| | Time range | Time Slot | Sala 4<br>Plenary + Theme A | Sala 5<br>Theme B/C | Sala 6<br>Theme D | Sala 2<br>Theme E | Sala 3<br>Theme F |
|---|---|---|---|---|---|---|---|
| Morning | 08:00 - 09:00 | | Registration | | | | |
| | 09:00 - 9:50 | | Opening session | | | | |
| | 9:50 - 10:40 | | Plenary Speaker: Samantha Siedlecki | | | | |
| | 10:40- 11:30 | | Plenary Speaker: Cristian Vargas | | | | |
| Afternoon | 11:30-14:10 | | Lunch Break | | | | |
| | 13:30 - 15:30 | - | **Ocean Processes**<br>Moderated by: David González-Santana and Luana Pinho | **Mollusks and Crustaceans**<br>Moderated by: Annie Schatz and Abigail Sisti | **Estuaries**<br>Moderated by: Libby Jewett and Nirupama Saini | **Impacts and Risks to Fisheries, Aquaculture, and Food Security**<br>Moderated by: Paco Quintana and A. Ajay Singh | **Capacity Building and Best Practices**<br>Moderated by: Kirsten Isensee and Damboia Cossa |
| | | 14:10 - 14:30 | Free | Free | **Free** | Free | **Valauri-Orton:** Equity in Ocean Acidification Research: Development of a Low-cost Kit for OA Monitoring |
| | | 14:30 - 14:50 | **Porter**: Carbonate chemistry and accretion/dissolution dynamics on the southern-most coral reefs in the Western Indian Ocean<br>*Virtual* | **Gómez Reyes:** Physiological assessment in response to two near-future OA escenarios during abalone (Haliotis rufescens) larval development<br>*Virtual* | **Batista:** Spatial and diurnal variability of net water-air CO2 fluxes in an amazon macrotidal estuary | **BednarŠek**: pH Magnitude, Variability and Predictability across Pacific Coast Estuaries determines the level of shell dissolution in Economically important Calcifiers under Ocean Acidification scenarios | **Kotra**: Ocean Acidification Monitoring in Vanuatu: Introduction and Capacity Building |
| | | 14:50 - 15:10 | **Arbilla**: CO2 Sink and Source Zones Delimited by Marine Fronts in the Drake Passage<br>*Virtual* | **Walker**: Response of the Physiological Condition of Mytilus edulis and Donax variabilis to Temporal and Spatial Variation in Water Quality | **Amaral:** Effect of Dissolved Organic Matter on Total Alkalinity and CO2 Concentration in a Subtropical Shallow Estuary | **Birchenough:** Exposure of commercial shellfish to changing pH levels: how do we scale-up experimental evidence to regional impacts?<br>*Virtual* | **Currie**: The development of accessible best practices for monitoring ocean acidification globally through the "GOA-ON in a Box" initiative |
| | | 15:10 - 15:30 | **Ogundare**: Winter Carbonate System Properties in the South Atlantic Ocean South of Africa | **Sola-Hidalgo:** Effects of upwelling in calcification, growth and mortality of Chilean scallops (Argopecten purpuratus) cultured in Tongoy bay (30° 12'S, 71° 34'W) | **Pacella:** Watershed Controls of Acidification Dynamics in Estuaries of the United States: from Case Study to National Assessment<br>*Virtual* | **Sordo**: Long-term effects of high CO2 on growth and survival of juveniles of the striped venus clam Chamelea gallina: implications of seawater carbonate chemistry | **Soapi**: Pacific Islands Ocean Acidification Centre: Building Monitoring Capacity from Local to Regional Scales |
| | 15:30 - 16:00 | | Coffee break | | | | |
| | 16:00-17:20 | - | **Methods, Sensors and Proxies**<br>Moderated by: Luana Pinho and Carla F. Berghoff | **Fishes**<br>Moderated by: Carla Edworthy and Giancarlo Correa | **Coasts**<br>Moderated by: L. Antonio Cuevas and Cale Miller | **Impacts and Risks to Fisheries, Aquaculture, and Food Security**<br>Moderated by: Libby Jewett and Damboia Cossa | **Capacity Building and Best Practices**<br>Moderated by: Lina Hansson and Celeste Sánchez-Noguera |
