POSTER Incorporating Local Knowledge about Coastal Communities with Drones, GIS and Spatial Storytelling: **T Hawthorne**, H Torres, K McClendon, A Ortiz, J E Clevenger, T Love, L Farmer, Z Flowers

ED14C-3576 POSTER An Underwater Snapshot: The Reality Behind Virtual Reality: **H Brady**

ED14C-3577 *POSTER* Towards Data-Driven Scientific Story Telling using Light Field Displays: **F Kuester**, V Petrovic, J P Rouja, A Hornstein

ED14D Poster Hall C-D

Monday 1600h

Propelling the Blue Economy Through Ocean Exploration, Unmanned Systems Technology, and STEM Education I Posters (*joint with IS, SI*)

Moderators: **Amanda Netburn**, Cooperative Institute for Ocean Exploration, Research & Technology; **Ruth Perry**, Shell Houston; **Kevin Wheeler**, NOAA Washington DC

ED14D-3579 *POSTER* Ocean Exploration in Support of the Blue Economy: **A N Netburn**, A P Leonardi

ED14D-3580 *POSTER* Biodiversity of the Deep Ocean and Blue Economy: Assessing Deep Sea Biodiversity Through NOAA's Office of Ocean Exploration and Research Sponsored Projects: **N J Valette-Silver**, S A Pomponi, J D Voss, S R Hammond, F Cantelas

ED14D-3581 *POSTER* Leveraging partnerships and unmanned systems to map coastal elevations and nearshore depths: **B Costa**, T Battista, C E Parrish, R K Slocum, C W Wright, M Sharr, J Kraus

ED14D-3582 *POSTER* Partnering with the Energy Industry to Sustain and Innovate Ocean Observations: **R Perry**, P Leung

ED14D-3583 *POSTER* Innovative Technologies for Arctic Exploration: Successful partnerships to advance ocean research: **H M Tabisola**, C W Mordy, P J Stabeno, J N Cross, C Meinig, C A Ladd

ED14D-3584 *POSTER* ASPIRE: A Campaign Focused on Partnerships and Ocean Exploration to Improve Understanding of the North Atlantic Ocean: **C Adams**, R Medley

ED14D-3585 *POSTER* EXPRESS: An eastern Pacific science and exploration campaign to inform the Blue Economy: **J Potter**, C Caldow, M E Clarke, C W Russell, G R Gelfenbaum, C K Paull, R Brennan

HIGH LATITUDE ENVIRONMENTS

HE14A Poster Hall C-D

Monday 1600h

Arctic-North Atlantic Connectivity: Variability, Changes, and Impacts of Freshwater and Heat Exchange III Posters (*joint with IS, OM, PC*)

Moderators: **Laura de Steur**, Royal Netherlands Institute for Sea Research; **Kristina Brown**, Institute of Ocean Sciences

HE14A-1906 *POSTER* Can Mid-Fjord Temperatures be Forecast from Shelf Temperatures Outside of Sermilik Fjord, Greenland?: **E El - Aton**, F Straneo, M R Lindeman, R Sanchez, J Holte

HE14A-1907 *POSTER* Coherent Subinertial Variability along the Southeast Greenland Coast: **R Gelderloos**, T W N Haine, M Almansi

HE14A-1908 *POSTER* Evidence of a Slope Jet Transporting Dense Water toward the Faroe Bank Channel: **S Semper**, R S Pickart, K Våge, K M H Larsen, B Hansen, H Hátún

HE14A-1909 *POSTER* Evolving properties of the East Greenland Current in Fram Strait: signals and impacts of Arctic Ocean change.: **L de Steur**

HE14A-1910 *POSTER* Exchange of water mass properties between the Greenland shelf and the surrounding subpolar North Atlantic: **K Wiegand**, D Kieke, P G Myers

HE14A-1911 *POSTER* Formation and Evolution of High-transport Denmark Strait Overflow Events: **M Almansi**, T W N Haine, R Gelderloos

HE14A-1913 *POSTER* Greenland Meltwater in the Coastal Current System of Southern Greenland: **N Beird**, F Straneo, I A A Le Bras, R S Pickart, W J Jenkins

HE14A-1914 *POSTER* How Similar Are Greenland Melting Signatures Observed in Model Simulations, Radar Altimetry and GRACE?: **S Stolzenberger**, C Wekerle, R Rietbroek, J Kusche

HE14A-1915 *POSTER* Impact of Varying Greenland Surface Melt on the West Greenland Shelf and the Labrador Sea: **J Holte**, F Straneo

HE14A-1916 *POSTER* Kinematic Structure and Dynamics of the Denmark Strait Overflow: **P Lin**, R S Pickart, K Jochumsen, M Moritz, K Moore, H Valdimarsson, T Fristedt

HE14A-1918 *POSTER* Mechanisms governing the inter-annual variability of water properties on the south-east Greenland continental shelf.: **F Facchinetti**, F Straneo, D Iovino, J Holte, I A A Le Bras, S Masina

HE14A-1919 *POSTER* Near real-time tracking of freshwater escaping the shelf west of Greenland: **I Goszczko**, E Frajka-Williams

HE14A-1920 *POSTER* Seasonal Sea Ice Loss in Eastern Greenland: **A Hamel**, F Straneo, L H Smedsrud

HE14A-1921 *POSTER* The nature and origin of monthly to seasonal hydrographic signals in the Denmark Strait Overflow: **J Opher**, J A Brearley, S Dye, I Renfrew, R S Pickart, M P Meredith, B Harden

HE14B-1930 *POSTER* Preliminary results from the first deployments of the Dynamic Ocean Topography Buoy: *in-situ* observations of sea surface height in ice-covered seas.: **J Guthrie**, J Morison, B Brand, B J Haines, M Kenney, R Kwok, T McGinnis, N Michel-Hart

HE14B-1931 *POSTER* Sea surface $p\text{CO}_2$ and ice concentration in the Canada Basin of the Arctic Ocean: **M D DeGrandpre**, W Evans, M L Timmermans, R A Krishfield, M Steele

HE14B-1933 *POSTER* Shelfbreak downwelling in the Alaskan Beaufort Sea: **N Foukal**, R S Pickart, K Moore, P Lin

HE14B-1934 *POSTER* Simulating the Sea Ice Carbon Pump in the Beaufort Gyre: **B Richaud**, K Fennel, E Oliver, M DeGrandpre, T Bourgeois, Y Lu, X Hu

HE14B-1935 *POSTER* Summer Net community production (NCP) and CO_2 flux evolutions in the western Arctic Ocean: **Z Ouyang**, W Zhong, D Qi, L Chen, W J Cai

HE14B-1936 *POSTER* The Atlantic Water Boundary Current in the Chukchi Borderland and southern Canada Basin: **J Li**, R S Pickart, P Lin, K R Arrigo, L W Juraneck, J H Swift, F Bahr, Y Xiao-Yi

HE14B-1937 *POSTER* The Impact of Submesoscale Dynamics on Arctic Freshwater Fronts: **M S Albery**, S Legg, R Hallberg, J A MacKinnon, J Sprintall, M H Alford, J Mickett, E Fine

HE14B-1938 *POSTER* The warming of the Chukchi slope through the Barrow Canyon outflow in the 2016-2017 winter: **S Kimura**, J Onodera, M Itoh, T Kikuchi, S Nishino, Y Kawaguchi, E Watanabe, N Harada

HE14B-1939 *POSTER* Validation of ICESat-2 satellite with hydrographic measurements derived from SIZRS flights: **S G Gallaher**, J Morison, R Kwok, R Andersen

HE14B-1940 *POSTER* Variability of the Beaufort Gyre freshwater content in 2003-2018 from observations and model results: **A Y Proshutinsky**, R A Krishfield, M L Timmermans, W J Williams, J Toole, S Zimmermann, E Golubeva, G Platov, E Watanabe, G Manucharyan, T W K Armitage, D S Dukhovskoy

HE14B Poster Hall C-D

Monday 1600h

New Insights into the Beaufort Gyre of the Arctic Ocean: Scientific Questions, Observing Technologies, and Modeling Capabilities I Posters

Moderators: **Mary-Louise Timmermans**, Yale University; **John Marshall**, Massachusetts Institute of Technology

HE14B-1923 *POSTER* Abnormally Surface freshening and halocline deepening during 2006-2012 in the Canada Basin associated with Arctic Oscillation: **J Dong**, Y Liu, M Jin, C Dong

HE14B-1925 *POSTER* Changing Sources and Pathways of Freshwater Accumulation in the Arctic Ocean: **C Chen**, Y Zhang, R C Beardsley, S T Cole, G Gao, H Lin

HE14B-1926 *POSTER* Circulation in the vicinity of Mackenzie Canyon from a year-long mooring array: **R S Pickart**, P Lin, F Wiese, D B Fissel, E Ross, J Kasper, F Bahr, D J Torres, J K O'Brien, H Melling, K Borg, R Gryba

HE14B-1927 *POSTER* Comparison of High-Resolution Model Output in the Beaufort Gyre: **E Douglass**, P J Hogan, A J Wallcraft

HE14B-1928 *POSTER* Exploring the role of the "Ice-Ocean governor" and mesoscale eddies in the equilibration of the Beaufort Gyre: lessons from observations: **G Meneghello**, J R Scott, E Doddridge, J C Marshall, J M Campin

HE14B-1929 *POSTER* Impacts of Spatially-Varying Vertical Mixing in an Arctic Ocean Model: **B O'Connor**, M Chanona, S Waterman, J R Scott, S MacTaggart

OCEAN OBSERVATORIES,
INSTRUMENTATION AND SENSING
TECHNOLOGIES

IS14A Poster Hall C-D

Monday 1600h

**Active Optics to Sense Marine Productivity
Throughout the World's Coasts and Oceans I
Posters (joint with CP, OB)**

Moderators: Greg Silsbe, University of Maryland Center for Environmental Science Horn Point Laboratory; **David Suggestt**, University of Technology

IS14A-3188 POSTER Quantifying Kinetics of Sequential Electron Transport Between Photosystem II and Photosystem I Using Light Induced Fluorescence Transient (LIFT) Method.: **Z S Kolber**

IS14A-3189 POSTER A Novel Diatoxanthin — Nonphotochemical Quenching — Fluorescence (DNF) Model For The Daytime Change Of *In Vivo* Fluorescence of Phytoplankton In Coastal Ecosystems: **Y Xie**, M S Dixon, G H Wilkfors, L Guy, M Krisak, Y Li

IS14A-3190 POSTER Non-photochemical quenching (NPQ) of chlorophyll a fluorescence (ChlF): an undervalued optical indicator of photosynthetic energy conversion efficiency: **N Schuback**, C Schallenberg, P Tortell

IS14A-3191 POSTER Deriving a proxy for iron limitation from chlorophyll fluorescence sensors on buoyancy gliders: **T Ryan-Keogh**, S J Thomalla

IS14A-3192 POSTER The Use of Fast Repetition Rate Fluorometry to Determine Phytoplankton Growth Rate and Nutrient Status via the Ratio of Single-Turnover to Multiple-Turnover Fluorescence: **M Brown**, W B Penta, M Behrenfeld

IS14A-3193 POSTER New Kinetic Fluorescence Technique for Measurements of Photosynthetic Rates and Instantaneous Growth Rates of Phytoplankton, in Relation to Nutrient Stress in the Ocean: **M Y Gorbunov**, P G Falkowski

IS14A-3194 POSTER Photosynthetic energy conversion efficiency along the West Antarctic Peninsula: **J Sherman**, M Y Gorbunov, O Schofield, P G Falkowski

IS14A-3196 POSTER Lidar Measurements of Ocean Optical Properties in Tank Tests and Coastal Water With Model Simulation Closure: **C M Strait**, M S Twardowski, F Dalglish, A Tonizzo, A K Vuorenkoski

IS14A-3197 POSTER A multispectral pulsed laser line scanning subsea LiDAR for studying Arctic benthic macroalgae and ice-bottom microalgae with AUVs: **E Rehm**, F Dalglish, W Britton, M Huot, P Archambault

IS14B Poster Hall C-D

Monday 1600h

**Emerging Ocean Technologies: A Snapchat of
New Sensors and Observing Platforms II
Posters**

Moderators: Kersey Sturdivant, Duke University; **Sophie Chu**, NOAA Pacific Marine Environmental Laboratory

IS14B-3198 POSTER A New Submersible Instrument for Measuring Hyperspectral Backscattering in Natural Waters (Hyper-bb): **W H Slade**, O A Mikkelsen, T Leeuw, D R Dana, C Pottsmith

IS14B-3199 POSTER A Sea Trekking Rechargeable Instrumented Drifter (STRIDR): **P J Rusello**, S Anderson, M Marnon, C Ohlmann

IS14B-3200 POSTER An Autonomous Vehicle Based Open Ocean Lagrangian Observatory: **B Hobson**, B Kieft, B Y Raanan, Y Zhang, J M Birch, J P Ryan, F Chavez, C A Scholin

IS14B-3201 POSTER Development of a Novel Sensor for Flow-Through Microplastics Detection: **B Colson**, A Michel

IS14B-3202 POSTER Imaging through turbulence with improved point spread model in a compressive sensing system: **W Hou**, B Ouyang, S Matt, D Estrada

IS14B-3203 POSTER Innovative Sensing Technology of Seawater pH by ISFET: **H Kayanne**, T Miyawaki, N Fujita, A Hemmi, K Morioka, K Suzuki, H Nakajima

IS14B-3204 POSTER Localizing sounds from ships and cetaceans with a glider equipped with a 8 hydrophones' network : First results from a 20 day - 600 km exploration of the Western French Mediterranean Sea in 2019: **J Lossent**, C Gervaise, L Beguery, R Tricarico, C A valentini-Poirier, P Boissery

IS14B-3205 POSTER Rotational motion compensation towards precise wind speed measurement on the sea: **H Taniguchi**, N Suzuki, G Garcia, A Ikeda

IS14B-3206 POSTER Stability of Tris pH buffer in artificial seawater stored in bags: **W Wolfe**, K Shipley, Y Takeshita, P J Bresnahan Jr, T Wirth, T R Martz

IS14B-3207 POSTER The SBE 61 CTD: Measuring the Bottom Half of the Ocean: **D J Murphy**, K I Martini

IS14B-3208 *POSTER* The *In Situ* Plankton Assemblage eXplorer (IPAX): An Inexpensive Plankton Imaging System for Zooplankton Study: **P Lertvilai**

IS14B-3209 *POSTER* TideRiders: Toward a Citizen-Scientist-Enabled and Institution-Supported Distributed Sensor Network for Water Quality Monitoring: **M Jakuba**, J W Partan, F Zhang, P McGuire

IS14B-3210 *POSTER* Underwater Optical Wireless Communications Sensor Links for Monitoring of Fragile Ocean Environments: **D Klawson**, A Agarwal, A Chen, W Nix, M Pique, E Salvatierra, N Zhao

IS14C Poster Hall C-D

Monday 1600h

From Catchments to Open Ocean: Advances in Remote Sensing for Supporting Sustainable Oceans II Posters (*joint with CP, OB, PI*)

Moderators: **Frode Vikebø**, Institute of Marine Research; **Kevin Turpie**, University of Maryland Baltimore County

IS14C-3211 *POSTER* Long term analysis of the North Sea light climate, using remotely sensed sediment data in a 3D coupled ecosystem mode: **D Thewes**, E V Stanev, J Wollschläger, J Pitarch, O Zielinski

IS14C-3212 *POSTER* Climatic Anomaly and Spatio-temporal Migratory Footprints on the Coastal Corridors of Nigeria: **J D Njoku**

IS14C-3213 *POSTER* Sentinel-3 SLSTR SST Validation using a Fiducial Reference Measurements (FRM) Service: **W Wimmer**, T Nightingale, J Hoyer, H Kelliher, R Wilson, J F Piollé, S Scifoni, S Dransfeld, C Donlon

IS14C-3214 *POSTER* Multi-decadal variations of remotely sensed phytoplankton size classes in the Bohai Sea and Yellow Sea: **X Sun**, F Shen, R J W Brewin, D Liu, R Tang

IS14C-3215 *POSTER* Analysis of satellite-derived time series of particulate organic carbon concentrations in surface layers of the global ocean: **I Joshi**, D Stramski, R A Reynolds, D H Robinson

IS14C-3216 *POSTER* Improved satellite ocean color algorithms for the tropical Pacific: **N Pittman**, P G Strutton, R Johnson, R Matear

IS14C-3217 *POSTER* High correlation but high scale-dependent variance between satellite measured night lights and terrestrial exposure: **A L Simons**, X Yin, T Longcore

IS14C-3218 *POSTER* Effects of Solar Penetration on the Prediction of Upper Ocean Circulation in the Northwest Atlantic: **Y Liu**, R He, Z Lee

IS14C-3219 *POSTER* Water Quality and Bio-optical Properties Measured from the Geostationary and Polar-Orbiting Ocean Color Sensors in the Northwestern Pacific Region: **S Son**, M Wang, L Jiang

IS14C-3220 *POSTER* A Scheme of Atmospheric Correction Using Same-day Observations: **J Wang**, Z Lee, J Wei, K Du

IS14C-3221 *POSTER* A 20-Year Analysis of Phytoplankton in the Northeast U.S. Continental Shelf Large Marine Ecosystem with Implications for Fisheries: **K Hyde**, M J Fogarty, C B Mouw, R Morse, K J Turner, A Ciochetto, V S Saba

