The University of Southern Mississippi has been recognized alongside distinguished institutions like Harvard, MIT, Stanford, Johns Hopkins, and others, as one of the nation’s leading research universities. The Carnegie Classification of Institutions of Higher Education recognizes only 130 institutions in the nation as “R1: Doctoral Universities – Very high research activity.”

As a leader in marine and coastal science research, USM researchers in our School of Ocean Science and Engineering are advancing the scientific understanding of the Gulf of Mexico.

And at the USM Marine Research Center at the Port of Gulfport, the University is proud to be cultivating one of the Gulf Coast region’s largest economic drivers—the new maritime blue economy.
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Author/presenter index is available on the CERF 2019 Conference
Mobile App – download instructions can be found on page 15
Welcome to CERF 2019

Welcome to the 25th Biennial Conference of the Coastal and Estuarine Research Federation! Our conference connects a global community dedicated to advancing understanding and wise stewardship of estuarine and coastal ecosystems. Above all, it is this community that makes CERF conferences unique. Throughout the week I hope you enjoy the immersion in science critical to coastal sustainability, the inspiration offered by the rich conference program, and the invigoration that arises from connecting to friends and colleagues.

Please join me in thanking the conference committee for developing an exceptional scientific program and many activities to enhance your conference experience. On behalf of the CERF family, I extend a special welcome to the more than 600 students and early-career professionals attending the conference and presenting their work. The organizers have embedded the conference with many opportunities to explore career paths, develop professional networks, and form lifelong, supportive friendships.

CERF's commitment to valuing individual identities and ensuring all people feel welcomed and respected permeates this conference. Plenary panels offering diverse perspectives, the Rising TIDES (Toward an Inclusive, Diverse, and Enriched Society) Conference Program, the Inclusion Luncheon, and scientific sessions steeped in cultural heritage and coastal humanities provide opportunities to embrace differences that will increase our capacity to address complex coastal challenges.

Over the past year the Governing Board enacted significant steps toward creating a CERF culture intolerant of sexual harassment. I invite you to review the Event Code of Conduct included in this program book. Placards are posted throughout the conference venues as reminders of expected behavior and to provide mechanisms for reporting unacceptable conduct.

It has been a great privilege to serve as CERF President over the past two years. The energy, passion, and commitment of the Governing Board, Executive Director Susan Park, headquarters staff, multitude of volunteers, and members toward our collective vision is truly outstanding: I thank you all. Enjoy your week of CERF connections in Mobile, this cultural and culinary hub of the Gulf coast that radiates history, heart, and soul – just like CERF.

Hilary Neckles
Welcome from the CERF Conference Committee Co-Chairs

The journey to CERF 2019 in Mobile, AL began in 2016 with the selection of the city by the Governing Board, but it really started in Spring 2014 when an ice storm trapped a microbial ecologist and economist in Mobile, creating time and space for us to discover all we didn’t know about each other’s disciplines, and all we could learn towards the benefit of coastal and estuarine ecosystems. The spark was set to create a time and space for others to engage across disciplines and put into motion the core idea for CERF 2019, connecting science and society to preserve coastal and estuarine habitats, resources, and heritage. With the support of CERF Headquarters, the CERF Governing Board, and the tireless work of 58 members of our conference team, we have developed a conference focused around the idea of **Responsive | Relevant | Ready**. A simple phrase invoked to create discussion about how research agendas form and are directed at finding and solving problems facing nature and society.

CERF’s 25th biennial conference features two plenary sessions aimed at creating knowledge bridges between natural and social disciplines. We will explore the process involved in environmental decision making, with case studies in coastal resource management and climate impacts. We also examine the importance of citizen science to promote relevant and comprehensive understanding of science with the public. We look forward to lively plenary discussions that ignite conversations in every corner of the conference.

We listened to input from conference attendees in the past and limited concurrent sessions to ten, enabling all to see as much of the conference as possible. Our poster sessions will be filled with interdisciplinary science and late breaking results that emerged through summer 2019. Also woven throughout the conference are events and presentations highlighting Cultural Heritage & Coastal Humanities, allowing us to explore cultural values and stewardship roles of coastal communities.

Pulitzer Prize winning author Dr. Jack Davis will share a story about nature, society and science converging in the Gulf of Mexico during the opening keynote address. Another important event in the conference tapestry is a special presentation on the discovery of the Clotilda, a slave schooner with nationally significant cultural history, and regionally important natural history. Afternoons and evenings will be filled with additional engagement and learning opportunities with two town halls, the film festival, and the CERF Inclusion Lunch. While the theme of the conference strikes a serious tone, we value a core principal of CERF culture: take our science seriously, ourselves not so much. That principal will be on full display with the President’s Welcome Reception on Sunday, November 3, which kicks off with a Second Line Procession, led by a local brass band and followed by all CERF attendees.

This conference is the result of the hard work and dedication of CERF volunteers, members and staff. We are grateful to Ruth Carmichael and Frank Hernandez for leading a creative and organized team on the Attendee Experience Committee. They have ensured that the conference will be welcoming, inclusive and engaging. We extend our sincere thanks to Jennifer Pollack, Jim Hagy and Sharon Herzka for leading the dedicated members of the Scientific Program Committee. They have crafted an innovative and ambitious program unlike any CERF before this one. We also thank CERF Executive Director Susan Park for guiding us on this journey.

We can’t wait to share this conference and the great city of Mobile with everyone.

Leila and David
CERF 2019 CONFERENCE COMMITTEES

The CERF 2019 Conference wouldn’t be possible without the help of the following committees. Thank you to all of those who have participated in planning our favorite event of 2019.

Conference Co-Chairs
Leila Hamdan, University of Southern Mississippi
David Yoskowitz, Harte Research Institute, Texas A&M University, Corpus Christi

Attendee Experience Committee
Co-Chairs
Ruth Carmichael, Dauphin Island Sea Lab
Frank Hernandez, University of Southern Mississippi

Family Friendliness
Dottie Byron, Dauphin Island Sea Lab

CERF Ambassador Program
Kristy Lewis, University of Central Florida
Christine Whitcraft, California State University, Long Beach

CERF Inclusion Luncheon
Treda Grayson, Environmental Protection Agency
Danielle Kreeger, Partnership for the Delaware Estuary
Tina Miller-Way, Dauphin Island Sea Lab

Social Event
Joy Bartholomew, CERF Executive Director Emeritus
Stephanie Smallegan, University of South Alabama
Rachel Mugge, University of Southern Mississippi

Conference Art
Janet Nestlerode, Environmental Protection Agency

Field Trip
Elizabeth Hieb, Dauphin Island Sea Lab
Kim Cressman, Grand Bay National Estuarine Research Reserve
Crystal Hightower, Dauphin Island Sea Lab
Sandra Huynh, Grand Bay National Estuarine Research Reserve
Jason Kudulis, Mobile Bay National Estuary Program

CERFers On The Run
Kayla DaCosta, Dauphin Island Sea Lab
Jim Hagy, Environmental Protection Agency
Haley Nicholson, Dauphin Island Sea Lab

Mentoring Program
Sibel Bargu Ates, Louisiana State University
Linda Blum, University of Virginia

Silent Auction
Beth Darrow, University of North Carolina-Wilmington
Pat Reilly, The Reilly Group

Social Media
Julian Damashek, University of Georgia

Student Career Networking Dinner
Geoff Cook, University of Central Florida
Geno Olmi, National Oceanic and Atmospheric Administration
Ashley Bulseco, Northeastern University

Student "On the Town" Night
Carla Culpepper, University of Southern Mississippi
Hank Hodde, Smart Home America

Student Travel
Ashley Bulseco, Northeastern University
Brian Donnelly, Northeastern University
Helen Cheng, New York Sea Grant, Northeastern University

Fisheries Town Hall Meeting
Just Cebrian, Northern Gulf Institute and Mississippi State University
LaDon Swann, University of Southern Mississippi

Scientific Program Committee
Co-Chairs
Jim Hagy, Environmental Protection Agency
Sharon Herzka, Center for Scientific Research and Higher Education of Ensenada (CICESE)
Jennifer Pollack, Harte Research Institute, Texas A&M University, Corpus Christi

Diversity in Science
Corey Garza, California State University, Monterey Bay
Treda Grayson, Environmental Protection Agency

Education
Linda Walters, University of Central Florida

Cultural Heritage/Coastal Humanities
Eric Sparks, Mississippi State University
Lee Yokel, Dauphin Island Sea Lab

CH/CH Support
Steve Sempier, Mississippi Alabama Sea Grant Consortium

Oral Sessions
Jane Caffrey, University of West Florida
Mike Wetz, Texas A&M University, Corpus Christi

Plenary Sessions
Bob Christian, East Carolina University
Megan La Peyre, USGS, LSU AgCenter
Paul Montagna, Harte Research Institute, Texas A&M University, Corpus Christi

Poster Sessions
Pedro Morais, University of California, Berkeley
John White, Louisiana State University

Workshops
Nancy Brown-Peterson, University of Southern Mississippi
Ben Walther, Texas A&M University, Corpus Christi

Film Festival
Cassie Gurbisz, St. Mary’s College of Maryland
Jace Tunnell, Mission-Aransas National Estuarine Research Reserve

Student Judging
Kelly Darnell, University of Southern Mississippi
Zach Darnell, University of Southern Mississippi

Advisory Committee
Ayesha Gray, Mississippi Department of Marine Resources
Holly Greening, Tampa Bay Estuary Program
Jan Newton, University of Washington
Robert Twilley, Louisiana State University

CERF Conference Staff
Susan Park, Executive Director
Megan Miller, Event Director
Louise Miller, Chief Operating Officer
Tiffany Hanzo, Event Project Manager
Krystina Toscas, Event Coordinator
Ian Smithgall, Marketing Coordinator
Lucia Regan, Exhibition/Sponsorship
Todd Fake, Abstract Database Manager
CERF GOVERNING BOARD, PUBLICATIONS OFFICIALS AND STAFF

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President-Elect
Jim Fourqurean, Florida International University
Past President
Robert R. Twilley, Louisiana State University
Secretary
Leanna Heffner, Northwest Boreal Landscape Conservation Cooperative
Treasurer, Finance & Investment Committee Chair
Erik Smith, University of South Carolina

Affiliate Society Representatives 2017–2019
ACCESS | Bruce Hatcher, Bras d’Or Institute/Cape Breton University
AERS | Joe Luczkovich, East Carolina University
CAERS | Theresa Talley, University of California—San Diego
GERS | Anna Armitage, Texas A&M University–Galveston Campus

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President
Jim Fourqurean, Florida International University
President-Elect
Leila Hamdan, University of Southern Mississippi
Past President
Hilary Neckles, U.S. Geological Survey
Secretary
Jamie Vaudrey, University of Connecticut
Treasurer
Erik Smith, University of South Carolina

Affiliate Society Representatives 2019–2021
ACCESS | Allen Beck, Clean Foundation
AERS | Ben Fertig, Irvine Nature Center
CAERS | Steven Litvin, Monterey Bay Aquarium Research Institute
GERS | Megan La Peyre, School of Renewable Natural Resources, LSU Agricultural Center

Executive Director | Susan Park, Coastal and Estuarine Research Federation
Chief Operating Officer | Louise Miller, Coastal and Estuarine Research Federation

Publication Officials
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Charles (Si) Simenstad, University of Washington
Reviews Editor | Ken Heck, Dauphin Island Sea Lab, University of South Alabama
Managing Editor | Taylor Bowen
CESN Managing Editor | Merryl Alber, University of Georgia
CESN Science Writer/Coordinating Editor | Claudia Geib
CERF’s Up! Editor | Stephen Hale

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Members-at-Large 2015-2019
Mark Brush, Virginia Institute of Marine Science
Ruth Carmichael, Dauphin Island Sea Lab
Member-at-Large 2017-2021
Christine Whitcraft, California State University at Long Beach
Student Member-at-Large 2017-2019
Ashley Bulseco, Woods Hole Marine Biological Laboratory

CERF’s Up! Editor | Stephen Hale

GoMRI is pleased to support:
# CERF 2019 CONFERENCE SCHEDULE-AT-A-GLANCE

**Mobile CC:** Mobile Convention Center  
**RRH:** Renaissance Riverview Hotel

## 02 November | Saturday

Conference Registration open 4:00 PM – 7:00 PM | Concourse Level – Mobile CC

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00 AM – 6:00 PM</td>
<td>Conference Registration</td>
<td>Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>Various</td>
<td>Field Trips</td>
<td>Offsite</td>
</tr>
<tr>
<td>Various</td>
<td>Workshops</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>11:00 AM – 12:00 PM</td>
<td>Student Worker Orientation and Training</td>
<td>Room 204A – Mobile CC</td>
</tr>
<tr>
<td>4:00 PM – 5:30 PM</td>
<td>CERF 2019 VIP Reception (By Invitation)</td>
<td>VIP Lounge – Mobile CC</td>
</tr>
<tr>
<td>5:00 PM – 5:45 PM</td>
<td>First Timer Orientation</td>
<td>Room 203A – Mobile CC</td>
</tr>
<tr>
<td>6:00 PM – 8:00 PM</td>
<td>Keynote Address and Scientific Awards</td>
<td>East and West Ballroom – Mobile CC</td>
</tr>
<tr>
<td>8:00 PM – 10:00 PM</td>
<td>Silent Auction Opens</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>8:00 PM – 10:00 PM</td>
<td>President’s Welcome Reception</td>
<td>South Hall – Mobile CC</td>
</tr>
</tbody>
</table>

## 03 November | Sunday

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:00 AM – 5:00 PM</td>
<td>Conference Registration</td>
<td>Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>6:15 AM – 7:15 AM</td>
<td>CERFers on the Run</td>
<td>Offsite</td>
</tr>
<tr>
<td>6:30 AM – 8:00 AM</td>
<td>Mentorship Program Breakfast (By Invitation)</td>
<td>Bon Secour Bay 1 &amp; 2 – RRH</td>
</tr>
<tr>
<td>8:00 AM – 9:30 AM</td>
<td>Early Morning Sessions (Session 1)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>9:30 AM – 10:00 AM</td>
<td>Break</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>10:00 AM – 11:30 AM</td>
<td>Late Morning Sessions (Session 2)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Lunch</td>
<td>Mobile CC</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Coastal Fisheries Town Hall: Threats, Challenges and Solutions for Coastal Fisheries Sustainability in a Changing World</td>
<td>East and West Ballroom – Mobile CC</td>
</tr>
<tr>
<td>1:00 PM – 2:30 PM</td>
<td>Early Afternoon Sessions (Sessions 3)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>2:30 PM – 3:00 PM</td>
<td>Break</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>3:00 PM – 4:30 PM</td>
<td>Plenary: Environmental Decision Making</td>
<td>East and West Ballroom – Mobile CC</td>
</tr>
<tr>
<td>4:30 PM – 7:00 PM</td>
<td>Poster Sessions/Happy Hour</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>7:00 PM – 9:00 PM</td>
<td>Student Career Networking Event</td>
<td>Bon Secour Bay 1 &amp; 2 – RRH</td>
</tr>
<tr>
<td>7:30 PM – 8:30 PM</td>
<td>Special Presentation: The Slave Schooner Clotilda – Hidden But Not Forgotten</td>
<td>East and West Ballroom – Mobile CC</td>
</tr>
<tr>
<td>9:00 PM – Midnight</td>
<td>Student “On the Town” Night</td>
<td>The Haberdasher</td>
</tr>
</tbody>
</table>

*Schedule is subject to change – current as of 19 October 2019*
## CERF 2019 CONFERENCE SCHEDULE-AT-A-GLANCE

### 05 November | Tuesday

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:15AM – 7:15AM</td>
<td>CERFers on the Run</td>
<td>Offsite</td>
</tr>
<tr>
<td>6:30AM – 5:00PM</td>
<td>Conference Registration</td>
<td>Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>7:00AM – 8:00AM</td>
<td>Past CERF Presidents’ Breakfast (By Invitation)</td>
<td>Room 107AB – Mobile CC</td>
</tr>
<tr>
<td>8:00AM – 9:30AM</td>
<td>Early Morning Sessions (Session 4)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>8:00AM – 4:30PM</td>
<td>Tours of R/V Point Sur</td>
<td>Offsite</td>
</tr>
<tr>
<td>9:30AM – 10:00AM</td>
<td>Break</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>10:00AM – 11:30AM</td>
<td>Late Morning Sessions (Session 5)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>11:30AM – 1:00PM</td>
<td>Lunch</td>
<td>Mobile CC</td>
</tr>
<tr>
<td>11:30AM – 1:00PM</td>
<td>CERF Inclusion Lunch (Ticketed Event)</td>
<td>Bon Secour Bay 1&amp; 2 – RRH</td>
</tr>
<tr>
<td>1:00PM – 2:30PM</td>
<td>Early Afternoon Sessions (Sessions 6)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>2:30PM – 3:00PM</td>
<td>Break</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>3:00PM – 4:30PM</td>
<td>Late Afternoon Sessions (Sessions 7)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>4:30PM – 5:30PM</td>
<td>Annual CERF Business Meeting</td>
<td>East and West Ballroom – Mobile CC</td>
</tr>
<tr>
<td>5:30PM – 6:30PM</td>
<td>Affiliate Society Meetings</td>
<td>Mobile CC ACCESS – Room 202 A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile CC AERS – Room 201 C</td>
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<td>Mobile CC CAERS – Room 201 D</td>
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<tr>
<td></td>
<td></td>
<td>Mobile CC GERS – Room 203 A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile CC NEERS – Room 202 B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile CC PERS – Room 204 A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile CC SEERS – Room 204 B</td>
</tr>
<tr>
<td>7:00PM – 10:00PM</td>
<td>Social Event</td>
<td>GulfQuest Maritime Museum</td>
</tr>
</tbody>
</table>

### 06 November | Wednesday

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:15AM – 7:15AM</td>
<td>CERFers on the Run</td>
<td>Offsite</td>
</tr>
<tr>
<td>6:30AM – 7:00PM</td>
<td>Conference Registration</td>
<td>Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>7:00AM – 8:00AM</td>
<td>CESN Team Meeting/Breakfast (By Invitation)</td>
<td>Room 107AB – Mobile CC</td>
</tr>
<tr>
<td>8:00AM – 9:30AM</td>
<td>Early Morning Sessions (Session 8)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>9:30AM – 10:00AM</td>
<td>Break</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>10:00AM – 11:30AM</td>
<td>Late Morning Sessions (Session 9)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>11:30AM – 1:00PM</td>
<td>Lunch</td>
<td>Mobile CC</td>
</tr>
</tbody>
</table>

*Schedule is subject to change – current as of 19 October 2019*
# CERF 2019 CONFERENCE SCHEDULE-AT-A-GLANCE

## 06 November | Wednesday  (continued)

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Estuaries and Coasts Board Mtg/Lunch (By Invitation)</td>
<td>Room 107AB – Mobile CC</td>
</tr>
<tr>
<td>1:00 PM – 2:30 PM</td>
<td>Early Afternoon Sessions (Sessions 10)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>2:30 PM – 3:00 PM</td>
<td>Break</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>3:00 PM – 4:30 PM</td>
<td>Plenary: Coastal Science Outreach</td>
<td>East and West Ballroom – Mobile CC</td>
</tr>
<tr>
<td>4:30 PM – 7:00 PM</td>
<td>Poster Sessions/Happy Hour</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>5:30 PM – 6:30 PM</td>
<td>Close of Silent Auction</td>
<td>South Hall – Mobile CC</td>
</tr>
<tr>
<td>7:00 PM – 10:00 PM</td>
<td>Film Festival</td>
<td>Bon Secour Bay 1&amp;2 – RRH</td>
</tr>
</tbody>
</table>

## 07 November | Thursday

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>6:15 AM – 7:15 AM</td>
<td>CERFers on the Run</td>
<td>Offsite</td>
</tr>
<tr>
<td>6:30 AM – 4:30 PM</td>
<td>Conference Registration</td>
<td>Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>7:00 AM – 8:00 AM</td>
<td>CERF 2021 Committee Breakfast (By Invitation)</td>
<td>Room 107AB – Mobile CC</td>
</tr>
<tr>
<td>8:00 AM – 9:30 AM</td>
<td>Early Morning Sessions (Session 11)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>9:30 AM – 10:00 AM</td>
<td>Break</td>
<td>Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>10:00 AM – 11:30 AM</td>
<td>Late Morning Sessions (Session 12)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Lunch</td>
<td>Mobile CC</td>
</tr>
<tr>
<td>11:30 AM – 1:00 PM</td>
<td>Estuaries and Coasts Town Hall: Misuse of P-values and why Estuaries and Coasts discourages the phrase “statistically significant.”</td>
<td>Room 107AB – Mobile CC</td>
</tr>
<tr>
<td>1:00 PM – 2:30 PM</td>
<td>Early Afternoon Sessions (Sessions 13)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>2:30 PM – 3:00 PM</td>
<td>Break</td>
<td>Concourse Level – Mobile CC</td>
</tr>
<tr>
<td>3:00 PM – 4:30 PM</td>
<td>Late Afternoon Sessions (Sessions 14)</td>
<td>Mtg Rooms, Concourse Level – Mobile CC</td>
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<td>4:30 PM – 5:30 PM</td>
<td>CERF 2019 Committee Reception (By Invitation)</td>
<td>VIP Lounge – Mobile CC</td>
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<td>5:30 PM – 8:30 PM</td>
<td>Close-out Party and Student Awards Presentation</td>
<td>East and West Ballroom – Mobile CC</td>
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*Schedule is subject to change – current as of 19 October 2019*

www.cerf.science
Catalyzing advances in science, practice, and capacity to generate long-term benefits for the Gulf of Mexico region and the nation.

Healthy Ecosystems
Advance understanding of ecosystem processes and dynamics to facilitate sustainable use of natural resources.

Thriving Communities
Enable people coastal communities to successfully prepare for, respond, and adapt to stressors and adverse events.

Safer Offshore Energy Systems
Foster minimization and management of risk to make offshore operations safer for both people and the environment.

Capacity Building
Enhance the ability of researchers, decision makers, and communities to solve challenges at the intersections of human, environmental, and offshore energy systems.

Independent, science-based program supporting studies, projects, and other activities to advance offshore energy safety, protect environmental health, and enhance community resilience.

Learn more by visiting our booth in the exhibit hall or online at www.nationalacademies.org/gulf
SCIENCE-DRIVEN SOLUTIONS

The Harte Research Institute seeks science-driven solutions for problems facing the Gulf of Mexico to advance its long-term sustainable use and conservation.

RESTORE

Healthy habitats support productive coastal environments and resilient coastal communities. Through our science we provide data to support resource management and conservation efforts and rebuild and improve sustainability of coastal ecosystems.

COLLABORATE

The Gulf’s working coasts are home to millions of citizens and play a vital role in the economic infrastructure of America, and its diverse habitats are home to many sensitive species. The Gulf is a laboratory to find balance between economic and environmental health.

EDUCATE

We’re dedicated to training the next generation of Gulf of Mexico scientists. Our graduate education program enables students to conduct cutting-edge research that impacts real world coastal and marine policy issues on an international scale.

info@harteresearchinstitute.org | 361-825-2000 | www.harteresearchinstitute.org

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### SPONSORS

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GENERAL INFORMATION

REGISTRATION
Conference check-in for pre-registered attendees and registration of on-site attendees will take place on the Concourse Level. The registration desk will be open during the following hours:

Saturday, 2 November ..........................4:00 PM – 7:00 PM
Sunday, 3 November ..........................7:00 AM – 6:00 PM
Monday, 4 November ..........................6:00 AM – 5:00 PM
Tuesday, 5 November ..........................6:30 AM – 5:00 PM
Wednesday, 6 November ..........................6:30 AM – 7:00 PM
Thursday, 7 November ..........................6:30 AM – 4:30 PM

SPEAKER PRESENTATION ROOM
All speakers who did not submit their presentations prior to the conference must visit the Speaker Presentation Room the day before their presentation to upload their slides. This allows the staff to upload all presentations onto the meeting room laptops and test the files prior to your session.

The Speaker Presentation Room will be located in Room 106 AB and will be open during the following hours for on-site submission, review and editing of PowerPoint presentations:

Sunday, 3 November ..........................12:00 PM – 5:00 PM
Monday, 4 November ..........................7:00 AM – 5:00 PM
Tuesday, 5 November ..........................7:00 AM – 5:00 PM
Wednesday, 6 November ..........................7:00 AM – 5:00 PM
Thursday, 7 November ..........................7:00 AM – 3:00 PM

WI-FI
Free WiFi is available to conference attendees in all convention center meeting rooms and the exhibit hall via the CERF2019WiFi network. The password is: CERF2019

CONFERENCE APP
Use CERF 2019’s mobile app to access the most up-to-date information about the conference. Abstracts for oral presentations, posters, and a full author/presenter index is available and you can even customize your own, personalized schedule.

How to download the mobile app:
1) Visit the Apple App Store or the Google Play Store on your mobile device and search for “CERF2019”.
2) Click “Download the App.”
3) Open the app and use the email you used to submit an abstract – or if you did not submit an abstract, use the email from your registration submission.
4) Start exploring! Don’t forget to turn on notifications so you can stay up-to-date!
5) To access the app from your PC or tablet, please go to http://bit.ly/CERF2019-app

Once in the app, you can search for abstracts by author name, day of presentation, or title. You will also find information about sponsors and exhibitors, conference events and the schedule.

ENVIRONMENTAL OFFSET
CERF aims to achieve a “green meeting” by minimizing negative impacts and maximizing positive impacts on the environment to the extent possible. At each Biennial Conference, we implement an environmental footprint offset donation to support a local environmental organization aligned with CERF’s mission. For CERF 2019, we have selected the Alabama Coastal Foundation (ACF). Since 1993, ACF has worked to promote a culture where environmental decisions are based on an accurate understanding of the underlying science, the dissemination of factual information, and the engagement of government, industry and citizens to find solutions to Alabama’s coastal environmental challenges. Thank you for your generous donations to ACF!

CONFERENCE ART EXHIBIT
CERF is pleased to feature the work of our conference artist, Inga Clough Falterman, in our Exhibit Hall. Falterman will have several works on display Sunday through Wednesday. Her conference art, “third coast, or gulf” will also be available at the silent auction.

FAMILY FRIENDLINESS/MOTHERS’ LOUNGE
CERF 2019 has taken aim to be the most family-friendly CERF conference yet.

Nursing mothers and others can visit the Mothers’ Lounge, located on the exhibit hall level of the Mobile Convention Center, in Room 105 B. The room has special amenities and supplies to help make navigating the conference an easier experience (such as refrigeration to store pumped milk).

The Family Friendliness Committee has identified a local facility—Sunshine Sue’s Playgarden—that offers drop-in care. The facility is open Monday-Friday from 8:00 AM – 3:00 PM, cost is $50/child and the facility is located 6 miles from the Convention Center. They accept children 8 months – 6 years old. Please mention you are a member of CERF when making your reservation. We strongly suggest you contact them ahead of time to ensure there is space available. Advanced, pre-paid reservations are required.*

You can also check with your hotel concierge for other childcare suggestions.

We are working on discounts for some of Mobile’s area attractions, suggestions of kid-friendly restaurants near the conference, and a map with nearby parks so you can get out and burn off that conference energy.