| | | 16:00 - 16:20 | **Lowder**: Lower Cost and Complexity for Carbonate Chemistry Measurements: the pCO2 to Go as a Tool for Observation and Adaptation | **Munday**: Ocean Acidification and the Behaviour of Marine Fishes<br>*Virtual* | **González-Santana**: Coastal Carbonate System Variability along an Active Lava-Seawater Interface | **Navarrete-Mier (Invited):** Preliminary assessment of pH variation in small scale aquaculture of whiteleg shrimp larvae in Ecuador | **Schoo**: Ocean acidification and the UN Sustainable Development Goal 14 |
| | | 16:20 - 16:40 | **Batista**: Intercomparison of Four Methods to Estimate Coral Calcification Under Various Environmental Conditions | **Thomas**: Neurobiological Mechanisms Underpinning Behavioural Responses to Elevated CO2 in a Cephalopod<br>*Virtual* | **Isah**: Diel carbonate chemistry variability in eutrophied reefs of Bolinao, Northwestern Philippines | **Hilmi:** The Vulnerability of the Fisheries Sector to Climate Change in the Mediterranean Region | **Espinosa-Díaz**: The ocean acidification monitoring begins in Colombia: REDCAM Strategy 20 years of inter-institutional cooperation |
| | | 16:40 - 17:00 | **N'Yeurt**: Spectrophotometry-derived in situ ocean acidification time series for the Fiji Islands and Dominica: Addressing SDG 14.3 requirements | **Spady**: The Effects of Projected Future CO2 Concentrations on the Behaviour of Two Species of Tropical Cephalopod<br>*Virtual* | **Alves Chielle**: Heterogeneity of CO2 dynamics in the Brazilian Northeast Equatorial coast | **Pilcher:** Modeling ocean acidification in the Bering Sea to support long-term planning and management of the largest U.S. fishery<br>*Virtual* | **González-Dávila**: CanOA, Ocean acidification observation network in the Canary Islands Region |
| | | 17:00 - 17:20 | **Jiang**: Synthesis and Visualization of Carbonate and Nutrient Data on North American Continental Shelves | **Correa**: Modeling the Multiple Action Pathways (MAPs) of ocean acidification effects on Pacific cod in the eastern Bering Sea | Free | Free | **Sami-Ashhab**: Ecosystem Protection Plans and Application of Neural Networks for pH Prediction in the Gulf of Aqaba-Jordan Coastal Water |
| Evening | 17:20-19:30 | | Poster Presentations | | | | |

| Day 2 | Time range | Time slot | Sala 4<br>Plenary + Theme A | Sala 5<br>Theme B/C | Sala 6<br>Themes D + B/C | Sala 2<br>Theme B/C + E | Sala 3<br>Themes A + F |
|---|---|---|---|---|---|---|---|
| Morning | 08:00 - 08:50 | | Plenary Speaker: Steve Widdicombe | | | | |
| | 08:50 - 9:40 | | Plenary Speaker: Dimitri Gutiérrez | | | | |
| | 9:40 - 10:00 | | Break | | | | |
| | 10:00 - 12:00 | - | **Ocean Processes**<br>Moderated by: Libby Jewett, Tim Iringan, and Matheus Batista | **Mollusks and Crustaceans**<br>Moderated by: Betina Lomovasky and Halle Berger | **Seeps and Vents**<br>Moderated by: David González-Santana and Masahiko Fujii | Free Session | **International and Regional Collaborations and Coordination**<br>Moderated by: Kirsten Isensee and Krishna Kotra |
| | | 10:00 - 10:20 | **Cryer**: The Role of Riverine Input in Coastal Ocean Acidification: A Case Study from Belize | **Manríquez:** The combined effects of ocean acidification and temperature levels on the thermal niche of two invertebrate species | **Agostini**: What we learn from the Shikine CO2 seep on the effects of high CO2 on hermatypic corals<br>*Virtual* | | **Newton (Invited Speaker)**: The Global Ocean Acidification Observing Network, GOA-ON: Ten years later and one hundred countries strong |