IS14C-3222 *POSTER* Retrieval of CDOM absorption coefficient with remote sensing reflectance in ultraviolet band for waters in the Changjiang (Yangtze) estuarine and coastal region: **W Yongchao**, Z Lee, F Shen

IS14C-3223 *POSTER* Monitoring harmful algal bloom in Baja California using *in-situ* measurement and satellite remote sensing: **M S Lee**, A Smith, F Micheli

IS14C-3225 *POSTER* Estimation of the Ocean Surface Irradiance Reflectance from Measurement of Ocean Color: **X Yu**, Z Lee

IS14C-3226 *POSTER* Land-ocean interaction Interpretation through remote sensing image analysis in North Korean coastal area: **J Yim**, J Nam

IS14C-3227 *POSTER* A Comparative Study of the Optical Characteristics and Application for Bio-optical Model on the Coast Waters of California and Korea: **J E Min**, L S Guild

IS14D Poster Hall C-D

Monday 1600h

Moving Beyond Technology: How Quantitative Image-Based Methods Help Reveal Ocean Ecology II Posters (*joint with ME, OB*)

Moderators: **Mark Ohman**, University of California San Diego; **Heidi Sosik**, Woods Hole Oceanographic Institution

IS14D-3228 *POSTER* Quantitative size and biomass distributions from particle images: An improved algorithm applied to IFCB observations: **H M Sosik**, E Peacock, E T Crockford, K Archibald, B Fowler, A Shalapyonok

IS14D-3229 *POSTER* Leveraging Unsupervised Methods to Train Image Classification Networks with Fewer Labelled Inputs: Application to Species Classification of Phytoplankton Imagery from an Imaging Flow Cytometer: **E Culhane**, N Haentjens, A P Chase, P Gaube, J Morrill

IS14D-3230 *POSTER* Automated observations of phytoplankton communities from open water moorings: **A D Barton**, U Send, A Shalapyonok, R Heux, A Smith, P Chua, H M Sosik

IS14D-3231 *POSTER* Morphological Diversity of Phytoplankton: Identification of Traits, Morphological Succession and Periodicities from Imagery in Narragansett Bay, U.S.: **V Sonnet**, L Guidi, C B Mouw, S D Ayata

IS14D-3232 *POSTER* Contributing datasets from the Imaging Flow Cytobot for Essential Ocean Variables: **K Qi**, S Beaulieu, J Futrelle, E Peacock, H M Sosik

IS14D-3233 *POSTER* Optical and Environmental Signatures of *Cochlodinium polykrikoides* in Narragansett Bay, Rhode Island: **J Carney**, C B Mouw, A Ciochetto, J Rines

IS14D-3234 *POSTER* Observing and understanding harmful algal blooms using autonomous underwater imaging: **K M Kenitz**, E C Orenstein, P Roberts, P J S Franks, J S Jaffe, M Carter, A D Barton

IS14D-3235 *POSTER* Structure and Dynamics of Pico-, Nano- and Microplankton by Combining Together Flow Cytometry Data and Imaging: **G Gregori**, T Silovic, M Thyssen, M Denis

IS14D-3236 *POSTER* Global plankton diversity and size structure revealed by quantitative imaging approaches during the Tara Oceans expeditions: **F Lombard**, F Ibarbalz, M Brandão, S Martini, N Henry, F Benedetti, A Elineau, L Jalabert, M Picheral, L Stemann, L Zinger, C Bowler, G Gorsky

IS14D-3237 *POSTER* Analyzing Spatial Variations of Zooplankton Community Size Structures on the Northeast US Shelf: **J Low**, S G Glancy, E Peacock, H M Sosik, J Llopiz

IS14D-3238 *POSTER* Allometric estimates of midwater zooplankton metabolism and vertical flux from image data: **H Gossner**, A E Maas, L Blanco-Bercial

IS14D-3239 *POSTER* Mesozooplankton predator-prey interactions: encounter rates and variable Diel Vertical Migration as detected by *Zooglider*: **B M Whitmore**, M D Ohman

IS14D-3240 *POSTER* High-resolution sampling of a broad marine life size spectrum to examine shelf biophysical coupling: **A T Greer**, A C Hagemeyer, J C Lehrter, M McFarland, A R Nayak, N Stockley, B M Binder, A E Rice, K M Boswell, I Shulman, S deRada, B Penta

IS14D-3241 *POSTER* Bottom focused cameras on the OOI Endurance Array and their potential value to ocean ecology: **C Holm**, K Politano, J P Fram, E P Dever

IS14D-3242 *POSTER* A Novel Real-Time Monitoring System for Coral Larvae Detection Using In Situ Imaging: **A Gomes**, L T de la Cruz, R M Lopes

IS14E Poster Hall C-D

Monday 1600h

New Technologies and Methods in Fisheries Science I Posters (*joint with ME*)

Moderators: Camille Pagniello; Katherine Wilson, NOAA Fisheries Office of Science and Technology

IS14E-3243 *POSTER* There are Plenty of Fish in the Sea- Improved Optical Visibility Range for Automatic Fish Surveys and Monitoring: **D Levy**, O Bar Natan, T Treibitz

IS14E-3244 *POSTER* 'Estimating Fecundity and Age: Auto-Diametric and FT-NIR Spectroscopy Methods': **E Saas**, H Mapes, S Beyer, M Monk, J C Field

IS14E-3245 *POSTER* Using Relative Body Measurements of Nassau Grouper to Predict Total Length: **A Bender**, B Stock

IS14E-3246 *POSTER* Bayesian Learning Machines for Fish Models: **A Gupta**, P F J Lermusiaux

IS14E-3247 *POSTER* Incorporating spatially explicit demographic rates in a Management Strategy Evaluation of the California spiny lobster: **T Burnham**, W J Harford, J Wilson, L Bellquist, K Hovel

IS14E-3248 *POSTER* Earth Observation Services For Wild Fisheries, Oystergrounds Restoration and Bivalve Mariculture along European Coasts*: **G El Serafy**, S Wanke, N Villars, A Spinosa

IS14E-3249 *POSTER* Advances in fisheries science through emerging observing technologies: **H Moustahfid**, W Michaels, P Brehmer

IS14F Poster Hall C-D

Monday 1600h

Operational Satellite Oceanography II Posters (*joint with OB, PL, SI*)

Moderators: Christopher Brown, NOAA; **Veronica Lance**, NOAA (CICS UMD)

IS14F-3250 *POSTER* Assessing Cyanobacteria Blooms from Space: **S Mishra**, R P Stumpf, A Meredith, B A Schaeffer, J Werdell, K A Loftin, E Urquhart, B Seegers

IS14F-3251 *POSTER* Could DART® bottom pressure data be used beyond tsunami research, forecasting and hazards assessment? Altimeter and coastal tide gauge records say YES for synoptic time scales.: **G Mungov**, Y Zhang, A Sweeney, K J Stroker, N P Arcos

IS14F-3252 *POSTER* Development of Red Tide Detection Algorithm using GOCI Image based on Random Forest: **Y Kim**, W Kim, J Im, S SIM, E Jang

IS14F-3253 *POSTER* Enhancements for NOAA's operational upper Ocean Heat Content product suite: **D Byrne**, E Maturi, E W Leuliette, L K Shay, J M Burns

IS14F-3254 *POSTER* Evaluating Atmospheric Correction Algorithms for Sentinel 3 OLCI in Chesapeake Bay: **A Windle**, G Silsbe

IS14F-3255 *POSTER* Evaluation of Satellite-Derived Sea Surface Temperature (SST) Using Ocean Glider Data in the Agulhas Current System: **S Swart**, J Sun, M Krug

IS14F-3256 *POSTER* Expanding the Paradigm for Operational Satellite Oceanography and Its Programmatic Implications: **C Brown**, P M DiGiacomo, B R Bojkov, F Montagner, C Wilson

IS14F-3257 *POSTER* Global Ocean Heat Content Estimates from Swarm Satellite Magnetometer Observations: **J Saynisch Wagner**, C Irrgang, M Thomas

IS14F-3258 *POSTER* Impact of channel selection on sea surface temperature retrievals from passive microwave observations: **P Englyst**, J Hoyer, E Alerskans, L Toudal Pedersen

IS14F-3259 *POSTER* Inter-satellite calibration for decadal observations and operational forecasting of cyanobacterial blooms: **T Wynne**, R P Stumpf, S Mishra, A Meredith

IS14F-3260 *POSTER* New CNES CLS 2019 Mean Sea Surface: First Validation: **P Schaeffer**, M I Pujol, Y Faugere, G Dibarboure, N Picot

IS14F-3261 *POSTER* OCEAN APPLICATIONS FROM ALTIMETRY SATELLITES: **M M Srinivasan**, G N Geller, A Gicquel

IS14F-3262 *POSTER* OceanWatch – Tools and products for ocean remote sensing in the Pacific Islands Region: **M Abecassis**, E A Howell

IS14F-3263 *POSTER* Open source software for ocean phenology indices: **E M Armstrong**, N Record, Y Jiang

IS14F-3264 *POSTER* Optimal Estimation Approach to Sea Surface Temperature Retrieval from Satellite IR Radiometers and its Dependence on the a Priori: **G Szczodrak**, P J Minnett

IS14F-3265 *POSTER* Refinement of Phytoplankton Functional Type Algorithms for VIIRS Ocean Color Data on the Northeast U.S. Continental Shelf: **K J Turner**, K Hyde, C B Mouw, R Morse, A Ciochetto

IS14F-3266 *POSTER* Retrieval of Sea Surface Temperature from HY-2A Scanning Microwave Radiometer: **M Liu**, L Guan

IS14F-3267 *POSTER* Satellite Infrared Retrievals of Sea-surface Temperature at High Latitudes: **C Jia**, P J Minnett

IS14F-3268 *POSTER* SeaPRISM observations of three freshwater lakes: impacts of cyanobacteria and atmospheric correction on remote sensing: **T Moore**, H Feng, S A Ruberg, S Greb, N Pahlevan, S Bartlett, M Wang, M McFarland, K Beadle

IS14F-3269 *POSTER* The airborne LUNAR Spectral Irradiance (air-LUSI) mission and calibration of ocean observations from space: **K R Turpie**, S Brown, J T Woodward, A Gadsden, T C Stone, A Newton

IS14F-3270 *POSTER* The use of RADARSAT-2 Backscatter Coefficients (σ^0 , β^0 , γ^0) to Discriminate Oil Seeps From Oil Spills: A Linear Discriminant Analysis in the Gulf of Mexico (Campeche Bay): **G D A Carvalho**, P J Minnett, E Paes, F P de Miranda, L Landau

MARINE ECOLOGY AND BIODIVERSITY

ME14A Poster Hall C-D; eLightning Theater

Monday 1600h

Building Resilience: Exploring the Role of Marine Protected Areas in the Face of Changing Ocean Conditions I eLightning (*joint with OC, PC, PI*)

Moderators: Michael Esgro; Gretchen Hofmann, University of California Santa Barbara

ME14A-02 *eLIGHTNING* New Classification Schemes Reveal MPAs Don't Buffer Climate Driven Fish Community Shifts: **R Freedman**, J Caselle, J Brown, C Caldwell

ME14A-03 *eLIGHTNING* Environmental variability introduces time lags into marine protected area responses: **K J Nickols**, W White, C Barcelo, A Hastings, L W Botsford

ME14A-04 *eLIGHTNING* Monitoring Marine Protected Areas with Citizen Science: **G Rapacciuolo**, A Young, M Esgro, R F Johnson

ME14A-05 *eLIGHTNING* Scale Matters: Understanding how small-scale interactions may determine the success of Marine Protected Areas: **T Eddy**, S Y Litvin, C Garza

ME14A-06 *eLIGHTNING* Targeted Metabarcoding to Assess the Possible Effects of Ocean Acidification and Hypoxia in the Olympic Coast National Marine Sanctuary: **C Paight**, C A Stepien, J Waddell

ME14A-07 *eLIGHTNING* What Can Large-Scale Marine Protected Areas Protect? Connecting Home Ranges to Species Protection in the New 500,000 km² Palau National Marine Sanctuary: **E Kelly**, A Dedrick, A Giron, C J Closek, S Lewis, L Hazen, E H Hartge, Y Golbuu, J Leape, F Micheli

ME14A-08 *eLIGHTNING* Using soundscapes to monitor species assemblages and vessel presence in two Australian marine parks: **J A McCordic**, A I DeAngelis, L Kline, C McBride, G Rodgers, T Rowell, J Smith, J Stanley, A Read, S M Van Parijs

ME14A-09 *eLIGHTNING* Are Australian Commonwealth marine protected areas climate ready?: **A M Fischer**, J S D Tan

ME14A-10 *eLIGHTNING* Evaluating Marine Protected Areas in Cuba's Southern Archipelagos: The Role of Public-Private Partnerships in Management Effectiveness: **A Puritz**

ME14A-11 *eLIGHTNING* Caribbean Challenge Initiative StoryMap: Interactively tracking progress towards the 20-by-20 ocean protection goal: **V McNulty**, S Schill

ME14B Poster Hall C-D

Monday 1600h

Building Resilience: Exploring the Role of Marine Protected Areas in the Face of Changing Ocean Conditions II Posters (joint with OC, PC, PI)

Moderators: Michael Esagro; Gretchen Hofmann,
University of California Santa Barbara

ME14B-0001 *POSTER* Effects of Age Structure and Spatial Diversity on Resilience in Networks of MPAs: **C Barcelo**, W White, L W Botsford, A Hastings

ME14B-0002 *POSTER* Designing for conservation success: a critical analysis and review of the related literature surrounding marine protection in the Mediterranean Sea: **M Cox**

ME14B-0003 *POSTER* Groundfish habitat associations on the “lost reefs” of the Monterey Bay National Marine Sanctuary; implications for conservation and management: **L Parker**, J Lindholm, S L Hamilton, A P DeVogelaere

ME14C Poster Hall C-D

Monday 1600h

Ecosystem Impacts and Ecosystem Services of Aquaculture II Posters (joint with OB, OC, SI)

Moderators: Janet Kubler, CSUN; **Charles Yarish,**
University of Connecticut

ME14C-0005 *POSTER* Establishing Aquaculture Frameworks for the Methane-Mitigating Rhodophyta, *Asparagopsis taxiformis*: **M Harden**, S Nuzhdin

ME14C-0006 *POSTER* Valuing Ecosystem Services from Seaweed Aquaculture: An Example Using Reduced Methane Production: **T B Murphy**, R Langton, L M Milke, T Noji

ME14C-0007 *POSTER* Quantifying Ecosystem Structure and Services Provided by Tropical Seaweed Farms: **M Baldino**

ME14C-0008 *POSTER* Growth Performance Assessment of Pure Strains *Oreochromis niloticus* (F1 Generations) From Ikorodu Water Body, Lagos State, Nigeria.: **A Usman**

ME14C-0009 *POSTER* Can sediment microbial fuel cells prevent the accumulation of porewater sulfide beneath aquaculture cages?: **C K Algar**, G Wanger, A Howard, C Ward, C Justrabo

ME14C-0010 *POSTER* Mapping declining oxygen in an aquaculture area (Pangasinan, Philippines) and in a bay impacted with untreated domestic waste (Manila Bay, Philippines): **L P A Sotto**, G S Jacinto, M I Rayos Del Sol, R Isah, M T Escobar, M L San Diego-McGlone

ME14C-0011 *POSTER* Challenges and Opportunities in Coastal Risk and Vulnerability Under Climate Change: Lessons from Coastal Area Planning and Management for Sustainable Fisheries in Asia.: **V Yavalkar**, S Patil, B Narkhede

ME14C-0012 *POSTER* Rethinking Blue Economy: “Farming Fresh Water Nile Tilapia (*Oreochromis niloticus*) in the Marine Waters of the Indian Ocean: **D Mirera**

ME14C-0013 *POSTER* Geographical Distance and Genetic Differentiation of Some Populations of *Tilapia guineensis* (Bleeker, 1862) in Nigerian Coastal Waters: **E A Ukenye**, I A Taiwo, P E Anyanwu

ME14C-0014 POSTER Identification of *Vibrio* species from recirculating aquaculture systems and their interactions with probiotic *Bacillus* spp.: **N Jacob**, A M Tarnecki

ME14C-0015 POSTER Microflora and Antibiotic Susceptibility Pattern of Some Microbes from Aquaculture Waste-water from Lagos, Nigeria: **O Olajuyigbe**, O A Agwu

ME14C-0016 POSTER Physico-chemical assessment of Lotic Nun River, and Abundance of its *Margaritifera margaritifera*: **U Chukwuka**

ME14D Poster Hall C-D

Monday 1600h

Impacts of Ecological Interactions on Marine Ecosystem Dynamics and Biodiversity: New Insights from Theory, Models, and Field Measurements IV Posters (joint with OB, OM, PI)

Moderators: Clifton Woodson, University of Georgia; Steven Litvin, Monterey Bay Aquarium Research Institute

ME14D-0018 POSTER Comparison of thermal niche model development methods for black sea bass: **L J Nazzaro**, E Slesinger, J T Kohut

ME14D-0019 POSTER Discovering Trophic Interactions in the Ocean Twilight Zone: Metabarcoding Analysis of Mesopelagic Fish Diet Diversity: **M Wojcicki**, S G Glancy, P G Batta-Lona, J Llopiz, A Govindarajan, A C Bucklin

ME14D-0020 POSTER Diversity, Abundance and Community Structure of Soft-Bottom Macrobenthic Fauna in the Maryland Coastal Bays, USA: **A Morales-Nunez**, P Chigbu