Please note: Children are welcome at conference sessions/workshops, in the exhibit hall, poster sessions, and receptions (Sunday through Thursday evenings) provided they are accompanied at all times by registered adult attendees. Please keep in mind...
that alcohol will be served at evening events. Parents are asked to show consideration to the presenters and other attendees by being proactive to avoid disruptions of the scientific program.

CERF has undertaken reasonable efforts to provide references to an appropriate childcare resource; however, parents should conduct proper due diligence in choosing a service for their children. CERF is providing this reference without endorsement, representation or warranty of any kind. Parents shall assume all responsibility for their research and selection of childcare facilities for their children. In no event shall CERF, or its directors, officers, or employees, be held liable for any losses, injury, damages, or any other consequences resulting from, or arising in connection with the use of, or reliance on, these childcare resources.

EMERGENCIES
In the case of an emergency, please dial 911, or to reach the Mobile Convention Center Security 24 hours a day, dial (251) 208-2165. You can also find any Event Services Representative, Security Officer, or any other Convention Center Manager for assistance.

CERFERS ON THE RUN
Time: Monday–Thursday, 6:15 – 7:15 AM
Location: Courtyard of the Renaissance Mobile Riverview Plaza Hotel

CERFers On The Run is an informal running club that gets together to run and exercise throughout the cities that the CERF Biennial Conference visits. This year, the CERFers On The Run will be meeting from 6:15 AM to 7:15 AM before the oral sessions start, Monday through Thursday.

Each day, there will be two different group runs, consisting of a long (about 3 miles) and short (about 1 mile) run. We will meet in the courtyard of the Renaissance Mobile Riverview Plaza Hotel at 6:15 AM and do 10-15 minutes of stretching before starting the run. Everyone will receive a ticket for each day they participate to enter to win a running-inspired gift basket!

All of the runs include landmarks throughout Mobile, consisting of Mobile historical landmarks and sites. Other routes will include popular downtown locations to explore during conference downtime. For maps and other information, visit www.cerf.science/cerfers-on-the-run

R/V POINT SUR TOURS
Time: 5 November 2019, 8:00 AM – 4:30 PM
Location: Mobile Convention Center

The Research Vessel (R/V) Point Sur, owned by The University of Southern Mississippi, will be open to conference attendees and the public for tours from 8:00 am – 4:30 pm, Tuesday, 5 November, 2019 at the Mobile Convention Center. As a regional class vessel, R/V Point Sur is the primary platform for marine research in the northern Gulf of Mexico, and has supported academic and industry research, and the science missions of the NSF, U.S. Navy, Bureau of Ocean Energy Management, National Oceanic and Atmospheric Administration, and Gulf of Mexico Research Initiative. R/V Point Sur was purchased by USM in 2015 to meet the growing needs of oceanographic researchers in the Gulf of Mexico. All are invited to tour the 135’ ship, meet the crew, and learn about its capabilities.

CERF MARDI GRAS PARADE
Time: 3 November 2019, 8:00 am
Location: Mobile Convention Center

Did you know Mobile, Alabama is the birthplace of Mardi Gras in the US? As the original capital of French Louisiana, Mobile celebrated Mardi Gras 15 years before New Orleans was founded, and 300 years later, the celebration continues! So in honor of our conference city, we are bringing Mardi Gras to CERF! We’ll kick off our opening social with a Second Line Procession, a traditional people’s parade with a fascinating multicultural history. As tradition holds, our parade will be led by a local brass band, The Mobile Second Line Society, followed by our CERF attendees!

SOCIAL MEDIA

Regular updates and reminders about conference activities will be posted to the CERF Facebook, Twitter and Instagram. All of our social channels are now @CERFScience

Participants are encouraged to tag their posts, photos and tweets with the following tags:

#CERF2019 if you are planning to post about your general CERF 2019 experience;

#CERFStudents if you are a student or recent graduate interested in connecting with your cohort or learning more about student and recent graduate opportunities through CERF;

#CERF2019Live if you want to follow live tweets from the keynote address and plenary speaker presentations

SOCIAL MEDIA POLICY

Please Read Before You Tweet (or Facebook, blog, Instagram, Pinterest, LinkedIn, etc.)

To balance the needs and expectations of conference presenters with the benefits of open sharing and discussion, we have prepared a best practice guideline for using social media during the conference.

- We encourage all conference attendees to openly discuss our conference on social media. You can live Tweet, post to Facebook, or even blog about the presentations. Please use the meeting hashtag #CERF2019 to increase engagement. We also encourage our attendees to follow and tag us on Twitter (@CERFSscience), Instagram (@CERFSscience), and Facebook (@CERFSscience), and to use these outlets to send us questions, ideas, or general thoughts—we’ll follow you back!

- Photography, video, and audio recording of scientific content from oral and poster sessions, plenaries, keynotes and Town Halls are not allowed unless you receive permission from the authors/presenters. Some authors/presenters wish to withhold audio/vi-
The Coastal & Estuarine Research Federation (“CERF”) is committed to providing safe and welcoming environments for all who participate in CERF Events. CERF prohibits and will not tolerate any form of harassment, bullying, or discrimination. Together, we can ensure that CERF Events support free expression and exchange of scientific ideas in environments that are positive and productive for all.

PURPOSE
CERF has established this Event Code of Conduct (the “Code”) to serve as a guideline for the professional conduct of anyone attending or participating in a CERF Event, as well as the consequences for unacceptable behavior. We expect you to follow this Code so that you and other participants can enjoy the Event responsibly and with respect for the rights of others. Failure to abide by this Code is subject to corrective action and sanctions, including refused admission, ejection, banishment, and other penalties consistent with this Code.

SCOPE AND APPLICABILITY
The Code applies to all attendees, media representatives, speakers, exhibitors, sponsors, staff, contractors, volunteers, organizers, and other guests (collectively referred to as “Participants”) of official CERF programs, conferences, events, meetings, social gatherings, and other activities held, sponsored, or affiliated with CERF (“Events”). This Code is intended to supplement, but not replace, the CERF Code of Ethics that is applicable to all CERF members. By attending any CERF Event, you agree to abide by this Event Code of Conduct.

RESTAURANTS & CONcessIONS
The CERF conference offers daily coffee and snack breaks, as well as appetizers and cash bars at evening receptions. There are several activities scheduled during lunch periods where attendees can bring take-out or “brown bag” options. The Mobile Convention Center offers on-site concessions for coffee, snacks and lunch.

There are also many establishments in the nearby hotels and neighborhood including:
- Serda's Coffee Company – 3 S Royal St.
- The Royal Scam – 72 S Royal St.
- Squid Ink: Eclectic Eats and Drink – 102 Dauphin St.
- Von's Bistro – 69 St Michael St.
- Dauphin’s – 107 St Francis St. #3400 (34th Floor)
- Bob's Downtown Restaurant – 263 St Francis St.
- Mediterranean Sandwich Co. – 274 Dauphin St.
- The Blind Mule – 57 N Claiborne St.
- T.P. Crockmier’s – 250 Dauphin St.
- Chuck's Fish – 551 Dauphin St.

COASTAL & ESTUARINE RESEARCH FEDERATION
EVENT CODE OF CONDUCT

EXPECTED BEHAVIOR
The following behaviors are expected and requested of all Event Participants:

- Behaving in a courteous and professional manner;
- Treating all participants with respect, dignity, and consideration, in the spirit of valuing a diversity of views and opinions;
- Being considerate, respectful, and collaborative in your communication and actions;
- Discussing differences and critiquing ideas in a non-confrontational manner with due regard for the viewpoints of others;
- Refraining from demeaning, discriminatory, or harassing behavior and speech;
- Reporting suspected inappropriate behavior directed at yourself or others;
- Respecting the rules, policies, and property of CERF and its contracted Event facilities and vendors; and
- Complying with all applicable laws and regulations.

PROHIBITED BEHAVIOR
Violations of this Code include but are not limited to the following:

- Harassment, which is defined for purposes of this Code to include unwelcome or offensive verbal, visual, or physical
CERF EVENT CODE OF CONDUCT (continued)

- contact directed at any Participant, including conduct, comments, or images that a person would reasonably find offensive, demeaning, or hostile;
- Sexual harassment, which is defined for purposes of this Code to include unwelcome, unsolicited, and unreciprocated sexual advances, requests for sexual favors, and other verbal or physical conduct or gesture of a sexual nature that has or that might reasonably be expected or be perceived to offend, humiliate, or intimidate another person;
- Exhibiting behavior that is unruly or disruptive, or that endangers the health or safety of yourself or others;
- Discriminatory conduct based on race, sex, sexual orientation, gender expression or identity, transgender status, age, national origin, disability, religion, marital status, veteran status, political affinity, or any other characteristic protected by law;
- Deliberate intimidation, threatening, stalking, or following;
- Sustained disruption of portions of the Event;
- Invasion of privacy;
- Actual or threatened pushing, shoving, or use of any physical force whatsoever against anyone;
- Possession of a weapon, or use of any item in a way that may cause danger to others;
- Destruction, theft, dismantlement, defacement, abuse, or intentional misuse of CERF or CERF-contracted venues, property, equipment, signage, or supplies;
- Failure to comply with directions of CERF staff or venue personnel regarding Event operations or emergency response procedures;
- Retaliation against participants for reporting activity that he or she reasonably believed to be in violation of this Code;
- Knowing and falsely reporting violations of this Code in bad faith; and
- Accessing restricted or ticketed areas without a proper ticket, pass and/or credential; misusing tickets, passes and/or credentials; presenting a false identification; or permitting another person to falsely present the Participant’s identification as his or her own.

Moreover, this Code is not intended to be all inclusive, and it is likely there will be conduct issues that it does not specifically address. In that event, as in all others, Participants are expected to follow the direction of CERF Event staff who will take appropriate action to ensure the safety, security and well-being of Participants.

REPORTING UNACCEPTABLE BEHAVIOR

If you believe you are being subjected to inappropriate conduct, believe someone else is being subjected to inappropriate conduct, or have any other concerns, please do not hesitate to contact CERF Event staff who can work with CERF leadership to resolve the situation. CERF Event staff will be happy to assist those experiencing inappropriate conduct to enable them to feel safe for the duration of the Event. If you or someone else is in immediate danger, or if you see something suspicious or would like to report a security issue or emergency, please contact venue security or local law enforcement.

Violations of this Code are taken seriously and should be promptly reported to any CERF Event staff present. Share as much information as you can to help us make a thorough investigation of the onsite incident. CERF will investigate all incidents reported at an Event with discretion. Participants are required to maintain the confidentiality of materials submitted to or received by CERF under this Code. CERF shall make reasonable efforts to maintain the confidentiality of relevant materials but may disclose case-related materials or information in response to legal process, when already publicly known, or when CERF leadership otherwise determines disclosure is in the best interests of CERF.

CONSEQUENCES OF PARTICIPANT ENGAGEMENT IN PROHIBITED CONDUCT

Event Participants asked to stop engaging in prohibited conduct are expected to comply immediately.

CERF, in its sole discretion, will determine the nature of the Participant conduct that warrants corrective action as well as the corrective action to be taken. Corrective action may take any of the following forms: verbal warning; expulsion from the Event; expulsion from the Event with no refund of conference fees; bar from future CERF Events; and/or notifying appropriate authorities. To protect all parties involved, CERF will generally not make any detailed public statements about Code incidents. The decision(s) of CERF are final. CERF may establish more detailed procedural guidelines for resolving conduct matters that are consistent with the provisions of these bylaws.

For questions regarding the Event Code of Conduct, please contact CERF’s Executive Director. This Code is subject to change and may be revised without further notice.

Approved by the Governing Board on October 19, 2018
The LSU Coastal Sustainability Studio
Tackling Real-World Water Challenges through Multidisciplinary Research and Design

The LSU Coastal Sustainability Studio leads multidisciplinary research and community outreach to expand the horizon of what is possible for people living and working at the interface of the environment, settlement, infrastructure, and the economy. Our studio is the perfect place to bring together disciplines that typically work independently—scientists, engineers, designers, and planners—to collaboratively address critical issues of coastal and deltaic settlement, restoration flood protection, and socio-economic sustainability. Although we typically focus on the Mississippi River Delta and Gulf Coast region our work is easily translatable to other dynamic environments heavily influenced by water.

What we do:
• Lead multidisciplinary research in support of real-world problem-solving
• Strengthen community resiliency
• Improve communications through visualization
• Stimulate “big idea” thinking

Be sure to visit the CERF exhibition hall to see design competition submissions. Stop by Booth #6 to meet with LSU Coastal Sustainability Studio representatives or visit us at www.css.lsu.edu

The LSU Coastal Sustainability Studio and Louisiana Sea Grant are pleased to sponsor the coastal design competition at CERF 2019.
Join Jack E. Davis for his lively long historical view of the Gulf of Mexico, drawn from his Pulitzer Prize-winning book *The Gulf: The Making of an American Sea*. Significant beyond tragic oil spills and hurricanes, the Gulf has historically been one of the world’s most bounteous marine environments, supporting human life for millennia. Davis starts from the premise that nature lies at the center of human existence, and takes his audience on a compelling journey from the Florida Keys to the Texas Rio Grande, along marshy shorelines and majestic estuarine bays, profoundly beautiful and life-giving. At the center of his talk is the way people, from pre-Spanish natives to present-day coastal residents, have organized their societies and individual lives around nature, and how Gulf nature has been a positive force in human events.

**About Dr. Davis:**


Jack is now writing a book on the cultural and natural history of the bald eagle. He divides the seasons between two "villes": Gainesville, Florida, and Harrisville, New Hampshire.

### CERF 2019 SCIENTIFIC AWARD RECIPIENTS

Join us in celebrating the 2019 CERF Scientific Award Recipients! The recipients of these awards embody the mission of CERF to advance understanding and wise stewardship of estuarine and coastal ecosystems worldwide by promoting research; supporting the education of scientists, decision-makers, and the public; and facilitating communication among these groups. The Federation thanks our Scientific Awards Committee chair, Linda Schaffner, as well as all of the subcommittee chairs and committee members, for their tireless efforts to recruit and select the outstanding recipients of this year’s awards. CERF also thanks the many nominators and letter writers that supported the exceptional nominations received this year.

**Odum Award for Lifetime Achievement**
The Odum Award is named for the three outstanding ecological scientists in the Odum family: Dr. Howard T. Odum; Dr. Eugene P. Odum; and Dr. William E. Odum, III. It honors an individual whose record of sustained accomplishments has made important contributions to our understanding of estuaries and coastal ecosystems.

**Iris Anderson**
Professor, Virginia Institute of Marine Science and College of William & Mary
Dr. Iris Anderson stands out as a trailblazer and leader in the fields of shallow-water estuarine and coastal ecosystem biogeochemistry and ecology, outstanding mentor and role model, very appropriately filling the mold of the Odum family legacy. In addition to her numerous accomplishments in these research, teaching, and outreach areas, the impacts of Iris’ work are all the more significant given her non-traditional path. She navigated a PhD program as the only woman in her class, paused her education to raise a family, and found a passageway back to gaining her doctorate and an outstanding record of professional achievements, having most recently served as Dean of Graduate studies at the Virginia Institute of Marine Science (College of William & Mary). Iris’ career serves as a strong reminder to the CERF community that scientific excellence can be enhanced and informed by non-linear trajectories.
CERF 2019 SCIENTIFIC AWARD RECIPIENTS (continued)

In addition, Iris has been inspirational for many young scientists. She frequently engages students in detailed conversations about their research and freely offers both advice and encouragement. Her research has evolved over time to keep pace with cutting-edge techniques and topics of broad interest to estuarine ecologists. She has a long history of working with a diverse cadre of scientists and students on a broad range of both scientific and applied topics that have clarified our understanding of complex biogeochemical processes in freshwater and marine habitats. This is reflected in her excellent first author high-impact publications and syntheses, and also in the many groundbreaking, highly cited, interdisciplinary publications that she has shared as co-author with a long and impressive list of students, technicians, and colleagues.

Iris has been a tireless contributor to the broader field of estuarine and coastal science and CERF in particular as a co-Editor of Estuaries and Coasts, and she continues to serve a very active, broad-based role in the review and editorial process.

Lastly, despite her long and rewarding career path, we note that Iris is far from “being done” as a solid contributor and pacesetter in estuarine and coastal science. She continues to be a tireless, creative, interactive, giving, and distinguished researcher, teacher, and role model, worthy of this year’s Odum Award.

**Cronin Award for Early Achievement**

This award recognizes the significant accomplishments of an estuarine scientist who is in the early stages of their career development. The recipient will have shown great promise with work carried out during the first six years past the PhD.

**Christine Angelini**

*Assistant Professor, University of Florida*

Dr. Christine Angelini is an Assistant Professor at the University of Florida Gainesville in Environmental Engineering Sciences. An NSF CAREER awardee, Christine performs expansive and innovative studies at the intersection of experimental ecology and ecosystem engineering while engaging and mentoring young scientists in simultaneous efforts to address conservation and management issues.

Christine has uniquely applied her deep ecological knowledge to questions of connectivity across the broad estuarine landscapes, from subtidal zones to terrestrial watersheds, with work in salt marshes, mangroves, sand dunes, oyster reefs, seagrass beds, and live oak savannahs. Her focus on resilience and the critical role that foundation species play in estuarine systems have produced an amazing suite of publications that contributed significantly to our mechanistic understanding of natural systems. Christine has translated this knowledge into restoration initiatives, including collaborative efforts with the public, natural resource managers, and coastal engineers to re-design living shorelines and rebuild coastal wetlands and dunes.

There is little doubt that Christine’s leadership, creativity, and passion for science and conservation has motivated and broadened public awareness about the importance of estuaries and their fragility. Her students and colleagues alike write that she is an extremely gifted teacher, communicator, and an amazing female academic role model. One needs only to glance at her CV to note her collaborative nature. Her scholarship, leadership, dedication to mentorship and education make her an ideal choice for the 2019 Cronin Award.

**Margaret A. Davidson Award for Stewardship**

This award was established to honor Margaret A. Davidson’s distinguished career in coastal resource management and her support of the application of science to the wise stewardship of estuaries and coasts. The Davidson award recognizes an individual that demonstrates extraordinary leadership, service, innovation, and commitment to the management of estuarine and coastal systems. Other CERF awards focus on research and education excellence; this award will recognize those who have worked in the estuarine and coastal arena and excelled in management and policy.

**Merryl Alber**

*Professor, University of Georgia and Director, University of Georgia Marine Institute*

Dr. Merryl Alber has demonstrated extraordinary leadership, service, innovation, and commitment to the management of estuarine systems. She formed the Georgia Coastal Research Council, which has fostered productive working relationships between over 150 researchers and resource managers for 17 years. Merryl has taught coastal policy courses to graduate students for 20 years and inspired many students to careers in management and policy. She has also served as a scientific leader, as Director of the University of Georgia Marine Institute as well as Principal Investigator of the Georgia Coastal Long Term Ecological Research program. Dr. Alber has served as the Managing Editor of Coastal and Estuarine Science News, which translates key scientific papers for resource managers and policy makers, since 2005, and she has served on numerous workgroups and committees dedicated to activities devoted to environmental stewardship. She has also written a children’s book about the salt marsh. Throughout her distinguished career, Merryl Alber has embodied the passion and commitment to management that Margaret Davidson pioneered.

**Donald W. Pritchard Award – Physical Oceanography Paper**

This award was established to honor Dr. Donald W. Pritchard, whose insightful research on the physical dynamics of coastal systems set the stage for much of the research in physical oceanography that is being conducted today. The Pritchard Award recognizes the author(s) of the best physical oceanography paper published in Estuaries and Coasts within the two-year interval between CERF conferences.

**Authors:** Robert J. Chant, Rutgers University; Christopher K. Sommerfield, University of Delaware; and Stefan A. Talke, Portland State University

continued on next page
**CERF 2019 SCIENTIFIC AWARD RECIPIENTS** (continued)

**Paper: “Impact of channel deepening on tidal and gravitational circulation in a highly engineered estuarine basin”**

Chant et al. assessed the influence of channel deepening on the estuarine exchange flow, stratification, and tidal amplitude. Estuaries worldwide have been deepened for navigation, with limited understanding of effects on water quality. Channel depth affects both barotropic and baroclinic dynamics, and ultimately water quality. They show how the estuarine response to channel deepening may not always be intuitive, and how analytical scaling and observational data can be used to test hypotheses in real systems.

The scaling of Hansen and Rattray (1965) indicates that estuarine circulation should increase with the depth cubed. However, Chant et al. note that increasing depth also increases salinity intrusion length, thereby decreasing the along-estuary salinity gradient. In the scaling proposed by Chant et al., the decrease in salinity gradient offsets the depth increase, suggesting instead that estuarine circulation is independent of depth. Similarly, they show that the change in salinity intrusion predicts that stratification should decrease with depth rather than increasing. Using observational data, Chant et al. further show that estuary geometry can prevent landward salinity intrusion and thereby contradict their revised scaling. Their scaling offers a template to evaluate physical changes in other estuaries where the salinity gradient is less constrained by estuary geometry.

**William A. Niering for Outstanding Educator**

To recognize the central role that education plays in achieving the objectives of our society, the Federation’s Governing Board established an award named for a leader in estuarine education, Dr. William A. Niering. The Award is for an individual who has played a particularly important role in education at any level—from primary school to the graduate level, inside or out of the classroom, or in the education of the general public through outreach activities.

**Susan Bell**

Professor, University of South Florida

Dr. Susan Bell is a deserving recipient of the 2019 Niering Outstanding Educator Award based on the depth and breadth of her contributions to teaching and mentoring. The CERF Governing Board states that “the Award is for an individual who has played a particularly important role in education at any level—from primary school to the graduate level, inside or out of the classroom, or in the education of the general public through outreach activities.” Over the 39 years of her academic career, Susan has played all these roles and has been acknowledged for them by her nominator and in the letters from her former students.

While her deepest contribution is toward her graduate students, she is also an excellent teacher and research mentor for undergraduates. She contributes to society through her applied work and training of applied scientists who now serve at every level, both in resource management as well as academia. She has also been active in K-12 education, and has been a strong role model as a female in science.

Two quotes from her letters were particularly compelling: “She has a unique ability to provide support while constantly challenging students” and “She is not afraid to take on new challenges when advising untraditional students.” For these reasons, we award Susan Bell the Niering Award at CERF 2019.

**Distinguished Service Award**

The Distinguished Service Award recipient is selected by the CERF President for their exceptional volunteer service to the Federation.

**Ruth Carmichael**

Senior Marine Scientist, Dauphin Island Sea Lab and Professor, University of South Alabama

Dr. Ruth Carmichael has served CERF in numerous ways over the past decades that have been key to the growth and impact of the Federation. Through sustained leadership and steadfast commitment to CERF’s vision, Ruth’s volunteer service has strengthened CERF’s capacity to promote research, stewardship, and education in coastal and estuarine systems. Ruth began volunteering for CERF in 2001 as a student attending her first CERF conference: she actively sought opportunities to help, ended up stuffing swag bags, and had so much fun that she went on to serve many subsequent conferences in roles of ever-increasing responsibility. She has assisted with workshop development; served as Workshops Chair for multiple conferences; and is currently serving as the Attendee Experience Committee co-chair for the 2019 Biennial CERF Conference, ensuring that CERF 2019 will be a fun, welcoming, and inclusive experience for all.

Ruth first served on the CERF Governing Board in 2011 as President of the Gulf Estuarine Research Society (GERS). She was instrumental in expanding the composition, scope, and activities of the GERS Governing Board, and consequently the reach of CERF science throughout the Gulf coast. She was later elected to the CERF Governing Board as a Member-at-Large where she led development of strategies to enhance the quality of CERF publications. As chair of the CERP Publications Committee, Ruth has been a continuous champion for Estuaries and Coasts, CERP’s Up!, Coastal and Estuarine Science News, and the textbook Estuarine Ecology, navigating needs, inspiring innovations, and coordinating calendars among a multitude of editors, publishers, and volunteers with skillful aplomb. For her long-term, exceptional volunteer service to the Federation, CERF awards Ruth the Distinguished Service Award.
CERF 2019 PLENARY SESSIONS

Overall theme of plenaries: Applying our science most effectively requires that we understand the societal context of both our work and our interactions with non-scientists.

Environmental Decision Making: How Can Natural and Social Scientists Contribute, and What Can They Expect?
Monday, 4 November | 3:00 – 4:30PM

Coastal landscapes provide significant natural and social resources within some of the most densely populated regions. These landscapes are also vulnerable to extreme climate events and face significant challenges from anthropogenic activities, including alteration of river inflows, eutrophication, development and climate change. Both natural and social scientists seek to better understand, conserve, and manage these coastal and estuarine landscapes. Often scientists think that if they simply present their information to the public or policy makers, the decisions or responses will reflect the scientific conclusion. However, decisions by policy-makers do not always conform to the information provided by scientists. How are scientific data and knowledge perceived and how do they fit within the policy-making process? Understanding the role of science in the decision-making process should help scientists (1) best provide relevant and timely data to inform policies, and (2) recognize why decisions may not follow recommendations based only on science. This plenary will explore the decision making process, and discuss applications directed to climate change and coastal resource management, providing insight into how natural and social scientists may contribute to current and future issues, ensuring that the CERF community is Responsive, Ready, and Relevant!

About the Presenters

Jason Shogren, PhD, is Stroock Chair of Natural Resource Conservation and Management and Department Chair in Economics at the University of Wyoming, his alma mater. He studies the behavioral underpinnings of economic and environmental policy. Jason is a foreign member of the Royal Swedish Academy of Sciences, and served as professor to King Carl XVI Gustaf of Sweden. He worked with the Intergovernmental Panel on Climate Change and for the Council of Economic Advisers in the White House. In 2007, he was one of 2,000 scientists and researchers on the Intergovernmental Panel on Climate Change, which was awarded a Nobel Peace Prize for its research establishing a connection between human activity and global warming. He is a Fellow of the Association of Environmental & Resource Economists, the Agricultural & Applied Economics Association, and the Beijer Institute of Ecological Economics.

Elizabeth A. Albright, PhD, an Assistant Professor of the Practice at Duke University’s Nicholas School of the Environment, engages in research focused on local-level resilience and community learning in response to extreme climatic events. Elizabeth is currently working on projects studying hurricane disasters in the Carolinas, floods in Colorado and access to water infrastructure in Alabama. Of particular interest to Elizabeth is the intersection of extreme events, climate change adaptation, and environmental justice. Funded by the National Science Foundation, her work in Colorado has been awarded the Paul A. Sabatier Award for Best Paper in Environmental Politics at the American Political Science Association annual meeting. She has published on response to extreme climatic events, the advocacy coalition framework, and stakeholder participation in state-level regulatory processes.

Osvel Hinojosa-Huerta, PhD, is the Director of the Coastal Solutions Fellowship Program at the Cornell Lab of Ornithology. Osvel received his doctorate in Wildlife and Fisheries Science from the University of Arizona. Since 1997, he has been working in conservation and research projects in northwestern Mexico, in particular in wetland areas of the Sonoran Desert. Osvel’s recent activities include the evaluation and recovery of protected birds, the implementation of community-based restoration projects, and the creation of partnerships with governments and stakeholders for the conservation of nature. He has been leading the efforts to restore the Colorado River delta during the past 20 years, including the restoration of river flows and the facilitation of binational negotiations between Mexico and the U.S. for the Colorado River. In his current position, Osvel is working to develop capacity and cross-collaborative projects to protect threatened coastal habitats for communities and shorebirds along the Pacific Flyway from Mexico to Chile. Osvel has co-authored 32 research articles and book chapters. In 2009 he received the National Award for the Conservation of Wetlands in Mexico, in 2012 he received the Emerging Explorer Award from the National Geographic Society, and in 2014 he received the Sonoran Desert Conservation Award.