| | | 10:20 - 10:40 | **Itahi de la Cruz-Ruiz**: Coastal air-water carbon dioxide flux in front of a community of the northwestern Mexican Tropical Pacific, in 3 different years | **Córdova-Rodríguez**: Effect of low pH on calcification and mechanical properties of Peruvian scallop Argopecten purpuratus | **Mirasole:** Fish assemblages cope with ocean acidification: a study case from two Mediterranean shallow CO2 vents<br>*Virtual* | | **Bantelman**: An overview of the Ocean Acidification International Coordination Centre's (OA-ICC) efforts to advance OA science |
| | | 10:40 - 11:00 | **Espinosa-Carreón**: First registers of dissolved inorganic carbon and CO2 ocean-atmosphere fluxes in the Baja California Sur Frontal System, Mexico<br>*Virtual* | **Duvane:** Phenotypic plasticity on the sea urchin Echinus esculentus larvae under constant and fluctuating seawater pH conditions | **Teixidó**: Functional biodiversity loss in newly discovered natural CO2 vent systems<br>*Virtual* | | **Chierici**: New science program to study ocean acidification along the coast of Africa and the Indian Ocean as part of the EAF Nansen Program<br>*Virtual* |
| | | 11:00 - 11:20 | **Chapa-Balcorta**: Coastal acidification in the Southern Mexican Tropical Pacific: the buffering role of riverine input in upwelling-dominate regions | **McFarland**: Physiological response of oyster larvae to interactive effects of climate change variables | **Bermudez**: Volcanic C02 vents at the Galapagos: a natural laboratory for long term multidisciplinary ocean acidification research<br>*Virtual* | | **Mullen:** The Ocean Acidification Information Exchange: an Online Community Connecting Questions with Answers |
| | | 11:20 - 11:40 | Free | **Di Poi:** From Scenario to Tipping-point experiments: revisiting responses of the Pacific oyster to Ocean Acidification<br>*Virtual* | **Carbonne**: Early life stages of Mediterranean corals are more sensitive to ocean acidification than adults<br>*Virtual* | | **Bhadury**: South Asia Regional Hub on Ocean Acidification (SAROA)- ocean acidification research for sustainable oceans<br>*Virtual* |
| | | 11:40 - 12:00 | Free | **Sisti:** Effects of Acute Exposure to Reduced pH on the Physiology of American Lobster Embryos (Homarus americanus) | **Harvey**: Feedback mechanisms stabilise degraded turf algal systems at a CO2 seep site<br>*Virtual* | | **Gómez Batista**: Observatory for the Study of OA in Cuba: First Results and Challenges for Its Sustainability |
| Afternoon | 12:00 - 14:10 | | Lunch Break | | | | |
| | 13:30 - 15:30 | - | **Seasonal Variability**<br>Moderated by: Rodrigo Kerr and Tim Iringan | **Mollusks and Crustaceans**<br>Moderated by: Halle Berger and Nina Bednarsek | Free Session | **Solutions: from MPAs to CDR**<br>Moderated by: Libby Jewett and Sam Mogen | **International and Regional Collaborations and Coordination**<br>Moderated by: Lina Hansson, Amy Markel, and Katy Soapi |
| | | 14:10 - 14:30 | **Curra-Sánchez**: Effects of contrasting land uses on the availability of Coloured Dissolved Organic Matter (CDOM) and the carbonate system in the coastal ocean<br>*Virtual* | **McElhany**: Dungeness crab in an acidifying ocean | | **Cross**: Carbon Dioxide Removal Research at NOAA<br>*Virtual* | **Cochran**: U.S. Interagency Working Group on Ocean Acidification: Federal Policy and Coordination through National Strategic Plan and Vulnerability Report |
| | | 14:30 - 14:50 | **Sánchez Noguera**: Carbonate chemistry along the Pacific coast of Costa Rica | **Brush**: Simulating the Impact of Ocean Acidification and Associated Stressors on the Eastern Oyster, Crassostrea virginica, in Chesapeake Bay | | **Bernal**: Evaluation of carbonate chemistry in two stations with contrasting conservation characteristics: First 3 years of measurements | **McGovern**: The OSPAR Assessment of Ocean Acidification in the North-East Atlantic |