ME14D-0021 POSTER Ecological feedbacks stabilize a turf-dominated ecosystem at the southern extent of kelp forests in the Northwest Atlantic: **C Feehan**, S Grace, C Narvaez

ME14D-0022 POSTER Estuarine pelagic communities in response to resource pulses after catastrophic hurricanes: **H Liu**

ME14D-0024 POSTER Field assessments of novel benthic communities emerging with changing coastal water quality in the Florida Keys and the surviving coral species.: **Z Thanopoulou**, J Patus, K Sullivan Sealey

ME14D-0025 POSTER Flexible Canopies and Their Effect on Benthic Community Structure on Shallow Coral Reefs: **J Girard**, P Edmunds

ME14D-0026 POSTER Hurricane Harvey disturbance effects on seagrass communities: **J Estrada**, L A Yeager

ME14D-0027 POSTER Influences of Herbivores, Temperature, and Nutrient Availability on Marine Microbial Assemblages: Results of an in-situ Field Experiment: **L Lees**, A Martiny, M E S Bracken

ME14D-0028 POSTER Investigating long-term temporal changes in trophic structure of fish communities: insights from whole muscle tissue and compound specific isotopic analysis of amino acids: **L Durante**, A Sabadel, T Ingram, S Wing

ME14D-0029 POSTER Larval Dynamics in the Gulf of Mexico: Using Ontogenetic Vertical Migration Patterns to Inform Larval Trajectories and Assess Ecosystem Impacts: **K Vasbinder**, C Ainsworth, G Zapfe, R H Weisberg, Y Liu

ME14D-0032 POSTER Potential cryptic speciation in the Japanese populations of the pelagic tunicate, *Oikopleura dioica*: **A Masunaga**, A Bliznina, A Liu, C Plessy, Y Tan, N Luscombe

ME14D-0033 POSTER Recent invasion of a cordgrass, *Spartina alterniflora*, into Korean tidal flat and its positive and negative effects on native benthic community: **J Ryu**, M Lee, E Park, Y H Kim

ME14D-0034 POSTER Role of Depth and Substrate in the Evolution of Sea Pens (Pennatulacea, Octocorallia): a Phylogenetic Study: **U Ganguly**, S C France

ME14D-0035 POSTER Southwestern Biscayne Bay Shoreline Relic Oyster Assemblage Identification, Abundance, and Hydrological Feature and Substrate Associations: **H Capone**, I Zink, J Browder

ME14D-0036 POSTER Spatial Distribution, Frequency Patterns and Condition Factor of Five Species of Sciaenid Trawled from Nigeria Coastal Water: **H Omogoriola**

ME14D-0037 POSTER Species Diversity and Distribution Patterns in the Mariana Back Arc Vent Fields: **T Giguere**, D A Butterfield, V Tunnicliffe

ME14D-0038 POSTER The differential effects of two dominant epiphyte grazers associated with surfgrass *Phyllospadix torreyi* in controlling epiphytic algae levels in seagrass beds: **A Owens**, C Wong, C Reilly, L Marrack, J Lee

ME14D-0039 POSTER The Effects of an Invasive Alga on the Trophic Dynamics of Temperate Rocky Reefs: **K Scafdi**, M A Steele

ME14D-0040 POSTER The metabolism of nitrogen in *Ulva prolifera* blooming in a marginal sea of China - a case study based on a ¹⁵N-enriched culturing experiment: **Y Xin**, P Y Zhang, Y Jin, T Liu

ME14D-0041 *POSTER* Trophic Analysis Armed with a Trident: A Three-pronged Approach to Characterizing the Role of the Ctenophore *Pleurobrachia bachei* in Pelagic Food Webs: **J Masterman**, A W E Galloway, R Cowen, S Sponaugle, K Sutherland

ME14D-0042 *POSTER* Trophic Ecology of *Sargassum*-Associated Juvenile Fishes: **C Stachowiak**, K Dillon, F Hernandez Jr, M Peterson

ME14D-0043 *POSTER* Trophic Ecology of Atlantic Sailfish Larvae in the Gulf of Mexico: An Analysis of Diet, Prey Availability, Prey Quality, and Influences on Predator Growth and Condition: **A Hugi**, F Hernandez Jr, V Wang

ME14D-0044 *POSTER* Trophic Ecology of Resident Chinook Salmon in Puget Sound: **J Muehlman**

ME14D-0045 *POSTER* Trophic interactions and mercury accumulation in batoids (Chondrichthyes: Batoidea) of California coast.: **M Bezerra**, J A Seminoff, D G Slotton, C T Lai

ME14D-0046 *POSTER* Urchin Starvation State May Amplify the Positive Interaction Between *Corynactis californica* and Macroalgae: **X Boone**, A C Stier, A Ritger

ME14D-0047 *POSTER* A Comparison of Two Ecosystem Models of the Oceanic Gulf of Mexico: **M Woodstock**, B Wang, K Fennel, T Sutton, Y Zhang

ME14D-0048 *POSTER* Analysis of phytoplankton and mixotroph diversity and abundance in an estuarine system using complementary methods: **N Millette**, M da Costa, R J Gast

ME14D-0049 *POSTER* Characterization of Cell Division During Early Oogenesis in Copepod Females Emerging From Diapause: **K Monell**, V Roncalli, P H Lenz, R R Hopcroft

ME14D-0050 *POSTER* Differential predation by common heterotrophic protists on four species of the dinoflagellate genus *Scrippsiella*: **J H You**, H J Jeong, J H Ok, S J Kim

ME14D-0051 *POSTER* Emergence and ecological significance of deviations from convexity in phytoplankton trait distributions: **T Lorimer**, C Albert, F Pomati, A D Barton

ME14D-0053 *POSTER* Grazing Ecophysiology of *Florenciella* and other mixotrophs that consume *Prochlorococcus* at Station ALOHA: **Q Li**, K F Edwards, C Schvarcz, G Steward

ME14D-0054 *POSTER* Grazing rates of mixotrophic nano- and dinoflagellates in the Northern Gulf of Alaska in response to gradients in light, inorganic nutrients, and prey availabilities: **H Busse**, J Fiechter, S Strom

ME14D-0055 *POSTER* Influence of ocean circulation on the temporal variability of marine phytoplankton populations: **A M Kuhn**, S Dutkiewicz, O Jahn, S Clayton, T A Ryneerson, M R Mazloff, A D Barton

ME14D-0056 *POSTER* Influence of prey competition with *Noctiluca scintillans* on the grazing rate of marine oligotrich ciliate *Strombidium* sp.: **S F Tsai**, X B Chen

ME14D-0057 *POSTER* Ingestion rate and grazing impact by the marine red tide ciliate *Mesodinium rubrum* on marine eubacteria: **Y D Yoo**, W Yih, K A Seong, J R Rho, E Y Yoon

ME14D-0058 *POSTER* Long-term dynamics of phytoplankton, protistan, and prokaryotic communities at the San Pedro Ocean Time-series: **Y C Yeh**, J A Fuhrman

ME14D-0059 *POSTER* Microbial Community Structure in the Amazon River Plume: **B Ramcharitar**, S Duhamel, E K Strobe, J P Montoya, A Subramaniam

ME14D-0060 *POSTER* Microzooplankton Herbivory Reduced By Petroleum Pollutants In A Mesocosm Study: **C H Tang**, E J Buskey

ME14D-0061 *POSTER* Modelling the drivers of phytoplankton in subtropical coastal waters: **S Sarker**

ME14D-0062 *POSTER* Morphology and Ribosomal Amplicons: Complementary Methods in the Analysis of Waquoit Bay Phytoplankton Diversity and Abundance: **M da Costa**, N Millette, R J Gast

ME14D-0063 *POSTER* Plankton population dynamics and food web structure on the Northeast US Shelf (NESLTER): early indication of seasonal shifts in production regimes: **P Marrec**, H McNair, F Morison, G Franzè, J Stroock, S Menden-Deuer

ME14D-0064 *POSTER* Succession or Co-blooming in Plankton – Correlating Genetic Distance and Fitness Difference: **J Hoffmann**, K Vergin, S J Giovannoni, F Hellweger

ME14D-0065 *POSTER* The Characterization of a Novel Heterotrophic Nanoflagellate Isolated from the Coastal Waters of North Carolina: **G Corradino**, A Schnetzer

ME14D-0066 *POSTER* The community composition of Marine Stramenopiles with spatiotemporal variations in a subtropical Pacific Ocean: **K P Chiang**, Y C Y Lin, C H Hsieh

ME14D-0067 *POSTER* The Distribution of Mycosporine-like Amino Acids in Phytoplankton Across a Southern Ocean Transect: **E Weiss**, M Vernet, M R Cape, B J Pan, B G Mitchell

ME14D-0068 *POSTER* THE QUORUM-SENSING MOLECULE 2-HEPTYL-4-QUINOLONE (HHQ) INFLUENCES THE COMMUNITY COMPOSITION OF MARINE MICROBES: **Y Gao**, J Becker, A Schrecengost, N Giannetti, E Harvey, K Whalen

ME14D-0069 *POSTER* Using t-Distributed Stochastic Neighborhood Embedding (t-SNE) to Investigate Ecological Physiology of Zooplankton: **P Lenz**, M C Cieslak, A M Castelfranco, V Roncalli, D K Hartline

ME14D-0070 *POSTER* Variation in Color Acclimation Times: Part of Parameterizing a Light Color Competition Model for Cyanobacteria in Blue-Green Ocean Niches: **R Lovindeer**, K Mackey, H M Medina

ME14E Poster Hall C-D

Monday 1600h

Ocean Epigenetics: What Are We Learning As We Explore Epigenetics in Marine Organisms and Ecosystems? I Posters (joint with CP, OC)

Moderators: **Gretchen Hofmann**, University of California Santa Barbara; **Hollie Putnam**, University of Rhode Island

ME14E-0071 *POSTER* Changes in Genome-wide Methylation in Response to Ocean Acidification in the Pteropod *Limacina helicina antarctica* and Evolutionary Differences in DNA Methylation Across Pteropoda: **S Bogan**, K M Johnson, G Hofmann

ME14E-0072 *POSTER* Diving Deep into Global 5-methylcytosine DNA Methylation Across the Subclass Octocorallia (Cnidaria, Anthozoa): **L Walling**, S France

ME14E-0073 *POSTER* DNA Methylation Associated Gene Expression and Calcification Responses to Ocean Acidification in the Eastern Oyster (*Crassostrea virginica*): **A Downey-Wall**, L Cameron, Y Venkataraman, J B Ries, S B Roberts, K Lotterhos

ME14E-0074 *POSTER* Effects of intragenerational $p\text{CO}_2$ conditioning on metabolism, oxidative stress response, and DNA methylation of juvenile Pacific geoduck *Panopea generosa*: **S Gurr**, S A Trigg, B Vadopalas, S B Roberts, H Putnam

ME14E-0075 *POSTER* Endocrine disruptors cause multigenerational and transgenerational epigenetic changes in fish exposed during early life: **S M Brander**, K Major, B M DeCourten, J Forbes, A Mehinto, J Li, M Settles, R Connon

ME14E-0076 *POSTER* Environment Influences Potential for Performance Legacies Across a Generation in a Reef Building Coral: **H Putnam**, L Hedouin

ME14E-0077 *POSTER* Epigenetic characterization of age-structure in a wild bottlenose dolphin population from Naples, FL.: **J Eirin-Lopez**, A Beal, R Wells, C Toms

ME14E-0078 *POSTER* Examining the role of DNA methylation in transcriptomic plasticity of early stage sea urchins: **M Strader**, L Kozal, T S Leach, J M Wong, J D Chamorro, M J Housh, G Hofmann

ME14E-0079 *POSTER* Influence of ocean acidification on DNA methylation patterns in geoduck clams: **S A Trigg**, S J White, S B Roberts, H Putnam

ME14E-0080 *POSTER* Influence of Ocean Acidification on Pacific Oyster (*Crassostrea gigas*) DNA Methylation: **Y Venkataraman**, S Roberts

ME14E-0081 *POSTER* Seasonal variation on DNA methylation patterns in the staghorn coral *Acropora cervicornis* in Culebra Island, PR.: **J Rodriguez Casariego**, I Ortiz, A E Mercado-Molina, A M Sabat, I B Baums, J M Eirin-Lopez

ME14E-0082 *POSTER* The Epigenetic Landscape of Transgenerational Acclimation to Climate Change: **T Ravasi**

MARINE GEOLOGY AND SEDIMENTOLOGY

MG14A Poster Hall C-D

Monday 1600h

Marine Geohazards I Posters (joint with CP, IS)

Moderators: **Drake Singleton**, San Diego State University; **Jillian Maloney**, University of California, San Diego

MG14A-2175 *POSTER* Erosion Rates on Uplift Marine Terraces Following the 2016 Kaikōura Magnitude 7.8 (M_w) Earthquake: **W J Stephenson**, M E Dickson, M D Hurst, N J Litchfield, K P Norton

MG14A-2176 *POSTER* Analysis of Fault Interaction and Deformation along the Newport-Inglewood Rose Canyon and San Onofre Trend Fault Systems Using High-Resolution 3D P-Cable Seismic Reflection Data: **J J Holmes**, H Perea, N W Driscoll, G M Kent

MG14A-2177 *POSTER* Recent faulting in south San Diego Bay: Potential rupture pathways for future earthquakes on the southern Newport-Inglewood-Rose Canyon Fault system: **D M Singleton**, J Maloney, D S Brothers, N W Driscoll, R W Sliter, J Kluesner

MG14A-2178 POSTER Construction of late Quaternary eruption history in and around the Izu Volcanic Islands, off Tokyo: **K Aoki**, M Kobayashi, M Murata, F Nishizawa, T Takahashi, T Suzuki

MG14A-2180 POSTER Kuroshio's meander triggered slow slip events detected by DONET tsunami sensors: **K Ariyoshi**, A Nagano, T Hasegawa, H Matsumoto, K Suzuki

MG14A-2181 POSTER Evaluation of the CODAR Tsunami Detection Algorithm and Software: **H Roarty**, C W Whelan

MG14A-2182 POSTER Numerical Modelling of Tsunami Generated by Submarine Landslides on Irregular Bathymetry: **C Zhang**, J T Kirby Jr, S T Grilli, F Shi, G Ma

MG14A-2183 POSTER South Asian Tsunami Hazards: Early Warning Systems And Lessons Learned from Past.: **B Narkhede**, R C Bhattacharjee

MM14A-0272 POSTER Towards an understanding of ecosystem effects of viruses in the Eastern Tropical North Pacific Oxygen Minimum Zone: **S Jurgensen**, S Roux, S M Schwenck, F J Stewart, M B Sullivan, J Brum

MM14A-0273 POSTER Genome-resolved metagenomics reveals lineage-specific metabolic strategies within marine nitrifier subpopulations: **L Reji**, B B Tolar, J M Smith, F Chavez, C Francis

MM14A-0274 POSTER Ecological and Metabolic Strategies of Nitrifying Lineages Across Freshwater Inland Seas: **J Podowski**, S Paver, R J Newton, M Coleman

MM14A-0275 POSTER Novel Isothermal Nucleic Acid Amplification Assays for the Detection of Harmful Algal Species in Water and Shellfish Flesh.: **M Wilson**, J McQuillan, J Robidart

MM14A-0276 POSTER A *Kiritimatiellales* isolate representing a novel genus shows the potential for anaerobic degradation of sulfated polysaccharides and nitrogen fixation: **N Liu**, V Kivenson, Z Cui, D L Valentine

MM14A-0277 POSTER BENEFITS AND CHALLENGES OF QUANTIFYING MICROBIAL GENE COPIES IN THE OCEAN IN THE ERA OF 'OMICS: **P Moisaner**, D Chappell, B D Jenkins, K A Turk-Kubo

MM14A-0278 POSTER Chemical Communication within the genus *Marinobacter* may Mediate Niche Competition: **C Carrano**, R Cruz-López, P Kolesinski, D H Green

MM14A-0280 POSTER From Genomics to Microbial Physiology: Exploring adaptability of *Cyclobacterium marinum* Atlantic-IS to various C-source in oligotrophic environment: **I Sharma**, M D Lee, A Hines, R Lamendella

MM14A-0281 POSTER Is everything everywhere? Population metagenomics of the "pink berries" microbial communities from Woods Hole salt marshes: **H Doré**, B S Castillo Villaseñor, E Wilbanks

MM14A-0282 POSTER Meta-omic and Biogeochemical Signatures of Ammonia-Oxidizing Archaea Blooms in South San Francisco Bay: **A N Rasmussen**, C Francis

MM14A-0283 POSTER Microbial drivers of nitrogen metabolism: Searching *Tara* Oceans metagenomes: **L Blum**, H Alexander, M Pachiadaki

MM14A-0284 POSTER New isolates and genomes allow for a comprehensive characterization of SAR11 subclade IIIa: **V C Lanclos**, M W Henson, C Thrash

MICROBIOLOGY AND MOLECULAR ECOLOGY

MM14A Poster Hall C-D

Monday 1600h

Marine Microbes in the Omics Epoch: Unveiling Their Critical Roles in the Pelagic and Benthic Environments III Posters

Moderators: **Marilou Sison-Mangus**, University of California Santa Cruz; **Linda Kelly**, San Diego State University; **Craig Nelson**, University of Hawaii at Manoa; **Shady Amin**, New York University Abu Dhabi

MM14A-0269 POSTER Characterization of the first cultivated strain of the SAR86 clade, isolated from the tropical Pacific Ocean: **K C Freel**, O Ramfelt, S J Tucker, M S Rappe