Coastal Science Outreach: Citizen Science and Communication
Wednesday, 6 November | 3:00 – 4:30PM

Approximately 40% of the global population lives in coastal areas, which also supports critical economic industries, and resources such as food, recreation and transportation. Ensuring the health and resilience of these coastal areas requires engaging the general population to improve scientific literacy and understanding of these systems. Both citizen science projects and effective science communication provide approaches that encourage scientific literacy, engage the next generation of scientists, and increase data collection possibilities. Increased citizen engagement, and involvement with practicing natural and social scientists help promote the use of up-to-date and relevant scientific understanding at local, state and national levels. This plenary will explore several citizen science projects, and discuss effective science communication strategies as examples of coastal science outreach, ensuring that the CERF community is Responsive, Relevant, and Ready!
About the Presenters

Lauren Alexander Augustine, PhD, is the Executive Director for the Gulf Research Program. She is responsible for overseeing all aspects of management and use of the criminal settlement funds from the Deepwater Horizon disaster that were entrusted with the National Academies by the federal government. This includes fulfilling the vision, defining the strategic direction, and leading the development and implementation of this multi-dimensional, science-based program. Since her tenure at the National Academies began in 2002, Lauren has gained experience working in a variety of roles on a broad range of topics pertaining to water, natural disasters, and resilience. Prior to joining the Gulf Research Program in 2018, she served as Director of the Resilient America Program, which supports communities’ efforts to build resilience to extreme events using science and diverse stakeholder engagement. In addition, she has formerly served as Country Director for the African Science Academy Development Initiative (ASADI), a decadal program that built scientific capacity in national academies across Africa; as Director of the Disasters Roundtable; and as a study director for the Water Science and Technology Board.

Outside of her work at the National Academies, Lauren has served on the World Economic Forum’s Global Agenda Council on Risk and Resilience; was a member of the Advisory Board for the American Geophysical Union’s Thriving Earth Exchange program; and was a juror for two resilience competitions, Rebuild by Design for recovery after Hurricane Sandy and Resilience by Design in San Francisco. She is also a NATO Expert for the Civil Protection Group. Lauren earned her BS in applied mathematics and systems engineering and her M.S. in environmental planning and policy from the University of Virginia, and her PhD in an interdisciplinary program that combined physical hydrology, geomorphology, and ecology from Harvard University.

Emily Maung-Douglass, PhD, is an Oil Spill Science Extension Specialist, Louisiana Sea Grant College Program, Louisiana State University. Emily received a doctorate in Marine Biosciences from the University of Delaware and holds degrees from Old Dominion University and University of Connecticut. Trained as a marine ecologist, she studied big picture questions using techniques from chemistry and ecotoxicology. During her schooling, she volunteered doing science outreach whenever possible and collected data for part of her dissertation through a citizen science project by partnering with the Delaware Center for the Inland Bays. After post-doctoral work as a visiting science fellow at Xiamen University in China, she put her skills and experiences to use for Louisiana Sea Grant at LSU where she is an Oil Spill Extension & Outreach Specialist. Originally from Cleveland, OH, Emily grew up in coastal Virginia where her fascination with the ocean and environment blossomed. She and her husband Keith now enjoy exploring Louisiana with their dogs, cat, and two-year-old son Luca.

Michael S. Wetz, PhD, is the Harte Research Institute Chair for Coastal Ecosystem Processes, Texas A&M University at Corpus Christi. Mike is a broadly trained marine scientist, with expertise in phytoplankton ecology and water quality studies. He strives to provide a sound scientific basis for stakeholder-led coastal restoration/management efforts. In recognition of these efforts, Mike has received several awards from local conservation entities, including CCAs’ “Conservationist of the Year” and the Coastal Bend Bays Foundation’s “Higher Education Award.” Mike led a volunteer water quality sampling program in Baffin Bay for 4 years. Results from that study are now guiding watershed restoration and protection efforts that are being coordinated by the Baffin Bay Stakeholder group, which he co-chairs. He is a member of the Nueces Estuary Advisory Council, a stakeholder group that is tasked with assessing the effectiveness of the water management strategies in the Nueces River Basin. Finally, Mike is a member of the Gulf of Mexico Alliance Water Resources team, which focuses on understanding and reducing water quality problems in the Gulf of Mexico region. He received a doctorate and masters in Oceanography from Oregon State University, and a BS from Coastal Carolina University.
\textbf{CERF 2019 WORKSHOPS}

\textbf{Beginner GIS for Ecologists}
Sunday, 3 November | 8:00 AM – 4:00 PM  
Room 201A | Mobile Convention Center

This seven-hour workshop will provide an overview of beginning GIS skills for biologists using ArcGIS, including use of existing data, creating your own data, and review of fundamental concepts for GIS. Participants will learn basic concepts of landscape ecology and implement applications of GIS through hands-on, self-guided exercises. Participants will be responsible for bringing their own laptop and will receive instructions for downloading software prior to the conference.

\textit{About the Presenter:}
Kayla Key brings more than eight years of GIS experience ranging from terrestrial to aquatic environments. She is currently finishing her PhD at Tennessee Tech University in the Cooperative Fishery Research Unit. Kayla is excited to share the capabilities of ArcGIS with other scientists to help them better answer important questions.

\textbf{Best Practices in Science Communication}
Sunday, 3 November | 8:00 AM - 10:00 AM  
Room 202A Mobile Convention Center

The goals of this two-hour workshop are to improve participants’ science communication capabilities and help participants translate their science to reach broader communities. This cross-cutting workshop touches on a variety of conference priorities. Science communication is not only important for promoting diversity and inclusion in science, but also to maintaining relationships and partnerships by communicating data in an understandable, engaging way. Communicating science effectively helps solve environmental problems by promoting the preservation of coastal and estuarine habitats, elucidating ecosystem services and resources those habitats provide, and supporting cultural heritage through transdisciplinary science and inclusive stakeholder approaches.

\textbf{Analyzing, Synthesizing and Communicating Your Data}
Sunday, 3 November | 10:00 AM – 12:00 PM  
Room 202A | Mobile Convention Center

Coastal and estuarine research encompasses monitoring data collected for a myriad of purposes. Whether it is for determining changes in water quality, evaluating climate change effects, protecting human health, establishing baseline conditions, measuring results of restoration activities, or modeling future conditions, synthesizing and communicating results is an essential part of using the data. Too often, monitoring datasets are not used to their full potential for managing, restoring, and protecting coastal and estuarine resources. This cross-cutting two-hour workshop touches on a variety of conference priorities, such as statistics and data processing, science communication and education/outreach, and diversity and inclusion.

\textbf{About the Presenters (8:00 AM and 10:00 AM Workshops)}:

\textbf{Dr. Bill Dennison} is a Professor of Marine Science and Vice President for Science Applications at the University of Maryland Center for Environmental Science (UMCES). Dr. Dennison’s primary mission within UMCES is to coordinate the Integration and Application Network.

\textbf{Heath Kelsey} is Director of the Integration and Application Network at the University of Maryland Center for Environmental Science. Dr. Kelsey has developed more than 20 ecosystem health report cards for coastal and riverine ecosystems worldwide. Dr. Kelsey has expertise in meaningful stakeholder engagement for ecosystem research, restoration, and planning to help communities identify a shared vision for their ecosystem. His specialties include science communication, environmental and public health assessment, ecosystem health indicators, and stakeholder engagement. Dr. Kelsey received his MSPH and PhD from The University of South Carolina Arnold School of Public Health in 2000 and 2006. Dr. Kelsey was a Peace Corps Volunteer in Papua New Guinea from 1995-1998.

\textbf{Building and Sustaining Effective Community-Researcher Partnerships}
Sunday, 3 November | 1:00 – 4:00 PM  
Room 202A | Mobile Convention Center

This three-hour workshop focuses on best practices for engaging in equitable and mutually beneficial relationships with community partners and will feature a combination of case study presentations, small group discussions, and interactive scenario-based activities. The ultimate aim of the workshop is to provide a space for coastal professionals and researchers from diverse disciplines to share their expertise and experience around community-research partnerships and learn from each other.

\textit{About the Presenters:}

\textbf{Katy Hintzen} is an Extension Agent with the University of Hawai’i Sea Grant College Program specializing in coastal resilience. As part of this role, she works to foster collaborative and equitable partnerships between coastal communities, resource stewards, and researchers across the Hawaiian Islands. Prior to her position with Hawai’i Sea Grant, Hintzen served as an Extension Agent with Michigan Sea Grant where she provided leadership for education and outreach programming related to community resilience, watershed health, and ecosystem conservation. She has also worked with NOAA developing strategic plans for research, restoration, and public engagement in the Great Lakes and served as a Peace Corps Volunteer in Ecuador.

\textbf{Brenda Asuncion} was raised in Waipi’o (‘Ewa, O’ahu) and her foundational experience with loko i’a (traditional Hawaiian fishponds) comes from volunteering and working at He’eia fishpond with the non-profit organization Paepae o He’i’ea. She worked as a policy specialist with the Hawaiian
CERF 2019 WORKSHOPS (continued)

Islands Humpback Whale National Marine Sanctuary where she assisted with management plan development and community-based projects, prior to joining the Hawai‘i-based non-profit Kua‘ina Ulu ‘Auamo (KUA) in 2013. Her primary responsibility is to facilitate opportunities for loko i’a practitioners to collaborate and amplify their collective efforts through a statewide network of over 40 loko i’a called Hui M’lama Loko I’a.

**Dr. Darren T. Lerner** serves as the Director of the University of Hawai‘i Sea Grant College Program, the University Director of the Pacific Islands Climate Adaptation Science Center and the interim Director for the University of Hawai‘i Water Resources Research Center. In these positions, Lerner interacts with the public at large in communicating the value of the scientific enterprise to the sustainable and regenerative use of coastal and marine resources including water resource sustainability and climate adaptation. Lerner has oversight of many K-12, undergraduate and graduate education and public policy activities conducted throughout the State of Hawai‘i and the Pacific region. Under his administration, these programs are involved in a wide range of public outreach, education and training programs.

**Concepts and Controversies in Tidal Marsh Ecology Revisited**

Saturday, 2 November – Sunday, 3 November

Location Offsite: Dauphin Island Sea Lab

This inter-generational meeting of tidal marsh ecologists will bring together ecologists from retired leaders to new grad students, to identify and discuss the key challenges facing these ecosystems into the 21st century. A combination of presentations, panel Q&A, and group discussions will facilitate the sharing of insights, knowledge, and advice from the old guard to the new. We will explore the central theme of marsh support of fisheries by discussing topics including habitat-fishery linkages, connectivity, seascapes, economic and social valuation, restoration, and climate change. Registration fee for this two-day, off-site workshop includes lodging and meals.

**Presenter:** Brian Glazer

**Engaging in Coastal Science After Retirement: Brainstorming Options and Opportunities**

Sunday, 3 November | 1:00 – 3:00 PM

Room 201D | Mobile Convention Center

Are you retired or thinking about retirement, but aren’t ready to completely hang up your coastal and estuarine science hat? Is your agency/company/university/NGO looking for ways to tap in to recently retired coastal scientists, watershed managers and other experienced CERF members? Come join this interactive three-hour workshop to hear from CERF members who have made the retirement transition into a “second life;” learn about opportunities after retirement from agencies, universities, NGOs and private companies eager to tap into expertise from retiring CERF members; and share ideas about how CERF can encourage linking retiring scientists and entities wishing to engage them.

**About the Presenters:**

**Ron Baker** is an Assistant Professor in Marine Sciences with the University of South Alabama, based at the Dauphin Island Sea Lab. His research examines the role of coastal systems in supporting fisheries, particularly their role as nurseries. His research has spanned coastal and estuarine systems of Australia, Papua New Guinea, Belize, as well as the Atlantic and Gulf Coasts of the US during time with NOAA Fisheries and the Smithsonian.

**Professor Matt Taylor** is a Principal Research Scientist with the New South Wales Department of Primary Industries – Fisheries (DPI-Fisheries) and a Conjoint Professor with University of Newcastle, Australia. His research is focused on the scientific development and subsequent application of innovative approaches to improve both fisheries productivity and sustainability, and he has authored 110 peer-reviewed contributions to international journals. His research vision is realized through several internationally significant, collaborative research programs, most notably in the study of fish habitat, recruitment and population processes, and with a focus on exploited crustaceans. Through his role with DPI-Fisheries, he applies this research in the development and implementation of approaches that address recruitment and habitat bottlenecks.

**Holly Greening** recently retired from the Tampa Bay Estuary Program, where she served as Senior Scientist (1991–2007) and Executive Director (2008–2018). A member of CERF since 1978, she has authored more than 25 peer-reviewed publications with a focus on estuarine ecology and collaborative watershed management and is the recipient of regional and national awards for coastal stewardship.

**Rich Batiuk** was the Associate Director for Science, Analysis, and Implementation at the United States Environmental Protection Agency’s Chesapeake Bay Program Office located in Annapolis, Maryland. In his 33 years with EPA and the Chesapeake Bay Program...
CERF 2019 WORKSHOPS (continued)

partnership, he led the integration of science into multi-partner policy-making and collaborative decision-making.

Out in the Open: Identifying, Understanding, and Addressing Implicit Bias
Sunday, 3 November | 1:00 – 4:00PM
Room 201A | Mobile Convention Center

CERF is committed to promoting a diverse and inclusive culture at all levels of the Federation. This three-hour workshop is aimed at increasing the capacity of diverse individuals to interact and to realize the benefits of diversity. Participants will explore some underlying reasons for the lack of diversity, and learn tools to identify, address, and overcome social stereotypes that form outside of our own conscious awareness, known as implicit bias. Expert speakers will lead a series of discussions and exercises that will result in better awareness of and actions to promote diversity, equity and inclusion in personal and professional settings.

About the Presenters

Treda Grayson is the Natural Resource Damage Assessment (NRDA) Program Manager at the U.S. Environmental Protection Agency Office of Water, where she supports and carries out EPA’s Trustee responsibilities for ecosystem restoration in the Gulf of Mexico following the 2010 Deepwater Horizon Oil Spill. She also chairs the CERF Broadening Participation Council, which guides the development and implementation of diversity, equity and inclusion activities and initiatives for the society.

Franklin Trimm, MD is Associate Dean for Diversity and Inclusion and Professor of Pediatrics at the University of South Alabama College of Medicine. Franklin has 30 years experience working with diverse communities as a Developmental-Behavioral Pediatrician and has held several national leadership positions in medical education organizations in which he has been able to promote equity, diversity and inclusion. Training leadership and staff about unconscious bias is a key component of Franklin’s current work within the College of Medicine and the Mobile and medical education communities.

Putting Science “In the Room:” Science Communication to Support Decision-Making
Sunday, 3 November | 1:00 – 4:00PM
Room 202B | Mobile Convention Center

CERF scientists produce extensive research that is intended to inform environmental decision making. Communicating science effectively to decision-makers usually requires specific skills often not included in graduate science training. Participants in this four-hour workshop will interact with environmental decision-makers in state and federal government by making a presentation and receiving feedback, thereby gaining experience translating their science through a decision scenario. Participants can expect to improve their understanding of common pitfalls and strategies to overcome them, and to hear from decision-makers about how they receive and apply scientific information. Participants can expect subject matter feedback on the presentations they make.

About the Presenter

Jacques (“Jack”) Oliver is a senior regulatory scientist with the U.S. Environmental Protection Agency, Office of Water, in Washington, D.C. His work focuses on implementing the Clean Water Act, specifically water quality standards for the management and regulatory oversight. Jack administers a national nutrient pollution control program that provides technical and regulatory support to state and tribal surface water agencies. He also collaborates with state, tribal, and federal programs working to reduce nutrient pollution discharges.

Sharing and Applying Best Practices for Mapping/Monitoring Coastal SAV
Sunday, 3 November | 8:00AM – 4:00PM
Room 201D | Mobile Convention Center

This four-hour workshop will build on earlier CERF SAV workshops to advance the awareness and application of best practices related to SAV mapping and monitoring. Information will be presented on mapping and monitoring methods, the indicators that can be measured at various scales or tiers, and the technologies useful at each tier. The results of a case study mapping/monitoring project will be presented and how the SAV Community of Practice contributed to that effort. Finally, participants will also learn how to join and engage with the CERF SAV Community of Practice.

About the Presenter

Mark Finkbeiner is a senior project leader with NOAA’s Office for Coastal Management where he manages the Ocean Data and Tools effort. His primary focus areas at NOAA are in benthic habitat mapping, supporting implementation of the Coastal and Marine Ecological Classification Standard, the Marine Cadastre, and developing the SAV Community of Practice. His background is in remote sensing and GIS.

The Next Step with R: Data Management, Graphics, and Functions
Sunday, 3 November | 8:00AM – 4:00PM
Room 2018 | Mobile Convention Center

The goal of this full-day workshop is to guide learners who are already using R to be able to automate daily tasks, manage their data in a reproducible framework (using tidyverse R packages dplyr and tidyr), make publication ready graphs (using R package ggplot2), and write their own functions. Anyone with questions about what exactly the workshop will cover or if they have the appropriate skillset can contact Kimberly Cressman or Shannon Dunnigan. Materials from a similar workshop offered at the 2018 American Ornithological Society meeting can be found here. Participants should bring their laptops with R installed on it.
SPECIAL MEETINGS & EVENTS

Monday, 4 November

Mentorship Program Breakfast  (By Invitation)
Time: 6:30 – 8:00 AM
Location: Bon Secour Bay 1 & 2 | Renaissance Riverview Hotel
Participants in the CERF 2019 Meeting Mentoring Program are invited to connect with their mentor/mentee to kick-off the week.

Sponsored By:

CERF 2019 Coastal Fisheries Town Hall
Threats, challenges and solutions for coastal fisheries sustainability in a changing world
Time: 11:30 AM – 1:00 PM
Location: East and West Ballroom | Mobile Convention Center
Many coastal fisheries around the world are in crisis. Overfishing, pollution, climate change and habitat destruction are decimating many coastal fisheries that large human populations rely on. Therefore, concerted and effective action is needed to manage coastal fisheries effectively and ensure their sustainability in a changing world. Such actions call for cross-disciplinary, integrated collaborations including academics, regulators, officers, fishermen and the general public.

Towards that end, this Town Hall will 1) summarize the most important common threats/challenges; 2) identify possible solutions (management actions); 3) and articulate how we can work together to accomplish those solutions. The Town Hall will kick off with a discussion led by a 4-person panel representing the research, fishing, outreach/extension, and regulatory/management communities. A facilitated discussion with attendees will ensue. The facilitator will engage all participants to ensure an inclusive discussion. The overarching goal of the Town Hall is to understand the prioritized needs in coastal fisheries and how we can collectively address those needs. Notes will be taken to aid in producing a well-balanced summary document including lessons learned and suggestions to move forward. The summary document will be shared with the Coastal and Estuarine Research Federation (CERF) membership and other stakeholders. The Town Hall and summary will be outputs in line with the CERF mission and of value to the Federation and other agencies with a stake on coastal fisheries sustainability.

Please join us and bring your own lunch.

Poster Sessions & Happy Hour with Exhibitors
Time: 4:30 – 7:00 PM
Location: Mobile Convention Center Exhibition Hall
Enjoy light snacks and a cash bar while viewing posters and speaking with presenters. See page 65 for a list of scheduled poster sessions and presenters for Monday evening.
Special Presentation: The Slave Schooner Clotilda: Hidden but Not Forgotten
Presenter: Dr. James Delgado
Time: 7:30 – 8:30 PM
Location: East and West Ballroom | Mobile Convention Center

Join us for the story of the June 2019 announcement of the discovery and identification of the wreck of the Clotilda off Mobile’s Twelvemile Island. The discovery has again focused attention not only on the story of the schooner, but also on the people brought to Alabama on Clotilda, and of Africatown, now part of Mobile, home to descendants of some of the schooner’s unwilling captives who when freedom came, established the community in the aftermath of the Civil War.

The wreck lies in a graveyard of ships that were purposely scuttled or abandoned in a backwater of the Mobile River. This is the story of the research, science and forensic archaeology used to identify the wreck of Clotilda, a nationally-significant archaeological site now protected by the Alabama Historical Commission for the people of Alabama.

Student + Early Career Networking Dinner
Time: 7:00 – 9:00 PM
Location: Bon Secour Bay 1 & 2 | Renaissance Riverview Hotel

Join us for this popular networking event! Converse with faculty, professionals, post-docs, and other students while enjoying complimentary pizza and beverages! Gather valuable information on various career options and make professional connections that may lead to job opportunities and future collaborations.

Participants will have the opportunity to chat with panelists from various coastal and estuarine science and management positions. Each career panelist will be stationed at a table, where students and recent graduates will join them for a set amount of time to talk and ask questions. Then, after a set amount of time, students and early career individuals will switch tables to interact with a new career panelist. This will allow for conversations with several people from varied career paths, as well as interactions with your fellow peers!

Student “On The Town” Night
Start Time: 9:00 PM
Location: The Haberdasher

After the Career Network Dinner, please join us on the town at the Haberdasher and let the networking continue! The Haberdasher is downtown Mobile’s premier craft-cocktail bar, only a few short blocks away from the Mobile Convention Center. Known for their classic and unique cocktails, the Haberdasher also has a rotating list of craft beers and a delicious menu of fresh, handmade snacks.

Please note this is a free event and attendees are responsible for their own food and drink expense. The Haberdasher is a 21+ venue.

Tuesday, 5 November

Past Presidents’ Breakfast (By Invitation)
Time: 7:00 – 8:00 AM
Location: Room 107AB | Mobile Convention Center

CERF welcomes its past presidents to gather together to reminisce and share their insights with current Federation leadership.

CERF Inclusion Lunch (This is a Ticketed Event)
Time: 11:30 – 1:00 PM
Location: Bon Secour Bay 1 & 2 | Renaissance Riverview Hotel

A limited number of tickets may still be available at registration.

Generously sponsored by the Gulf Sea Grant Programs, the CERF Inclusion Lunch is a venue for the CERF community to address challenges faced by underrepresented people in the sciences, provide an environment supportive of triumphs, and develop personal and professional networks.

This year, the CERF Inclusion Lunch presents an opportunity for conference attendees to broaden participation even further as a part of the CERF initiative Rising TIDES, Toward an Inclusive, Diverse, and Enriched Society.

The work and achievements of women over the years have laid the critical groundwork for Rising TIDES. The CERF Inclusion Lunch will celebrate the work of women pioneers in CERF to demonstrate the significance of a progressively diverse science community.

2019 Theme: What’s In Your Gumbo?

Ingredients for Putting Diversity, Equity and Inclusion into Practice

Gumbo, a stew originated in Louisiana, is especially popular in the Gulf Coast region. This flavorful dish is full of various combinations of meat, seafood, vegetables and spices that are brought together by three key ingredients characteristic of gumbo: a flavored stock, a thickener and the Holy Trinity (a.k.a. bell peppers, celery, and onions). It is the different types of ingredients that meld together and make the gumbo so delicious, much like it is the ingredients of diverse people, perspectives and experiences that enhance and enrich the CERF and coastal and marine science gumbo. During the CERF Inclusion Lunch, attendees learn strategies and gain tools to promote and instill the key ingredients of diversity, equity, and inclusion at both individual, organizational and institutional levels.

The keynote speakers Dr. Tuba Ozkan-Haller and Dr. Kristy Lewis will lead the audience through presentations, exercises and facilitated discussion to help identify meaningful ways in which to engage in
DEI along multiple dimensions. There will also be time for personal and professional networking at the conclusion of the formal program.

**SPEAKERS:**

**Dr. Tuba Özkan-Haller**  
Professor, College of Earth, Ocean, and Atmosphere Sciences; Professor, School of Civil and Construction Engineering; Associate Vice President for Research Administration and Development, Oregon State University

Dr. Özkan-Haller is well known in the field of coastal engineering with expertise in nearshore waves and water motion and has served on the Ocean Studies Board of the National Academies of Science, Engineering and Medicine. Dr. Tuba Özkan-Haller is passionate about communicating science to the public and has appeared in numerous documentaries produced by the History Channel, the National Geographic Channel, and Oregon Public Broadcasting.

**Kristy Lewis Ph.D.**  
Kristy’s research investigates ecosystem-level variability in marine communities and the impact these changes have on human stakeholders using statistical and ecological modeling strategies. Her focus on integrating science with societal needs includes participation of under-represented groups to find robust solutions to the world’s most challenging coastal issues. For example, in a recently funded grant, she and an interdisciplinary research team will develop a web application giving coastal residents, including those in our most marginalized communities, the ability to assess their vulnerability to future environmental hazards and make informed housing decisions to reduce risk and increase resilience in fiscally responsible ways.

**Annual CERF Business Meeting**  
*Time:* 4:30–5:30PM  
*Location:* East and West Ballroom | Mobile Convention Center  
CERF members are encouraged to attend the annual CERF Membership and Business meeting, where CERF Executive Director Susan Park will share details about the activities and programs of the Federation.

**Affiliate Society Meetings**  
*Time:* 5:30–6:30PM  
Connect with colleagues and learn more about coastal and estuarine activities in your area at one of the regional Affiliate Society Meetings. The following Affiliates will hold meetings on Tuesday evening as noted below:

- Atlantic Estuarine Research Society (AERS): Room 201C  
- California Estuarine Research Society (CAERS): Room 201D  
- Atlantic Canada Coastal and Estuarine Science Society (ACCESS): Room 202A  
- New England Estuarine Research Society (NEERS): Room 202B  
- Gulf Estuarine Research Society (GERS): Room 203A  
- Pacific Estuarine Research Society (PERS): Room 204A  
- Southeastern Estuarine Research Society (SEERS): 204B

**25th CERF Biennial Conference Social Event (Ticketed Event)**  
*Time:* 7:00–10:00PM  
*Location:* GulfQuest Maritime Museum

Each ticket purchase includes delicious southern-style heavy hors d’oeuvres (vegan and vegetarian options provided), access to all museum exhibits, and a drink ticket. The event will feature a large dance floor and local band. Additional drink purchases can be made at one of several cash bars. The museum contains over 90 interactive exhibits, simulators, displays, and theaters (www.gulfquest.org).

Outdoor rooftop access overlooks the Mobile River and provides an excellent location to unwind after a long conference day. Biodegradable products will ensure an environmentally conscious great time!

Join your friends and fellow CERFers for a fun-filled night at one of Mobile’s most impressive museums.

**Wednesday, 6 November**

**CESN Team Meeting/Breakfast** *(By Invitation)*  
*Time:* 7:00–8:00AM  
*Location:* Mobile Convention Center Rooms 107AB

**Estuaries & Coasts Editorial Board Lunch** *(By Invitation)*  
*Time:* 11:30AM–1:00PM  
*Location:* Mobile Convention Center Rooms 107AB

**Poster Sessions & Happy Hour with Exhibitors**  
*Time:* 4:30–7:00PM  
*Location:* Mobile Convention Center Exhibition Hall  
Enjoy light snacks and a cash bar while viewing posters and speaking with presenters. See page 72 for a list of scheduled poster sessions and presenters for Wednesday evening.