| | | 14:50 - 15:10 | **Idrissi**: New marine observations of carbonate chemistry variability and ocean acidification state in North West Africa waters | **Jorquera**: Effects of pCO2 on Aerobic Respiration and Critical Oxygen Pressure (Pcrit) of Two Squat lobster Species (Pleuroncodes monodon and Cervimunida johni) | | **Miller:** High-latitude Seagrass Pools Experience Carbonate Chemistry Decoupling During Times of High Photosynthetic Activity | **Meléndez & Palacio**: Caribbean Ocean Acidification Community of Practice |
| | | 15:10 - 15:30 | **Martínez-Fuentes:** On the causes of the seasonal dynamics of the inorganic carbon chemistry in Bahía de los Ángeles, Gulf of California (México)<br>*Virtual* | **Ramaglia da Mota**: Does the effect of ocean acidification and salinity variation on crab Callinectes danae gene expression and physiology increase over long periods of exposure?<br>*VIrtual* | | **Singh**: Resource, Biodiversity and Water Quality Baseline Mapping of the Cakau ni sasi and Yarawa Reef Ecosystem within the Great Sea Reef of Fiji | **Sanchez-Cabeza**: Ocean Acidification Research in Latin America and The Caribbean by the REMARCO Network |
| | 15:30 - 16:20 | | Coffee break | | | | |
| | 16:20-17:40 | - | **Methods, Sensors and Proxies**<br>Moderated by: Moh'D Sami Ashhab and Bronte Tilbrook | **Seagrass, Mollusks, and Macrophytes**<br>Moderated by: Antoine De Ramon N'Yeurt and Nina Bednarsek | **Latin America**<br>Moderated by: Paco Quintana and Valentina Amaral | **Adapting Human Communities, Economies, Industries**<br>Moderated by: Libby Jewett and Laura Sordo | **Interannual Variability**<br>Moderated by: Abigail Sisti and Margaret Ogundare |
| | | 16:20 - 16:40 | **Álvarez**: Ocean acidification at the crossroads: approaching unpurified and purified m-cresol spectrophotometric pH measurements | **Fernandez**: Local Adaptation Modulates Kelp's Responses to Global Climate Change: A Phenotypic and Genetic Approach | **Bernales**: Implications of ENSO on the coast-ocean gradient of siliceous and calcareous phytoplankton communities off the central coast of Peru<br>*Virtual* | **Ombres**: Assess, Anticipate, Adapt: Vulnerability and Responses to Ocean Acidification in the US | **Barbero**: Ocean Acidification trends in the Gulf of Mexico: Results from the GOMECC program |
| | | 16:40 - 17:00 | **Evans:** A nearshore Burke-o-Lator network along the North American Pacific coast<br>*Virtual, live* | **Diaz-Pulido**: The Effects of Ocean Acidification on Macroalgal Physiology and Ecology and Implications for Coral Reefs | **Berghoff**: New Sea Surface CO2 Fugacities measurements in the Argentine Sea | **Falkenberg**: Physical and mental health consequences of ocean-acidification driven changes to marine biodiversity<br>*Virtual* | **Cuevas**: From short-term to interannual variability of carbonate system parameters at near-shore sites |
| | | 17:00 - 17:20 | **Hammermeister**: State of the Art Autonomous CO2 System Measurements Onboard Boaty McBoatface: Results from an 8-day Mission in the Celtic Sea | **Kumar**: Evaluation of growth, primary productivity, nutritional composition, redox state, and antimicrobial activity of red seaweeds Gracilaria debilis and G. foliifera under pCO2 induced seawater acidification | **Díaz-Rosas**: Calcifying Phytoplankton in the Eastern South Pacific for Understanding Ocean Acidification | Free | **Pinho:** CO2 fluxes between air-water interface at SAMBAR Project |