MM14A-0270 POSTER Cyanophage Dynamics at the San Pedro Ocean Time Series: Generalists, Specialists, and One-shot-wonders: **E Dart**, J C Ignacio Espinoza, J A Fuhrman, N Ahlgren

MM14A-0271 POSTER Temperate infection in a canonically virulent virus-host system: **B Knowles**, J A Bonachela, M Behrenfeld, K Bondoc, B B Cael, C A Carlson, N Cieslik, B Diaz, H L Fuchs, J Graff, J Grasis, K Halsey, L Haramaty, C Johns, F Natale, J I Nissimov, B Schieler, K Thamatrakoln, T F Thingstad, S Våge, C E Watkins, T K Westberry, K D Bidle

MM14A-0285 POSTER Pangenomics and ecophysiology of SAR116 bacterioplankton: **J Coelho**, M W Heson, B Temperton, J C Thrash

MM14A-0287 POSTER Presence and Abundance of the Type VI Secretion System in a Coastal Ocean Environment: **M Kempnich**, M Sison-Mangus

MM14A-0288 POSTER Role of Integrative Elements in Gene Transfer and Niche Adaptation in *Prochlorococcus*: **E Thomas**, T Hackl, R Laurenceau, M J Ankenbrand, C Bliem, Z Cariani, P Berube, S Biller, R Stepanauskas, S W Chisholm

MM14A-0289 POSTER Small-scale spatial variations in bacterioplankton community structure at the San Pedro Ocean Time Series station off the coast of Southern California: **A R Santora**, C Fletcher-Hoppe, S M Laperriere, S Hou, A Long, M Thukral, J A Fuhrman

MM14A-0291 POSTER Vitamins B1 and B12 and biosynthetic precursors affect bacterioplankton growth dynamics and community composition in oceanic systems: **G Wienhausen**, L Dlugosch, M Simon

MM14B Poster Hall C-D

Monday 1600h

The Microbial Phosphorus Cycle Posters (*joint with ME, OB*)

Moderators: **Solange Duhamel**, The University of Arizona; **Kahina Djaoudi**, The University of Arizona

MM14B-0292 POSTER Effects of As:P Ratios on Co-cultures of a Green Alga and SAR11 Bacteria: **C P Lee**, K Halsey, S J Giovannoni

MM14B-0293 POSTER Evidence of Phosphonate Utilization by the Eukaryotic Phytoplankton, *Isochrysis galbana*: **L Whitney**, E J McDermith, C Mahoney, M W Lomas

MM14B-0294 POSTER Phosphate May Be Fully Reduced to Phosphine Gas in Anoxic Seawater: **L Coe**, B A Van Mooy

MM14B-0295 POSTER Piecing together phosphonate cycling in the surface oligotrophic ocean: **M Acker**, G Bachi, B N Granzow, O Sosa, A M Ebling, S T Wilson, B A Van Mooy, D M Karl, C Santinelli, T S Granzow, D Repeta

MM14B-0296 POSTER Alkaline Phosphatase Activity in an Equatorial Coral Reef Ecosystem: **R Nichols**, P Martin, M A Moynihan, S Chen

MM14B-0297 POSTER Trace Metal Availability for Alkaline Phosphatases: A Proteomic Perspective from the Oligotrophic North Atlantic: **K Kunde**, N Held, C Davis, N Wyatt, M R McIlvin, M Woodward, M A Saito, A Tagliabue, C Mahaffey, M C Lohan

MM14B-0298 POSTER Bioavailability of representative dissolved organic phosphate compounds to microbial communities in the western North Atlantic.: **K Djaoudi**, S Plummer, R Steffen, E Waggoner, S Duhamel

MM14B-0299 POSTER Dissolved Organic Phosphorus Utilization by *Synechococcus*: **E Waggoner**, S Duhamel,

MM14B-0300 POSTER Dissolved organic phosphorus utilization by phytoplankton reveals preferential degradation of polyphosphates: **J M Diaz**, R Steffen, J G Sanders, Y Tang, S Duhamel

OCEAN BIOLOGY AND BIOGEOCHEMISTRY

CT14A Poster Hall C-D

Monday 1600h

Gases As Tracers of Ocean Biogeochemical and Physical Processes Posters (*joint with AI, OB, OM*)

Moderators: **Roberta Hamme**, University of Victoria; **David Ho**, University of Hawaii at Manoa

CT14A-0829 POSTER Distribution of mantle ^3He in the Indian Ocean simulated by an Ocean General Circulation Model: **D Tsumune**, F Bryan, K T Lindsay, K Misumi, T Tsubono, N Takahata, H Obata, J Nishioka

CT14A-0830 POSTER Helium isotopes near the Indonesian Throughflow: **M T Escobar**, N Takahata, H Obata, Y Sano

CT14A-0831 POSTER Quantifying vertical nutrient fluxes along *GEOTRACES* sections using helium observations: **S Rigby**, R G Williams, E P Achterberg, W J Jenkins, A Tagliabue

CT14A-0832 POSTER ^{222}Rn as a tracer of air-sea gas exchange across the river influenced northern Gulf of Mexico shelf: **J Forsman**, K Maiti

CT14A-0833 POSTER Evaluating the Accuracy of Biogeochemical Cycling Rates from Transient Tracers: **S Mecking**, R E Sonnerup, M Claret, A Shao

CT14A-0834 POSTER Dissolved Oxygen Response on the Climate Variability of the Mediterranean Sea: **S S Sofianos**, A M Mavropoulou, V Vervatis

CT14A-0835 *POSTER* Annual Oxygen Budget for the Subpolar North Atlantic using Air-calibrated Glider and Mooring Data from the Ocean Observatories Initiative Irminger Sea Array: **H I Palevsky**, D P Nicholson, L Wanzer

CT14A-0836 *POSTER* An Observation of Primary Production Enhanced by Coastal Upwelling in the Southwest East/Japan Sea: **D Hahm**, T S Rhee, H C Kim, C J Jang, Y S Kim, J H Park

CT14A-0837 *POSTER* High-resolution dissolved O₂/Ar and optical scattering observations from the North Pacific subtropical/subpolar transition zone reveal contributions of small phytoplankton to oceanic net community production: **L W Juranek**, A E White, M Dugenne, S Ferrón, S Dutkiewicz, D M Karl

CT14A-0838 *POSTER* Machine-learning estimates of global marine gross primary production: **Y Huang**, D Nicholson, B Huang, N Cassar

CT14A-0839 *POSTER* From the ocean with ESTOC towards the coast with CanOA, expanding our knowledge on ocean acidification in the North-East Atlantic: **M González-Dávila**, J M Santana-Casiano, A Gonzalez

CT14A-0840 *POSTER* Constraints from Ocean Biogeochemistry Models and Global Datasets on Air-sea Fluxes of Climate-active Trace Gases: **P Suntharalingam**, E Buithenuis, Z Chen, J H Butler

CT14A-0842 *POSTER* Analysis of Atmospheric Potential Oxygen (APO) in the Pacific region to evaluate the seasonal air-sea gas exchange: **Y Tohjima**, H Mukai, T Machida, S I Nakaoka, I Misa, T Shirai

CT14A-0843 *POSTER* Precise quantification of seasonal air-sea exchanges of O₂ at the hemispheric scale using data from the ATom, ORCAS, and HIPPO airborne campaigns.: **Y Jin**, B B Stephens, J Bent, R F Keeling

CT14A-0844 *POSTER* Estimating global ocean heat uptake from the atmospheric Ar/N₂ ratio: **B Birner**, E J Morgan, J P Severinghaus, R F Keeling

CT14A-0845 *POSTER* Observational Constraints on the Vertical and Interhemispheric Gradient of the Ar/N₂ Ratio in the Troposphere: **E J Morgan**, B B Stephens, B Birner, R F Keeling

OB14A Poster Hall C-D

Monday 1600h

Benthic and Benthic-Pelagic Community Connectivity from Coastal to Deep-Ocean Environments II Posters (*joint with IS, ME, OM*)

Moderators: **Amanda Netburn**, Cooperative Institute for Ocean Exploration, Research & Technology; **Jeroen Ingels**, Florida State University

OB14A-0350 *POSTER* Community Composition of Deep Sea Meiofauna in the Atacama Trench and Pacific Seamounts: **J Ingels**, H J Horacek III

OB14A-0351 *POSTER* Extreme marine nematodes towards the comprehension of origin and evolution of life in our changing Planet: **D Zeppilli**, J Ingels

OB14A-0353 *POSTER* Benthic Community and Nutrient Enrichment Influence Development of Reef Biofilms: **K Remple**, M Donahue, M D Fox, H Putnam, Z Quinlan, N Silbiger, C Nelson

OB14A-0354 *POSTER* Tracing Isotopic Signatures of a Deep-Sea Coral from the North-Central California Margin: **L Rodgers**, C Fish, T M Hill, C Vines, T Guilderson

OB14A-0355 *POSTER* Multi-scale Characterization of Mesopelagic Organisms including Three-dimensional Imaging Lidar: **T McKenzie**, M Twardowski, A R Nayak, F Dalgleish, K M Boswell, B J Russell

OB14A-0356 *POSTER* Recruitment of Juvenile Fishes to Different Artificial Substrates in the Northwestern Gulf of Mexico: **C E Cintra Buenrostro**, S Salinas, J D Shively

OB14A-0357 *POSTER* Impacts of Scallop Larva Behavior in the Surface Mixed Layer on Larval Transport and Settlement over the US Northeast Continental Shelf: **L Zhao**, C Chen, S M Gallagher, R C Beardsley, P He, R Ji, C Davis

OB14A-0358 *POSTER* Patterns of Seafloor Biodiversity and Ecosystem Function in the Clarion Clipperton Zone: Are No-Mining Areas Representative of Regional Patterns?: **C R Smith**, M R Clark

OB14A-0359 *POSTER* Settling mechanisms of microplastics in an estuary system in the northeastern Japan: **H Fukuda**, Y Nishibe, R Yamashita, H Ogawa

OB14B Poster Hall C-D**Monday 1600h****Energy Metabolism and Calcification in Marine Organisms: Mechanisms and Responses to Environmental Stress II Posters (joint with ME, OC)****Moderators: Frank Melzner**, GEOMAR Helmholtz Centre for Ocean Research Kiel; **Martin Tresguerres**, Scripps Institution of Oceanography

OB14B-0360 POSTER Temporal trends in shell calcification of a foundational bivalve: combining baselines and short-term experiments to understand species' responses in a changing ocean: **E Bullard**, I Torres, T Ren, G T Kwan, O A Graeve, M Tresguerres, K Roy

OB14B-0361 POSTER Oxygen Flux Limitation drives Heat Wave Vulnerability of a Coastal Keystone Predator: **F Melzner**, U Findeisen, C Bock, C Hiebenthal, M Lenz, M Wall

OB14B-0362 POSTER Bivalve regulation of extrapallial fluid carbonate chemistry under ocean acidification: insights from pH, DIC and trace element measurements of the extrapallial fluid: **L Cameron**, A Downey-Wall, J H Grabowski, C W Hunt, K Lotterhos, E McNally, J Salisbury II, I T Westfield, J B Ries

OB14B-0363 POSTER Combining Multiple Geochemical Approaches (B/Ca, $\delta^{11}\text{B}$, $\delta^{13}\text{C}$, $\delta^{18}\text{O}$, Δ_{47}) to Study the Biocalcification Responses of Scleractinian Corals to Seawater Temperature and pH.: **I A DeCorte**, M Guillermic, C Bove, S Misra, G Mervyn, K Castillo, J B Ries, R Eagle

OB14B-0364 POSTER Critical salinity of benthic osmoconformers in the Baltic Sea: **F Melzner**, I Podbielski, M Bleich

OB14B-0365 POSTER Effects of Ocean Acidification and Warming on the Physiology of *Crassostrea virginica* Larvae: From the Cellular to Whole-organism Levels: **A Schatz**, J McDowell, E B Rivest

OB14B-0366 POSTER Examining symbiont selection and polyp connectivity in *Astrangia poculata* : **J Thibodeau**, M Sánchez-García, L Roberson

OB14B-0367 POSTER Light-Triggered Processes Drive Ocean Acidification Effects on Calcification and Dissolution of Tropical Reef Macroalgae: **M Koch**, C G McNicholl, L C Hofmann, P Swarzenski, M Metian, F Oberhaensli, A Taylor, M Gomez

OB14B-0368 POSTER Studying Coastal Acidification Effect on the Atlantic Surfclam, *Spisula solidissima* through an Experimental and Modeling Survey: **E Pousse**, M Poach, D H Redman, G Sennefelder, D Veilleux, M Krisak, M S Dixon, Y Li, E E Hofmann, J M Klinck II, D Munroe, G H Wilkfors, S Meseck

OB14B-0369 POSTER Temperature differentially affects feeding, metabolism, and biosynthesis in larval forms: **J Wang**, M DellaTorre, D T Manahan

OB14B-0370 POSTER The Impacts of Temperature Changes on the Coral *Astrangia poculata*: **C Ceballos**, L Roberson, M Sánchez-García

OB14B-0371 POSTER The Response of Antarctic Bivalves to Environmental Change in the Southern Ocean: **M J Sarría Dulcey**, S M Jennions, D N Schmidt, K Linse

OB14B-0372 POSTER Unlocking the role of the symbiotic community in the calcification process of the temperate coral *Astrangia poculata*: **Z Dellaert**, L Roberson

OB14B-0373 POSTER Warmth, and OA, and Hypoxia, Oh My! Interactions of simulated climate change on the metabolism of coastal species: **G Schwieterman**, D P Crear, D Lavoie, B Anderson, J Sulikowski, P Bushnell, R Brill

OB14C Poster Hall C-D**Monday 1600h****Marine Snow and Associated Small-Scale Processes with Large-Scale Implications II Posters (joint with PI)****Moderators: Jennifer Prairie**, University of San Diego; **Uta Passow**, University of California at Santa Barbara

OB14C-0374 POSTER Shear-Generating Roller Tanks for Studying Marine Snow Disaggregation: **M Rau**, Y Song

OB14C-0375 POSTER Observing aggregate formation using high-resolution stereoscopic imaging: **R S Henning**, J C Prairie

OB14C-0376 POSTER Consistent Increase in Particle Sinking Velocity with Depth Found across >30 High-Latitude Phytoplankton Blooms using Biogeochemical Argo: **N Briggs**, S Henson, M Villa-Alfageme, H Claustre, F Carvalho, S L C Giering

OB14C-0377 POSTER A comparative study of the particle size spectra for Arctic, North Atlantic and Southern Ocean spring blooms: implications for POC export and sinking velocity.: **E Ceballos-Romero**, F C de Soto, M H Iversen, M Villa-Alfageme

- OB14C-0378** *POSTER* Diurnal Periodicity in Particle Flux in the Gulf of Mexico, Estimates from Flux Camera observed Particle Data: **A R Diercks**, J Blancher
- OB14C-0379** *POSTER* Observed Changes in Particle Abundance Driven by Changes in the Diel Thermocline: **N Doiron**, A R Diercks
- OB14C-0380** *POSTER* The effect of marine snow particle distribution on copepod behavior: **E Beckhaus**, J C Prairie, M Young, M Décima
- OB14C-0381** *POSTER* The effect of distribution on copepod ingestion of marine snow particles: **M Young**, J C Prairie, E Beckhaus, M Décima
- OB14C-0382** *POSTER* Quantifying reactions of copepods to marine snow through image analysis: **T Drake**, J C Prairie, H Martinez, C Briseño-Avena
- OB14C-0383** *POSTER* Marine Snow Consumption by Zooplankton Facilitates a Novel Entry Pathway for Domoic Acid into the Marine Food Web: **I Marquez**, A Abraham, J W Krause
- OB14C-0384** *POSTER* *Rapid Abiotic Transformation of Marine Dissolved Organic Matter to Particulate Organic Matter in Marine Surface and Deep Waters.*: **P Valdes**, C O Almeda-Jauregui, H Maske
- OB14C-0385** *POSTER* Determining the Abundance and Diversity of Bacteria on Marine Particles of Different Size Classes: **E Dougherty**, J A Cram
- OB14C-0386** *POSTER* The Influence of Temporal Variability on Marine Snow Dynamics in a Subtropical Estuary System: **E Harvey**, S Anderson, P Duffy
- OB14C-0387** *POSTER* Can the protein/carbohydrate (P/C) ratio of exopolymeric substances (EPS) be used as a proxy for its 'stickiness' and other biophysical properties?: **P H Santschi**, C Xu, K Schwehr, P Lin, L Sun, W C Chin, M Kamalanathan, H Bacosa, A Quigg
- OB14C-0388** *POSTER* TEP Production and Aggregate Formation in Eukaryotic Picophytoplankton: **B N Cruz**, C L Shurtleff, C Fredette-Roman, S Aouad, S Neuer
- OB14C-0389** *POSTER* Fragmentation of marine snow and marine oil snow due to small-scale turbulence: **K Ziervogel**, J Sweet, L Bretherton, A Quigg, U Passow
- OB14C-0390** *POSTER* The fate and distribution of oil residues in deep-sea sediments resulting from the sinking of marine snow in the northern Gulf of Mexico: **I C Romero**, J Chanton, G Brooks, S Bosman, R Larson, A R Diercks
- OB14C-0391** *POSTER* Sedflume Analysis of the Resuspension of Deep Gulf of Mexico Sediments: **A Harris**, A R Diercks