**CERF Film Festival**  
*Time:* 7:00–10:00PM  
*Location:* Renaissance Riverview Hotel, Bon Secour Bay 1 & 2  
CERF is pleased to announce that this year’s meeting includes a film festival. Members have submitted short videos that align with one of four categories: Research, Places, People, and Coastal Connections. One filmmaker from each category will win the prestigious CERF Film Festival Best in Category Award! We encourage everyone to come to the film festival screening event!
Thursday, 7 November

**CERF 2021 Committee Breakfast** *(By Invitation)*
*Time: 7:00–8:00AM*
*Location: Mobile Convention Center Rooms 107AB*

**Estuaries and Coasts Town Hall**
**Misuse of P-values and why *Estuaries and Coasts* discourages the phrase statistically significant**
*Time: 11:30AM–1:00PM*
*Location: Room 107AB | Mobile Convention Center*
For two decades, there has been a debate among statisticians about the misuse and misinterpretation of P-values. There is now a consensus among statisticians that it is wrong to use the binary choice of “statistically significant” or “non-significant” based on arbitrary assumptions about fixed alpha values e.g., 0.05 (Wasserstein et al. 2019), and some are recommending that editors ban the use of these terms from their journals (Hurlbert et al. 2019). The *Estuaries and Coasts* editors are considering this, but before taking such a drastic action, we want to explain to the CERF community what we are considering and why. This would both inform the CERF community that publishes in *Estuaries and Coasts*, provide advice on presenting results of statistical analyses, and allow the editors to receive feedback on how to move forward. Please join us and bring your own lunch.

**CERF 2019 Committee Reception** *(By Invitation)*
*Time: 4:30–5:30PM*
*Location: Mobile Convention Center Room 107AB*

**Close Out Party & Student Awards Presentation**
*Time: 5:30–8:30PM*
*Location: East and West Ballroom | Mobile Convention Center*
Volunteer judges will be evaluating student oral and poster presentations throughout the conference. At the Close-Out Party, the highest ranking students will receive recognition and a monetary reward for their exceptional work. Come support the students and celebrate another successful CERF conference.

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**Worth liking. Worth protecting.**

To learn more about our new coastal habitat efforts visit our booth and website.

[pewtrusts.org/ConserveCoastalHabitats](http://pewtrusts.org/ConserveCoastalHabitats)
[@PewEnvironment](https://twitter.com/@PewEnvironment)

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**Sea Grant**

Sea Grant offers over 50 internships, fellowships and other experiences for graduate and undergraduate students

[seagrant.noaa.gov/students](http://seagrant.noaa.gov/students)
CERF 2019 Silent Auction

Bidding Opens: Sunday, 3 November 8:00 PM
Bidding Closes: Wednesday, 6 November 6:00 PM
Payment Due By: Thursday, 7 November 1:00 PM
Location: Mobile Convention Center

OVERVIEW:
Bring your bids for the fantastic silent auction offerings! Participants will use bid sheets to attempt to win the auction item(s) that they desire. Don't forget to keep checking back, because you never know who may sneak in and try to outbid you. We will accept cash, check, or credit card donations as payment. Winners are responsible for the collection and transport of their item(s). Remember that every bid you make will increase the funds going to support CERF students.

HOW IT WORKS:
Bidding: Items available for the silent auction will have an associated bid sheet. On the bid sheet for the item, the bid increments will be specified, and there will be spaces for your bids. To bid, write your name, email or cell, and bid amount in the appropriate columns. Check back often to see if you've been outbid and raise the stakes. Once you bid on an item, you'll only need to add your name to subsequent bids as you compete to win the item. Remember—this is about philanthropy. Your generous contributions will do SO much for students!

AUCTION CLOSE OUT:
The last bids allowed will be at 6:00 PM Wednesday, 6 November, during the poster session and happy hour. The person who has bid the highest amount will be declared the winner of the item. Winning bidders will be listed on a board in the auction area and will be notified via email/text/phone provided on the bid sheet. Some items will be available for pick up and payment at the end of the poster session, and the remainder through the morning break and lunch on Thursday. Winners will have until the end of lunch at 1:00 pm on Thursday, 7 November to pick up and pay for the item(s). If you’ve won, go to the registration desk to make your payment and pick up the bid sheet. Take the bid sheet to the auction area and pick up your item(s). Some items like gift cards and scientific equipment may be waiting for you at registration. Auction assistants will be available to help facilitate this process. If the winner fails to pick up their items before the deadline the item will be awarded to the next highest bidder.
<table>
<thead>
<tr>
<th>Time</th>
<th>201 A</th>
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<th>202 A</th>
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<tr>
<td>8:00 AM</td>
<td>Fish and fisheries: linking science, management, and society</td>
<td>Impacts of multiple disturbances on coastal ecosystem structure and function</td>
<td>Biogeochemical cycling and transport across the land–ocean continuum</td>
<td>Innovative approaches for estuarine/watershed data analysis, mining, and visualization</td>
<td>Ecological processes, structures and functions in tidal urban ecosystems</td>
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<td></td>
<td>Pedro Morais and Ester Dias</td>
<td>Corinne Tatarnik and Anna Braswell</td>
<td>Raymond Nagaj, Marjorie Friedrichs, Pierre St. Laurent and Susan Pan</td>
<td>Qian Zhang, Rebecca Murphy, Marcus Beck and Jeni Keisman</td>
<td>Ryan Woodland, Lora Harris and Eric Schatt</td>
</tr>
<tr>
<td>8:15 AM</td>
<td>A global review of tested and reported sound production in fishes</td>
<td>A 35 year spatial-temporal analysis of serious Spartina alterniflora biomass declines in coastal Georgia</td>
<td>Long-term dynamic global river nitrogen loads to the coastal ocean</td>
<td>Machine learning to improve decision making for water management strategies, land use planning and policy</td>
<td>Linking land use to physical changes in Charleston's estuaries and tidal creeks</td>
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<tr>
<td></td>
<td>Audrey Looby, Kieran Cox, Rodney Rountree, Francis Juarez, Charles Martin, Laura Reynolds</td>
<td>John Schalles, Christine Hlaðik, John O'Donnell, Nicholas Nealy</td>
<td>Minjin Lee, Elena Shvetliakova, Charles Stock, Sergey Malyshev, PC Milly</td>
<td>Susan Pan, Zihao Bian, Yuanzhi Yao, Harqin Tian, Marjorie Friedrichs, Raymond Nagaj, Eileen Hoffman</td>
<td>Breanne Hanson, Andrew Tweet, Norm Shea, Denise Sanger</td>
</tr>
<tr>
<td>8:30 AM</td>
<td>Using hotspot analyses to identify long-term spatial patterns in common estuarine sportfish</td>
<td>Buying time: elevation capital extends life of marshes in the sediment-deficient Plum Island Estuary, MA</td>
<td>Changes in Nitrogen loading from the Chesapeake Bay watershed since 1900: magnitude and attribution</td>
<td>Machine-learning classifiers applied to sediment identification for coastal restoration near Ship Shoal in Louisiana</td>
<td>Biogeochemical data from a tropical urban estuary implicate unexpected nitrogen sources</td>
</tr>
<tr>
<td></td>
<td>Janelle Johnson, H. Nathan Miller, Dave Blewett, Courtney Saari</td>
<td>Amy Langston, Ellen Herbert, Orenco Durant Vinent, Matthew Kirwan</td>
<td>Susan Pan, Zihao Bian, Yuanzhi Yao, Harqin Tian, Marjorie Friedrichs, Raymond Nagaj, Eileen Hoffman</td>
<td>Susan Pan, Zihao Bian, Yuanzhi Yao, Harqin Tian, Marjorie Friedrichs, Raymond Nagaj, Eileen Hoffman</td>
<td>Autumn Oczkowski, Emily Santos, Rose Martin, Evelyn Huertas, Alana Hanson, Elizabeth Watson, Cathleen Wigand</td>
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<tr>
<td>8:45 AM</td>
<td>Using acoustic telemetry and stable isotope analysis to understand juvenile red drum foraging and movement</td>
<td>Habitat decoupling via altered saltmarsh creek geomorphology decreases mummichog terrestrial subsidy to aquatic food webs</td>
<td>Biogeochemical gradients in a subterrestrial estuary providing DIN to the York River estuary</td>
<td>Creating a long-term climatologically based forecast for hypoxia in the Chesapeake Bay</td>
<td>Establishing a water quality baseline in the impounded Guana River estuary</td>
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<td>David Behringer, James Nelson</td>
<td>Justin Lesser, Cameron Bechtold, Linda Deegan, James Nelson</td>
<td>Stephanie Wilson, Iris Anderson, Craig Tobias, Bongkeun Song</td>
<td>Andrew Muller, Diana Muller</td>
<td>Nicole Dix, Shannon Dunningan, James Tenazinis, Jessica Lee</td>
</tr>
<tr>
<td>9:00 AM</td>
<td>Identifying indicators of protandric hermaphroditism on otoliths of common snapping turtle Centropomus undecimalis</td>
<td>Decadal response of natural and stabilized fringing saltmarshes to SLR, hurricanes, and drought</td>
<td>Is eutrophication inevitable? In-situ incubations identify threshold responses to nutrientification in oligotrophic New Zealand estuaries</td>
<td>Data-driven monitoring and modeling for predicting marsh edge erosion</td>
<td>Critical coastal habitat assessment: understanding climate change impacts in Tampa Bay, Florida</td>
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<td>Brent McKenna, Joy Young, John Baldwin</td>
<td>Carolyn Currin, Jenny Davis, Anna Hitting, Michael Greene, Quentin Walker</td>
<td>Amanda Vieillard, Simon Thresh</td>
<td>Navid Jafari, Jim Chen, Ling Zhu, Brian Harris</td>
<td>Gary Raulerson, Lindsay Cross, Pam Latham, David Loy, Ryan Moyer, Renee Price, Kasa Rudaubagh, Thomas Ries, Doug Robison, Edward Sherwood</td>
</tr>
<tr>
<td>9:15 AM</td>
<td>Determining changes in fish community structure along salinity gradients in a reflowed, hypersaline estuary</td>
<td>Prescribed fire drives decomposition dynamics along a coastal elevation gradient</td>
<td>Tidal freshwater zones as hotspots for nitrogen retention and removal in two Texas rivers</td>
<td>Improving estimates of coastal marsh plant biomass while minimizing costs of data collection</td>
<td>Snapshots of lateral gradients along St. Lucie Estuary, Florida, before and after Hurricane Irma</td>
</tr>
<tr>
<td></td>
<td>Catherine Eckert, David Hicks</td>
<td>Julia Cherry, Lorae Simpson, Mollie Nugent, Loretta Battaglia</td>
<td>Xin Xu, Hengchen Wei, Kevan Moffett, James McClelland, Amber Hardison</td>
<td>Megan Vahsen, James Holmquist, Patrick Megenigal, Jason McLachlan</td>
<td>Amanda Kahn, Sarah Bornhoet, Cassandra Armstrong, Zhiqiang Chen</td>
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<tr>
<td>9:30 AM</td>
<td>Hawaiian estuaries are highly invaded by non-native fishes and other mobile species</td>
<td>Changes in benthic community composition and ecological function along an estuarine urban pollution gradient</td>
<td>Influence of nutrient concentrations and forms on phytoplankton communities in tidal freshwater zones of rivers</td>
<td>Inferring estuarine wetland loss for the western United States from a tidal inundation model</td>
<td>Successes and challenges in improving water quality in the Narragansett Bay watershed</td>
</tr>
<tr>
<td></td>
<td>Kimberly Peyton, Troy Sakihara</td>
<td>Gary Banta, Judi Hewitt, Simon Thrush</td>
<td>Hengchen Wei, Xin Xu, Amber Hardison, Kevan Moffett, Deana Erdiner, James McClelland</td>
<td>Laura Brophy, Correigh Greene, Van Hare, Brett Holycross, Andy Lanier, Hinoo Imaki, Tanya Haddad, Randy Dana, Walter Heady, Kevin O'Connor</td>
<td>Courtney Schmidt, Mike Gerel, Julia Bancroft, Eivy Monroy</td>
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**ORAL SESSIONS**  Monday 04 November | Early Morning ☀️ 8:00 AM – 9:30 AM

* = Lightning Presentations  CH = Cultural Heritage/Coastal Humanities  |  All Presentations are Traditional Oral unless otherwise noted.

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**Break**

You can view the author/presenter index on the CERF 2019 Conference Mobile App – download instructions can be found on page 15

www.cerf.science
### ORAL SESSIONS

**Monday 04 November | Early Morning  8:00AM – 9:30AM**

**= Lightning Presentations  **CH = Cultural Heritage/Coastal Humanities  **| All Presentations are Traditional Oral unless otherwise noted.**

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<thead>
<tr>
<th>201B</th>
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<tr>
<td><strong>Advances in understanding sea level rise and coastal landscape change</strong></td>
<td><strong>Searching for solutions: the future of deltas and estuaries worldwide</strong></td>
<td><strong>Short-term and long-term variability in coastal and estuarine microbial communities</strong></td>
<td><strong>Advanced remote-sensing methods for water quality monitoring and forecasting</strong></td>
<td><strong>Ecosystems, human well-being and resilience: characterizing socio-ecological systems</strong></td>
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<tr>
<td>Keryn Gedan and Matthew Kirwan</td>
<td>John Day</td>
<td>Byron Crump, Jennifer Bowen and Pia Moisander</td>
<td>Aimee Neeley and Guangming Zheng</td>
<td>Lisa Smith and Linda Harwell</td>
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### Advanced Presentations

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<tr>
<td><strong>Dynamics and spread of invasive Phragmites during upland conversion to tidal marsh</strong></td>
<td><strong>Wetland soil strength with emphasis on the impact of nutrients and sediments</strong></td>
<td><strong>Source tracking microbial communities and metagenomes in the Columbia River estuarine turbidity maxima</strong></td>
<td><strong>Built environment vulnerability: How does coastal development affect response and resilience to coastal hazards?</strong></td>
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<tr>
<td>Keryn Gedan, Justus Jabe, Man Qi, Phoebe Shaw</td>
<td>Navid Jafari, Brian Harris, Jack Cadigan, John Day, Charles Sasser, Cathleen Wigand, Angelina Freeman, James Pahl, Robert Lane, Leigh Anne Sharp, Gary Shaffer, Guerry Holm</td>
<td>Byron Crump, Mariya Smith, Lydie Herfort, Holly Simon</td>
<td>Anna Brazwell, Stefan Leyk</td>
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### Early Morning Presentations

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<tbody>
<tr>
<td><strong>Decadal-scale coastal sea-level variability in the northern Gulf of Mexico: implications for coastal wetland sustainability</strong></td>
<td><strong>The genomic capabilities of microbial communities track seasonal variation in Arctic lagoons</strong></td>
<td><strong>A multi-sensor approach for monitoring cyanobacterial harmful algal blooms in a large subtropical lake</strong></td>
<td><strong>What’s a “restored” Chesapeake Bay? Towards an integrated assessment of Chesapeake Bay and its watershed</strong></td>
</tr>
<tr>
<td>Greg Snedden, Robert Rohli</td>
<td>Kristina Baker, Colleen Kellogg, James McClelland, Ken Dunton, Byron Crump</td>
<td>Abhishek Kumar, Deepak Mishra</td>
<td>Vanessa Vargas-Nguyen, Michael Paolisso, William Dennison</td>
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###afternoon Presentations

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<tr>
<td><strong>Climate Change at the Coastal Margins: Effects of Glacier Loss on Estuary Ecosystems of Alaska</strong></td>
<td><strong>A Temporal Study of the Marine Microbial Ecology in the Coastal Waters of Pensacola Beach</strong></td>
<td><strong>Influence of river input on the carbonate chemistry of northern Gulf of Mexico</strong></td>
<td><strong>Sustainability in Chesapeake Bay shorelines: climate change, management decisions, and ecological functions</strong></td>
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<td>9:00 AM</td>
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###break

**9:30 AM BREAK**

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## ORAL SESSIONS

**Monday 04 November | Mid Morning 10:00AM – 11:23AM**

![Responsive Relevant](www.cerf.science)

### 201 A  
**Fish and fisheries: linking science, management, and society**  
Pedro Morais and Ester Dias

### 201 C  
**Imacts of multiple disturbances on coastal ecosystem structure and function**  
Coniranne Tatarw and Anna Braswell

### 202 A  
**Biogeochemical cycling and transport across the land–ocean aquatic continuum**  
Raymond Najjar, Marjorie Friedrichs, Pierre St. Laurent and Susan Pan

### 202 B  
**Innovative approaches for estuarine/watershed data analysis, mining, and visualization**  
Qian Zhang, Rebecca Murphy, Marcus Beck and Jeni Kiesman

### 203 B  
**Ecological processes, structures and functions in tidal urban ecosystems**  
Ryan Woodland, Lora Harris and Eric Schott

![Lightning Presentations](www.cerf.science)

#### 10:00 am

**Comparative growth of hatchery and wild Pacific salmon during out-migration**  
Raien Emery, Joseph Smith

**Patterns and drivers of salinity over multiple time scales in the Albemarle Pamlico estuarine system**  
Matthew Stillwagon, Marcelo Ardon

**Bioavailability of dissolved organic nitrogen in the Caloosahatchee River and Estuary**  
Cassandra Armstrong, Stacey Olliv

**Recent trends in nitrogen sources and estimated loads to estuaries of the conterminous United States**  
Naomi Detenbeck, Mingde You, Daniel Tone

**Characterizing salt marsh microbial communities along an urbanization gradient**  
Annie Murphy, Ashley Bulsso, McKim, Christian Alsterberg, Ross Ackerman, Jarrett Bynes, Jennifer Bowen

#### 10:15 am

**Identifying nursery origin of a euryhaline predator: Evaluating the utility of natural tags**  
Thomas TinHan, Shannon O’Leary, Jay Rackover, David Portnoy, Carey Gelp, R.J. David Wells

**Hurricane, hypoxia, and oil spill effects on ammonium cycling in the northern Gulf of Mexico**  
Silvia Newell, Stephen Carini, Mark McCarthy, Xiaolin, Lijun Hou, Justyna Hampel, Wayne Garder

**Applying the isotope pairing technique to measure nitrogen dynamics in a coastal Louisiana detrital floodplain**  
Song Li, Robert Twilley

**Quantifying the Drivers of Eutrophication across the South Atlantic and the Gulf Coasts**  
Lise Montefiore, Natalie Nelson

**Colonization of pier piles by sessile marine invertebrates in the Hudson River**  
Allison Fitzgerald, Carre Roble

#### 10:30 am

**Determining River Herring eDNA shedding and decay rates to develop a methodology for quantification**  
Seth Gibbons, Sara Rozzelle, Austin Eberwein, Michael Brewer, Roger Ruffson, Erin Field

**Seasonal Variability in Basal Food Web of Dredge Pits on the Louisiana Continental Shelf**  
Monique Boudreaux, Sibel Bargu, John White, Kanchan Manti, Laura Thompson

**Impacts of invasive Phragmites australis and extreme weather events on nitrogen processing in coastal marshes**  
Mollie Vacano, Suzanne Thompson, Michael Pfeifer

**Linking landcover, climate, and coastal ecosystems: a watershed perspective for a changing South Carolina coast**  
Lloyd Hill, Andrew Tweed, Sharleen Johnson, Denise Sanger

**Human modifications to estuaries modify the diet, morphology, and functional niches of coastal fish species**  
Felicity Hardcastle, Andrew Olds, Christopher Henderson, Thomas Schlacher, Tyler Martin, Paul Maxwell, Rod Connolly, Ben Gilby

#### 10:45 am

**Larval supply of eastern oyster (Crassostrea virginica) to restored and historic oyster reefs in Mississippi**  
Leah Morgan, Chet Rakocinski

**Benthic community resiliency in a southeastern river-dominated estuary**  
Alexis Marti, Martin Posey, Troy Alphin

**Nutrient loading impacts nitrogen removal and carbon dynamics in a Juncus and Spartina dominated saltmarsh**  
Taylor Ledford, Coriranne Tatarw, Julia Cherry, Olivia Mason, Behzad Mortazavi

**CRMS Calciasieu/Sabine Basin analysis — Flood stress and land loss on Louisiana’s Chenier Plain**  
Leigh Anne Sharp, Tommy Mcginnis, William Wood

**Structural and functional patterns of demersal fish assemblages in an urbanized coastal landscape**  
Ryan Woodland, Lora Harris, Eric Schott, Alexandra Firman, Erin Reilly

#### 11:00 am

**Time and temperature effects on histamine and histamine-producing bacteria (HPB) in decomposing fish**  
Ashley Frith, Kristin Bjornsdottir-Butler, Ruth Carmichael

**Disturbance structures the dynamics, synchrony, and biodiversity of giant kelp forests**  
Max Castorani, Tom Bell, Robert Miller, Daniel Reed, Daniel Reuman, Lawrence Sheppard, Jonathan Walter

**Building ecosystem function: Do constructed salt marshes remove nitrogen as well as their natural counterparts?**  
Coriranne Tatarw, Taylor Ledford, Sommer Starr, Larue Simpson, Erin Smyth, Abigail Griffin Wood, Julia Cherry, Behzad Mortazavi

**What is upstream for my water samples? The need of Directional Water Quality Data**  
Henry Briceno, Reinaldo Garcia, Michael Absten, Sandro Stumpf, Henry Briceno, Jarrett Bynes, Jennifer Bowen

**Landscape transformation alters functional diversity in coastal seascapes**  
Christopher Henderson, Ben Gilby, Thomas Schlacher, Rod Connolly, Marcus Sheaves, Paul Maxim, Nicole Flint, Andrew Olds

#### 11:15 am

**Variability in the trophic ecology of Sargassum-associated juvenile fishes**  
Courtney Stachowiak, Olivia Leisnade, Kevin Dillon, Frank Hernandez

**Linking Watershed pollution to stony coral condition**  
William Fisher, Leah Oliver

**Developing ecological targets for watershed restoration**  
Lisa Vandiver

**Urbanisation and conservation shape ecosystem functioning across disturbed seascapes**  
Andrew Olds, Ben Gilby, Christopher Henderson, Thomas Schlacher, Rod Connolly, Paul Maxwell, Marcus Sheaves, Hayden Borland, Nicholas Oertodossi

**11:30 am LUNCH**
### ORAL SESSIONS

**Monday 04 November | Mid Morning 10:00AM – 11:30AM**

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<th>Session 201 D</th>
<th>Session 204 A</th>
<th>Session 204 B</th>
<th>Session 203 A</th>
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</table>
| 10:00 AM | Advances in understanding sea level rise and coastal landscape change  
Keryn Gedan and Matthew Kirwan | Supporting management of coastal ecosystems through integrated ecosystem assessments  
Chris Harvey, Chris Kelble, Mark Monaco and Geoffrey Cook | Shallow water mapping in coastal environments: research, methods and management  
Mark Borrelli and Monique LaFrance Bartley | Social and natural sciences: When the stars align… or don’t  
David Yoskowitz, Lauren Hutchison, Paul Hindsley, and Rex Caffey | Microbes to maps: data-model integration for coastal wetland blue carbon  
James Holmquist, Camille Stagg, Brandon Boyd, Melissa Baustian, Torig Aw, Courtney Creamer, James Morris, and Amanda Spivak |
| 10:15 AM | Advances in sea-level driven land conversion in the Chesapeake and beyond  
Matthew Kirwan, Mark Schuerch, Keryn Gedan, Nathalie Schieder | Session Introduction: Supporting management of coastal and marine ecosystems through integrated ecosystem assessments  
Mark Monaco, Rebecca Shuford, Chris Harvey, Chris Kelble, Spooner Ellen | Use of acoustic methods for ecosystem monitoring in a seagrass meadow  
Megan Ballard, Kevin Lee, Jason Sagers, Gabriel Venegas, Andrew McLeese, Abdullah Rahman, Preston Wilson | Enhancing Cross Disciplinary Research to Application through Boundary Organizations  
Stephen Semper, D. Swann | Physical constraints on the stabilization of coastal soil carbon  
Lisanne Windham-Myers, Patrick Megonigal |
| 10:30 AM | Different marshes, different trajectories: long term change in vegetated marsh extent at three LTER sites  
Merryl Alber, Christine Burns, Clark Alexander | A Global Perspective on Ecosystem-based Management and Integrated Ecosystem Assessments  
Jason Link, Mark Dickey-Colls, Erik Olsen, Alida Bundy, Elizabeth Fulton | Vessel-Based, Shallow Water Mapping with A Phase-Measuring Sidescan Sonar: Lessons Learned from the Field  
Mark Borrelli, Theresa Smith | Natural experiments, coral reef management, and integrating socio-ecological data  
Kelly Dunning | WARMER-2: Refining a marsh elevation and carbon model to incorporate vegetation succession and parameter uncertainty  
Kevin Buffington, Chris Janousek, Bruce Daggett, Karen Thorne |
| 10:45 AM | Effects of Hurricane Matthew's storm surge pulse disturbance on the forest-marsh ecotone in South Carolina  
Thomas O’Halloran, Thomas Williams, Stephanie Whitmire, Bo Song, William Curren, Skip Van Bloem | Using the Climate Change Web Portal for integrated ecosystem assessment and coastal applications  
Michael Alexander, James Scott, Gaetane Hervieux | Monitoring *Nipponaenidae* biwakoensis infestation of Phragmites australis using NDVI and remotely sensed land cover classifications  
Aimee Beaudette, Brady Couvillon | A consistent approach for ecosystem services projects to ensure useful results for coastal management  
Peter Wiley, Rebecca Love, Jennifer Zhuang, Kate Quigley | Ecosystem level carbon stocks and sequestration rates across coastal morphology explain mangrove blue carbon mitigation  
Robert Twilley, Andre Rovai, Edvard Castaño-Moya, Paolo Paglioca, Alessandra Fonzoa, Pablo Pau |
| 11:00 AM | The effects of storm surge on pitch pine growth in a rapidly transgressing coastal forest  
LeeAnn Haaf, Pedram Daneshgar, Elizabeth Watson, Salli Dymond | An open-science approach to ecosystem reporting for IEA in the Northeast US  
Sean Hardison, Sarah Gaichas, Sean Lucey, Scott Lange | Quantifying and mapping intertidal oyster reefs using LiDAR-based remote sensing  
Sara Hogan, Matthew Reidenbach | Integrating People and Ecosystems to Enhance Coastal Resiliency through Living Shorelines  
Amanda Guthrie, Donna Marie Bilkovic, Carl Hershney, Sarah Stafford | Assessing the role of organic matter reactivity in limiting salt marsh pond deepening  
Sheron Luk, Kelsey Gosselin, Ann McWichel, Jonathan Sanderman, Amanda Spivak |
| 11:15 AM | Change is happening: a look at sea-level rise driven upland tidal salt marsh edge migration  
Rachael Sacatelli, LeeAnn Haaf, Richard Lathrop | There is no I in EAFM: adapting Integrated Ecosystem Assessment for Mid-Atlantic Fisheries Management  
Sarah Gaichas, Greet DePiper, Richard Seagraves, Brandon Muffley, Sean Lucey | Hyperspectral imagery from unmanned aerial systems for mapping and monitoring tidal wetland restoration  
Amy Borde, Andre Coleman, Curtis Roegner, Robert Erdt | Panel Discussion | Responses of marsh ecosystems to coastal change in the Southeastern Florida Everglades  
Tiffany Truxillier, Benjamin Wilson, Fred Sklar, Sean Charles, John Korominoki, Evelyn Gaiser, Carlos Coronado-Molina, Stephen Kelly, Stephen Davis, Kandker Ishnaq, Jennifer Richards, Daniel Gain |
| 11:30 AM | *LUNCH* | | | | |