| | | 17:20 - 17:40 | **Chu:** Field deployment of a new generation of carbon dioxide sensor in an underway application<br>*Virtual* | Free | **Vellojín**: Seasonal variability of the air-sea CO2 flow in a sub-Antarctic glacier fjord (Chile, 53°S): Patagonia southernmost fjords as a CO2 sink region? | Free | **Nestor:** Ocean Acidification monitoring project in Palau |
| | 17:40 - 19:30 | | Poster Presentations | | | | |

| Day 3 | Time range | Time slot | Sala 4<br>Plenary + Theme A | Sala 5<br>Theme B/C | Sala 6<br>Theme D | Sala 2<br>Theme B/C | Sala 3<br>Theme F |
|---|---|---|---|---|---|---|---|
| Morning | 08:00 - 08:50 | | Plenary Speaker: Jessie Turner | | | | |
| | 08:50 - 9:40 | | Plenary Speaker: Frédéric Gazeau | | | | |
| | 9:40 - 10:00 | | Break | | | | |
| | 10:00 - 11:40 | - | **Seasonal Variability**<br>Moderated by:<br>Matheus Batista, Raffi Isah, and Nirupama Saini | **Mollusks and Crustaceans**<br>Moderated by: Taylor Walker and Catherine Czajka | **Arctic**<br>Moderated by: Margaret Ogundare and Jose Martin Hernandez Ayon | **Intertidal Communities**<br>Moderated by: Libby Jewett and Laura Sordo | Free Session |
| | | 10:00 - 10:20 | **Palacio**: Carbonate system along the Florida Reef Tract: Long term trends, seasonality, and regional variation | **Meseck**: Energetic response of Atlantic surfIcam Spisula solidissima to Ocean acidification: an experimental and dynamic energy budget model<br>*Virtual* | **Fransson**: Storms and sea-ice processes in the high Arctic Ocean enhance wintertime ocean CO2 uptake<br>*Virtual* | **Jewett**: Challenges of Scaling Ocean Acidification Impacts from Lab to Field | |
| | | 10:20 - 10:40 | **Ibello**: Carbon dioxide fluxes and pH levels in the surface waters of the North-East Levantine basin (Mediterranean Sea) | **Schatz**: Comparing Physiological Effects, from Cellular to Whole-Organism, of Co-exposure to Ocean Acidification and Warming in Two Groups of Larval Eastern Oysters, Crassostrea virginica | **Rastrick:** Natural Analogues of an Arctic in Rapid Transition (AnalogueART working group)<br>*Virtual* | **Espinel-Velasco**: To Settle, or not to Settle: Marine Biofilms, Larval settlement and Ocean Acidification | |
| | | 10:40 - 11:00 | **Naik**: Seasonal shift in pCO2 source and sink status in the eastern Arabian Sea | **Sisti:** Effects of Acute Exposure to Reduced pH on the Physiology of American Lobster Embryos (Homarus americanus) | **Corrales Guerrero**: Fate of cold-water coral reefs – using natural gradients to identify dominant drivers of ecosystem change resulting from ocean acidification and warming<br>*Virtual* | **Ouillon**: Effects of Different Oxygen and pH Regimes on Energy Metabolism and Biological Functions of the Ragworm Hediste diversicolor | |
| | | 11:00 - 11:20 | **Ono:** Short-term variation of pH in seawaters around Japan coastal areas: Its characteristics and forcings<br>*Virtual* | **Castillo-Briceno**: Dissecting ocean acidification potential impacts during the early life cycle of the Tropical Pacific shrimp Litopenaeus vannamei in Ecuador | **Polukhin:** Long-term spatio-temporal variability of DIC, carbon dioxide flow and ocean acidification rate on the Arctic shelf<br>*Virtual* | **Widdicombe**: Unifying biological field observations to detect and compare ocean acidification impacts across marine species and ecosystems | |
| | | 11:20 - 11:40 | **Vance**: Evaluating Seasonal and Long-term Carbon Dynamics in the South Pacific | Free | **Chierici**: Highlights from 8-years of monitoring Ocean Acidification in Norwegian waters<br>*Virtual* | **Chatzinikolaou:** Impact of Ocean Acidification on Different Life Traits of the Gastropod Hexaplex trunculus<br>*Virtual* | |