OB14D Poster Hall C-D**Monday 1600h****New Tools and Approaches to Constrain the Marine Nitrogen Cycle: From the Surface to the Sediments III Posters (joint with IS, MM, PI)**

Moderators: **Mar Benavides**, Mediterranean Institute of Oceanography; **Carolyn Löscher**, Univ Southern Denmark

- OB14D-0392** *POSTER* Cell-specific Nitrogen Fixation Rates of the Symbiotic Cyanobacterium UCYN-A Vary with Depth and Photoperiod: **M R Gradoville**, A M Cabello Perez, S T Wilson, K A Turk-Kubo, D M Karl, J P Zehr
- OB14D-0393** *POSTER* Dominance of heterotrophic N₂ fixation in a temperate estuary: **M Benavides**, S Hallstrøm, C W Evans, L J Potts, J Granger, C R Tobias, C B Mouw, L Riemann, P Moisaner
- OB14D-0394** *POSTER* Counteracting impacts of increasing atmospheric nitrogen and iron deposition on global marine N₂ fixation in the Anthropocene: **C J Somes**, A Landolfi
- OB14D-0395** *POSTER* Data-Driven Modeling of the Distribution of Diazotrophs in the Global Ocean: **W Tang**, N Cassar
- OB14D-0396** *POSTER* Effects of Mesoscale Eddies on the Contribution of N₂ Fixation to Export Production in the North Pacific Subtropical Gyre: **M Zhou**, J Granger, A E White, B Barone, D M Karl
- OB14D-0397** *POSTER* Hydrogen production by diazotrophs: a novel approach for high frequency measurements of nitrogen fixation: **M Caffin**, S T Wilson, A E White, D M Karl
- OB14D-0398** *POSTER* Temporal Dynamics of the Diazotroph UCYN-A and its Known and Possible Hosts over 10 Years at the San Pedro Ocean Time-series (SPOT): **C Fletcher-Hoppe**, Y C Yeh, J A Fuhrman
- OB14D-0400** *POSTER* Unexpected Presence of the Nitrogen-fixing Symbiotic Cyanobacterium UCYN-A in Coastal Monterey Bay Waters: **A M Cabello Perez**, K A Turk-Kubo, K Negrey, L Jacobs, R M Kudela, J P Zehr
- OB14D-0401** *POSTER* Airborne microbes contribute to N₂ fixation in surface water of the Northern Red Sea: **E Rahav**, A Paytan, E Mescioglou, Y Galletti, S Rosenfeld, O Raveh, C Santinelli, T Y Hou, B Herut
- OB14D-0402** *POSTER* Detection of the Nitrogen Fixing Bacteria UCYN-A using *nifH* geneFISH: **K J Harding**, K A Turk-Kubo, X Mayali, J P Zehr

OB14D-0403 *POSTER* Effects Of Southern Hemispheric Wind Changes On Marine Biological Production And N₂ Fixation: **A Landolfi**, J Getzlaff, C J Somes

OB14D-0404 *POSTER* Modelling the Impact of Multiple Environmental Drivers on Marine Diazotrophy: **L Wrightson**, C Mahaffey, O Aumont, A Tagliabue

OB14D-0405 *POSTER* Three Years of Observations Show a Sharp Boundary for Diazotrophs and N₂ Fixation Rates near the Northern Subtropical Front of the North Pacific Ocean: **W Mak**, M R Gradoville, H Farnelid, A E White, K A Turk-Kubo, B Stewart, F Ribalet, S Ferrón, P Pinedo-Gonzalez, V Armbrust, D M Karl, P S John, J P Zehr

OB14D-0406 *POSTER* Variable Nitrogen Fixation in *Crocospaera watsonii* Experiencing Iron-Light Co-limitation: **J Lopez**, N S Garcia, K R Mackey

OB14E Poster Hall C-D

Monday 1600h

Quantifying Carbon Export Pathways in the Global Ocean IV Posters (*joint with CT, MM, PI*)

Moderators: **David Siegel**, University of California Santa Barbara; **Deborah Steinberg**, College of William and Mary

OB14E-0407 *POSTER* Constraining Net Community Production and Export of Carbon From Daily In Situ Sensor Measurements of Carbon, Nitrate and Oxygen in the Central Labrador Sea: **D Atamanchuk**, J Koelling, U Send, D Wallace

OB14E-0408 *POSTER* A Decade of Net Community Production in the North Pacific from Biogeochemical Profiling Floats: **A J Fassbender**, W Haskell, J Long, J N Plant, K S Johnson, S Johannessen, S Riser

OB14E-0409 *POSTER* A method-to-method comparison for direct determination of particulate inorganic carbon fluxes in sediment trap samples: **K Pelham**, M L Estapa, C A Baker, R S Lampitt, K Buesseler

OB14E-0410 *POSTER* A size- and trait-based model of the copepod community in the global ocean: **C Serra Pompei**, B A Ward, A W Visser, T Kiørboe, K H Andersen

OB14E-0411 *POSTER* A Streamlined, Mechanistic Particle Flux Model Designed For Earth System Models Of Intermediate Complexity: A Global Assessment Of Particle Transfer Efficiency To The Deep Ocean: **A Dinauer**, S Doney, F Joos

OB14E-0412 *POSTER* Assessing Net Community Production in the Sargasso Sea Using Autonomous Underwater Glider Observations: **M Sullivan**, R Curry

OB14E-0413 *POSTER* Assessment of Sinking Particle Size Spectra from Marine Snow Catcher Deployments during EXPORTS: **E Romanelli**, S L C Giering, D Siegel, U Passow

OB14E-0415 *POSTER* Comparison of POC flux vertical attenuation between the subarctic and subtropical regions in the western North Pacific: **M C Honda**

OB14E-0416 *POSTER* Decoupling between particulate carbon and biogenic silica export within North Pacific Subtropical Gyre cyclonic eddies.: **K Zhou**, C R Benitez-Nelson, J Huang, P Xiu, Z Sun, M Dai

OB14E-0417 *POSTER* Diagnosing export pathways in the biological pump: Sediment trap data from the EXPORTS North Pacific field campaign: **M L Estapa**, C A Durkin, M Omand, K Buesseler

OB14E-0418 *POSTER* Drivers of carbon export efficiency in the global ocean: **S Henson**, F A C Le Moigne, S L C Giering

OB14E-0419 *POSTER* Estimating relative flux of phytodetritus, fecal pellets, and bacterial biomass using compound-specific isotope analysis of amino acids at Station Papa (EXPORTS): **H G Close**, P K Wojtal, L C Henderson, C R Benitez-Nelson, K Buesseler, M L Estapa, S M Pike, B N Popp, M Roca-Martí

OB14E-0420 *POSTER* Estimating the Contribution of Zooplankton Fecal Pellets to Marine Suspended Particle Pools: **S Doherty**, A E Maas, D K Steinberg, B N Popp, H G Close

OB14E-0421 *POSTER* ESTIMATION OF PARTICLE (DIS)AGGREGATION RATES FROM THE JOINT INVERSION OF POC, Al, AND Ti CONCENTRATION DATA: **V J Amaral**, O Marchal, J M Lee, P J Lam, M Roca Martí, K Buesseler

OB14E-0422 *POSTER* Expanding our Use of Thorium-234 as a Particle Flux Tracer in the EXPORTS Program: **K Buesseler**, C R Benitez-Nelson, S J Clevenger, J Drysdale, M Roca Martí, S M Pike, L Resplandy, B Umhau, A Wyatt

OB14E-0423 *POSTER* Fronts Potentially Drive Variability in Phytoplankton Productivity in the HNLC Subarctic Northeast Pacific.: **A H Timmerman**, R C Hamme

OB14F Poster Hall C-D**Monday 1600h****The Role of Cell Size and Plankton Community Structure As Drivers of Ocean Metabolism****Posters (joint with IS, ME, MM)****Moderators: Angelicque White**, University of Hawaii at Manoa; **Laurie Juranek**, Oregon State University

OB14F-0424 *POSTER* Remineralisation of Organic Carbon by Marine Bacterioplankton (REMAIN) - Reducing the Known Unknown: **I Seguro**, N Osmá, I Fernandez-Urruzola, C M Liszka, E Garcia-Martin, C Robinson

OB14F-0425 *POSTER* Photo-acclimation sustains modelled phytoplankton size diversity by flattening fitness gradients, but may confound observed relationships: **S L Smith**

OB14F-0426 *POSTER* Identifying seasonal shifts in freshwater phytoplankton assemblages through optimizing a flow imaging microscopy technology for the Great Lakes.: **G Null**, R Errera, D L Fanslow

OB14F-0427 *POSTER* The importance of the 'middle class' to oceanic net community production: **A E White**, L W Juranek, M Dugenne, S Dutkiewicz, S Ferrón, D M Karl

OB14F-0428 *POSTER* Middle-sized Phytoplankton Benefit Most from Increasing Seawater CO₂: conclusion from law of physical diffusion and carbonate equilibrium: **Q Zhang**, Y W Luo

OB14F-0429 *POSTER* Size Distributions and Carbon Biomass of Surface Picophytoplankton at Station ALOHA Using the SeaFlow Underway Flow Cytometer.: **A M Hynes**, C T Berthiaume, J E Swalwell, E V Armbrust, F Ribalet

OB14F-0430 *POSTER* A day in the life of *Prochlorococcus*: Diel ecological oscillations of cyanobacteria, viruses and grazers in the North Pacific Subtropical Gyre: **S Beckett**, D J R Demory, A Coenen, J Casey, C L Follett, M Dugenne, P E Connell, M Carlson, S K Hu, S T Wilson, D Muratore, A Boysen, M Harke, E Luo, R Rodriguez, S Peng, K Becker, S Coesel, D R Mende, A E Ingalls, B A Van Mooy, S Dyhrman, J P Zehr, E V Armbrust, E DeLong, D M Karl, D A Caron, D Lindell, M J Follows, A E White, F Ribalet, J S Weitz

OB14F-0431 *POSTER* Effects of cell size and shape on plankton diversity: **A Ryabov**, B Blasius, O Kerimoglu

OB14F-0432 *POSTER* Comparing phytoplankton carbon to volume relationships using three-dimensional (3D) and two-dimensional (2D) imaging: **C Hammond**, H McNair, S Menden-Deuer

OB14F-0433 *POSTER* A meta-analysis on environmental drivers of marine phytoplankton C:N:P: **T Tanioka**, K Matsumoto

OB14F-0434 *POSTER* C:N:P of Dinoflagellates: **O Carnicer**, A J Irwin, Z Finkel

OB14F-0435 *POSTER* Microzooplankton-induced mortality of protists in the Gulf of Mexico: across regions, along productivity gradients, and among functional groups: **B A Stauffer**

OB14F-0436 *POSTER* Changes in Phytoplankton Community Size Structure Across the Shelfbreak Front of the Middle Atlantic Bight: **K Archibald**, E T Crockford, D J McGillicuddy Jr, M Neubert, E Peacock, W G Zhang, H M Sosik

OB14F-0437 *POSTER* Determining ecological provinces from optical cytometric data in the North Pacific Ocean: **M R Cape**, F Ribalet, J Bien, S Hyun, E V Armbrust

OB14F-0438 *POSTER* Direct Measurement of Group-Specific Phytoplankton Chlorophyll: **N Bock**, A Subramaniam, A R Juhl, J Montoya, S Duhamel

OB14F-0439 *POSTER* Protist Community Ecology Across an Eddy Dipole in the North Pacific Subtropical Gyre: **B Stewart**, J L Beatty, L Y Mesrop, E DeLong, D A Caron

OB14F-0440 *POSTER* Nanoplankton and Microzooplankton grazing in the Northern Gulf of Mexico: **G Kurtay**, M Pathare, B A Stauffer

OCEAN MODELING**OM14A Poster Hall C-D****Monday 1600h****Advances in Coupled Physical-Biogeochemical Modeling: Continental Shelves, Estuaries, and the Coastal Ocean III Posters (joint with CP, OB)****Moderators: Laura Bianucci**, Institute Of Ocean Sciences; **Liuqian Yu**, The Hong Kong University of Science and Technology

- OM14A-3076** *POSTER* A Coupled Modeling System for Simulating Oil-Biological-Sediment Interactions in the Ocean: **S L Morey**, E Chassignet, D S Dukhovskoy, C K Harris, V Coles, M R Stukel, R D Hetland, K M Thyng, T J Hsu, A J Manning, O Mason, V Ruiz Xomchuk, D Kobashi, L Qu, L Ye, L Cui, X Chen, J Wang
- OM14A-3077** *POSTER* A Comparison of Two Versions of an Individual Based Particle Tracking Model for Harmful Algal Blooms (HABs): **S Longridge**, D Henrichs, L Campbell
- OM14A-3078** *POSTER* Integrated Modeling of Harmful Algal Genus Pseudo- Nitzschia to Support Ecosystem Prediction and Environmental Management in the Southern California Current System: **P Hoel**, D Bianchi, C Anderson, R M Kudela, F Kessouri, M Sutula, C A Deutsch, J Smith, A Moreno
- OM14A-3079** *POSTER* A mechanistic model to predict seasonal timing and spatial distribution of *Prorocentrum minimum* blooms in Chesapeake Bay: **S H Ahn**, F Zhang, M Li, P M Glibert
- OM14A-3080** *POSTER* Modeling mixotrophic *Karlodinium veneficum* in Chesapeake Bay: **P M Glibert**, M Li, F Zhang, Y Song, M Lin, S H Ahn
- OM14A-3081** *POSTER* Variability of carbonate chemistry in Chesapeake Bay: a long-term study using simple and complex models: **C Shen**, J M Testa, M Herrmann, R Najjar
- OM14A-3082** *POSTER* Discerning effects of warming, sea level rise and nutrient reduction on long-term hypoxia trend in Chesapeake Bay: **W Ni**, M Li, J M Testa
- OM14A-3083** *POSTER* Influence of the Hydrodynamics on the Phytoplankton-Biomass Variability in Bahía de los Ángeles, Baja California: Results from a Numerical Physical-Biological Coupled Ocean Model: **N L López Tejada**, D Rivas, E García-Mendoza
- OM14A-3084** *POSTER* Physical-Biological Variability Analysis of a Pacific Coast Lagoon (Ojo de Liebre) Through a Hydrodynamic-NPZD Coupled Numerical Ocean Model: **G Reséndiz Colorado**, D Rivas
- OM14A-3085** *POSTER* Modeling productivity in lower trophic levels in Otsuchi Bay, northeast of Japan, using a nested OGCM with a biogeochemical component: **T T Sakamoto**, S Urakawa, S Itoh, H Hasumi, K Tanaka
- OM14A-3086** *POSTER* Modeling the factors which contribute to zooplankton congregation over Stellwagen Bank: **X Zhai**, G Flierl, J J McCarthy
- OM14A-3087** *POSTER* Finite Volume Community Ocean Model (FVCOM) provides high spatio-temporal hydrodynamics to inform biogeochemical wetland-estuarine models.: **L Ziegler**, R R Hood
- OM14A-3088** *POSTER* Influence of Diurnal Sea Breeze on Residence Time and Associated Biogeochemical Processes in the Mississippi Sound and Bight: **C Bouchard**, M K Cambazoglu, M S Dinniman, P J Fitzpatrick, E E Hofmann, J D Wiggert
- OM14A-3089** *POSTER* The Forecasting Model of the Environmental Dynamics of the Northern Adriatic Sea. Structure and Preliminary Results.: **I Scroccaro**, M Zavatarelli, T Lovato
- OM14A-3090** *POSTER* GLOBAL CLIMATE MODELS OVERESTIMATE EXPOSURE REGIMES IN NEARSHORE ENVIRONMENT: **M Fagundes**, F Micheli, G De Leo, S Y Litvin, C A Boch, J P Barry, S Omidvar, C B Woodson
- OM14A-3091** *POSTER* A regional biogeochemical model outperforms global Earth System Models in northwest North Atlantic shelf waters: **A Laurent**, K Fennel, A M Kuhn
- OM14A-3092** *POSTER* Modelling oxygen dynamics in a Canadian archipelago (Discovery Islands, BC): **L Bianucci**, M Foreman, W Callendar, H V Dosser, M V Krassovski, P P Thupaki, P Chandler, J Jackson
- OM14A-3093** *POSTER* Temporal and spatial scales of oxygen depletion in a shallow tributary estuary in response to altered nutrient loading and elevated temperature: **J M Testa**, C Shen, N M Basenback, K L Cole, W Liu, A Moore, D C Brady
- OM14A-3094** *POSTER* Modeling of Ocean Acidification in the Massachusetts Bay/Boston Harbor and over the US Northeast Shelf: **L Wang**, C Chen, R C Beardsley, J Salisbury II
- OM14A-3096** *POSTER* Nesting Resolution Study of Narragansett Bay Using the Regional Ocean Modeling System: **X Fan**, H Wang, B Fox-Kemper, C Dong
- OM14A-3097** *POSTER* A Computationally Efficient Parametrization of the Underwater Light Field for Biogeochemical Models in Coastal Waters: **J Wollschläger**, B Tietjen, O Zielinski
- OM14A-3098** *POSTER* A modeling study of estuarine-shelf circulation using a composite tidal and subtidal open boundary condition: **Z LIU**, J Gan
- OM14A-3099** *POSTER* Offline Tracer Advection in a Realistic Regional Ocean Model: **K M Thyng**, V Ruiz Xomchuk, D Kobashi, L Qu, R D Hetland, D S Dukhovskoy, S Morey, X Chen, E Chassignet
- OM14A-3100** *POSTER* Coupled Ocean-Wave Models for Galway Bay: **C Calvino**, F Dias, T Dabrowski