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### ORAL SESSIONS

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| 201 D | Advances in understanding sea level rise and coastal landscape change  
Keryn Gedan and Matthew Kirwan | Supporting management of coastal ecosystems through integrated ecosystem assessments  
Chris Harvey, Chris Kelble, Mark Monaco and Geoffrey Cook | Biogeochemical cycling and transport across the land–ocean aquatic continuum  
Raymond Rajat, Marjorie Friedrichs, Pierre St. Laurent and Susan Pan | Foundation species conservation: bridging the basic and applied research divide  
Rachel Smith, R. Daniel Harris | CERF 2019 Coastal Design Competition: Mobile Bay  
Robert Twillery, Tiffany Trouder, Karen McGlothery, Traci Birch and Jeff Carney |

| 202 A | Biodeposition by ribbed mussels drives vertical marsh accretion in southeast US salt marshes  
Sinead Crotty, Christine Angelini | Quantifying and Comparing Risk to Ecosystem Services Production Across Coastal South Florida  
Geoffrey Cook, Chris Kelbl | Decadal changes of soil physiochemical properties in a freshwater wetland after Mississippi River reconnection  
Alicia Spera, John White, Ron Constante | Roadmap for restoration: using ecological data to inform resource management and restoration practice  
Jennifer Beseres Pollack, Terry Palmer, Jonathan Grabowski, Kevin De Santiago, Danielle Marshall, Abby Williams | Design and planning for long-term living shoreline sustainability and resilience  
Meg Goeccker, Kevin Hanegan, Nick Cox, Chris Williams, Mary Kate Brown |

| 204 A | How will sea level rise–driven shifts in wetland vegetation alter ecosystem services?  
Beth Lawrence, Aidan Barry, Sean Khan Ooi, Chris Elphick, Ashley Helton | An Ecosystem Status Report to support management decisions in Barataria Basin, Louisiana  
Shannon Martin, Suzanna Blake, Amy Freitag, Daniel Dorfman, Seann Regan, Michael Jepson | Considering coasts: Adapting terrestrial models to characterize coastal habitats  
Teri O’Meara, Daniel Ricciuto, Genevieve Noyce, Benjamin Salman, Fengming Yuan, Roy Rich, Peter Thornton, Patrick Megonigal | Understanding foundation species through research and restoration — a tale of two biogenic habitats  
Megan La Peyre | Multidisciplinary Assessment of Urban Design through a Resiliency Framework: Miami Beach Case Study  
Aurora Alcaide-Ortiz, Ron Hariprasad, Timothy Kirby, Jazmin Locke, Helen Roldan, Roberto Rivera, Tiffany Trouder |

| 204 B | Incorporating marsh migration into traditional river and wetland restoration efforts  
Caitlin Alcott, Nick Nelson, Mike Burke | Applying Science-based Indicator Portfolios to National Marine Sanctuaries  
Gregory Williams, Jennifer Brown, Chris Harvey, Andrew DeVogelaere, Chris Caldwell | A comprehensive estuarine organic carbon budget and the importance of tidal marshes in estuarine biogeochemistry  
J. Blake Clark, Wen Long, Raleigh Hood | From 0-to-60: Challenges of training GulfCorps members in field monitoring  
Jeff DeQuattro | Inland from the Coast: Engaging stakeholders to design resilient communities in the face of uncertainty  
Rachelle Trahan, Alexandre Cowles, Kathleen Eubanks, Yuta Masakane, Tanvi Shah |

| 205 D | The role of hurricanes, climate and sea level in shaping the southern Florida coastline  
G. Lynn Wingard, Minam Jones, Sarah Bergstesser, Bethany Stockhouse, Kristen Hoefle, Marci Marot, Andre Daniels | Indicator selection to support EBM: the Florida Keys National Marine Sanctuary Integrated Ecosystem Assessment  
Kelly Montenero, Chris Kelbl | Particulate organic nitrogen transport and fate in Chesapeake Bay: A numerical study  
Hao Wang, Raleigh Hood, Wen Long | Panel Discussion | Panel Discussion |

| 206 A | Increasing tidal inundation and the biophysical structure of a saltmarsh over the past decade  
Erik Smith, Tracy Buck | Forks in the road toward successful integrated ecosystem management and ecosystem-based management support  
Chris Harvey | Impact of Sediment Resuspension on Nearbed DIC and Acidification in the Northern Gulf of Mexico  
Linlin Cui, Courtney Harris, Kanchan Maiti, Wei-Jun Cai | | |

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<td>1:00 PM</td>
<td>Tracking San Francisco Bay water quality using generalized additive models in an R Shiny framework</td>
<td>Marcus Beck, Ian Wren, Rebecca Murphy, Perry de Valpine, David Serin</td>
<td>Qian Zhang, Rebecca Murphy, Marcus Beck and Jeni Kesman</td>
<td>Microbes to maps: data-model integration for coastal wetland blue carbon</td>
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<tr>
<td>1:15 PM</td>
<td>Evaluating water quality response trajectories in Chesapeake Bay using statistical models</td>
<td>Rebecca Murphy, Jennifer Keisman</td>
<td>Blue Carbon: A tool to help finance the protection and restoration of coastal Louisiana</td>
<td>Leland Moss, Tim Carnuthers, Ern Swails, Scott Settelmyer, Melissa Baustian, Stefanie Simpson</td>
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<tr>
<td>1:30 PM</td>
<td>Web-based 4-Dimensional Visualization of Water Quality and Habitat Status and Change in Chesapeake Bay</td>
<td>Zhaoying Wei, John Wolf, Emily Trentacoste, Qian Zhang, Richard Tian, Peter Tango</td>
<td>Mangrove Productivity and Carbon Storage is controlled by Hurricanes, Geomorphology, and Hydrology along Mexico's coastline</td>
<td>Victor Rivera-Monroy, Maria Rodriguez-Zúñiga, Luis Farfán, Samuel Velázquez-Salazar, Berenice Vázquez-Balderas, Edgar Villeda-Chávez, Carlos Troche-Souza, Maria Cruz-López, Xiaochen Zhao, Robert Rohli</td>
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<tr>
<td>1:45 PM</td>
<td>Assessing the cumulative effects of restoration activities on improving water quality in Tampa Bay, Florida</td>
<td>Edward Sherwood, Marcus Beck, Jessica Henkel, Kirsten Dorans, Kathryn Ireland, Patricia Varela</td>
<td>Improving blue carbon estimates: best practices for quantifying uncertainty in loss-on-ignition</td>
<td>Lauren Brown, Samantha Chapman, Brandon Boyd, Chris Janousek, Jonathan Sanderman, Gregory Ne, Amanda Spivak, Elizabeth Fard, James Morris, James Holmquist, Patrick Megonigal, Glen MacDonald</td>
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<tr>
<td>2:00 PM</td>
<td>Visualizing urban stormwater contamination through design thinking, pollution loading, and social equity metrics</td>
<td>Emily Howe, Christian Nilsen, Jamie Robertson</td>
<td>How sensitive are soil elevation and carbon to root turnover in mangrove and marsh ecosystems?</td>
<td>Samantha Chapman, Emily Geoghegan, Claire Fell, James Holmquist, Matthew Hayes, Ilka Feller, James Morris, J Adam Langley</td>
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<td>2:30 PM</td>
<td>Accelerating Headwater Land Protection in the Mobile Bay Watershed</td>
<td>Kari Servold, Meg Goecker, Eldon Blanchet, II, Roberta Swann, Dan Dumont</td>
<td>Elevation drives gradients in surface soil temperature within salt marshes</td>
<td>Jessica O’Connell, Meryl Alber</td>
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<tr>
<td>2:45 PM</td>
<td>Reproducible workflows for understanding and illustrating Surface Elevation Table data</td>
<td>Kimberly Cressman, Suzanne Shull, Kristin Evans, Jonathan Pitchford, Margo Posten, Brook Russell, Jenni Schmitt, Kari St. Laurent, Megan Tyrrell</td>
<td>Data-Model Integration for Forecasting Carbon Sequestration in Coastal Wetland Soils</td>
<td>James Holmquist</td>
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<td>1:00</td>
<td>Fish and fisheries: linking science, management, and society</td>
<td>Pedro Morais and Ester Dias</td>
<td>201 A</td>
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<tr>
<td>1:08</td>
<td>Fish assemblage response to intermittent flood gate openings in an urban estuarine waterbody.</td>
<td>Martin O'Connell, Ann Uzee-O'Connell</td>
<td>201 C</td>
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<td>1:15</td>
<td>Flatfish matter, too: How obsolete navigational cuts can affect local assemblage patterns</td>
<td>Jessica Reichmuth, A. Loren Mathews, Bruce Saul</td>
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<td>1:23</td>
<td>Hot water and hungry fish: threats to juvenile lobsters in the Narragansett Bay</td>
<td>Kristin Huizenga, Candace Oviatt</td>
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<td>1:30</td>
<td>Connecting marine governance with ecological outcomes in small-scale fisheries.</td>
<td>Sara Marriott, Kim de Mutsert</td>
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<td>1:38</td>
<td>Quantifying habitat of fishes in Chesapeake Bay</td>
<td>Adena Schonfeld, James Gartland, Robert Latour</td>
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<td>1:45</td>
<td>Fish community response to restoration of essential fish habitat</td>
<td>Brittany Troast, Linda Walters, Geoffrey Cook</td>
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<tr>
<td>2:03</td>
<td>Optimising conservation outcomes for mangrove forests</td>
<td>Lucy Goodridge Gaines, Andrew Olds, Rod Connolly, Christopher Henderson, Thomas Schlacher, Ben Gilby</td>
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<td>2:15</td>
<td>!= Optimising conservation outcomes for mangrove forests</td>
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### SAVE THE DATE

*Restore America’s Estuaries & Coastal States Organization*

**2020 SUMMIT**

The National Coastal & Estuarine Summit

Providence, RI • October 4-8, 2020

Rhode Island Convention Center

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<tr>
<td>8:00 AM</td>
<td>201 C</td>
<td>Impact of weather and extreme events: observations, analysis, and modeling</td>
<td>Chunyan Li, Arnoldo Valle-Levinson, Ming Li</td>
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<td></td>
<td>201 B</td>
<td>Exploring interdisciplinary and collaborative sea-level rise research for coastal adaptation</td>
<td>David Kidwell, Renée Collini and Matthew Bilkeke</td>
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<td></td>
<td>201 A</td>
<td>Mud, macrofauna and microbes: An ode to benthos III</td>
<td>Leila Hamdan, Janet Nesterode, Kelly Dorgan and Elizabeth Hinchey</td>
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<td></td>
<td>201 D</td>
<td>Carbon fluxes in coastal systems</td>
<td>Robert Chen, Iris Anderson, Damien Maher, David Ho and Ken Krauss</td>
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<td></td>
<td>204 B</td>
<td>Living shorelines and marsh nature-based infrastructure: lessons learned</td>
<td>Cindy Palimak, Brandon Boyd, Savanna Barry, Sara Martin and Eric Sparks</td>
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<tr>
<td>8:15 AM</td>
<td>202 C</td>
<td>Adjustment of wind-driven motion and storm surge in a semi-enclosed bay</td>
<td>Chunyan Li, Wei Huang, Je Wang, Changsheng Chen, Huichan Lin</td>
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<td>202 B</td>
<td>Spending more to delay wetland benefits: incorrectly accounting for sea-level rise when designing restoration projects</td>
<td>John Nyman</td>
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<td>202 A</td>
<td>Assessing spatial and temporal variation of bioturbation in coastal wetlands of Moreton Bay, Queensland, Australia</td>
<td>Zoe Shribman, Keila Stark, Vicki Bennett, Catherine Lovelock</td>
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<td></td>
<td>202 D</td>
<td>Factors influencing carbon stocks and accumulation rates in New England eelgrass meadows</td>
<td>Alyssa Novak, Marguerite Pelletier, Phil Colarussa, Juliet Simpson, Nicole Gutierrez, Arriane Anas Ortiz, Michael Charpentier, Pere Masquè, Paesede Vella</td>
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<td>204 B</td>
<td>Assessing the Efficacy of Marsh Terracing for Coastal Wetland Restoration in Louisiana</td>
<td>Joseph French, Adam Skarke, Raul Osorio Morillo, Anna Linhoss, Michael Brasher</td>
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<td>8:30 AM</td>
<td>203 C</td>
<td>An investigation of an historic low salinity event in the York River estuary, Chesapeake Bay</td>
<td>David Parrish, Carl Friedricks, William Reay, Erin Shields</td>
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<td>203 B</td>
<td>Inlet channel, water level and salinity responses to sea level rise in intermittently closing estuaries</td>
<td>John Largier, Dane Behrens, Sam Winter, Michael Koshatkin, Karen Thorne, Kevin Buffington</td>
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<td>203 A</td>
<td>Comparison of ecosystem responses to long-term climate variability among three estuaries</td>
<td>Patricia Cocket, Paul Montagna</td>
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<td>203 D</td>
<td>Assessing tidal wetland above- and belowground net primary production using field and in situ measurements</td>
<td>Caroline Narron, Deepak Mishra, Jessica O’Connell, David Cotten, Peter Hawman, Lishen Mao</td>
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<td>204 B</td>
<td>Lessons learned from living shoreline implementation and planning in Florida's central Gulf coast</td>
<td>Savanna Barry, Mark Clark</td>
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<td>8:45 AM</td>
<td>204 C</td>
<td>South Alabama Mesonet observations during Tropical Storm Gordon (2018) Sylskie Kimball</td>
<td>Wei Huang, William Reay, Erin Shields, David Parrish, Carl Friedricks, William Reay</td>
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<td>204 B</td>
<td>Impacts of incident wave and vegetation properties on wave attenuation by salt marshes</td>
<td>Jana Haddad, Johana Rosman, Rick Luettich, Christine Voas</td>
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<td>204 A</td>
<td>Salinity alters the effects of host community diversity on oyster microbial communities</td>
<td>Sarah Gignoux-Wolfsohn, Gregory Ruiz, Denise Breitburg, Katrina Pagenkopp Lohan</td>
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<td>204 D</td>
<td>Salt marsh light use efficiency and gross primary production in response to environmental conditions</td>
<td>Peter Hawman, Deepak Mishra, David Cotten, Jessica O'Connell, Lishen Mao, Caroline Narron</td>
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<td>204 B</td>
<td>Long-term monitoring of a living shoreline project in Hancock County, Mississippi</td>
<td>Sarah Ballard, Karin Olsen</td>
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<td>Analysis of a sub-tropical cyclone over Florida in the present and projected future climates</td>
<td>John Lanici, Thomas Allison, Henry Fueberg</td>
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<td>205 B</td>
<td>Role of Vegetation in Reducing Coastal Flooding Vulnerability due to Sea Level Rise and Storms</td>
<td>Peter Sheng, Vladimir Paramygin, Christine Angelini, Justin Davis, Karen Thorne, Kevin Buffington, Mike Savarese, David Kidwell, Kun Yang</td>
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<td>Adaptation of multivariate AMBI (M-AMBI) for use in US coastal waters</td>
<td>Marguerite Pelletier, David Gillett, Anna Hamilton, Treda Grayson, Virginia Hansen, Erik Leippo, Stephen Weisberg, Angel Bojia</td>
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<td>Carbon and nitrogen sequestration: identifying drivers and monetizing sequestration</td>
<td>Sandra Dembernger, Nathaniel Weston, Christopher Craft, Elise Rodriguez, Kristen Jezucki</td>
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<td>Evaluating the impacts of large-scale breakwaters on fringing marshes in high wave energy environments</td>
<td>Sara Martin, Nigel Temple, Gillian Palins, Just Leban, Eric Sparks</td>
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<td>9:15 AM</td>
<td>206 C</td>
<td>Numerical Experiments on Storm Surge and Circulation in Wax Lake Delta</td>
<td>Wei Huang, Chunyan Li, Matthew Hiatt, David Burdick, Christopher Peter, Brina Fischella, Kenneth Kaposa, Megan Iymell, Jenny Allen, Jordan Mora, Jason Goldstein, Christine Feurt</td>
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<td>206 B</td>
<td>Synthesizing NERR sentinel site data to improve coastal wetland management across New England</td>
<td>David Burdick, Christopher Peter, Brina Fischella, Kenneth Kaposa, Megan Iymell, Jenny Allen, Jordan Mora, Jason Goldstein, Christine Feurt</td>
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<td>206 A</td>
<td>Refining benthic condition assessment tools by incorporating taxa-specific stressor response information</td>
<td>Treda Grayson, Kim de Mutsert</td>
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<td>The response of net ecosystem carbon balance to fertilization in a North Carolina salt marsh</td>
<td>Kenneth Crapia, Iris Anderson, Carolyn Cummi</td>
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<td>206 B</td>
<td>Comparing abilities of alternative substrates to halt salt marsh erosion and support oyster reef development</td>
<td>Emory Wellman, Brandon Puckett, Rachel Gittman</td>
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<td>9:30 AM</td>
<td>207 C</td>
<td>The impact of diurnal winds on exchange through barrier island passes into the Mississippi Sound</td>
<td>Michael Dinniman, Courtney Bouchard, Mustafa Cambazoglu, Jerry Wiggert</td>
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<td>207 B</td>
<td>A Gamified Approach to Engaging Residents in the Science of Adaptation and Building Coastal Resilience</td>
<td>We Yusuf, Michelle Covi</td>
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<td>207 A</td>
<td>Colonization dynamics in experimentally disturbed areas of mudflat in the upper Bay of Fundy, Canada</td>
<td>Greg Norris, Myriam Barbeau, Dr. Hamilton</td>
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<td>Recovery of carbon cycle processes after the cessation of chronic nutrient enrichment</td>
<td>Thomas Mozdzier, Sophie Drew, Paige Weber, Bridget Reed, Joshua Kaplan, Linda Deegan</td>
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<td>207 B</td>
<td>Getting muddy: oyster reef living shoreline sediments six years and two hurricanes later</td>
<td>Jessica Veenstra, Melissa Southwell</td>
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  - **204 A** Setting ecologically relevant targets for management of marine plant habitats
  - Rob Coles, Michael Rasheed and Catherine Collier

- **8:15 AM**
  - **204 A** Spatial data as a benchmark for managing coastal seagrasses in Queensland, Australia
  - Alex Carter, Robert Coles, Alana Grech, Mike Rasheed, Skye Mihenna, Len McKenzie, Norm Duke

- **8:30 AM**
  - **204 A** Defining seagrass desired state for evaluating environmental management outcomes in the Great Barrier Reef
  - Catherine Collier, Alex Carter, Michael Rasheed, Len McKenzie, Robert Coles, James Udy, Michelle Waycott, Kate O’Brien, Megan Saunders, Katherine Martin, Carol Honchin, Emma Lawrence

- **8:45 AM**
  - **204 A** The consequences of burrowing crabs for plant community composition and restoration
  - Janet Walker, Edwin Grosholz, Jeremy Long

- **9:00 AM**
  - **204 A** Beyond static ecological thresholds: Incorporating habitat stress responses in Environmental Management and Monitoring Plans (EMMP)
  - Siti Maryam Yaakub, Cheng Ann Tan

- **9:15 AM**
  - **204 A** Habitat-specific changes in nitrogen cycling in a Gulf of Mexico estuary
  - Richard Fulford, Katelyn Houghton, Joseph James, Marc Russell

- **8:00 AM**
  - **202 B** Ocean and coastal acidification: rationales and insights from place-based collaboration
  - Holly Galavotti, Amanda Santon, Libby Jeffret, Kim Yates, Jason Gear, and Eva DiDonato

- **8:15 AM**
  - **202 B** Tampa Bay Coastal Acidification Monitoring to Determine Restoration Benefits
  - Kimberly Yates, Christopher Moore, Mitchell Lemon

- **8:30 AM**
  - **202 B** Temporal variability and driving factors of the carbonate system in an estuary with long-term acidification
  - Melissa McCutcheon, Hongming Ye, Cory Staryk, Xinping Hu

- **8:45 AM**
  - **202 B** Integrating coastal acidification data across eight National Estuary Programs (NEPs)
  - Nicholas Rosenau, Holly Galavotti

- **9:00 AM**
  - **202 B** Evaluating organic contami- nants associated with nurdles along beaches of south Texas
  - Xintao Jiang, Kajian Lu, Jace Tunnell, Jeremy Colle, Zhanfei Liu

- **9:15 AM**
  - **202 B** Short-term forecasts of acidifica- tion metrics in the Chesapeake Bay
  - Marjorie Friedrichs, Aaron Bever, Fei Du, Pierre St. Laurent, Karen Hudson

- **8:00 AM**
  - **203 B** Marine plastic pollution from nano- to macro-scale: fate, effects, solutions
  - Simon Getz, Kristin Wilson, Grimes, Caitlin Wessel and Howard Forbes, Jr.

- **8:15 AM**
  - **203 B** Microplastic abundance and distribution along the continental shelf in the northern Gulf of Mexico
  - Caitlin Wessel, Andrew Lucore, Gillian Palito

- **8:30 AM**
  - **203 B** Trends in US Virgin Islands marine debris from a historical, citizen science-collected, territorial dataset (1988-2016)
  - Zola Roper, Kristin Wilson Grimes, Kara Lavender Law, Sennai Habibis

- **8:45 AM**
  - **203 B** Accumulation and distribution of marine debris on barrier islands across the northern Gulf of Mexico
  - Katie Swanson, Caitlin Wessel, Tracy Weatherall, Just Cebran

- **9:00 AM**
  - **203 B** Ecosystem metabolism and carbon balance in Chesapeake Bay: A 30-year modeling study
  - Jeremy Testa, Chunqiu Shen, Weiwei Wu, Wei-Jun Cai, Ming Li, Michael Kemp

- **9:15 AM**
  - **203 B** Galveston Bay Watershed Trash Action Plan: A regional partnership plan addressing litter and marine debris
  - Erin Kinney, Stephanie Glenn

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  - **201 A** Biogeochemical cycling and transport across the land–ocean aquatic continuum
  - Raymond Najjar, Marjorie Friedrichs, Pierre St. Laurent and Susan Pan

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  - **201 A** Contribution of submerged cave chemosynthesis to river and estuary carbon fluxes
  - Robert Scharping, James Garey

- **8:30 AM**
  - **201 A** Urbanization changes the composition, quality, and timing of exported carbon from blackwater streams
  - Adam Gold, Suzanne Thompson, Caitlin Magel, Michael Pielke

- **8:45 AM**
  - **201 A** Implications of nonconsumptive indirect effects of black sea bass on bivalve survival
  - Stephen Heck, Bradley Peterson

- **9:00 AM**
  - **201 A** An analysis of dredge efficiency for ocean quahog and surfclam commercial dredges
  - Leanne Poussard, Eric Powell, Daniel Hennen

- **9:15 AM**
  - **201 A** Using simulation testing to guide risk-based management of Atlantic Surfclam (Spisula solidissima)
  - Laura Solinger, Eric Powell, Daniel Hennen, Steven Cadigan

- **8:00 AM**
  - **204 B** The state of commercial fishing and opportunities for collaboration
  - Pedro Morais and Esther Dias

- **8:15 AM**
  - **204 B** Defining seagrass desired state for evaluating environmental management outcomes in the Great Barrier Reef
  - Catherine Collier, Alex Carter, Michael Rasheed, Len McKenzie, Robert Coles, James Udy, Michelle Waycott, Kate O’Brien, Megan Saunders, Katherine Martin, Carol Honchin, Emma Lawrence

- **8:30 AM**
  - **204 B** Short-term forecasts of acidifica- tion metrics in the Chesapeake Bay
  - Marjorie Friedrichs, Aaron Bever, Fei Du, Pierre St. Laurent, Karen Hudson

- **8:45 AM**
  - **204 B** Evaluating organic contami- nants associated with nurdles along beaches of south Texas
  - Xintao Jiang, Kajian Lu, Jace Tunnell, Jeremy Colle, Zhanfei Liu

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ORAL SESSIONS  Tuesday 05 November | Mid Morning  10:00AM – 11:30AM

**C** = Lightning Presentations  **CH** = Cultural Heritage/Coastal Humanities  | All Presentations are Traditional Oral unless otherwise noted.