| Afternoon | 11:40 - 13:30 | | Lunch Break | | | | |
| | 13:30 - 15:30 | - | Free Session | **Mollusks and Crustaceans**<br>Moderated by: Betina Lomovasky and Taylor Walker | **Arctic**<br>Moderated by: Jose Martin Hernandez Ayon and Mario Hurtado | **Intertidal Communities**<br>Moderated by: A. Ajay Singh and Yimnang Golbuu | **Stakeholder Engagement and Policy Action**<br>Moderated by: Libby Jewett and Amy Markel |
| | | 13:30 - 13:50 | | Free | Free | Free | **Bellerby (Invited Speaker):** Co-produced ocean acidification scenarios for coastal Norway |
| | | 13:50 - 14:10 | | **Giménez**: Responses of a British Columbia bivalve foundation species to acidification experiments incorporating environmental and population complexity: Investigating transgenerational exposures, responses to dynamic PCO2 treatments, and synergistic effects of thermal and acidification stress<br>*Virtual* | **Jones**: Ocean Acidification State in the Arctic: Contemporary Dynamics Around the Svalbard Archipelago<br>*Virtual* | **McGraw:** How Will Biota Respond To A Changing Ocean? A Best Practice Guide for Multiple-Driver Research | **Pugh**: Canada's Ocean Acidification Community of Practice |
| | | 14:10 - 14:30 | | **Bednaršek:** Carapace Dissolution, Growth decline and mechanoreceptor damages in Dungeness crab related to severity of ocean acidification gradients | **Green:** Studying changing carbonate chemistry in the Arctic Ocean using satellite Earth observation<br>*Virtual, live* | **Dupont**: Mechanism of local adaptation to natural variability in pH in marine calcifiers | **Makomere:** Addressing Ocean Acidification through Polycentric Governance: Shifting the Focus to Regulation of Ocean Acidification Response Strategies |
| | | 14:30 - 14:50 | | **Schatz**: Comparing Physiological Effects, from Cellular to Whole-Organism, of Co-exposure to Ocean Acidification and Warming in Two Groups of Larval Eastern Oysters, Crassostrea virginica | Free | **Szkope-Cobo**: Multiple climate change stressors impact fundamental subcellular stress response in marine calcifiers: Novel approaches for stress detection and quantification<br>*Virtual, live* | **Turner**: International Alliance to Combat Ocean Acidification: Governments Working Together to Increase Ambition to Reduce Carbon Dioxide Emissions and Implement Strategies to Assess and Prepare for Impacts of Ocean Acidification |
| | | 14:50 - 15:10 | | **Czajka**: Impacts of future climate change on Chesapeake Bay carbonate chemistry and oyster growth | Free | **Caillon:** Physiological and immune response of oysters to climate change as a function of diet and tidal regime | **Currie**: Practical Resources and Strategies to Assist Policymakers in Managing Ocean Acidification |
| | | 15:10 - 15:30 | | **Watson**: Ocean acidification alters invertebrate behaviour across multiple trophic levels<br>*Virtual* | Free | Free | **Carter**: Supporting State Action on Ocean Acidification: Mobilizing Solutions-focused Science, Policy and Management in California<br>*Virtual* |
| | 15:30 - 16:00 | | Coffee Break | | | | |
| | 16:00-17:20 | - | **Methods, Sensors and Proxies**<br>Moderated by: Moh'd Sami Ashhab and Bronte Tilbrook | **Fishes**<br>Moderated by: Paula Judith Rojas-Higuera and Yimnang Golbuu | **Multiple Stressors and Adaptations**<br>Moderated by: Pamela Fernandez and Jean-Pierre Gattuso | **Plankton**<br>Moderated by: Carla F. Berghoff | **Seagrass, Mollusks, and Macrophytes**<br>Moderated by: Antoine De Ramon N'Yeurt and Nina Bednarsek |