PAST, PRESENT AND FUTURE CLIMATE

AI14B Poster Hall C-D

Monday 1600h

Toward an Improved Understanding of Indian Ocean Dynamics and Its Role in the Monsoon III Posters (joint with PC, PL)

Moderators: Aneesh Subramanian, University of Colorado Boulder; Harindra Fernando, University of Norte Dame

AI14B-2258 *POSTER* Weakening relationship between East Asian summer monsoon and Asian-Pacific Oscillation after 1990s: **W Hua**

AI14B-2259 *POSTER* Air-sea interaction and memory of Indian Ocean in MJO prediction of JMA's coupled seasonal prediction system: **T Komori**, S Hirahara, Y Kubo, Y Adachi, Y Fujii, I Ishikawa, T Yoshida

AI14B-2260 *POSTER* An Anomalous Atmospheric Event during 2019 MISO-BOB Field Campaign: **E Gonzalez**, R Dimitrova, H J S Fernando, R Krishnamurthy, S D Wagh, S U P Jinadasa, S Jayawardena, A Muslim, Z Hameed, V Amelie, H W Wijesekera

AI14B-2261 *POSTER* Atmosphere-ocean interaction in the Indian monsoon: **M K Flatau**, S Chen, J A Ridout, A Rydbeck, H W Wijesekera, M Janiga, T G Jensen

AI14B-2262 *POSTER* Boundary Currents off the Sri Lankan East and South Coasts Observed with PIES: **M J Lankhorst**, A Anutaliya, U Send, J McClean, J Sprintall

AI14B-2263 *POSTER* Detecting Monsoon Intraseasonal Oscillations in the Indian Ocean in Salinity: **S Bulusu**, C B Trott, H L Roman-Stork

AI14B-2264 *POSTER* Diurnal Signal in Turbulence During SW Monsoon in the Bay of Bengal: **R Thakur**, E Shroyer, R Govindarajan, J T Farrar, J Moum

AI14B-2265 *POSTER* Effect of Stratification and Wind on Upwelling Source Depth and SST: A Case Study Comparing the Arabian Sea and Bay of Bengal During the Summer Monsoon: **J He**, A Mahadevan

AI14B-2266 *POSTER* Effects of climate modes on interannual variability of upwelling in the tropical Indian Ocean.: **X Zhang**, W Han

AI14B-2267 *POSTER* Epochal variability in the Equatorial Indian Ocean subsurface temperature and the forcing mechanisms.: **S Mohapatra**, D G Chellappan

AI14B-2268 *POSTER* Estimation and Prediction of the Upper Ocean Circulation in the Bay of Bengal: **G Gopalakrishnan**, A Subramanian, A J Miller, H Seo, D Sengupta

AI14B-2269 *POSTER* Evolution of Thermal Fronts in the Somali Current System: **M J Caruso**, H C Graber

AI14B-2270 *POSTER* Hydrodynamic and Thermohaline Effects on the Gulf due to Super Cyclone Gonu of 2007: **W Lee**, J M Kaihatu, J Veeramony

AI14B-2271 *POSTER* Impact of ocean observation systems on ocean analyses and subseasonal forecasts of the monsoon intraseasonal oscillations: **A C Subramanian**, F Vitart, M A Balmaseda, Y Fujii, Y Takaya, A J Miller

AI14B-2272 *POSTER* Long Wave Measurement Corrections for the OMNI Buoy Network: **A Tandon**, J Joseph, V Ramasamy, J T Farrar, R A Weller

AI14B-2273 *POSTER* Long-term Observations of Turbulent Measurements in the Southern Bay of Bengal: **C A Luecke**, H W Wijesekera, E Jarosz, D W Wang, S U P Jinadasa

AI14B-2274 *POSTER* Observations and modelling of wind seas and swells in the Bay of Bengal: **D W Wang**, J D Dykes, H W Wijesekera, E Jarosz, T G Jensen, S U P Jinadasa

AI14B-2275 *POSTER* On the Sea Surface Temperature variability and mesoscale dispersion in the Bay of Bengal during 2015 and 2019 monsoon as tracked by drifters: **S Kerhalkar**, A Tandon, E Shroyer, L R Centurioni, J D Nash, J A MacKinnon, J T Farrar, L Johnson

AI14B-2276 *POSTER* Persian Gulf Water eddies and filaments inject oxygenated, highly saline water to the Bay of Bengal: **P Sheehan**, B Webber, A Sanchez-Franks, A J Matthews, K J Heywood, P Vinayachandran

AI14B-2277 *POSTER* Resonant Forcing, Salinity Stratification and Near-Inertial Oscillations in the North Bay of Bengal: **D Chaudhuri**, D Sengupta, M Mathur, R Venkatsen

AI14B-2278 *POSTER* Sea surface conditions in the Bay of Bengal since the early Pliocene: **D A Lowdermilk**, P Dekens, A Stine, L R Fox

AI14B-2279 *POSTER* Semiannual Variability of Mid-depth Zonal Currents along 5°N in the Eastern Indian Ocean: Characteristics and Causes: **K Huang**, D Wang, W Han, M Feng, G Chen, W Wang, J Chen, J Li

AI14B-2280 *POSTER* Simulation of large anti-cyclonic eddies generated by westward propagating Rossby waves in the southern Bay of Bengal during the summer Monsoon season 2019: **T G Jensen**, H W Wijesekera, A Rydbeck, E Jarosz, D W Wang, C A Luecke, M K Flatau, J Schmidt

AI14B-2281 *POSTER* Somali Current eddy interaction during the Indian Southwest Monsoon: **B A Melzer**, T G Jensen, A Rydbeck, E Nyadjro

AI14B-2283 *POSTER* Submesoscale temperature inversions in the Bay of Bengal during the winter monsoon: **S Ramachandran**, A Tandon, A Mahadevan, S Yeager, P Chang, G Danabasoglu, A Altuntas

AI14B-2284 *POSTER* The role of the fresh surface layer in governing air-sea interaction in the northern Bay of Bengal: **R A Weller**, J T Farrar, R Lukas, F Santiago-Mandujano

AI14B-2285 *POSTER* Variability of Water Exchanges Through the Strait of Hormuz: **P Vasou**, V Vervatis, G Krokos, I Hoteit, S S Sofianos

AI14B-2286 *POSTER* Water Mass Intrusion from Arabian Sea to the Bay of Bengal during summer; Experimental Observations in August 2015: **S U P Jinadasa**, G Pathirana, A P Wijesundara, H W Wijesekara, H J S Fernando

AI14B-2287 *POSTER* Weakly-nonlinear Ekman pumping in the Sri Lanka Dome: **K Cullen**, E Shroyer

PC14A-1686 *POSTER* Back to the Future of Sea Urchins: Using Long-term Datasets to Generate Proxies of Climate Change Impacts on California's Purple Urchin Populations: **Z S Welch**, S Schroeter, D Iglesias-Rodriguez

PC14A-1688 *POSTER* Effect of Temperature in the Transcriptomic Profile of Octopus maya Optic Glands: **C Ventura-López**, L L López Galindo, C Rosas, C E Galindo-Sanchez

PC14A-1689 *POSTER* Effects of CO₂ and Temperature on Early Life-Stage Development in the American Horseshoe Crab, *Limulus polyphemus*: **G Mukai**, R C Chambers, E Olson

PC14A-1690 *POSTER* Impact of Solar Energy on *Anthopleura elegantissima* and the Effect of Its Behavioral Defense Through Shell Coverage: **H Boe**, J Lin

PC14A-1691 *POSTER* Impacts of Climate Change on Site Selection for Coral Restoration: **R Setter**, C Mora

PC14A-1692 *POSTER* Impacts of the Predatory Whelk *Mexacanthina lugubris*: A Dark Unicorn in Southern California Intertidal Communities: **P Wallingford**, C J B Sorte

PC14A-1693 *POSTER* Progression of Seastar Wasting Disease Outbreak Across Habitats in Central British Columbia, Canada: **A L Gehman**, O Pontier, T Froese, C Harley

PC14A-1694 *POSTER* Sperm performance and sexual selection in a rapidly changing ocean for broadcast spawning marine invertebrates.: **C N Lewis**, K Smith

PC14A-1695 *POSTER* Taxonomic variability in coral bleaching on a remote, uninhabited island in the western Pacific.: **J Carilli**, L Bolick, D Marx, S H Smith, D Fenner

PC14A-1696 *POSTER* The Effect of Temperature Change on the Relationship Between *Tegula funebris* Grazing and Algal Growth Rates: **S Clements**, L Zhou, C Reilly, L Marrack

PC14A-1697 *POSTER* The Impact of Climate Variation on the Golden Jellyfish, *Mastigias papua etpisoni*, in Jellyfish Lake, Palau: a Twenty-Year Perspective: **S Patris**, G Ucharm, K Giramur, L J Bell, M N Dawson, L E Martin

PC14A-1698 *POSTER* Anomalous warm ocean conditions impact the depth and distribution of Chinook Salmon (*Oncorhynchus tshawytscha*) off the Oregon Coast: **A Teahan**, M A Banks, M R Bellinger, S Miller

PC14A-1699 *POSTER* Climate Change Impacts, Vulnerabilities and Adaptations of Western Indian Ocean Marine Fisheries: **H Moustahfid**, A Gangopadhyay, F Marsac

PC14A Poster Hall C-D

Monday 1600h

Climate Impacts on Marine Species IV Posters

(joint with HE, ME)

Moderators: **Barbara Muhling**, NOAA-Fisheries; **Erin Meyer-Gutbrod**, University of California Santa Barbara

PC14A-1681 *POSTER* Forecasting changes in biodiversity and species distribution of phytobenthos associated with climate change.: **K Torn**, A Peterson, K Herkül

PC14A-1682 *POSTER* Impact of Extreme Climate Events on Coastal Phytoplankton Abundance and Diversity in the Southern California Bight, California, USA.: **M Carter**, K D Seech, J Fumo, J A McGowan

PC14A-1683 *POSTER* Growth Responses in the Marine Picocyanobacteria *Synechococcus*: A Multi Stressor Approach: **S Basu**, K R Mackey

PC14A-1684 *POSTER* Physiological and Reproductive Responses of an Intertidal Rockweed to Conditions Associated with Sea Level Rise: Assessing the Potential for Local Adaptation to a Changing World.: **A Heyman**, J Burnaford

PC14A-1685 *POSTER* The effect of different patterns of salinity fluctuation on functions and species interactions of an eelgrass (*Zostera marina*) bed communities: **M Namba**, M Nakaoka

PC14A-1700 POSTER Competition between Atlantic cod and black sea bass due to warming southern New England waters: **N Santos**, C Mayer, J A Langan, K McMahon

PC14A-1701 POSTER Do Climate-Mediated Effects on Adult Size Affect Larval Lobster Performance?: **A Ascher**, G Andrews, D Baughman, M Niemisto, D Fields, R Wahle

PC14A-1702 POSTER Evaluating the Effects of Parentage on the Response of Atlantic silverside (*Menidia menidia*) to Varying Thermal Regimes: **L Markow**, T R Waters, R C Chambers

PC14A-1703 POSTER Juvenile Dungeness Crabs Are Smaller When Exposed to Ocean Acidification Conditions in the Laboratory: **E Reinhardt**, S Busch, K Donahue, D Perez, K Rovinski, E Tully, P Mcelhany

PC14A-1704 POSTER Multidecadal climatic variability drives the basin-scale distribution of Atlantic Bluefin Tuna: **R Faillettaz**, G Beaugrand, E Goberville, R R Kirby

PC14A-1705 POSTER The Effect of Increasing Acidity on Stage Z1 Blue Crabs, *Callinectes sapidus*: **C Buscher**, S A Macko

PC14A-1706 POSTER Using Fin Development to Determine Morphological Milestones in Arctic Cod (*Boreogadus saida*): **C J Hansum**, A Dreary, M S Busby

PC14A-1707 POSTER Using Pacific Halibut (*Hippoglossus stenolepis*) Distributional Response to Recent Environmental Anomalies as a Tool to Explore Possible Dispersal Effects Related to Climate Change in the Future: **L Sadorus**, R Webster

PC14A-1708 POSTER Time series analysis of *Calanus finmarchicus* and *Centropages typicus* abundance with respect to the converging time frequencies in multiple climate mechanisms in the Gulf of Maine.: **C Nowakowski**, K Stamieszkin, N Record, K McMahon

PC14A-1709 POSTER Vulnerability to climate change of marine mammal and sea turtle populations: **M D Lettrich**

PC14A-1711 POSTER Understanding the Key Contributors to Smooth Dogfish Trends in Abundance in New Jersey and Delaware Waters: **B R Villalon**, C McCandless

PC14A-1712 POSTER The Impacts of Climate Change on Fish and Fishing Communities in the United States: the Findings of the U.S. Global Change Research Program: **A Lustig**

PC14A-1713 POSTER The Shrinking Lake Chad!: Urgent need for Concerted Effort by Member Countries to Save it from Extinction: **K I Ndimele**

PC14B Poster Hall C-D

Monday 1600h

High-Resolution Geochemical Proxies of Global Change: Progress, Problems, and Utility I Posters (joint with CT, MG, OB)

Moderators: David Gillikin, Union College; Nina Whitney, Iowa State University

PC14B-1714 POSTER Extending northwest Atlantic pH records using the boron isotope-pH proxy in two marine calcifiers in the Gulf of Maine: **B Williams**, J Stewart, A D Wanamaker, N Whitney, B Jellison, B Hernandez, A L Strong, M LaVigne

PC14B-1715 POSTER Calibration of $\delta^{18}\text{O}$ values in mollusc shells analyzed via SIMS for paleotemperature reconstructions: **L E Graniero**, W G Parker, D M Surge, Y Yanes

PC14B-1716 POSTER Fine-scale timing of environmental changes at the BA-YD transition in the Cariaco Basin revealed by molecular stratigraphy at sub-annual resolution: **B Boehman**, L Wörmer, J Wendt, G H Haug, K U Hinrichs

PC14B-1717 POSTER Application of coral carbon isotopes to study river discharge and paleo-turbidity in the Gulf of Chiriquí, Panamá: **L D Brenner**, B K Linsley, W R McGillis, T L Weiss, J E Lambert, S Traylor, M Calcio

PC14B-1718 POSTER Seasonal timing of growth cessation in fossil *Mercenaria spp.* shells from warm vs. cold climates, Mid-Atlantic Coastal and Gulf Coastal Plains: **K Palmer**, D M Surge, D K Moss

PC14B-1719 POSTER Interannual variations of $\text{D}^{14}\text{C}_{\text{TOC}}$ and elemental contents in the laminated sediments of Santa Barbara Basin during the past 200 years: **H C Li**, Y W Chang, W Berelson

PC14B-1720 POSTER Cooler and More Variable Medieval Climate in the Northern Caribbean indicated by *Pseudodiploria strigosa* and *Orbicella faveolata* Coral Sr/Ca-based Temperature Records from the 11th Century: **A Nalesnik**, K H Kilbourne

PC14B-1721 POSTER 200 years of climate-driven biogeochemical shifts in the California Current System reconstructed from high-fidelity proteinaceous coral archives: **G Pugsley**, D S Glynn, Y Shen, M McCarthy, T P Guilderson

PC14B-1722 POSTER Tsunami-Riding Clams: Decoding the life history of the mysterious Glycymeris fauna of Israel: **D E Killam**, A Paytan, T Katz, B Goodman-Tchernov

PC14B-1723 *POSTER* Constraining Paleo-ENSO with Coral Based Sr-U Thermometry: **N R Mollica**, A L Cohen, F Horton

PC14B-1724 *POSTER* Exploring the Paleoceanographic Utility of Intertidal Mussels Using Paired Geochemical and Microstructural Proxies: **V Vriesman**, T M Hill, S J Carlson

PC14B-1725 *POSTER* Assessing Regional Variability in the Eastern Tropical North Pacific Oxygen Minimum Zone through a Geochemical Comparison of Pescadero Slope and Soledad Basin Sediments: **C Tams**, W Berelson, A van Geen, Y Hamann

PC14B-1726 *POSTER* Temperature Calibration of *Siderastrea siderica* coral from the Flower Garden Banks National Marine Sanctuary: **A Gorenflo**, A J Wagner, K L DeLong, N C Slowey

PC14B-1727 *POSTER* My Biogeochemical Romance: Correlation of inorganic geochemical proxy data and biomarker composition to reveal oceanic redox structure in the Late Ordovician Utica-Point Pleasant Formation: **S Ritzer**, J J Brocks, E A Sperling

PC14B-1728 *POSTER* Amino acid $\delta^{13}\text{C}$ records from deep-sea corals of the NW Atlantic: Reconstructing plankton community composition in a rapidly changing ocean: **O Sherwood**, C R Fougère, B S Tibert, K McMahon

PC14C-1732 *POSTER* Causes and Consequences of Changing Ocean Properties, Circulation and Sea Ice in the Polar Regions: the SROCC Assessment.: **M P Meredith**, M Sommerkorn, S Cassotta, C Derksen, A Ekaykin, A B Hollowed, G Kofinas, A Mackintosh, J Melbourne-Thomas, M Muelbert, G Ottersen, H D Pritchard, E Schuur, S He, V L Peck