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| Impact of weather and extreme events: observations, analysis, and modeling  
Chunyan Li, Arnoldo Valle-Levinson, Ming Li | Exploring interdisciplinary and collaborative sea-level rise research for coastal adaptation  
David Kudrolli, Renee Collini and Matthew Bilskie | Mud, macrofauna and microbes: An ode to benthos III  
Leila Hamdan, Janet Nestiendorf, Kelly Dorgan and Elizabeth Hincheny | Carbon fluxes in coastal systems  
Robert Chen, Iris Anderson, Damiri Maher, David Ho and Ken Krauss | Living shorelines and marsh nature-based infrastructure: lessons learned  
Cindy Falinkas, Brandon Boyd, Savanna Barry, Sara Martin and Eric Sparks | Marine plastic pollution from nano- to macro-scale: fate, effects, solutions  
Simon Geist, Kristin Wilson Grimes, Caitlin Wessel and Howard Forbes, Jr. |
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| 20 Years of Mississippi River Plume Variability in the Gulf of Mexico from Big Data  
Catherine Fitzpatrick, Alexander Kolker, Philip Chu | Prioritizing nature and nature-based features that increase the resilience of coastal communities to flooding  
Jessica Hendricks, Julie Herman, Pamela Mason | Effects of diel oxygen cycling on infaunal behavior and sediment oxygen demand  
Kara Gadeken, Kelly Dorgan | Dissolved Carbon Dynamics in Marshes with Contrasting Salinity within Barataria Basin, Louisiana  
Songjie He, Kanchan Maiti, Tracy Quirk, Christopher Swarzenski, Gina Groseclose, Dubravko Justic, Giulio Mariotti | Should we just bag it? An alternative strategy to oyster bags in living shorelines projects  
Kelly Smith, Pamela Marcum, Scott Eastman | Effects of different microplastics on sediment microbial communities and nitrogen cycling processes  
Meredith Seeley, Robert Haile, Bongkeun Song |
| Mangrove freeze damage and recovery along a latitudinal gradient within the Texas marsh-mangrove ecotone  
Carolyn Weaver, C. Edward Proffitt | A Living Laboratory for Coastal Resilience on the Boston Harbor Islands  
Robert Chen, Kirk Bosma, Paul Kishen, Mark Borelli, Lucy Luckwood | The fate of biogenic carbonate in bioturbated sediment: Insights from a long-term lugworm exclusion experiment  
Nils Volkenborn, Ian Dwyer | Comparative metabolism of two wetland-dominated estuarine estuaries  
Charles Hopkinson, Nathaniel Weston, Inke Forbrich | Oysters and mangroves: case studies of living shorelines from the United States and Australia  
Rebecca Morris, Elisabeth Strain, Benedikt Fest, Stephen Sweare 
| Mangrove freeze damage and recovery along a latitudinal gradient within the Texas marsh-mangrove ecotone  
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Kelly Smith, Pamela Marcum, Scott Eastman | Effects of different microplastics on sediment microbial communities and nitrogen cycling processes  
Meredith Seeley, Robert Haile, Bongkeun Song |
| Variability in the fundamental and realized niches of mangroves in North America  
Rémi Bardou, John Parker, Kyle Cavanaugh, Ilka Feller | Past, present, and future nuisance flooding on the Charleston Peninsula  
James Morris, Katherine Renken | Effect of environmental history on physiology and stress responses of the Eastern oyster (Crassostrea virginica)  
Jill Ashby, Emily Rivest | Contribution of eelgrass community metabolism to the carbon flux of San Diego Bay  
Abigail Ryder, Matthew Edwards, Melissa Wain, Walt Oechel | Cutting edge and promoting hedge: marsh facilitation of mangrove seedlings along an eroding shoreline  
Aaron Macy, Julia Cherry, Michael Olsland, Just Cebrian | Microplastics in Mississippi River Fishes  
Ahmed Gad, Kerin Toner, Mark Benfield, Stephen Midway |
| Biscayne Bay Hydrodynamic, Sediment Transport, and Water Quality Model  
Reinaldo Garcia, Henry Briceno, Piero Gardinali | A process model for the co-production of climate knowledge in the Tampa Bay estuary  
Maya Burke, Libby Camahan, Kelli Hammer-Lexy, Gary Mitchum | Predicting benthic macroalgal abundance in shallow coastal bays from hydrodynamics and geomorphology  
Alice Besterman, Michael Pace | The seagrass sediment carbon pump and its impact on carbon dynamics in coastal environments  
David Burdige, Richard Zimmerman, Mathew Long | Site-specific plant considerations for increasing the success of living shorelines and ecological restoration projects  
Randy Mandel, Jessica Foley, Sara Copp Franz | Occurrence of microplastics in the diet of juvenile fish in five Texas Coastal Bend bays  
M. Gray Ryan, Simon Geist |
| Compounding atmospheric events impacting shelf heat content: Implications for Hurricane Michael  
Brian Dzvonkowski, Jeff Coogan, Grant Lockidge, Kyeong Park | Panel Discussion  
An ode to phylogenetics in disturbance ecology  
Erin Kiskaddon, Kelly Dorgan, Sarah Berke | Effectiveness and viability of an assimilation wetland in southern Louisiana  
Skylar Flaska, James Nelson, Taylor Sloey | Engineering tidal creeks through biomimicry  
Kevin Hanegan, Meg Goecker, Nick Cox, Chris Williams, Mary Kate Brown | Potential impacts of microplastic ingestion on the gut microbiome of Sargassum-associated juvenile fishes  
Olivia Lestrade, Valeria Nunez, Robert Griffith, Frank Hernandez |
| Simulating compound flooding during a hurricane using a creek-to-ocean baroclinic model  
Fei Ye, Joseph Zhang, Saeed Moghimi, Zizang Yang, Edward Myers | Impacts of infauna on geoacoustic properties of marine sediments  
Kevin Lee, Megan Ballard, Andrew McNeese, Kelly Dorgan, Gabriel Venegas, Preston Wilson | The carbon balance in a restored marsh at Poplar Island, MD in upper Chesapeake Bay  
Lorie Staver, Court Stevenson, Jeffrey Cornwell, Nick Nizkorz, Michael Divers | Multiple negative impacts of polyethylene terephthalate plastic (PET) exposure on juvenile eastern oysters (Crassostrea virginica)  
Laura Eierman | You can view the author/presenter index on the CERF 2019 Conference Mobile App – download instructions can be found on page 15 |
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<td><strong>Impacts of coastal hypoxia on fishes, food webs and ecosystems.</strong> Kim de Mutsert and Stephen Brandt</td>
<td><strong>Mapping SAV and coastal habitats: drones and other recent technologies</strong> Max Castorani, David Wilcox, Iom Bell and Kristen Kaufman</td>
<td><strong>Non-indigenous and invasive species in estuaries and coasts</strong> Pedro Morais</td>
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<td><strong>Spatial and temporal variability of stable isotopes in flora and fauna of Barnegat Bay, NJ</strong> Michelle Gannon, Elizabeth Watson, Autumn Oczkowski, Kirk Raper, David Helinsky</td>
<td><strong>Predicting the effects of reduced nutrients and hypoxia on fishes in the Gulf of Mexico</strong> Stephen Brandt, Arnaud Laurent, Cynthia Sellinger, Cassandra Glaspie, Kim de Mutsert</td>
<td><strong>Developing a Vegetation Index to map large-scale seagrass change using LandSat Imagery</strong> Jonathan Rodemann, Rolando Santos, Jennifer Rehage, Daniel Gann, Zachary Fratta, David Lagomasino, Margaret Hall, Bradley Furman</td>
<td><strong>Contrasting seed germination of Spartina alterniflora along latitude in the native and introduced ranges</strong> Wenwen Liu, Yihui Zhang</td>
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<td><strong>Long-term water quality monitoring of the Pamlico River: Temporal and Spatial Patterns</strong> Enrique Reyes</td>
<td><strong>Using coupled ecosystem modeling to evaluate nutrient and hypoxia reductions on living marine resources.</strong> Kim de Mutsert, Stephen Brandt, Kristy Lewis, Arnaud Laurent, Jeroen Steenbeek, Joe Buszowski</td>
<td><strong>Deep learning for coastal ecosystem mapping</strong> Justin Ridge, Patrick Gray, Anna Windle, David Johnston</td>
<td><strong>Susceptibility of submerged plant communities to invasive Eurasian watermilfoil</strong> LaTina Steele, Rachel DeMarzo, Jenna Larson</td>
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<td><strong>Influence of Tidal Inlet Exchange on the Marine Ecosystem and Biogeochemistry of the Mississippi Bight</strong> Jerry Wiggert, Courtney Bouchard, Mike Dinniman, Mustafa Cambazoqul, Stephan O’Brien, Pat Fitzpatrick, Scott Milroy, Eileen Hofmann</td>
<td><strong>Impact of hypoxia on the pelagic food web of the northern Gulf of Mexico</strong> Cassandra Glaspie, Melissa Clouse, Klaus Huebert, Stuart Ludsin, Doran Mason, James Pierson, Michael Roman, Stephen Brandt</td>
<td><strong>From seagrass to salt marsh: benefits and challenges of monitoring coastal habitats with drones</strong> Brendan Brown, Drew Reicks, Howard Young, Andrew Ryan</td>
<td><strong>Environmental influence on competitive interactions between a native and invasive SAV species</strong> Ashley McDonald, Charles Martin, Laura Reynolds, Carrie Adams</td>
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<td><strong>Biogeochemical cycling in the Pensacola Bay, Florida: contrasts from three urban bayous</strong> Grace Sommerville, Jane Caffrey</td>
<td><strong>Getting to the bottom of coastal food webs: hypoxia impacts to benthos</strong> Melissa Baustian, Nancy Rabalais</td>
<td><strong>Using Object-Based Classification and Machine Learning to Automate the Chesapeake Bay Annual SAV Aerial Survey</strong> David Wilcox, Lien Pham, Robert Orth</td>
<td><strong>The recent spread of the non-indigenous species, Hermundura americana (Polychaete: Pilargidae) throughout the Chesapeake Bay, USA</strong> Daniel Dauer, Anthony Rodi, Roberto Llanso</td>
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<td><strong>Variation in dissolved organic matter, trace metals, and acidification parameters in the western Mississippi Sound</strong> M. S. Sankar, Padmanava Das, Yuehan Lu, Andrew Mears, Ziki Arslan, Scott Sanders, Sudeera Wickramarathna, Rusch Ragland, Shuo Chen, Robert Moorhead</td>
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<td><strong>Quantitative remote sensing of seagrass distribution and density using high spatial resolution multispectral imagery</strong> Victoria Hill, Richard Zimmerman, Blake Scharffier, Megan Coffer, Jiang Li, Kazi Islam, Daniel Perez</td>
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<td><strong>A diel study of fluorescent DOM in Florida Bay seagrasses overlying carbonate sediments</strong> Mary Zeller, Bryce Van Dam, Christian Lopes, John Kaminski</td>
<td><strong>Interactions between hypoxia and the northern Gulf of Mexico shrimp fishery</strong> Kevin Craig, Dongwha Sohn, Rick Hart, Daniel Obenour, Venkata Rohith Reddy Matli, Kenneth Rose</td>
<td><strong>Semi-Automated Mapping of Seagrass Distribution of Tampa Bay</strong> Aaron Brown, Nathaniel Morton, James McDermott, Andrew Brenner, Bryan Deslauriers</td>
<td><strong>The butterfly effect: ecological impacts of a non-indigenous invasion</strong> John Rogers, Adam Chupp, John Formby, Natalie Deering, Hannah Barnes, Richard Brown, Kelly Oten</td>
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### Notes
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- **Mud, macrofauna and microbes: An ode to benthos III**  
  Leila Hamdan, Janet Nestleleode, Kelly Dorgan and Elizabeth Hinchey  
  203 A

- **Linking infauna to sediment oxygen demand**  
  Kelly Dorgan, Sarah Berke, Erin Kiskaddon, Kara Gadeken, Susan Bell  
  1:00 PM

- **Distribution of terrestrial organic material in nearshore marine ecosystems due to debris flow emergency response**  
  Heili Lowman, John Melack, Matthieu Moingt, Andrew Zimmernan  
  1:15 PM

- **Determining the fate of anthropogenic nitrogen in saltmarshes using a large-scale 15N isotope tracer experiment**  
  Hillary Sullivan, Linda Deegan, Anne Giblin, Jennifer Bowen  
  1:30 PM

- **Invertebrate-bacteria associations as hotspots for benthic nitrogen cycling in estuarine muddy habitats**  
  Mindaugas Zilius, Stefano Bonaglia, Ulisse Cardini, Aurelija Samuloviene, Anastasija Zako, Jolita Petkuvienė, Imre Vybortna-Lubiene, Ugo Marzocchi, Marco Bartoli, Toba Poit  
  2:00 PM

- **Oiling impacts on salt marsh nitrogen cycling rates: insights from a large-scale marsh mesocosm experiment**  
  Brian Roberts, Chalres Schutte, Ryann Ross, Anne Bernhard, Anne Giblin  
  2:15 PM

- **Factors controlling nitrogen removal and retention in marine sediments**  
  Rachel Presley, Anne Giblin, Christopher Algar, Sean O’Neill, Jeremy Rich  
  2:30 PM

- **The Twelvemile Island Shipwreck Graveyard**  
  James Delgado, Staciee Hathorn  
  3:00 PM

- **Microbial biofilm recruitment near built structures on the seafloor in the Gulf of Mexico**  
  Rachel Mugg, Rachel Pugh, Anirban Ray, Leila Hamdan  
  3:15 PM

- **Oiling impacts on salt marsh nitrogen cycling rates: insights from a large-scale marsh mesocosm experiment**  
  Brian Roberts, Chalres Schutte, Ryann Ross, Anne Bernhard, Anne Giblin  
  3:30 PM

- **Assessment of Recovery Of Mangrove Habitats Using Multiple Tracers: Stable Isotopes And Benthic Community Analysis**  
  Amanda Demopoulos, Jill Bourque, Nicole Cormier, Jennifer McClain-Counts, Ken Krauss  
  3:45 PM

- **Effects of removed carbonic anhydrase activity on biomass and production of estuarine benthic microalgal communities**  
  Eilea Knotts, James Pinckney  
  4:00 PM

- **Importance of microphytobenthos-meiofauna pathway in intertidal habitats highlighted by trophic markers and food web modeling**  
  Luuk van der Heijden, Ragnhild Asmus, Martin Groeve, Jadwiga Reznik-Deignac, Nathalie Niquel, Matilda Haraldsson, Blanche Saint-Béat, Stephen Pacella, Denis Fichet, Gaël Guillo, Harald Asmus, Benoit Lebreton  
  4:15 PM

- **How to outrun your parasites, the LP**  
  David Johnson, Jeff Shields, Richard Heard  
  4:30 PM

- **Carbon fluxes in coastal systems**  
  Robert Chen, Iris Anderson, Damen Mahler, David Ho and Ken Krauss  
  201 D

- **Using hydrological-biogeochemical linkages to elucidate coastal wetland carbon dynamics today and tomorrow**  
  Julia Guimond, Xia Yu, Xiaolong Geng, Holly Michael  
  1:00 PM

- **Mapping tidal wetland CO₂ surface-atmosphere exchange with environmental response functions**  
  Inke Forbrich, Ke Xu, Stefan Metzger  
  1:15 PM

- **Air-water CO₂ exchange over a subtropical seagrass meadow**  
  Bryce Van Dam, Christian Lopes, James Fourqurean  
  1:30 PM

- **How much of the seagrass wrack contributes to global greenhouse gas emissions**  
  Songlin Liu, Stacey Trenathan-Tackett, Carolyn Ewers Lewis, Zhijian Jiang, Xiaopeng Huang, Peter Marascide  
  2:00 PM

- **Drivers of air-sea flux in a karst subtropical seagrass ecosystem.**  
  Christian Lopes, Bryce Van Dam, James Fourqurean  
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- **Vertical and lateral exchange of carbon, nitrogen, and sediment in tidal marshes of contrasting elevation**  
  Nathaniel Weston, Inke Forbrich, Mary Gawatki, Lott Sutter, Brian Donnelly, Mikala Jordan  
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- **Fluxes of dissolved organic carbon (DOC) in coastal systems during precipitation events**  
  Shannon Davis, Robert Chen  
  3:00 PM

- **Accounting for Carbon Fluxes Caused by Pulsing Disturbances in Mangrove Wetlands Carbon Budgets (Everglades, USA)**  
  Xiaochen Zhao, Victor Rivera-Monroy, Edward Castañeda-Moya, Rafael Travesio, Evelyn Gaiser, Luis Farfán  
  3:15 PM

- **Salt Marsh Net Ecosystem Carbon Balance: Comprehensive Measurements of the Lateral Flux**  
  3:30 PM

- **Lateral alkalinity and carbon export from mangroves in the Everglades National Park, Florida**  
  Gloria Reithmaier, Scott Jonston, David Ho, Damien Mahler  
  3:45 PM

- **Lateral alkalinity and carbon export from mangroves in the Everglades National Park, Florida**  
  Gloria Reithmaier, Scott Jonston, David Ho, Damien Mahler  
  4:00 PM

- **Coastal primary productivity: Apportioning benthic, water column, and atmosphere exchange importance with in-situ fluxes**  
  Matthew Long, David Burdige, Daniel McCorkle, Jennie Rheuban, Richard Zimmerman  
  4:15 PM

- **Interannual and seasonal variations in terrestrial carbon export from North American land to oceans: 1980-2015**  
  Hanqin Tian, Bowen Zhang, Susan Pan, Rongting Xu, Steven Lohrenz, Raymond Najjar, Marjorie Friedrichs, Wei-Jun Cai, Ruoying He, Eileen Hofmann, Charles Hopkinson, Chaoqun Lu  
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<td><strong>Impacts of coastal hypoxia on fishes, food webs and ecosystems.</strong>  Kim de Mutsert and Stephen Brandt</td>
<td><strong>Seagrasses: sentinel species in a changing world</strong>  Robert Orth and Kenneth Heck</td>
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<td><strong>Hypoxic volume in the northern Gulf of Mexico is ecologically more relevant than hypoxic area</strong>  Dubravko Justic, Donald Scavia, Daniel Obenour, Kevin Craig, Li Xia Wang</td>
<td>My four decade friendship with Susan Williams: I heard it through the grapevine  William Dennison</td>
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<td><strong>Nontraditional shoreline protection demonstrations along a central coast of Louisiana bay</strong>  Thomas McGinnis, Margaret Luent</td>
<td><strong>Predicting fish population responses to hypoxia using 3-D coupled biophysical models</strong>  Kenneth Rose, Dubravko Justic, Haosheng Huang, Kevin Craig, Klaus Huebert, Elizabeth LaBone, Ehab Meselhe, Jia Yang, Hoonshin Jung, Z. George Xue, Hangy Tan</td>
<td>Hidden biodiversity: Genetic variation in eelgrass and its community consequences from local to global scales.  John Stachowicz, J. Emmett Duffy, Zostera Experimental Network</td>
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<td><strong>Designing shellfish-based living shorelines for water quality enhancement</strong>  Sarah Bouboulis, Joshu Moody, Irina Beal, Matthew Gentry, Danielle Keeperger</td>
<td><strong>Effects of tides on hypoxia and fish avoidance movement in the Gulf of Mexico</strong>  Elizabeth LaBone, Dubravko Justic, Kenneth Rose, Li Xia Wang, Haosheng Huang</td>
<td>Environmental rather than host plant differences drive local scale variation in the eelgrass microbiome  Melissa Kardish, John Stachowicz</td>
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<td><strong>Maximizing living shoreline designs for runoff pollution filtration: lessons learned from multi-year projects</strong>  Just Cebrian, Nigel Temple, Julie Cherry, Daniel Firth, Andrew Lucore, Sara Martin, George Ramseur, Eric Sparks</td>
<td><strong>Through the Heads of Fishes: Consequences of Baltic Sea Hypoxia Exposure Revealed by Otolith Chemistry</strong>  Karin Limburg, Melvin Samson, Michele Casi</td>
<td>The effect of warming on wasting disease intensity depends on seagrass genotypic identity and diversity  Forest Schenck, Katherine Dubois, Melissa Kardish, John Stachowicz, Randall Hughes</td>
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<td><strong>Effects of oyster reef design on sediment and hydrodynamic characteristics on a landward mudflat</strong>  Frank Marshall, Lynn Leonard, Sam Bradtke, Eman Ghoneim</td>
<td><strong>Mixed effects of sublethal hypoxia exposure on fish growth and food web displacement</strong>  Benjamin Walther, Matthew Altenritter, Tyler Steube</td>
<td>Linking adult and seed diversity across the depth gradient in the seagrass Zostera marina  Cynthia Hays, Torrance Hanley, Forest Schenck, Randall Hughes</td>
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<td><strong>Design and Construction of the Little Beaver Island Shoreline and Coastal Wetland Habitat Improvement Project</strong>  Ryan Davis, Mark Bogdan</td>
<td><strong>Spatial behaviors of migratory fish in response to seasonal hypoxia as revealed by acoustic telemetry</strong>  Richard Kraus, Mark Rowe, Mas Faust, Christopher Vandergeoot</td>
<td>Local adaptation of eelgrass linked to temperature and shading stress within a northern California estuary  Katherine Dubois, Susan Williams, Kenzie Pollard, Nicole Kollars, John Stachowicz</td>
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<td><strong>Evaluating living shorelines to inform regulatory decision-making in South Carolina, USA.</strong>  Andrew Tweel, Peter Kingley-Smith, Denise Sanger, Sharleen Johnson, Blak Kepplles, Michael Hodges, Nancy Hadley, Benjamin Stony, Gary Sundin, Erik Smith</td>
<td><strong>Can we compare hypoxia impacts on coastal zooplankton across ecosystems and species?</strong>  Michael Roman, James Pioncer</td>
<td>Changing the tide toward rebuilding seagrass habitats  Carlos M. Duarte</td>
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<td><strong>Transforming bulkheads and eroding sedimentary shorelines into healthy living shorelines</strong>  Jamie Amato, Just Cebrian, Eric Sparks, Joshu Goff</td>
<td><strong>Vertical migrations of fish larvae and mesozooplankton in relation to hypoxia in the Mississippi Bight</strong>  Adam Greer, Valerie Cruz, Luciano Chiaverano, Mustafa Cambazoglu, Tihis Axler, Christian Briseño-Avena, Robert Cowen, Frank Hernandez</td>
<td>Unprecedented long-term restoration of seagrass habitat has led to rapid recovery of multiple ecosystem services  Robert Orth, Jonathan Lefcheck, Karen McGlathery, Lillian Aoki, Mark Luckenbach, Bo Lusk, Kenneth Moore, Matthew Oreska, Richard Snyder, David Wilcox</td>
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<tr>
<td><strong>Resilience in action: Connecting engineers, nature, and communities</strong>  Danielle Boudreau, Brian Leslie, Michael Barnett</td>
<td><strong>Transgenorational and carryover effects of hypoxia and warming on eastern oyster performance</strong>  Sarah Donelan, Denise Breitburg, Matthew Ogburn</td>
<td>Performance of seagrass restoration: new information revealed from projects missing from the primary literature  Susan Bell, Ryan Rezek, Margaret Hall, Bradley Furman, Robin Jung</td>
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<td><strong>Connecting living shorelines and nature-based infrastructure with the National Flood Insurance Program’s Community Rating System</strong>  Niki Pace, Christine Shepard</td>
<td><strong>Quantifying the relationship among dissolved oxygen, algal blooms, and fish kills in coastal Florida</strong>  Dakota Lewis, Geoffrey Cook</td>
<td>Seagrass restoration potential through development of a bio-optical model  Kaitlyn O’Toole, Bradley Peterson</td>
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<td><strong>Shorelines Protection Decisions: Factors Influencing the Future of Virginia’s Tidal Wetlands</strong>  Michelle Covt, Wali Yasuf</td>
<td><strong>Improved assessment of Chesapeake Bay dissolved oxygen criteria violations using a benthic community health index</strong>  Jennifer Keisman, Richard Tian, Elgin Perry, Gary Shenk, Richard Batiuk</td>
<td>Subsequent shift in seagrass species composition through seagrass recovery in the northern European Wadden Sea  Tobias Dolch, Christian Buschbaum, Karsten Reise</td>
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<td><strong>USACE framework for planning natural infrastructure: San Francisco Bay and Barmegat Bay-Little Egg Harbor estuaries</strong>  Brandon Boyd, Candice Percy, Matthew Bates, Mary Bryant, Monica Chaster, James Morris</td>
<td><strong>Deoxygenation over coral reefs triggers coral bleaching and microbial community shift</strong>  Andrew Altenritter, Tyler Steube, Christopher Vandergoot, Benjamin Walther</td>
<td>Resilience of seagrass beds after the catastrophic tsunami varies among sites and component species  Masahiro Nakao, Hideto Tamaki, Daisuke Muraoka, Daisuke Shimizu, Norio Tanaka</td>
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<td><strong>Florida’s living shorelines training course for marine contractors</strong>  Fara Ilami, Jessy Wayles</td>
<td><strong>Local adaptation of eelgrass linked to temperature and shading stress within a northern California estuary</strong>  Katherine Dubois, Susan Williams, Kenzie Pollard, Nicole Kollars, John Stachowicz</td>
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<td>Incorporating molecular ecology tools into coastal and estuarine monitoring programs</td>
<td>David Gillett, Alison Watts, Angel Borja and Eric Stein</td>
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<td>1:15PM</td>
<td>Applying eDNA Methods for Assessment and Management of Estuarine Systems in the NERRS</td>
<td>Alison Watts, Bree Yednock, Jason Goldstein, Christopher Peter, W. Thomas</td>
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<td>Applying DNA Metabarcoding to Periphyton Biomonitoring: Lessons Learned from Mesocosm, Watershed, and National Scale Research</td>
<td>Erik Pilgrim, Nate Smucker, Chris Nietch, Brent Johnson, John Darling</td>
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<tr>
<td>1:55PM</td>
<td>Investigating Intertidal metazoan biodiversity within previously oiled sheared and intact coastal margins</td>
<td>Patrick Rayle</td>
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<td>2:00PM</td>
<td>Detecting diadromous fish with eDNA: A comparison between ddPCR and metabarcoding</td>
<td>Jessica Haskins, Devin Thomas, W Thomas, Alison Watts, Bree Yednock</td>
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<td>2:15PM</td>
<td>Environmental DNA reveals 2000-year history of coastal plant communities in a temperate wetland</td>
<td>Nicole Foster, Bronwyn Gillanders, Alice Jones, Jennifer Young, Kør-jent Van Dijk, Edward Biffin, Paul Lavery, Oscar Serrano Grau, Anna Laffatt, Michelle Waycott</td>
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<td>2:30PM</td>
<td>Focused flows to protect natural nurseries</td>
<td>Paul Montagna, Hannah Ehrmann, Elaine Kurr</td>
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<td>3:00PM</td>
<td>Developing eDNA tools to map and monitor shifts in salt marsh mosquito populations</td>
<td>Richard Lathrop, Dina Fonseca, Ashley Gonzales, Rachael Sacatelli</td>
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<tr>
<td>3:15PM</td>
<td>Incorporating eDNA data into monitoring, assessment, and management of anadromous river herring</td>
<td>Matthew Ogbr, Louis Plough, Charles Bangley</td>
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<td>Detecting diadromous fish with eDNA: A comparison between ddPCR and metabarcoding</td>
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<tr>
<td>3:45PM</td>
<td>Augmenting Biological Monitoring with eDNA Metabarcoding Methods</td>
<td>Devin Thomas, Alison Watts, W Thomas, Christopher Peter, Jason Goldstein, Yoshimi Rii, Shon Schooler, Jason Garwood, Sarah Fernal</td>
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<td>4:00PM</td>
<td>Setting reference conditions for M-gAMBI calculation, a benthic DNA-based index</td>
<td>Angel Borja, Anders Lanzete, Naiara Rodriguez-Expeleta, Iligio Musika</td>
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<td>4:15PM</td>
<td>The impact of bioinformatic pipeline on algal bioassessment results</td>
<td>Susanna Theroux, Joshua Steele, John Griffith, Eric Stein</td>
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<td>4:45PM</td>
<td>Developing methods for testing the effects of altered freshwater inflow on Gracilaria virgulina (Eastern Oyster)</td>
<td>Evan Turner, Norman Johns, Paul Montagna, Caimee Schoenbaechler, Joe Trungale</td>
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<td>4:45PM</td>
<td>Plant-soil interactions in salt marshes: Effects of fungal presence/identity on Spartina production and physiology</td>
<td>Torrance Hanley, Catherine Gehring, Christina Richards, Randall Hughes</td>
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| **Fishers’ perceptions of ciguatoxic fish poisoning and modelling bioaccumulation of ciguatoxin in Puerto Rico reefs.**  
Henry Raab, Joseph Luczkovich, Cindy Grace-McCaskey, Miguel Del Pozo, David Griffith | **Nine years after Deepwater Horizon, what have we learned about nearshore fishes?**  
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| **Contrasting nutrient management implications from statistical and process-based estuary phytoplankton models**  
Alexey Katin, Daniel Obenour, Dario Del Giudice | **Resilience or vulnerability of Gulf fisheries economies following Deepwater Horizon?**  
Savannah Swinea, Joel Fodrie |
| **A potential reservoir for the brown tide organism, Aureoumbra lagunensis, in a South Texas estuary.**  
Kenneth Hayes, Michael Wetz, Emily Cira, Hongjie Wang | **Salt marsh primary production and greenhouse gas fluxes along an experimental oil-exposure gradient**  
Charles Schute, Ryann Rossi, Scott Jones, Brian Roberts |
| **Understanding environmental controls on Mangalefidinium polykrikoides blooms in the lower Chesapeake Bay**  
Linnea Davis, Eileen Hofmann, John Kinck, Margaret Mulholland, Eduardo Perez-Vega, Michael Echevarria, Katherine Filippino | **Bacterial Responses to Different Crude Oils Under Varying Solar Exposure**  
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| **Roles of mixotrophy and physical processes in Cochlodinium polykrikoides bloom initiation in the Lafayette River**  
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| **Phytoplankton responses to adaptive management interventions in a eutrophic urban estuary**  
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| **1 HAB, 3 Estuaries: Insights from long-term fisheries-independent monitoring along Florida’s Gulf coast**  
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| **Are human-managed freshwater discharges fueling Florida’s red tides?**  
Natalie Nelson, Edward Philips, Eric Milbrandt | **Emerging contaminants in our coastal waters: a national Mussel Watch assessment**  
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| **Building consensus on Florida’s harmful algal blooms**  
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<td>Isotopes, lipids, and DNA: Trophic biomarkers in coastal ecosystem ecology</td>
<td>Responsive, relevant, ready: new directions in coastal science and modeling</td>
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<td>Linker Lewis, Gopal Bhatt, Carl Cerco and Gary Shenk</td>
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<td>8:15 AM</td>
<td>Quantification and valuation of subwatershed scale nitrogen removal by commercial shellfish in Greenwich Bay, CT</td>
<td>Detecting surf zone fish diversity using environmental DNA and other non-destructive methods</td>
<td>Multi-model assessment of climate and emission projections on atmospheric nitrogen loading to the Chesapeake Bay</td>
<td>Pathway of the suspended sediment from the Mackenzie River to the Mackenzie Shelf</td>
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<td>Anthony Dravars, Suzanne Bricker, Gary Wiktor, John Bohorquez, Mark Dixon, Julie Rose</td>
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<td>Historical changes to freshwater transport pathways along the Oregon/Washington coast</td>
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<td>Comparison of nutrient content between diploid and triploid Crassostrea virginica from two farm sites.</td>
<td>Exploiting microbial food web connectivity using thermodynamics, stable isotopes probing, and genomics</td>
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<td>Are the shallow lagoon systems well mixed?</td>
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<td>9:00 AM</td>
<td>Minimal effects of oyster aquaculture on local water quality: examples from southern Chesapeake Bay</td>
<td>A new niche for isotope ecology: Combining MixSIAR and hyperpycnal metrics to understand resource use</td>
<td>Impacts of Sea Level Rise on Water Quality in Chesapeake Bay: Model Validation and Assessment</td>
<td>Lateral Mixing Induced by Filaments and Eddies on a Mid-Latitude Shelf Subject to Buoyancy Loss</td>
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<td>9:15 AM</td>
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<td>Habitat use and connectivity of native and nonnative gobies in a fragmented California wetland</td>
<td>Identifying cost-effective water quality management strategies in the Chesapeake Bay watershed</td>
<td>Effects of local and remote wind on residence time and its relationship with estuarine-shelf exchange</td>
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<td>Mario Marquez, Charles Jagoe, Suzanne Bricker</td>
<td>Chloe Van Grootheest, Christine Whitcraft</td>
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<td>Importance of Oyster Reef Design and Setting in Restoration Success in Mobile Bay</td>
<td>Tracking foraging behavior using consumer-specific energetic landscapes</td>
<td>Increasing the Value of Mechanistic Watershed Models Through Emulation and Machine Learning</td>
<td>Mauparticle revisited – a simple particle tracking model for coastal and estuarine mixing</td>
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<td>Merritt McCall, Sean Powers</td>
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<td>Investigating phytoplankton community trends off Cape Canaveral, FL—Different Diatoms for a Different Season. Ben Stelling, Edward Philips, Susan Badyak, Leslie Landauer, Debra Murie, Macie Tate, Anne West-Valle, Mami Hamasaki</td>
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Pedro Morais | **Impacts of hurricanes on coastal physical, ecological, and biogeochemical processes**  
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Erica Nejad, Tara Schraa, James Cloern | **Synthesizing and Understanding Ecosystem Responses to Tropical Cyclones**  
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| **Use of point-of-view video cameras to assess fish interactions with oyster aquaculture bottom cages**  
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Adam Boyette, Jeffrey Krause, Sydney Acton, Donald Redalje, William "Monty" Graham | **Hurricane driven sediment deposition and remobilization in the northern Gulf of Mexico**  
Wokil Bam, Kanchan Maiti, Samuel Bentley, John Lehrter |
| **Characterizing the habitat function of bivalve aquaculture using underwater video**  
Bridget Ferriss, Molly Bogeberg, Letitia (Tish) Conway-Cranos, Laura Hobericht, Peter Kiffney, Kate Little, Jodie Toft, Karl Veggerby, Beth Sanderson | **What influences Puget Sound zooplankton dynamics — phytoplankton, physical factors, or something else?**  
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| **Mind the gap: a multi-regional understanding of the cultural ecosystem services provided by shellfish.**  
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<td><strong>Ocean acidification in a multiple-climate-change-stressors context: science-based tools for management</strong>&lt;br&gt;Faycal Kessouri, Daniele Bianchi, Richard Feely, Elizabeth Turner, Nina Bednarsek, Martha Satula</td>
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<td><strong>Collaborative modeling for responsive, relevant, and timely coastal management</strong>&lt;br&gt;Mark Snush, Elizabeth North, Nora Harris, Samuel Lake</td>
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<td><strong>Does nekton enhancement vary consistently across microhabitats on restored oyster reefs?</strong>&lt;br&gt;Theresa Davenport, Jonathan Grabowski, Randall Hughes</td>
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<td><strong>Concentrations of anthropogenic carbon along the west coast of North America</strong>&lt;br&gt;Richard Feely, Brenton Carter, Nina Bednarsek, Wei-Jun Cai, Simone Alin, Dana Greeley</td>
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<td><strong>Fair-weather friends: a tale of how oyster and cordgrass symbiosis drives edge distribution</strong>&lt;br&gt;R Daniel Harris, James Byers</td>
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<tr>
<td>10:30 am</td>
<td><strong>Validation of a High-Resolution Physical-Biogeochemical Model for Pollution Impact Assessments in the Southern California Bight</strong>&lt;br&gt;Karen McLaughlin, Faycal Kessouri, Martha Satula, Minna Ho, James McWilliams, Curtis Deutsch, Daniele Bianchi, Nina Bednarsek, Lionel Renault, Richard Feely, Richard Ambrose, Stephen Weisberg</td>
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<tr>
<td>10:30 am</td>
<td><strong>Collaborative modeling using online, reduced complexity models as decision-support tools</strong>&lt;br&gt;Mark Brush</td>
</tr>
<tr>
<td>10:30 am</td>
<td><strong>Factors Influencing Estuarine Fish Communities in Espiritu Santo Bay, Texas</strong>&lt;br&gt;Malika Beach-Mehrotra, Jeffrey Wozniak, Philip Match</td>
</tr>
<tr>
<td>10:30 am</td>
<td><strong>Impacts of subsoscale ocean dynamics on the biogeochemistry and ecosystem of the California Current</strong>&lt;br&gt;Daniele Bianchi, Faycal Kessouri, James McWilliams, Lionel Renault, Curtis Deutsch, Hartmut Frenzel, Pierre Damiens</td>
</tr>
<tr>
<td>10:30 am</td>
<td><strong>Modeling a catastrophic flooding event to improve water quality and environmental health in Southern Louisiana</strong>&lt;br&gt;Lucas Goodman, Robert Miller</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Habitat associations and spatiotemporal overlap patterns of an assemblage of estuarine predators and prey</strong>&lt;br&gt;Mariah Livernois, R.J. David Wells, Mark Fisher, Masami Fujitaya, Jay Rooker</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Submesoscale Simulations to Support Management Conversations on the Impact of Local Pollution in Southern California</strong>&lt;br&gt;Faycal Kessouri, Martha Satula, Daniele Bianchi, James McWilliams, Curtis Deutsch, Karen McLaughlin, Minna Ho, Nina Bednarsek, Evan Howard, Lionel Renault, Simon Yang, Stephen Weisberg</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>An integrated modeling approach for characterizing oyster larvae movement, mortality, and spatial distribution</strong>&lt;br&gt;Tyler Keys, Corey Trahan, Candice Piercy, Todd Swannack</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Increased preference of habitat heterogeneity and structural complexity with predatory threat in seagrass fish species</strong>&lt;br&gt;Nikki Bramwell, Edward Hammill, David Booth</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Nutrient Pollution Effects on Acidification and Hypoxia in Southern California Bight: Biological vs Water Quality Impacts</strong>&lt;br&gt;Martha Satula, Faycal Kessouri, James McWilliams, Curtis Deutsch, Daniele Bianchi, Nina Bednarsek, Evan Howard, Lionel Renault, Karen McLaughlin, Richard Feely, Simone Alin, Richard Ambrose</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Multiple ecosystem model integration for use in an environmental impact study</strong>&lt;br&gt;Kristy Lewis, Cameron Ainsworth, Damian Brady, Kim de Mutsert, Kenneth Rose, Shane Sable</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Influence of marsh island size on nekton communities: intermediate optima rather than SLOSS?</strong>&lt;br&gt;Shelby Ziegler, Lauren Clance, Andrew McMains, Marianna Miller, Joel Fodrie</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>High resolution numerical ocean outfall plume modeling in the Southern California Bight</strong>&lt;br&gt;Minna Ho, Faycal Kessouri, Martha Satula, James McWilliams, Daniele Bianchi, Tinu Galian, George Robertson, Jeren Molemaker</td>
</tr>
<tr>
<td>10:45 am</td>
<td><strong>Spectral wave modeling in a shallow estuary of the Northern Gulf of Mexico</strong>&lt;br&gt;Azadeh Razavi Arab, Haocheng Huang</td>
</tr>
</tbody>
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All Presentations are Traditional Oral unless otherwise noted.