| | | 16:00 - 16:20 | **Clegg**: A New Chemical Model to Constrain the Impacts of Ocean Acidification in Aquatic Systems: Application to pH and the Carbonate System<br>*Virtual* | **Edworthy**: Combining Monitoring and Eco-Physiology to understand the response of a coastal fish to ocean acidification | **Graham:** Using natural analogues to study the combined effects of hurricanes and ocean acidification on tropical reefs<br>*Virtual* | **McQuaid**: Ocean Acidification Negatively Impacts Marine Primary Productivity by Interfering with Iron Acquisition in Phytoplankton<br>*Virtual* | **Krieger**: Internal Chemistry dictates Responses of Coralline Algae<br>to Ocean Acidification |
| | | 16:20 - 16:40 | **Jiang**: Global ocean acidification indicators: past, present, and future | **Mitchell**: Ocean Warming and Acidification Degrade Shoaling Performance and Lateralisation of Novel Tropical–Temperate Fish Shoals<br>*Virtual* | **Aldunate**: Carbon assimilation in the community inhabiting the secondary chlorophyll maximum of the low pH anoxic marine zones of the Eastern tropical North and South Pacific | **Moreno-Alcántara**: Atlantic Heteropods as Indicators of Environmental Change in the Southern California Current<br>*Virtual* | **Rivest:** Modeling species interactions to evaluate whether seagrass can alter the physiological condition of Easternoysters under ocean acidification<br>*Virtual* |
| | | 16:40 - 17:00 | **Osborne**: Utilizing Planktonic Foraminiferal Morphometrics as a Gulf of Mexico Paleo-OA Proxy | **Ravasi**: Genetic variation and phenotypic plasticity in the response of a coral reef fish to ocean acidification<br>*Virtual* | **Santana-Casiano**: Fe Biogeochemistry in a High CO2 Ocean | **Sugie**: Altering planktonic trophic interactions of the Arctic through the different temperature- and CO2 -sensitivities between small and large phytoplankton<br>*Virtual* | **Taise:** Effects of ocean acidification on Caulerpa spp<br>*Virtual* |
| | | 17:00 - 17:20 | Free | Free | **Cipriani:** Niche Plasticity allows species to BENEFIT from ocean acidification<br>*Virtual* | **Goes**: Assessing the Potential Impacts of Ocean Acidification on Phytoplankton Communities in River influenced Coastal Ecosystems<br>*Virtual* | **Quesquén**: Composition, distribution and abundance of holoplanktonic mollusks in the coastal Peruvian Upwelling System |

| Day 4 | Time range | Time slot | Sala 4<br>Plenary + Theme A | Sala 5<br>Theme B/C | Sala 6<br>Theme D + A | Sala 2<br>Theme B/C | Sala 3<br>Theme A |
|---|---|---|---|---|---|---|---|
| Morning | 08:00 - 08:50 | | Plenary Speaker: Sarah Cooley | | | | |
| | 08:50 - 9:40 | | Plenary Speaker: Guillermo Diaz-Pulido | | | | |
| | 9:40 - 10:00 | | Break | | | | |
| | 10:00 - 12:00 | - | **Modeling**<br>Moderated by: Jose Martín Hernandez Ayon and Catherine Czajka | **Corals**<br>Moderated by: Celeste Sánchez-Noguera and Treasure Warren | **Upwelling**<br>Moderated by: Libby Jewett and Margaret Ogundare | **Plankton**<br>Moderated by: Sangeeta Naik and Nina Bednarsek | **Long-term Trends:**<br>Moderated by: Rodrigo Kerr and Raffi Isah |
| | | 10:00 - 10:20 | **Orr (Invited Speaker)**: Arctic Ocean annual highs in pCO2 and [H+] could shift from winter to summer<br>*Virtual* | **Webb:** Projections of Reef Habitat Persistence under Ocean Acidification and Warming: Implications of Restoration and Coral Adaptation on the Persistence of the Inshore Patch Reef Cheeca Rocks | **Alin**: Past, present, and future upwelling season ocean acidification and hypoxia conditions on the Olympic Coast (Washington, USA) | **Johnson**: Nutritional Content of Emiliania huxleyi Under Ocean Acidification and Warming | **Sutton**: A call for a community of practice for assessing ocean acidification trends |