PC14C-1733 *POSTER* Causes and consequences of changing ocean properties on polar ecosystems: the SROCC assessment.: **A B Hollowed**, M P Meredith, M Sommerkorn, S Cassotta, C Derksen, A Ekaykin, G Kofinas, A Mackintosh, J Melbourne-Thomas, M Muelbert, G Ottersen, H D Pritchard, E Schuur, S He, V L Peck

PC14C-1734 *POSTER* Human Responses to Climate Change in Polar Ocean Systems: IPCC's SROCC: **G Kofinas**

PC14C-1735 *POSTER* Sea Level Rise and Implications for Low Lying Islands, Coasts and Communities: **R V D Wal**, M Oppenheimer, B C Glavovic, J Hinkel, R Cai, A Magnan, R DeConto, F Isla, T Ghosh, B Marzeion, A Abd-Elgawad, B Meyssignac, J Hay, Z Sebesvari, M Cifuentes-Jara

PC14C-1736 *POSTER* Perspectives on sea-level rise and coastal impacts beyond SROCC: **E Lambert**, J Rohmer, D Le Bars, G Le Cozannet, R V D Wal

PC14C-1737 *POSTER* Observed and Projected Physical Oceanic Changes Related to Climate Change as Assessed in SROCC: **R Hallberg**, J Aristegui, N L Bindoff, W W L Cheung, N Hilmi, N Hilmi, N Jiao, J G Kairo, S Karim, L A Levin, S ODonoghue, S Purca Cuicapusa, B Rinkevich, T Suga, A Tagliabue, P Williamson

PC14C-1738 *POSTER* Time of Emergence of Key Climate Change Variables and Exposure to Climate Hazards in the Ocean: **A Tagliabue**, J Aristegui, N L Bindoff, W W L Cheung, N Hilmi, R Hallberg, N Hilmi, N Jiao, J G Kairo, S Karim, L A Levin, S ODonoghue, S Purca Cuicapusa, B Rinkevich, T Suga, P Williamson

PC14C-1739 *POSTER* Observed impacts and projected risks of climate change on marine ecosystems: **W W L Cheung**, J Aristegui, N L Bindoff, V Guinder, R Hallberg, N Hilmi, N Jiao, J G Kairo, S Karim, T Suga, L A Levin, S ODonoghue, S Purca Cuicapusa, B Rinkevich, A Tagliabue, P Williamson

PC14C-1740 *POSTER* Climate Change Impacts on the Ocean Threaten Human Well-Being and Sustainable Development: **N Hilmi**, J Aristegui, N L Bindoff, W W L Cheung, V Guinder, R Hallberg, N Jiao, J G Kairo, S Karim, L A Levin, S ODonoghue, S Purca Cuicapusa, B Rinkevich, A Tagliabue, T Suga, P Williamson

PC14C Poster Hall C-D

Monday 1600h

Key Findings of the IPCC Special Report on Ocean and Cryosphere in a Changing Climate: Challenges, Opportunities, and Future Scenarios | Posters (joint with ED, SI)

Moderators: **Katja Mintenbeck**, Intergovernmental Panel on Climate Change, WGII Technical Support Unit; **Matthew Collins**, University of Exeter

POSTER Welcoming Remarks:

PC14C-1729 *POSTER* How does the IPCC Special Report on Ocean and Cryosphere in a Changing Climate inform decision-makers?: **K Mintenbeck**, H Poertner

PC14C-1730 *POSTER* The IPCC Special Report on Ocean and Cryosphere in a Changing Climate – a view from the mountains tops to the deepest depths: **E Poloczanska**, H O Portner, K Mintenbeck

PC14C-1731 *POSTER* Impacts of the Changing Cryosphere in a Warming World: a Mountain Perspective: **H Steltzer**

PC14C-1741 *POSTER* Can we use the ocean to mitigate climate change? Insights from the IPCC SROCC report: **N L Bindoff**, P Williamson, J Aristegui, W W L Cheung, N Hilmi, R Hallberg, N Hilmi, N Jiao, J G Kairo, S Karim, L A Levin, S ODonoghue, S Purca Cuicapusa, B Rinkevich, T Suga, A Tagliabue

PC14C-1742 *POSTER* Marine heatwaves and their implications: **T L Froelicher**, J Kajtar, R M Koll, M Collins, K L McInnes, S M Cheong, M Sutherland, L Bower, H Jacot Des Combes, I J Losada, B M W Ratter, E Rivera-Arriga, R D Susanto, D Swingedouw, L Tibig

PC14C-1743 *POSTER* Extremes, Abrupt Changes and Managing Risks: **M Collins**

PHYSICAL-BIOLOGICAL INTERACTIONS

PI14A Poster Hall C-D

Monday 1600h

Biological Coupling to Physical Forcing on Shallow-Water Ecosystems: Using Observations to Reveal Patterns and Test Mechanisms III

Posters (joint with CP, ME, PS)

Moderators: **Nathalie Reyns**, University of San Diego; **James Leichter**, Scripps Institution of Oceanography, University of California at San Diego

PI14A-2460 *POSTER* The effect of changing lagoonal volume on the amplitude of diel carbon chemistry variability within a seagrass lagoon at Dongsha Atoll, Taiwan: **M Rintoul**, W C Chou, H C Chu, A Pezner, T Courtney, S Kekuwa, R W Syu, A J Andersson

PI14A-2461 *POSTER* Enhancement of rates of net community production and gross primary production at the shelfbreak front: **A Choe**, F Adams, E Kim, L Kinjo, A Mehta, Z Sandwith, D J McGillicuddy Jr, R Stanley

PI14A-2463 *POSTER* Variability of hypoxia in coastal transition zone off Pearl River Estuary: observational and modeling studies: **D LL**, J Gan

PI14A-2464 *POSTER* Thin Phytoplankton Layer Observation in the Coastal Zone of Ubatuba, Brazil.: **S Penninck**, J Lima, R M Lopes

PI14A-2465 *POSTER* Combining Observations, Remote Sensing, and Hydrodynamic Modeling to Assess the Impact of Atmospheric and Tidal Fronts on Coastal Bio-Optical Variability: **R W Gould Jr**, S Anderson, D Lewis, D Miller, I Shulman, G B Smith, T Smith, D W Wang, H W Wijesekera

PI14A-2466 *POSTER* Building Essential Bridges between Ecosystem Data and Hydrodynamic-Ecosystem Models of Rhode Island Coastal Waters: **N Flecchia**, C R Kincaid, B Sullivan-Watts

PI14A-2467 *POSTER* Submesoscale Recirculations Around an Island Cape: **A Valle-Levinson**, L Tenorio-Fernandez, B Juarez, M Daly, C B Woodson, S G Monismith

PI14A-2469 *POSTER* Ommastrephid squid paralarvae distribution and transport under contrasting interannual conditions in the tropical-subtropical convergence off Mexican Pacific: **E Ruvalcaba-Aroche**, L Sanchez Velasco, E Beier, V M Godinez, E D Barton, D Landeros-Tafolla

PI14A-2470 *POSTER* Environmental Context Elicits Behavioral Modification of Collective State in Schooling Fish: **I Rodriguez-Pinto**, G Rieucan, N O Handegard, K M Boswell

PI14A-2471 *POSTER* Spatial and temporal patterns of zooplankton community structure in the northern Gulf of Mexico (2015-2017): **J Gilmartin**, H Liu

PI14A-2472 *POSTER* Trace metals in Antarctic clam shells record the chemical dynamics of changing sea ice conditions.: **S Wing**, S A O'Connell-Milne, L C Wing, M R Reid

PI14A-2473 *POSTER* Benthic Nitrogen excretion by the Invasive Quagga Mussel *Dreissena bugensis* offshore gradients in Lake Michigan: A Time Series Approach: **C Aguilar**, R Cuhel

PI14A-2475 *POSTER* Biostabilization in Sandy Carbonate Environments Detected from Multi-Seasonal Turbidity Time Series: **S M Murshid**, G Mariotti

PI14A-2476 *POSTER* Microbial responses to physical variations in coastal Southern California: Changes in community structure and ecosystem function assessed via an 18 month twice-weekly time-series at the Scripps Ecological Observatory: **J Wilson**, J S Bowman

PI14B Poster Hall C-D

Monday 1600h

Cross-Shore Fluxes in Ocean Boundary Currents: Biogeochemical and Ecological Consequences II Posters (joint with ME, OB)

Moderators: **Julie Keister**, Organization Not Listed; **Michael Stukel**, Florida State University

PI14B-2477 *POSTER* Cross-shore fluxes in the California Current Ecosystem LTER site: a Lagrangian Approach: **M D Ohman**

PI14B-2478 *POSTER* Evolution of phytoplankton community structure and physiology in a newly-upwelled filament off Pt. Sur, Central California: **G Ralf**, M Roadman

PI14B-2479 *POSTER* Seasonal variability of surface phytoplankton biomass in the Humboldt Upwelling System: **F Prowe**, T Xue, I Frenger, Y J S Jose

PI14B-2480 *POSTER* Diversity of responses to iron availability by phytoplankton of the California Current ecosystem: **T Coale**, K Forsch, A Ruacho, L Manck, K Barbeau, A E Allen

PI14B-2481 *POSTER* Mesozooplankton Grazing and Egg Production of the Copepod *Calanus pacificus* in Relation to Evolution of Newly-Upwelled Filaments off Central California: **L E Lilly**, S A Matthews, M D Ohman

PI14B-2482 *POSTER* Cross-shore Changes in Vertical Habitats of Mesozooplankton: A Paired Metabarcoding and Morphological Approach: **S A Matthews**, E Goetze, M D Ohman

PI14B-2483 *POSTER* The California Undercurrent as a source of upwelled waters in a coastal filament: **K D Zaba**, P J S Franks, M D Ohman

PI14B-2484 *POSTER* Temporal Variability of Cross-shore Fluxes in the California Current Ecosystem: **M D Ohman**, P Chabert, F d'Ovidio

PI14B-2485 *POSTER* Surface Water Exchange Between the Continental Shelf and the Deepwater Region of the Gulf of Mexico: **J Gonzalez-Rejon**, P Perez-Brunius, J Sheinbaum, S Z Herzka

PI14B-2486 *POSTER* Controls and variability of Yucatan Shelf coastal upwelling: **A J Souza**, I Marino-Tapia, C Enriquez

PI14B-2487 *POSTER* Observation of Rossby Waves Off the West African Coast Contributing to Offshore Extent of Phytoplankton.: **J Sirven**, M R Crepon, J Mignot

PI14B-2488 *POSTER* Mesoscale Contribution to the 3D Cycling of Organic Matter in the Canary Upwelling System: **N Gruber**, E Lovecchio, M Munnich

PHYSICAL OCEANOGRAPHY: MESOSCALE AND LARGER

PL14A Poster Hall C-D

Monday 1600h

Advances in Understanding of the Meridional Overturning Circulation in the South Atlantic Ocean: Variability, Mechanisms, and Impacts I Posters (*joint with AI, OM, PS*)

Moderators: **Marion Kersalé**, University of Miami; **Olga Sato**, USP University of Sao Paulo

PL14A-2596 *POSTER* On the Interannual Variations of the Chlorophyll-a Concentration in the South Atlantic driven by the MOC: **O T Sato**, L Carnier Casaroli

PL14A-2597 *POSTER* Interannual variability of chemical parameters at the western end of a South Atlantic Ocean section (34.5°S): **A B L Cavalcante**, V G Chiozzini, H J R Dias, E J D Campos, E D S Braga

PL14A-2598 *POSTER* Baroclinic Rossby Waves and the South Atlantic Meridional Overturning Circulation: **M Miracca Lage**, P S Polito

PL14A-2599 *POSTER* On the Role of Southern Ocean Mesoscale Dynamics on the Circulation and Meridional Overturning in the South Atlantic: **F U Schwarzkopf**, J Harlass, A Biastoch

PL14A-2600 *POSTER* Volume Transport Variability of the Atlantic Meridional Overturning Cells at 34.5°S: **M Kersalé**, R C Perez, C S Meinen, M Le Henaff, D Valla, T Lamont, O T Sato, S Speich, A R Piola, I J Ansorge, M P Chidichimo, E J Campos

PL14A-2601 *POSTER* Variability of the Deep Western and Eastern Boundary Currents and their relationship to the Meridional Overturning Circulation at 34.5°S: **C S Meinen**, M Kersalé, D Valla, T Lamont, O T Sato, R C Perez, M Le Henaff, S Dong, T Terre, M P Chidichimo, M Van den Berg, S Speich, A R Piola, E J Campos, I J Ansorge

PL14A-2602 *POSTER* Variability of the Bottom Flow as Measured by Currentmeters in the SAMOC Basin-wide Array: **E J Campos**, O T Sato, M van Caspel, C S Meinen, A R Piola

PL14A-2603 *POSTER* Pacific/Circumpolar and North Atlantic Deep Waters in the Argentine Basin: Lateral Stirring within the AMOC: **S V S Brand**, L D Talley, M R Mazloff, C Prend, I Rosso, P Chamberlain

PL14A-2604 *POSTER* Rising Temperatures, Falling Isopycnals and Decreasing AOU: The Story of Abyssal Property Change at 24°S in the Atlantic (2009-2018): **A Arroyo**, A M Macdonald, S Yoshida

PL14A-2605 *POSTER* Temporal Evolution and Spatial Transformation of Subsurface South Atlantic Overturning Waters between 30°S and 24°S: **A M Macdonald**, S Yoshida, A Arroyo, M O Baringer, X J Davis, E McDonagh

PL14A-2606 *POSTER* *Interannual South Atlantic Ocean Heat Content Variability in an Eddy-Resolving Coupled Climate Model*: **A Gronholz**, H Lopez, S Dong, G J Goni, M O Baringer

PL14A-2607 *POSTER* What Caused the Large-scale Heat Deficit in the South Atlantic Ocean during 2009-2012?: **S Dong**, H Lopez, S K Lee, C S Meinen, G J Goni, M O Baringer

PL14A-2608 *POSTER* Heat and freshwater Fluxes in the Atlantic Ocean at 30S in 1993, 2003 and 2011: **A Hernandez-Guerra**, L D Talley

PL14A-2609 *POSTER* Atmospheric Origins of Variability in the South Atlantic Meridional Overturning Circulation: **T Smith**, P Heimbach

PL14A-2610 *POSTER* Early-Holocene South Atlantic thermal structure and the control of South American Monsoons.: **W A C S Filho**, L Prado, I C Wainer, Z Liu, M M Mata

PL14B-2616 *POSTER* Kinetic energy of coherent eddy features from sea surface altimetry.: **J Martínez Moreno Sr**, A M Hogg, A E Kiss, N Constantinou, A K Morrison

PL14B-2617 *POSTER* A Global Atlas of Coherent Lagrangian Eddies Derived from Satellite Altimetry: **T Liu**, R Abernathey

PL14B-2618 *POSTER* 'Lofoten Vortex Regeneration Through Vertical Alignment': **M Trodahl**, P E Isachsen, J M Lilly, J Nilsson, N Melsom Kristiansen

PL14B-2619 *POSTER* Kinetic energy transfers between mesoscale and submesoscale motions: **A Naveira Garabato**, X Yu, K L Polzin, E Frajka-Williams, S Griffies, C E Buckingham

PL14B-2620 *POSTER* Eddy saturation of the Southern Ocean: a baroclinic versus barotropic perspective: **N Constantinou**, A M Hogg

PL14B-2621 *POSTER* Langmuir and mesoscale and submesoscale and bears, oh my! Assessing process impacts on climate: **B Fox-Kemper**, S C Clemens, L Johnson, Q Li, A Nelson, P Orenstein, B Pearson

PL14B-2622 *POSTER* On Energy Cascades in General Flows: **W K Dewar**, Q Jamet, A O Ajayi, A M Hogg, T Penduff, J Lesommer

PL14B-2623 *POSTER* Cyclonic eddies are more energetic than anticyclonic eddies in the southeast Indian Ocean: **Y He**, M Feng, J Xie, Q He, J Liu, J Xu, Z Chen, S Cai

PL14B-2624 *POSTER* Deep Western Boundary Current variability at 26.5°N and its connection with local abyssal recirculation.: **T Carrilho Bilo**, W E Johns

PL14B-2625 *POSTER* A Simple Two Dimensional Dynamical System for Eddy Saturation: **J R Maddison**, D P Marshall, J Mak

PL14B-2626 *POSTER* How cyclonic eddies become more energetic than anticyclonic ones.: **G Sutyrin**

PL14B-2627 *POSTER* Ocean eddy energy budget and parameterization in the North Atlantic: **K Zhao**, D P Marshall

PL14B-2628 *POSTER* The Vortex Gas Closure of Baroclinic Turbulence: **B Gallet**, R M Ferrari

PL14B-2629 *POSTER* The impact of topography and eddy parameterization on the simulated Southern Ocean response to changes in surface wind stress: **H Kong**, M Jansen

PL14B-2632 *POSTER* A diagnosis of anisotropic eddy diffusion from a high-resolution global ocean model: **S D Bachman**, B Fox-Kemper, F Bryan

PL14B-2633 *POSTER* Measuring Eddy Driven Transport in a Zonally Inhomogeneous Flow: **D Balwada**, K S Smith, R Abernathey

PL14B Poster Hall C-D

Monday 1600h

Ocean Transport and Eddy Energy IV Posters

(joint with OM, PS)

Moderators: **Alistair Adcroft**, Princeton University;
Sylvia Cole, Woods Hole Oceanographic Institution

PL14B-2611 *POSTER* *Vertical distribution of physical properties of the semi-permanent structure of Campache Bay*: **S Cisneros**, M C Tenreiro, E Pallas Sanz