*CH = Cultural Heritage/Coastal Humanities*
## ORAL SESSIONS

**Wednesday 06 November | Mid Morning 10:00 AM – 11:30 AM**

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<th>Session Time</th>
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<tr>
<td>10:00 AM</td>
<td>Isotopes, lipids, and DNA: Trophic biomarkers in coastal ecosystem ecology</td>
<td>Outreach and engagement of our estuaries, coasts, and oceans</td>
<td>Seagrasses: sentinel species in a changing world</td>
<td>Ecosystem-based management: Challenges and opportunities for regional implementation</td>
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<tr>
<td></td>
<td>Michael Polito, James Nelson, Amanda Spivak and Sabrina Taylor</td>
<td>Linda Walters</td>
<td>Robert Orth and Kenneth Heck</td>
<td>Michael Roman, Felix Martinez and Amie West</td>
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<tr>
<td>10:08 AM</td>
<td>Trophic structure and mercury biomagnification in a coastal Tanzanian seagrass fish community</td>
<td>Telling the local stories: integrating data to inform local management in the Chesapeake Bay watershed</td>
<td>Seagrass gap dynamics for the Lower Laguna Madre, Texas</td>
<td>Genetic diversity of Halodule wrightii is resistant to large scale dieback</td>
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<td></td>
<td>Mario Hernandez, Rebeca Brasso, Stephen Midway, Michael Polito</td>
<td>Emily Trentacoste, John Wolff</td>
<td>Hudson DeVo, Warren Pulich, Jr, Nicole Laas, John Garcia</td>
<td>Laura Reynolds, Kathryn Tiling, Gna Digiantionio, Vincent Encomia, Lori Morris</td>
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<td></td>
<td>Sarah Jansen, Joel Hoffman, Ryan Lepak, Monson Bruce, Greg Peterson, Cotter Anne, David Krabbenhoft</td>
<td>Gabriela Canas, Kaitlyn Campbell, Josephine Spearman</td>
<td>Bradley Furman, Mike Wheeler, Bianca Broselli, Laura Reynolds, Kelly Darnell, Margaret Hall</td>
<td>Mark Dickey-Collins, Jason Link, M. Robin Anderson, Anna Rindor, Paul Snegrove, Margaret (Peg) Brady, Ellen Johannesen, Ellen Kenchington, Howard Townsend, Alda Bundu, David Johnson</td>
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<tr>
<td>10:23 AM</td>
<td>If we are what we eat, then sea lamprey ammocoetes are made of riparian vegetation</td>
<td>Recommendations for the integration of outreach with research: The Gulf of Mexico Research Initiative experience</td>
<td>Seagrass contribution to productivity and community biogeochemistry in Reunion Island (West Indian ocean)</td>
<td>Ecosystem-based management (EBM) in the Gulf of Mexico - restoration on historically human-occupied land</td>
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<td></td>
<td>Ester Dias, Maria Miranda, Ronaldo Sousa, Carlos Antunes</td>
<td>Tina Miller-Way, Sara Beresford, Kate Fillingham</td>
<td>Irene Olivi, Emilio Garcia-Robledo, Joao Silva, Rui Santos, Nick Kameros, Pascale Cuet, Patrick Frouin</td>
<td>Anthony Limas, Emily Nastase, William Dennison, Vanessa Vargas-Ruayen, Emily Nastase</td>
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<tr>
<td>10:31 AM</td>
<td>Disentangling the importance of autotrophy along a salinity gradient of a salt marsh food web</td>
<td>Our Wastewater Footprint: Enhancing water quality through scientific communication and public outreach</td>
<td>The consequences of simulated grazing disturbance on the genetic diversity of eelgrass</td>
<td>Characterizing and Comparing U.S. Marine Fisheries Ecosystems: Successful Factors in Moving Toward Ecosystem-Based Fisheries Management</td>
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<td></td>
<td>Sydney Moyo, Hayat Bennadj, Jessica Johnson, Paola Lopez-Duarte, Jill Olin, Charles Martin, Linda Hooper-Bui, Brian Roberts, Michael Polito</td>
<td>Toni Thomason, Elizabeth Hieb, Ruth Carmichael</td>
<td>Nicole Kollars, John Stachowicz</td>
<td>Tony Marshak, Jason Link</td>
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<tr>
<td>10:39 AM</td>
<td>Trophic niche and life history of Hardhead Catfish in the northern Gulf of Mexico</td>
<td>Citizens, Oysters and Changing the Culture through POP (Project Oyster Pensacola)</td>
<td>Eelgrass Genetic Diversity Influences Resilience to Stresses Associated with Eutrophication Holly Plaisted, Alyssa Novak, Sarah Weigel, Anita Klein, Frederick Short</td>
<td>Connecting Our Local Data to Inform Region-Level Management in the National Park Service</td>
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<td>Lucas Pensinger, Stephen Midway, Michael Polito, Shane Florin, Andrew Ostrowski</td>
<td>Jane Caffrey, Barbara Albrecht</td>
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<td>Katie Mausmann, William Dennison, Vanessa Vargas-Ruayen, Emily Nastase</td>
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<tr>
<td>10:47 AM</td>
<td>Seasonal dietary shifts of Red Snapper (Lutjanus campechanus) in Mississippi state waters</td>
<td>From graduate to elementary school: Engaging young students can be easy!</td>
<td>Ex-seeding expectations: quantifying Z. marina seed quality over time</td>
<td>Effect of multiple pressures on early marine survival of juvenile salmon in Puget Sound</td>
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<td></td>
<td>Caitlin Slife, Kevin Dillon</td>
<td>Sarah Ramsden, Mary Curran</td>
<td>Avonelle Combs, Jessie Jarvis, W. Judson Kenworthy</td>
<td>Hem Nalini Morzaria-Luna, Isaac Kaplan, Raphael Gardin, Chris Harvey, Michael Schmidt, Elizabeth Fulton, Parker MacCready</td>
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<tr>
<td>11:05 AM</td>
<td>Spatial, temporal, and individual-level variation in northern Gulf of Mexico common bottlenose dolphin diet</td>
<td>Seagrasses under pressure from intensive seaweed farming in Rote Island, Indonesia</td>
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<td>Challenges for novel approaches to habitat restoration on historically human-occupied land</td>
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<td>Carl Cloyd, Brian Balmer, Mandy Tumlin, Eric Zolman, Aaron Barleycorn, Keri Rowlis, Lori Schwacke, Ruth Carmichael</td>
<td>Mirta Teichberg, Hugo Duarte Moreno, Mónica Marinta, Alfred Kase, Annette Breckwoldt, Hauke Reuter</td>
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<td>Andrew Heaton, Karen Clark, Robert Gruba, Jay McLwain, Jonathan Pitchford</td>
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<tr>
<td>11:13 AM</td>
<td>Determining interspecific interactions between crinophores and fishes in Maryland Coastal Bays using stable isotope analysis</td>
<td>Building bridges over troubled waters: Citizen engagement to support shellfish aquaculture</td>
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<tr>
<td>1:00</td>
<td>Microbial source tracking in wet weather</td>
<td>Impacts of hurricanes on coastal physical, ecological, and biogeochemical processes</td>
<td>Population/community ecology</td>
<td>Identifying restoration priorities and evaluating socio-ecological benefits at multiple scales</td>
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<td></td>
<td>Kenneth Schiff, Joshua Steele and John Griffith</td>
<td>Ian Zink, John Lehrner, Amber Hardison, Anna Armitage, Joan Browder, Wei-Jun Cai, Kanchan Maiti, Brian Roberts, Zhanfei Liu and Christopher Patrick</td>
<td>Sharon Herzka and Joel Fedorie</td>
<td>Lesa Chambers, Rachel Gittman, Ann Hujelos, Katie Arkema, Bryan DeKogelis, Melinda Donnelly, Jonathan Grabowski, Kelly Kibler and Bethany Kraft</td>
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<td>1:30</td>
<td>Tracking human fecal sources in an urban, coastal watershed during wet weather</td>
<td>Influence of drought, periodic storm events, and Hurricane Harvey on estuarine particulate organic matter</td>
<td>Influence of predation and environmental conditions on juvenile bull shark densities in two Texas estuaries</td>
<td>Preserving cultural heritage in a changing landscape: Oysters and the Pointe-au-Chien Indian Tribe</td>
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<td></td>
<td>Joshua Steele, Dancy McCarger, Amy Zimmer-Faust, John Griffith, Rachel Noble, Kenneth Schiff</td>
<td>Sarah Douglas, Jianhong Xue, Zhanfei Liu, Amber Hardison</td>
<td>Amanda Lothius, Jeffrey Wozniak, Philip Match</td>
<td>Deborah Abibou, Christa Russell</td>
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<tr>
<td>1:35</td>
<td>Microbial Source Tracking for Monitoring the Impact of Short-term Tidal Variability in Marine Beaches</td>
<td>In the wake of a hurricane: differential effects on early versus late successional seagrass species</td>
<td>Sea oter disturbance reduces eelgrass extent of intertidal beds in southeast Alaska</td>
<td>A framework for using trophic structure to evaluate ecosystem services of estuarine habitat restoration</td>
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<td></td>
<td>Ashley Chapman, Kendall Anderson, Asli Aslan</td>
<td>Victoria Congdon, Chistina Borsell, Meaghan Cuddy, Kenneth Dunton</td>
<td>Tiffany Stephens, Maggie Shields, Wendell Raymond, Lisa Dornie, Melanie Borup, Genny Eckert</td>
<td>Melinda Donnelly, Suzanne Connor, Jessica Copertino, Giovanna McClenachan, Michelle Shaffer</td>
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<tr>
<td>1:45</td>
<td>Sources of Enterococci to a Coastal Beach Experiencing Elevated Background Levels</td>
<td>Hurricanes temporarily disrupt interaction between salt marsh wrack and range-expanding mangrove propagules</td>
<td>Four decades of standing response: Hotspots and shifting baselines in northern Gulf of Mexico</td>
<td>Overcoming the odds: restoration of a Grassostrea virginica oyster reef in St. Charles Bay, TX</td>
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<td>Afeefa Abdool-Ghany, Peter Sawhelly, Maribeth Gilley, Christopher Singalilano, James Klaus, Helena Solo-Gabriele</td>
<td>Rachel Smith, Julie Blaze, James Byers</td>
<td>Mackenzie Russel, Noel Wingers, Courtney Nelson Seely, Ruth Carmichael</td>
<td>Meghan Martinez, Natacha Breux, Terry Palmer, Jennifer Beseeres Pollack</td>
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<tr>
<td>2:00</td>
<td>Quantification of fecal sources to coastal waters at the Southwest US Border</td>
<td>The influence of summer storms on black sea bass movement ecology in the Mid-Atlantic Bight</td>
<td>Perinate bottlenose dolphin mortality following the Northern Gulf of Mexico</td>
<td>Relating the scale and structure of oyster reefs to diversity, ecosystem processes and functions</td>
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<tr>
<td>2:15</td>
<td>What can dogs do? Canine detection of human sewage in the Pohuquaququ Estuary, RI.</td>
<td>Ecological responses to Hurricane Florence in Masonboro Sound, North Carolina</td>
<td>Use of manatee ear bone chemistry to track migrations in the northern Gulf of Mexico</td>
<td>Scaling our Restoration Thinking for the Challenges of the Future Denise Reed</td>
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<td>Veronica Beroumsky, Heidi Travers, Karen Reynolds</td>
<td>Aaron Ramus, Lawrence Cahoon</td>
<td>Kayla DaCosta, Ruth Carmichael</td>
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<tr>
<td>2:23</td>
<td>Larval distributions of key fish families off Galveston post Hurricane Harvey compared to historic data</td>
<td>Linking use of ship channels by West Indian manatees to seasonal migration and habitat use</td>
<td>Assessing the response of Mangrove Snapper (Lutjanus griseus) trophic dynamics to oyster reef restoration</td>
<td>Incorporating project-based field research into a marine science curriculum at a small coastal campus: TAMUG</td>
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<td>Shannah McAskill, Simon Geist, Glenn Zaple</td>
<td>Elizabeth Hib, Carl Cloyed, Meri Collins, Kayla DaCosta, Ruth Carmichael</td>
<td>Jennifer Loch, Geoffrey Cook</td>
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### ORAL SESSIONS

**Wednesday 06 November | Early Afternoon 🌞 1:00PM – 2:30PM**

- **201 B**
  - **Estuarine and coastal plankton communities: sentinels of evolving ecosystems**
    - Pedro Morais
  - **Ocean acidification in a multiple-climate-change-stressors context: science-based tools for management**
    - Faycal Kessouri, Daniele Bianchi, Richard Freey, Elizabeth Turner, Nina Bednarsek, Martha Sutula

- **202 A**
  - **Isotopes, lipids, and DNA: Trophic biomarkers in coastal ecosystem ecology**
    - Michael Pinto, James Nelson, Amanda Spivak and Sabrina Taylor
  - **Seagrasses: sentinel species in a changing world**
    - Robert Orth and Kenneth Heck

- **202 B**
  - **Seagrasses: sentinel species in a changing world**
    - Robert Orth and Kenneth Heck
  - **Seasonal differences in mesozooplankton communities in a shallow, wind-driven estuary in southern Louisiana**
    - Christin Selle, Beth Stauffer, Kelly Robinson
  - **Potential links between jellyfish blooms and environmental variability in the northern Gulf of Mexico**
    - Chengxue Li, Hui Liu

- **204 A**
  - **Biophysical processes leading to the ingress of temperate fish to the ingress of temperate fish**
    - Pedro Morais, Claire Paris, Eric Walanuki, Ara&Alexandra Irodosio
  - **Impact of Oyster Biodeposit Resuspension on Phytoplankton Community Structure in Estuarine Systems**
    - Sarah Davis, Elka Porter, Eric Robins, Richard Lacouture, Regina Minniss
  - **Spatiotemporal distribution and environmental drivers of zooplankton communities within the Columbia River Estuary**
    - Kaitlynn Connelly, Gretchen Rollwagen-Bollens, Stephen Bollens, Julie Biemiller, Tamara Holmlund

- **204 B**
  - **Advancing Gulf of Mexico resilience through integrative, cross-disciplinary science**
    - Lauren Showalter, William "Monty" Graham and Jerry Melillo
  - **Florida Panhandle National Heritage Area: a community-based approach for coastal resources management**
    - Soma Khakzad, Kelly Dunn, Deniele Miller, Morgan Dudley