| | | 10:20 - 10:40 | **Jarníková:** Where Does The Extra Carbon Go? Dominant Impacts of Anthropogenically Modified Carbonate Chemistry in a Temperate Fjord System | **Heitzman:** Coral-Algae Interactions under Ocean Acidification<br>*Virtual* | **Alvites**: Coccolithophore community in the Peruvian Acidic Coastal Upwelling System: Temporal and spatial variability | **Yorifuji**: Experimental assessment of Ocean Acidification combined with Deoxygenation using a copepod Tigriopus japonicus | **Länger:** Modelling ocean acidification in a rapidly changing Arctic ocean |
| | | 10:40 - 11:00 | **Petton**: Development of a coastal observation monitoring network for carbonate system along the French coast | **Barkley:** Coral Reef Ecosystem Responses across a Strong Ocean Acidification Gradient in the U.S. Pacific Islands<br>*Virtual* | **Aguilera**: Antagonistic interplay between pH and food resources affects copepod traits and performance in a year-round upwelling system | **Rigual-Hernández**: Response of keystone coccolithophore species to natural and anthropogenically-induced variations of CO2 in the Southern Ocean | **Huertas**: The count-down for calcifiers to dissolve in major Atlantic and Mediterranean water masses due to ocean acidification |
| | | 11:00 - 11:20 | **Burger**: Compound Marine Heatwaves and Ocean Acidity Extremes<br>*Virtual* | **Rojas-Higuera**: Long-term Trends of pH and Sea Surface Temperatures over Colombian Maritime Areas and the Threats to Regional Corals | **Bravo**: Variability of carbonate chemistry in the coastal upwelling area in front of Pimentel, Lambayeque – Perú | Free | **Duke**: Seasonal, Interannual, and Long-Term Trends in Air-Sea CO2 Fluxes in the Northeast Pacific |
| | | 11:20 - 11:40 | **Lavoie:** Drivers, Variability, and Projections of pH and Calcium Carbonate Saturations in Three Distinct Regions of the Gulf of St. Lawrence<br>*Virtual* | **van der Heide:** Calcification and Photosynthetic Responses of Reef-Building Corals to Ocean Acidification | Free | Free | **Graco**: A Long-term Observatory of Marine-coastal Acidification and ODS in the Upwelling System off Peru: Challenges and Opportunities |
| | | 11:40 - 12:00 | **Mogen**: Near-Term Predictions of Ocean Acidification | **Kirkland:** Laboratory Experiments Reveal Reef Invertebrates in the Northern Gulf of Mexico are Sensitive to Warming yet, can Acclimate to Acidification | Free | Free | Free |
| Afternoon | 12:00 - 13:00 | | Lunch Break | | | | |
| | 13:00 - 14:00 | - | **Modeling**<br>Moderated by: Masahiko Fujii and Sam Mogen | **Corals**<br>Moderated by: Pamela Fernandez and Treasure Warren | Free Session | Free Session | Free Session |
| | | 13:00 - 13:20 | **Feely (Invited Speaker)**: Anthropogenic Carbon Concentrations in the Pacific Ocean: Implications for Ocean Acidification Since the Beginning of the Industrial Era | **Cornwall**: Global Declines in Coral Reef Calcium Carbonate Production under Ocean Acidification and Warming<br>*Virtual* | | | |
| | | 13:20 - 13:40 | **Musetti:** Carbonate System Reconstruction at the Western Tropical Atlantic Ocean Surface Waters<br>*Virtual* | **Enochs**: Moving Past the Mean: The Amplitude of Diel pH Fluctuations Can Influence Coral Calcification | | | |
| | | 13:40 - 14:00 | **Bernardo:** Comparative Marine Ecosystem Modelling to Assess the Impacts of Ocean Acidification and Hypoxia in Miyako Bay and Tokyo Bay, Japan | **Simancas-Giraldo**: Ecophysiological Responses of Four Soft Coral Genera to Ocean Acidification | | | |
| | 14:00 - 15:00 | | Coffee break | | | | |
| | 15:00-16:60 | 15:00 - 15:50 | Plenary Speaker: Dalin Shi (*virtual)* | | | | |
| | | 15:50-16:50 | Closing Ceremony | | | | |