PL14B-2612 *POSTER* Instabilities and Multiscale Interactions Underlying the Loop Current Eddy Shedding in the Gulf of Mexico: **Y Yang**, R H Weisberg, Y Liu, X S Liang

PL14B-2613 *POSTER* Glider Observations of the Loop Current and LC Eddy in the western Gulf of Mexico: comparison of buoyancy mixing and relationships with oxygen variability: **S Mahmud**, S F DiMarco, A Knap

PL14B-2615 *POSTER* Recurrent Oceanic Circulation Patterns in the Gulf of Mexico: **E R Olvera-Prado**, J Zavala-Hidalgo, O Calderon-Bustamante, L E Moreles-Vazquez, R González-Santamaría

PHYSICAL OCEANOGRAPHY:
MESOSCALE AND SMALLER

PS14A Poster Hall C-D

Monday 1600h

Multiscale Topographic Effects on Large-Scale Flow: From Wakes and Lee Waves to Small-Scale Turbulence and Mixing II Posters (joint with PL)

Moderators: Shaun Johnston, Scripps Institution of Oceanography; Jody Klymak, University of Victoria

PS14A-2810 *POSTER* The Deformation Radius with Bathymetry: **J H Lacasce**, S Groeskamp

PS14A-2811 *POSTER* Wave-Topography Interaction and Impact on Oceanic Kinetic Energy Distribution: **C Wortham**

PS14A-2812 *POSTER* How variable is mixing efficiency in the abyss?: **T Ijichi**, L St Laurent, K L Polzin, J M Toole

PS14A-2813 *POSTER* Uncertainty quantification for lee wave drag due to spectral parameterization of the abyssal hill topography: **P Zhu**, E Mayer, P K Kitanidis, O B Fringer, C Gorle

PS14A-2814 *POSTER* Tidally modulated uniform flow past a conical obstacle: a LES study: **P S Puthan**, M Jalali, G R Pawlak, S Sarkar

PS14A-2815 *POSTER* Parameterizing nonhydrostatic lee wave drag with the lowest over-topping streamline: **E Mayer**, O B Fringer

PS14A-2816 *POSTER* The effect of tidal flow on mean-flow drag from large-scale bathymetry: **J M Klymak**

PS14A-2817 *POSTER* Impacts of Lee Waves on the Southern Ocean Circulation and its Sensitivity to Wind Stress: **L Yang**, M Nikurashin, A M Hogg, B Sloyan

PS14A-2818 *POSTER* Submesoscale eddies in the abyssal Southern Ocean: **M Nikurashin**, K Zheng

PS14A-2819 *POSTER* Flow Across Large Amplitude Topography: Bottom PV injection and Watermass Transformation: **M Jimenez-Urias**, L Thompson

PS14A-2820 *POSTER* Forced Symmetric and Centrifugal Instability in the Bottom Boundary Layer: **J O Wenegrat**, L N Thomas

PS14A-2821 *POSTER* Spatial and Temporal Patterns of Deep Dissipation Near Palau: **A Simpson**, J D Nash, J A MacKinnon, M Alford, G Voet, H L Simmons, C A Luecke, J Moum

PS14A-2822 *POSTER* Examining Turbulence and Vortex Structures in the Wake of Velasco Reef Near Palau.: **B Wynne-Cattanach**, M H Alford, J A MacKinnon, J D Nash, G Voet

PS14A-2823 *POSTER* Low-Frequency Currents Observed around the Velasco Reef off Northern Palau: **W Teague**, H W Wijesekera, D W Wang, Z Hallock

PS14A-2824 *POSTER* Multiscale interactions for Flow Encountering Abrupt Topography: **P F J Lermusiaux**, P Haley Jr, C Mirabito, S Johnston

PS14A-2825 *POSTER* Observations of Multi-layer Flow and Wake around Southern Palau: **C Y Ou**, S Johnston

PS14A-2826 *POSTER* The Interaction of Large-Scale Yanai Waves with the Seychelles Plateau: **I B Arzeno**, S N Giddings, G R Pawlak, J McClean, H Wang

PS14A-2827 *POSTER* Dynamics and Variability of Topography-induced Shear Instabilities in Western Boundary Currents: **J L Chen**, X Yu, M H Chang, Y J Yang, S Jan

PS14A-2828 *POSTER* Evolution of the Kuroshio-Induced Island Wake: Satellite Observations and Numerical Simulation: **P C Hsu**, C R Ho, C Y Ho, H J Lee

PS14A-2829 *POSTER* Bumpy topographic and Kuroshio impacts on the transbasin evolution of large-amplitude internal solitary wave in the northern South China Sea: **J Xie**, Y Wu, Y He, Z W Chen, J Xu, S Cai

PS14A-2830 *POSTER* LES Modelling of the Impact of the Topography on Large-scale Exchange Flow in the Strait of Gibraltar: **M Hilt**, F Auclair, L Bordoio, F Dumas, R Benschila, X Capet, L Debreu, F Lemarié, S Jullien, P Marchesiello, C Nguyen, L Roblou

PS14A-2831 *POSTER* LOCAL AND CIRCUMGLOBAL EFFECTS OF EDDY-INITIATED CROSS-FRONTAL EXCHANGE IN THE ANTARCTIC CIRCUMPOLAR CURRENT: **D R Watts**, K L Tracey, K A Donohue

PS14A-2832 *POSTER* Deep Circulation in the Colombian Caribbean and its Interaction with Bathymetric Features Close to La Guajira Peninsula and Nicaraguan Rise: **Y Cardona**, S Jaramillo, M Guarin

PS14A-2833 *POSTER* Observed deep anticyclonic cap and its geological effects over Caiwei Guyot: **W Wang**, B Guo Sr, Y Shu

PS14B Poster Hall C-D

Monday 1600h

Turbulent Mixing of the Ocean Surface Boundary Layer: Observation, Simulation, and Parameterization V Posters (*joint with AI, OB, OM*)

Moderators: **Ivan Savelyev**, US Naval Research Laboratory; **Gregory Wagner**, MIT

PS14B-2834 *POSTER* Measurements of Concurrent Turbulent Mixing and Velocity Shear in the Ocean Surface Boundary Layer with Gliders: **J T Witte**, M R Palmer, M Toberman, J Wihgott, A Naveira Garabato, B I Moat

PS14B-2835 *POSTER* Wind limits on rain layers and diurnal warm layers: **E J Thompson**, J Moum, C W Fairall, S A Rutledge

PS14B-2836 *POSTER* Barrier Layer in the Indian Ocean during Central Pacific and Eastern Pacific El Niños: Observations and Mechanism: **X Zhang**, L Zeng, X Tian

PS14B-2837 *POSTER* Turbulent Diurnal Jets as Observed by an Ocean Microstructure Glider.: **M Toberman**, M Inall, M R Palmer

PS14B-2839 *POSTER* Overlapping boundary layers in coastal oceans: **C Yan**, J C McWilliams, M Chamecki

PS14B-2840 *POSTER* Diffusion of Pollutants in Wind-Induced Oceanic Surface Turbulence: **B Kim**, Y K Cho, Y Noh

PS14B-2841 *POSTER* Anisotropic Turbulence and Subsurface Heat Fluxes in the Diurnal Warm Layer: **K Hughes**, J Moum, E L Shroyer

PS14B-2842 *POSTER* Mixed Layer Deepening due to Wind-Induced Shear-Driven Turbulence and Scaling of the Deepening Rate in the Stratified Ocean: **Y Ushijima**, Y Yoshikawa

PS14B-2843 *POSTER* Evaluating Monin-Obukhov Scaling for the Turbulent Ocean Surface Layer: **Z Zheng**, R R Harcourt, E A D'Asaro

PS14B-2844 *POSTER* Vertical turbulent cooling of the mixed layer in the Atlantic ITCZ and trade wind regions: **G R Foltz**, R M Hummels, M Dengler, R C Perez, M Araujo

PS14B-2845 *POSTER* On the variability of Arabian Sea mixing and its energetics: **S Singh**, V Valsala, A G Prajeesh, S Balasubramanian

PS14B-2846 *POSTER* Uncertainty quantification and optimization of an eddy diffusivity, mass flux model for turbulent vertical mixing in the ocean surface boundary layer: **G L Wagner**, A Souza, R M Ferrari

PS14B-2847 *POSTER* On the spatial and temporal discretization of vertical diffusion in the turbulent planetary boundary layer: **F Lemarié**

PS14B-2848 *POSTER* Vertical mixing parameterization for the ocean surface boundary layer based on assumed distribution higher order closure: **A Garanaik**, R Robey, L Van Roekel, Q Li

PS14B-2849 *POSTER* A general turbulence velocity scale for transport of buoyant materials in the oceanic mixed layer: **T Chor**, M Chamecki

PS14B-2850 *POSTER* Towards super-parameterization of ocean surface boundary layer turbulent mixing in MPAS-Ocean: **Q Li**, L Van Roekel

PS14B-2851 *POSTER* Turbulence and Convection in Ocean and Atmospheric Models: The Unified Eddy-Diffusivity/Mass-Flux (EDMF) Approach: **J Teixeira**

SOCIAL-OCEAN SCIENCE INTERACTIONS AND SDGS

SI14A Poster Hall C-D

Monday 1600h

Reconstruction of Drowned Paleolandscapes and Potential Uses for Underwater Archaeology Posters (*joint with CP, MG*)

Moderators: **Amy Gusick**, Natural History Museum of Los Angeles County; **Jillian Maloney**, University of California, San Diego

SI14A-1526 *POSTER* Paleocoastal Reconstruction of an Ancient Maya Trading Port, Quintana Roo, Mexico: **D Rissolo**, R Jaijel, B Goodman-Tchernov, P A Beddows, D Smith, J B Glover

SI14A-1527 *POSTER* Controlled-Source Electromagnetic Methods to Investigate the Submerged Cultural Landscapes of the Pacific Continental Shelf: **R King**, J Maloney, S Constable, A E Gusick, T Braje, D Ball

SI14A-1528 *POSTER* Preliminary Sediment Core Analysis and Paleoenvironmental Reconstruction: Northern Channel Islands Platform, California: **L Johnson**, J M Maloney, S Klotsko, A E Gusick, T Braje, D Ball

SI14A-1529 *POSTER* Refining search areas for submerged archaeological resources using subbottom data and applied geomorphology: **J Maloney**, A Laws, M Skakun, A E Gusick, S Klotsko, T Braje, L G Davis, A Nyers, D Ball, J Erlanson

SI14A-1530 *POSTER* Structural Controls on Paleodrainage Morphology on the Oregon Continental Shelf During the Last Glacial Maximum: **S Klotsko**, J M Maloney, A E Gusick, L G Davis, A Nyers, T Braje, D Ball

SI14A-1531 *POSTER* Submerged Landscapes and the Antiquity of Maritime Adaptations: **T Braje**, J Erlandson, A E Gusick

SI14A-1532 *POSTER* Submerged Landscape Modeling using a Virtual World Simulation: **J O'Shea**, A Lemke, R Reynolds, T Palazzolo, D Stanley

SI14B Poster Hall C-D

Monday 1600h

Sustainable Food from the Sea: Challenges and Solutions II Posters

Moderators: Rebecca Gentry; Sarah Lester, Florida State University

SI14B-1533 *POSTER* The Ecological and Economic Potential for Offshore Mariculture in the Caribbean: **L Thomas**, T Clavelle, D H Klinger, S Lester

SI14B-1534 *POSTER* PREDICTING MARICULTURE'S IMPACTS ON WILD FISHERIES: **J Couture**, S Gaines, B Halpern

SI14B-1535 *POSTER* Regulatory and socioeconomic drivers of mariculture production worldwide: **B Ruff**, R Gentry, S Lester

SI14B-1536 *POSTER* Spatial Planning of Marine Aquaculture Under Climate Decadal Variability: A Case Study for Mussel Farms in Southern California: **J Sainz**, E Di Lorenzo, T W Bell, S Gaines, R J Miller

SI14B-1537 *POSTER* Re-location of Aquaculture Farms for Sustainable Seafood Provision in Korea's Coastal Waters under the Accelerated Climate Change: **J Y Park**, J Nam, J Yim

SI14B-1538 *POSTER* Aquaculture and Blue Economy Initiatives at the Port of San Diego: **P Sylvia**, P C LeBlanc

SI14B-1540 *POSTER* Addressing seafood traceability at the city-scale: stakeholder engagement for co-designing a solution for Los Angeles: **D Willette**, S Cheng, P H Barber, J Greenberg, D Solis

SI14B-1542 *POSTER* Ecolabeled seafood has a higher substitution rate at the end of the supply chain: **K Wilson**, D Willette, M Smith, S Esteves, X Yuan

SI14B-1543 *POSTER* Identification of rockfish species in Monterey, CA Fishmarkets using DNA barcoding: **A Gunter**

SI14B-1544 *POSTER* Meta-omics solutions for producing sustainable seafood: genome and microbiome research applied towards fisheries and aquaculture: **J Minich**

SI14B-1545 *POSTER* Societal Adoptions to Ocean and Climate Extremes : Application of Information and Communication Technologies for Governing and Sustaining Marine Food Chain in Indo-Pacific and Beyond.: **K Chaudhari**, M Cerreta, P De Toro, P J Philip

SI14C Poster Hall C-D

Monday 1600h

Transdisciplinary Approaches to Coastal Challenges Posters (*joint with CP, ED, PC*)

Moderators: Sean Thatcher, Rutgers University New Brunswick; **Johnny Quispe**, Rutgers University New Brunswick

SI14C-1547 *POSTER* Building Regional Baselines and a Suite of Spatial Tools to Better Prepare for Oil Spills: **L Romeo**, A Dyer, J Nelson, J Bauer, K K Rose, P Wingo, M Sabbatino

SI14C-1548 *POSTER* C2R2: Training Students To Build Coastal Resilience: **C Ferraro**, R E Kopp, R Jordan, S Bond, L M Auermuller, J Herb, J Gong, C Andrews, J D McDonnell

SI14C-1550 *POSTER* Innovative Strategies for Mitigating Coastal Challenges to Prevent Marine Pollution.: **V C**, M Cerreta

SI14C-1551 *POSTER* Lessons from Implementing Interdisciplinary Approaches for Climate Change Adaptation: **E Ryan**, J Lawrence, R Bell, R K Priestley, S A Stephens, P Blackett, M Haasnoot

SI14C-1552 *POSTER* Local Knowledge, Sense of Place, and Coastal Restoration in the Indian River Lagoon: **F Rivera**, T Hawthorne, H Torres, L Graham

SI14C-1553 *POSTER* Using a Data-assimilative Ocean Biogeochemistry Model (ECCO-Darwin) as a Novel Framework for Evaluating Carbon Mitigation Strategies, Outreach, and Policy: **D Carroll**, D Menemenlis, T Van Der Stocken, J O Niles, K Cavanaugh, J F Adkins

SI14C-1554 *POSTER* What Shall We Call It? How Different Fields Can Help Us Think About Transdisciplinary Work: **L Williams**

SI14D Poster Hall C-D

Monday 1600h

What's My Hazard? Meaningful and Actionable Coastal Science for Property Owners, Planners, and Practitioners II Posters (*joint with CP, ED*)

Moderators: **Erika Lentz**, U.S. Geological Survey; **Greg Dusek**, NOAA National Ocean Service; **Hilary Stockdon**, U.S Geological Survey

SI14D-1555 *POSTER* Offshore Sand Resource Management - Marine Minerals Information System "A Data Management Pillar of the National Sand Inventory": **L Turner**, K Dobbs, A Ramirez

SI14D-1556 *POSTER* Bluff Retreat and Sediment Input to a Sand-Starved Littoral System on the Pennsylvania Lake Erie Coast, USA: **A M Foyle**, M A Rutter, K Schuckman

SI14D-1557 *POSTER* Building Data Access for Sharing non-NWLON Water Level Information in Alaska: **C Janzen**, M McCammon, W Koeppen, J Overbeck

SI14D-1558 *POSTER* Building toward a dynamic national coastal flood map that includes sea level rise and storms: **P Barnard**, K S Doran, L H Erikson, A O'Neill, D L Passeri, C D Storlazzi

SI14D-1559 *POSTER* Evaluating future coastal landscape change through a decision-support framework: **E E Lentz**

SI14D-1560 *POSTER* Probabilistic Inundation Mapping: Providing 'Weather-Like' Forecasts for Flooding: **K Schmid**

SI14D-1561 *POSTER* Forecasting Wave Driven Inundation in West Maui – Modelling a Complicated Nearshore Environment to Predict Runup: **M D Guiles**, C Tognacchini, A Azouri, V Roeber, N Li, M Iwamoto, F Langenberger, T Owens, D S Luther

SI14D-1562 *POSTER* Co-Developed Assessment of Inundation Risk at Pu'uhonua o Hōnaunau National Historical Park, HI: **A H Sanchez**, P R Thompson, B Powell, J E Stopa

SI14D-1564 *POSTER* From Lifeguards to AI: Advancing Rip Current Forecasting Through New Detection Methods: **G Dusek**, M Churma, J S Im, R Etienne, A Pang, A de Silva, I Mori

SI14D-1565 *POSTER* Risk assessment and epistemic uncertainty at the residential scale as a function of wave and erosion model physics: **A R Grilli**, G Westcott, M Gardner, F Shi, J T Kirby Jr, M L Spaulding, S T Grilli

SI14D-1567 *POSTER* The StormSurgeMonitor for the German Coast: **E Meyer**, R Weisse, I Meinke, X Liu