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<td>Ocean acidification in a multiple-climate-change-stressors context: science-based tools for management</td>
<td>Enhancing sustainability of hatchery production: effects of water manipulations and associated multi-stressors on larval physiology</td>
<td>Building authentic community-government alliances through Indigenous Stewardship Methods to advance Louisiana's Coastal Master Plan</td>
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<tr>
<td>1:30PM</td>
<td>Differential effects of UV radiation on two early life stages of the scyphozoan Aurelia aurita</td>
<td>Ocean acidification promote invasions of the invasive red macroalga, Dasyiphonia japonica</td>
<td>Resource partitioning among sympatric saltmarsh fishes in coastal Louisiana</td>
<td>Trophic mysteries of the shallows: Unraveling eelgrass ecosystems in Southeast Alaska</td>
<td>Building authentic community-government alliances through Indigenous Stewardship Methods to advance Louisiana's Coastal Master Plan</td>
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<td>Impact of Oyster Biodeposit Resuspension on Phytoplankton Community Structure in Estuarine Systems</td>
<td>Enhancing sustainability of hatchery production: effects of water manipulations and associated multi-stressors on larval physiology</td>
<td>Benthic microalgae help retain detrital marsh grass carbon and nitrogen in estuarine sediments</td>
<td>Quantifying factors influencing interannual variability of eelgrass (Zostera marina) using a 30-year dataset</td>
<td>Spatial-Temporal Models of Multi-Species Interactions to Study Impacts of Catastrophic Events</td>
</tr>
<tr>
<td>2:15PM</td>
<td>Biophysical processes leading to the ingress of temperate fish larvae into estuarine nursery areas</td>
<td>Of crabs and clams: OA and salinity effects on marine invertebrate growth and armor</td>
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**2:30 PM BREAK**
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<tr>
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<td>8:00</td>
<td>Mapping salt marsh of global delta using time series Landsat and Sentinel-1 imagery</td>
<td>Xiyou Zhao, Bo Tian, Ying Niu, Chunpeng Chen, Ya Peng, Wenting Wu, Yueka Hu</td>
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<tr>
<td>8:15</td>
<td>Understanding landscape level impacts of increased temperature – mangrove encroachment influence on seagrass meadows</td>
<td>Cayla Sullivan, Laura Reynolds, Ashley Smyth</td>
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<td>8:30</td>
<td>Nitrogen Enrichment Enhances Freeze Tolerance of Avicennia germinans</td>
<td>Ilka Feller, Emily Dangermond, Lora Simpson, Catherine Lovelock</td>
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<tr>
<td>8:45</td>
<td>Quantifying the effect of changing vegetation on ecosystem functions and habitat structure at salt-mash-mangrove ecotone</td>
<td>Julie Walker, Christine Angelini, Julie Walker, Todd Osborne</td>
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<tr>
<td>9:00</td>
<td>From fiddlers to fisheries: bottom-up effects of the shifting salt mash-mangrove ecotone</td>
<td>Janelle Goelke, Anna Armitage</td>
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<tr>
<td>9:15</td>
<td>Effects of Hurricane Irma on nitrification and ammonia oxidizer community in St. Lucie Estuary (Florida)</td>
<td>Justyna Hampel, Mark McCarthy, Megan Reed, Silvia Newell</td>
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<td>Potential effects of chemical cues emitted by Cepedula fomicata on foraging by chemosensory predators</td>
<td>Tracey Vlasak, Stephen Tettelbach, Bradley Peterson, Rebecca Kulp</td>
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<td></td>
<td>Predation and herbivory across spatial and temporal scales: a fishy tale</td>
<td>Olivia Rhoades, William Wed, Andrew Altiere, Savanna Barry, Scott Jones, Charles Martin, Owen O’Shea, Christopher Patrick, Valene Paul, Laura Reynolds, Brigitta van Tussenbroek, Justin Campbell</td>
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<tr>
<td></td>
<td>Restoration-induced changes to phytoplankton communities: do cyanobacteria affect oxygen feeding and selectivity?</td>
<td>Andrea Jaegge, Sandra Casas, Jerome La Peyre, Megan La Peyre, Beth Stauffer</td>
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<tr>
<td></td>
<td>Reflections from eight years of collaborative science in coastal Alabama</td>
<td>Eric Sparks, Just Cebrian, Michael Shilton, Eric Brunden, Scott Phipps, Julia Cherry</td>
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<td>Building an oyster filtration model from the ground up</td>
<td>Jessica Kinsella, Elizabeth Darrow, Awaisi Volety, Suzanne Bricker, Martin Posey, Troy Alphin, João Femeira, Alhambra Cubilla, Susanne Brande, Brandon Puckett</td>
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<td>An interdisciplinary approach to wet prairie restoration in the Florida panhandle</td>
<td>Ashlynn Smith, Emily Coffey, Matthew Deitch, John McKenzie, Deborah Miller, Jessica Stephens, Jeff Talbert, Mack Thetford, Laurie Blackmore</td>
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<td>Exclusion studies reveal the interactions between herbivores in structuring tropical seagrass meadows</td>
<td>Abigail Scott, Paul York, Michael Rasheed</td>
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<td>Invasion of the reef urchins: Impact of Echinometra on seagrass beds in Rocos del Toro</td>
<td>Abigail Cannon, Cynthia Peña, Eric Brown, Andrew O’Dea, Andrew Altiere, Jennifer Smith</td>
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<td>8:15</td>
<td>Evaluating the carbonate production and allometry of Ctasstraea virginica in the Mississippi Sound</td>
<td>Sara Pace, Eric Powell, Kelsey Raykendall, Jeremy Timbs</td>
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<td>Herbivory in seagrass meadows: a continually changing paradigm</td>
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<td>Green toilets: A hidden potential of inorganic nitrogen sources in coastal ecosystems</td>
<td>John Madison, John Terhune, Matthew Wren, David Cessna, Adam Gittman, Joel Fodrie, Niels Lindquist, Christopher Baillie</td>
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<td>Jessica Kinsella, Elizabeth Darrow, Awaisi Volety, Suzanne Bricker, Martin Posey, Troy Alphin, Joao Femeira, Alhambra Cubilla, Susanne Brande, Brandon Puckett</td>
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<td>From fiddlers to fisheries: bottom-up effects of the shifting salt marsh-mangrove ecotone</td>
<td>Janelle Goelke, Anna Armitage</td>
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<td>Effects of Hurricane Irma on nitrification and ammonia oxidizer community in St. Lucie Estuary (Florida)</td>
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<td>Potential effects of chemical cues emitted by Cepedula fomicata on foraging by chemosensory predators</td>
<td>Tracey Vlasak, Stephen Tettelbach, Bradley Peterson, Rebecca Kulp</td>
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<td>Predation and herbivory across spatial and temporal scales: a fishy tale</td>
<td>Olivia Rhoades, William Wed, Andrew Altiere, Savanna Barry, Scott Jones, Charles Martin, Owen O’Shea, Christopher Patrick, Valene Paul, Laura Reynolds, Brigitta van Tussenbroek, Justin Campbell</td>
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### ORAL SESSIONS  Thursday 07 November | Early Morning  8:00AM — 9:30AM

- **Identifying restoration priorities and evaluating socio-ecological benefits at multiple scales**
  - Lisa Chambers, Rachel Gittman, Ann Hijuelos, Katie Arkema, Bryan DeAngelis, Melinda Donnelly, Jonathan Grabowski, Kelly Kibler and Bethany Kraft

- **Increasing coastal and estuarine hypoxia: causes, responses, and remedies**
  - James Ammerman and James O’Donnell

- **Tidal freshwater wetlands: transitional ecosystems under climate change**
  - Judith Drexler, Gregory Noe and Kai Jensen

#### 8:00AM

- **Stakeholders rate Living Seawalls benefits as almost double the risks**
  - Kate Dodds, Maria Vozzo, Katherine Dafforn, Matana Mayer-Pinto, Melanie Bishop

- **Post-construction monitoring of nitrogen reductions in an urban tidal embayment**
  - Richard Ideiib, Beau Ranheim, Keith Mahoney, Nicholas Cholewka, Dorothy Chao, David Yozzo, Katherine Drury

- **Biota-mediated carbon cycling in tidal freshwater wetlands: from rhizospheres to consumer control**
  - Kai Jensen, Peter Mueller, Stephanie Nolte

#### 8:15AM

- **Integrating local priorities into restoration using sketch mapping and GIS**
  - Hannah Torres, Timothy Hawthorne, Fernando Rivera

- **Disentangling Trends and Variability in Nitrate and Oxygen in Long Island Sound**
  - James O’Donnell

- **Variation in soil microplastics between habitats in a tidal freshwater wetland**
  - Andy Baldwin, Ryan Helcoski, Lance Yonkos

#### 8:23AM

- **Linking science, ecosystem services, and economic valuation to prioritize and communicate mangrove restoration goals**
  - Brita Jessen, Sara Mason, Lydia Okander, Jeffrey Carter, Jessica McIntosh, Laura Flynn, Stefanie Simpson, Scott Settelmyer, Ken Krauss, Nicole Cornier, Kathy Worley, Keith Laakonen

- **Drivers and predictability of subseasonal variations of dissolved oxygen in Chesapeake Bay**
  - Andrew Ross, Charles Stock, Keith Dixon, Marjorie Friedrichs, Ralegh Hood, Ming Li, Kathleen Pegion, Gabriel Vecchi, Vincent Saba

- **Egeria densa: an ecosystem engineer and carbon sink in the Sacramento-San Joaquin Delta of California**
  - Judith Drexler, Shruti Khanna, Jessica Lacy

#### 8:30AM

- **Integrating sense of place into ecosystem restoration: a novel approach to achieve synergistic social-ecological impact**
  - Kelly Kibler, Geoffrey Cook, Lisa Chambers, Melinda Donnelly, Timothy Hawthorne, Fernando Rivera, Linda Walters

- **Impacts of sea level rise on Chesapeake Bay and its seasonal hypoxia**
  - Pierre St. Laurent, Marjorie Friedrichs, Ming Li, Wenfei Ni

- **Hydrology of coastal freshwater forested wetlands of Louisiana: the role of tides**
  - Richard Day, Andrew From, Ken Krauss

- **Growth response of freshwater forested wetland tree species to increasing sea level and saltwater intrusion**
  - William Conner, Jamie Duberstein

#### 8:45AM

- **Regional Approach to Development of New Restoration Projects for Louisiana’s Coastal Master Plan**
  - Elizabeth Jarrell, Stuart Brown, Mandy Green, Eric White, Krista Jankowski, Catherine Fitzpatrick, Ashley Cobb, Denise Reed, Yushi Wang

- **Annual, Seasonal Patterns of Stratification and Hypoxia in Chaldeure and Breton Sounds in Southeast Louisiana**
  - John Lopez, Tasia Denapolis, Kristen Butcher

- **Tidal extension: will sea-level rise change ecosystem functions of tidal freshwater wetlands on the whole?**
  - Alicia Korol, Gregory Noe, Scott Ensigh

#### 8:53AM

- **A hierarchical approach to valuing land conservation to support Gulf of Mexico estuarine biotic health**
  - Andrew Shamaskin, Kristine Evans, Garrett Street, Sandra Correa, Anna Linhoss, Sathishkumar Sarniapan, Jennifer Roberts, Jiantong Liu

- **Physical Drivers of Dissolved Oxygen Variability in a Shallow Highly Stratified Estuary**
  - Jeff Coogan, Brian Dziwonski, John Lehrter, Kyeong Park, Renee Collini, Alexis Hagemeyer

- **Ecology and long-term sustainability of tidal freshwater marshes of the Mississippi River Delta Plain, Louisiana**
  - Christopher Swarzenski, Thomas Doyle

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## ORAL SESSIONS  Thursday 07 November | Early Morning  8:00AM – 9:30AM

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<td>Education partnerships in coastal and marine science</td>
<td>Putting ecogeomorphology into practice: predicting and managing flow–sediment–biota interactions</td>
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<td>Mikell Smith and Richard McLaughlin</td>
<td>Christopher Esposto, Heidi Nepf and Therlyn Henkel</td>
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<td>8:15</td>
<td>Panel Discussion: Jacqueline Rousseau (NOAA Educational Partnership Program), Larry Robinson (NOAA CCME), David Yoskowitz (NOAA CCME)</td>
<td>Assessing sediment management strategies that support nature conservation in a highly anthropogenic delta region</td>
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<td>8:30</td>
<td>Environmental Factors Controlling Nitrate Removal Potential in Deltaic Floodplain Wetlands</td>
<td>Comparing two dissimilar Atchafalaya River Delta sediment diversion strategies over an eighteen year period</td>
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<td>Alexandra Christensen, Robert Twilley</td>
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<td>9:00</td>
<td>Coastal foredune stabilizing plants as ecosystem engineers shaping foredune genesis</td>
<td>Facilitating the Development of Partnership-Relevant Competencies through a Center-Wide Course</td>
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<td>Bianca Charbonneau</td>
<td>Owen Temby, David Hicks, Katia Sanchez</td>
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<td>Conservation and social science: rebuilding resilient habitat and community engagement</td>
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<td>Meghan Martinez, Natasha Beaux, Terry Palmer, Jennifer Beseres Pollack</td>
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<td>10:00 AM</td>
<td>Marshes to Mangroves: the support of fisheries by estuarine wetlands</td>
<td>Ronald Baker, Matthew Kimball, Jennifer Doerr and Philine zu Emmagisen</td>
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<td>Impacts of hurricanes on coastal physical, ecological, and biogeochemical processes</td>
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<td>Population/community ecology</td>
<td>Sharon Herzka and Joel Fodrie</td>
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<td>Seagrasses: sentinel species in a changing world</td>
<td>Robert Urth and Kenneth Heck</td>
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<td>10:15 AM</td>
<td>Settlement processes shape fauna community</td>
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<td>N-cycling in coastal sediments in the aftermath of Hurricane Michael</td>
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<td>Troyc Metschler, Justin Myers, Daniel Hoffman, Silvia Newell, Mark McCarthy</td>
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<td>Kelp subsidies drive community structure and ecosystem function</td>
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<td>Kyle Emery, Jennifer Dugan, Robert Miller, David Hubbard, Carter Oihmann</td>
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<td>Imported kelp subsidies secondary production in seagrass meadows</td>
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<td>Glenn Hyndes, Audery Cartaoud, Caitlin Rae, Paul Lavery</td>
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<td>Estuarine nektont assemblages along a marsh-mangrove ecotone</td>
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<td>Hurricane Impacts on Indian River Lagoon water quality revealed</td>
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<td>through continuous, high-frequency, automated observations</td>
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<td>11:00 AM</td>
<td>Growth of penaeid shrimp in salt marsh and black mangroves</td>
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<td>Hurricanes fertilize coastal wetlands in the Gulf of Mexico:</td>
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<td>The case of Florida Everglades mangroves</td>
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<td>Edward Castaíeda-Moya, Victor Riveta-Munro, Randy Chambers,</td>
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<td>Xiaochun Zhao, Lucas Lamb-Wotton, Adrianna Gorsky, Evelyn Gaiser, Tiffany</td>
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<td>Teeter, John Kominski, Matthew Hart</td>
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<td>Restoring Virginia’s oyster reefs: environmental controls on oyster</td>
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<td>recruitment, growth, and survival across spatial scales</td>
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<td>Kinsey Tedford, Max Castorani</td>
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<td>Evaluating the ability of bivalve facilitation to enhance seagrass bed</td>
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<td>Sarah Donaher, Christopher Baillie, Rachel Gittman</td>
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<td>Using otolith microchemistry to trace survivorship of juvenile</td>
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<td>common snook: mangroves vs. salt marshes</td>
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<td>Janet Ley, Holly Rolls</td>
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<td>Changes in recalcitrance and isomeric composition of dissolve organic</td>
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<td>matter from Texas rivers after hurricane</td>
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<td>Kaikun Lu, Zhanfei Liu</td>
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<td>Gulf ribbed mussels increase saltmarsh cordgrass growth and primary</td>
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<td>Fish functional groups vary in their nutrient provisioning in a tropical</td>
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<td>Assessing fish use of hardenend, natural, and nature-based estuarine</td>
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<td>Hurricane Harvey and Nate impacts on coastal carbon and oxygen cycling</td>
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<td>Drought and turbidity influence trophic cascades through sensory driven</td>
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<td>Deconstructing environmental drivers of seagrass community composition</td>
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<td>and fish abundances across the Gulf of Mexico</td>
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**ORAL SESSIONS**  Thursday 07 November | Mid Morning  10:00AM – 11:30AM

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**LUNCH**

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<td>Gulf of Mexico oxygen deficiency: where, when, what to do?</td>
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<td>The role of oyster reef restoration in coastal sediment biogeochemical cycling</td>
<td>Impact of seasonal variations in flocculation on large-scale sediment transport patterns in a tide-dominated estuary</td>
<td>Why there is no progress in abating Gulf hypoxia and scientists must effectively resolve controversies</td>
<td>National Water Center Internship Experience: Low flow reservoir release predictions for the National Water Model</td>
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<td>A Cumulative-effects Paradigm for Large-Scale Coastal Ecosystem Restoration</td>
<td>Processes impacting floc size over a tidal cycle in an idealized estuary model</td>
<td>Fusion-based hypoxia estimates: linking geostatistical and mechanistic models of dissolved oxygen variability</td>
<td>Assessment of Petenes resilience to sea level rise due to climate change in Mexico</td>
<td>A Pathway and Partnership Program to Engage U.S. Virgin Islanders in the Marine Sciences</td>
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<td>Everglades restoration reassessed: addressing coastal wetland vulnerabilities to sea-level rise</td>
<td>Sediment transport processes in Barataria Bay of Louisiana and its implication to sediment diversion</td>
<td>Observations of seafloor hypoxia in the western Mississippi Bight</td>
<td>Assessment of Petenes resilience to sea level rise due to climate change in Mexico</td>
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<td>Salt Marsh Integrity Assessments: Baseline Results from 15 Northeast National Wildlife Refuges</td>
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<td>Voluntary restoration: mitigation’s partner in the quest to outpace coastal wetland loss in the USA</td>
<td>Effects of human alteration of sediment supply on tidal wetland vulnerability to sea level rise</td>
<td>Modeling spatiotemporal patterns of organic carbon dynamics affecting hypoxia on the Louisiana Continental Shelf.</td>
<td>Development of a bioassessment protocol for tidal stream systems in the upper Texas coast</td>
<td>Youth Ocean Explorers: A pathway to diversifying the field of marine science</td>
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<tr>
<td>11:15 am</td>
<td>A New Approach to Habitat Master Planning</td>
<td>Correlations between coastal dune elevations and wave runup in New England</td>
<td>Karenia brevis bloom induced dead zone in the Southeast Gulf of Mexico.</td>
<td>Development of a physically based, geospatially complete wetland vulnerability index</td>
<td>You can view the author/presenter index on the CERF 2019 Conference Mobile App – download instructions can be found on page 15</td>
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### ORAL SESSIONS

**Thursday 07 November | Early Afternoon 1:00PM – 2:30PM**

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<tr>
<th>Time</th>
<th>201 A</th>
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<th>204 A</th>
<th>204 B</th>
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<tbody>
<tr>
<td>1:00 pm</td>
<td>Marshes to Mangroves: the support of fisheries by estuarine wetlands</td>
<td>Impacts of hurricanes on coastal physical, ecological, and biogeochemical processes</td>
<td>Population/community ecology</td>
<td>Seagrasses: sentinel species in a changing world</td>
<td>Solutions-based science to support coastal environmental management: approaches and challenges</td>
</tr>
<tr>
<td>1:15 pm</td>
<td>Stable isotopes suggest limited role of wetland production supporting aquatic food webs across mangrove-marsh ecotone</td>
<td>Hurricane Impacts on Reef Restoration: The Good, the Bad, and the Ugly</td>
<td>Variability in environmental tolerances of Mercenaria mercenaria across the east coast of the United States</td>
<td>Scaling-up: predicting the impacts of climate change on seagrass ecosystems</td>
<td>A systems analysis approach for managing the marine ecosystem: accommodating natural and human features</td>
</tr>
<tr>
<td>1:30 pm</td>
<td>Estimating fish production from seagrass, saltmarsh and oyster reef in the Gulf of Mexico</td>
<td>Impacts and recovery on coral reefs following Hurricanes Irma and Maria in St. Thomas, USVI</td>
<td>Environmental and biological factors impact cardiac activity of northern bay scallops across multiple temporal scales</td>
<td>Metabolomics reveal biochemical pathways responsible for eelgrass response to climate change</td>
<td>Modeling tools for extreme events of climate change to provide resources for managers</td>
</tr>
<tr>
<td>1:45 pm</td>
<td>Collective adjustments of shoaling nekton in intertidal salt marsh pools support their refuge function</td>
<td>Does plant diversity modulate the effect of hurricanes on seagrass meadow resilience via seedbank retention?</td>
<td>Effects of freshwater inflow on blue crab Callinectes sapidus populations in Louisiana.</td>
<td>From traits to plasticity: How will seagrass look in a changing world?</td>
<td>High stakes. Decision support for oyster mariculture within an estuarine reserve</td>
</tr>
<tr>
<td>Guillaume Rieucau, Kevin Boswell, Dennis Allen, Matthew Kimball</td>
<td>Jesse Jarvis, W. Judson Kenworthy, Joel Frodhe, Lauren Yoger</td>
<td>Caleb Taylor, John Nyman, Megan La Peyre</td>
<td>F. E. Feltche, Ines Gonzalez Mara, Mira Teichberg</td>
<td>Elizabeth Darrow, Troy Alphie, Martin Posey, Susanne Brande, Brandon Puckett, Suzanne Bricker, Joao Ferreira, Jessica Kinsella, Madison Lyle, Kelsey Billet, Alhambra Cubillo</td>
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</tr>
<tr>
<td>2:00 pm</td>
<td>How has the juvenile fish community in mangroves changed in a quarter of a century?</td>
<td>Acute and persistent storm impacts influence post-hurricane recovery trajectories in a salt marsh-mangrove ecotone</td>
<td>Warming of the Northwestern Atlantic as recorded by ocean quahogs and Atlantic surf clams</td>
<td>Seagrass OASiS: Ocean Acidification Sanctuaries and Subsides</td>
<td>Using Sentinel Site Cooperatives to facilitate scientist-stakeholder engagement: Examples from the Chesapeake Bay</td>
</tr>
<tr>
<td>Matt Kendall, Bethany Williams, Arias Winship, Ashley Ruffo, Aaron Adams</td>
<td>Anna Armitage, Carolyn Weaver, John Kaminiski, Steven Penning</td>
<td>Eric Powell, Roger Mann, Sara M. Pace</td>
<td>Environmental management actions in Buzzards Bay, Massachusetts</td>
<td>Taryn Sudol</td>
<td>Christopher Neill, Rachel Jakub</td>
</tr>
<tr>
<td>2:15 pm</td>
<td>Seasonal and interannual variability in flatfish assemblages in a southeastern USA estuary</td>
<td>Mangrove damage, mortality, and recovery following Hurricane Irma at two landfill sites in southwest Florida</td>
<td>First data-rich age-frequency distributions for the ocean quahog and optimized sample-size selection using age-frequency simulator</td>
<td>Investigation of structure and persistence of temperate and tropical seagrasses located at a transition zone</td>
<td>Long-term and spatially-distributed water quality data drive environmental management actions in Buzzards Bay, Massachusetts</td>
</tr>
<tr>
<td>Mary Curran, Dana Wilber</td>
<td>Kara Radabaugh, Ryan Moyer, Amanda Chappel, Emma Dorsis, Christine Russo, Kirsten Joyce, Melissa Bovnik, Audrey Geckner, Nicole Khan</td>
<td>Kathleen Hemeon, Eric Powell, Roger Mann, Theressa Redmond, Sara M. Pace</td>
<td>Amy Bartenfelder, Jesse Jarvis, W. Judson Kenworthy, Brandon Puckett</td>
<td>Christopher Neill,</td>
<td>Samuel Studviant, Joe Germano</td>
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<tr>
<td>2:30 pm</td>
<td>Understanding the potential for estuarine habitat types to predict juvenile Dungeness crab densities</td>
<td>Hurricane effects on mangroves: Destruction reproduction, recruitment, growth, and succession</td>
<td>Use of geochemical tagging to test Eastern oyster (Crassostrea virginica) population connectivity</td>
<td>The tropicalization of Western Atlantic seagrass beds: Brief insights from a large-scale coordinated network</td>
<td>Trapped in Plato's Cave: benthic indigence and the illusion of objectivity</td>
</tr>
<tr>
<td>Nathaniel Lewis, Theodore DeWitt</td>
<td>C. Edward Proffitt, Donna Devlin, Glenn Collier, Carolyn Weaver, Kathryn Tiling, Ilka Feller, Steven Travis</td>
<td>Haley Gancel, Ruth Carmichael</td>
<td>Justin Campbell, Olivia Rhoades, Andrew Alten, James Douglass, Valerie Paul, Kenneth Heck</td>
<td>Samuel Studviant, Joe Germano</td>
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<td>2:45 pm</td>
<td><strong>2:30 PM BREAK</strong></td>
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## ORAL SESSIONS

Thursday 07 November | Early Afternoon  
1:00 PM – 2:30 PM

<table>
<thead>
<tr>
<th>Time</th>
<th>Session A</th>
<th>Session B</th>
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<th>Session D</th>
<th>Session E</th>
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</thead>
</table>
| 1:00 pm | Identifying restoration priorities and evaluating socio-ecological benefits at multiple scales  
Lisella Chambers, Rachel Gittman, Ann Hjeljol, Katie Arkema, Bryan DeAngelis, Melinda Donnelly, Jonathan Grabowski, Kelly Kibler and Bethany Kraft  
Coastal sediment transport processes  
Kehui Xu, Courtney Harris, Michael Miner, and Davin Wallace  
New challenges in estuarine and coastal water quality monitoring  
Jane Caufey  
Using citizen science to address complex environmental problems  
Suzanne Spitzer | Coastal environments as geologic archives for assessing environmental change  
Clark Alexander, John Jaeger and D. Reid Corbett  
Evaluating cumulative effects to effectively plan and assess regional restoration efforts in Louisiana, USA  
Gregory Steyer, Robert Twilley, Hedda Dieffenbacher  |  
Suspended sediment transport by a tidal dipolar vortex  
Scott Mize, Christopher Swarzenski | Designing a citizen science program for monitoring Chesapeake Bay grasses  
Suzanne Spitzer, J. Brooke Landry, William Dennison, Katie May Laumann, Sky Swanson |  
Regional-scale management of Louisiana’s barrier islands  
Jonathan Bridgeman, Justin Mennefield, Joseph LeBlanc, Syed Khall | Using Coupled Modeling Suites to Understand Sediment Dynamics in the Land Ocean Interaction Zone Z. George Xue, Zhengchen Zang, Dongqiao Yin, Kehui Xu, Jim Chen, Samuel Bentley, David Gesch | Implementing Agency-  
Coordinated Water Quality Monitoring in Louisiana: Challenges and Lessons Learned  
Angelina Freeman, Richard Rayne, Elizabeth Robinson | How to work together: The Chesapeake Monitoring Cooperative’s story  
E. Caroline Donovan, Alexandra Fries, Liz Chudoba, Peter Tango, Suzanne Spitzer |  
Systematic landscape restoration: planning for more effective and efficient restoration  
Ben Gilby, Andrew Olds, Rod Connolly, Christopher Brown, Paul Maxwell, Christopher Henderson, Nicholas Ortonossi, Cassandra Duncan, Thomas Schlacher |  
Seasonal sediment transport in estuarine waters of Mississippi Sound and shelf waters of Mississippi Bight  
Mustafa Cambazoglu, Stephan O’Brien, Jerry Wiggert, Michael Dinniman, Travis Miles | Applying innovative techniques to monitor, analyze, and forecast water quality changes along Florida’s Springs Coast  
Chris Anastasios, Robin Speidel, Mike Wessel | Lessons learned in the development of a multi-organizational citizen’s monitoring database  
Dave Jasinski, David Parrish, Liz Chudoba |  
Evaluating the social, economic, and ecological benefits of land conservation in the Gulf of Mexico  
Jennifer Roberts, Kristine Evans, Anna Linhoss, Jiao Dong, Liu, Sathishkumar Samiapanam, Matthew Heinemann, Andrew Shamaskin, John Tirpak, Benjamin Wilson, Matthew Snider, Steve Ashby | Cyclone driven sediment flux within an urbanized estuary: impact of Hurricane Harvey on Galveston Bay  
Timothy Dellenapp, Victoria Bartlett, Mohammad Almukaimi | Trends in nutrients and geogenic solutes in a canal-dominated landscape  
Troy Hill, Joseph Park, Donatto Surratt | Citizen science “King tide” flood reporting in Miami  
Matthew Goshgarian, Tiffany Tuxes, Susan Jacobson, Eric Baron |  
How much environmental benefit can $1 billion in new infrastructure deliver to the Everglades watershed?  
Jed Redwine, Agnes McLean, David Rudnick, Troy Hill | Estuaries as sedimentary archives of sea level and climate change: Weeks and Mobile bays, AL  
Rebecca Minzoni, Davin Wallace, Lauren Parker, Asmaa Lehmann, Emily Elliott | Seasonal and spatial variations in phytoplankton resource limitation have changed over time in Chesapeake Bay  
Emily Trentacoste, Qian Zhang, Claire Buchanan, Cuiyin Wu, Tom Fisher, Anne Gustafson | Integrating fishermen into science: maximizing data collection on red drum reproduction during a red tide  
Sarah Walters Burmsted, Susan Lowestre-Barbiers, Joel Bickford, Hayden Menendez |  
Limited diffusion of scientific advances may impede restoration of coastal habitats  
Randall Hughes, Peter Edwards, Jonathan Grabowski, Steven Scyphers, Susan Williams | Marsh edge erosion and estuarine transport affect sediment availability in back-barrier marshes: Barnegat Bay, New Jersey  
James Pinckney, Erik Smith, Krystyn Kibler | Community-Based Data Generation to Assess Shoreline Change and Background Oiling  
Diane Maygardner, Mark Kulp, Carrie Miller, Ed Owens |  
Can mangrove wetlands keep up with sea level rise?  
Randy Chambers, Adrianna Gorsky | Using stratigraphic records from two coastal wetlands to underscore regional-scale coastal restoration initiatives.  
Christopher Smith, Christian Haller |  
| 2:30 pm BREAK |
### ORAL SESSIONS | Thursday 07 November | Afternoon | 3:00PM – 4:30PM

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<th>204 A</th>
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<tbody>
<tr>
<td><strong>Imacts of hurricanes on coastal physical, ecological, and biogeochemical processes</strong>&lt;br&gt; Iain Zink, John Lehrte, Amber Hardison, Anna Amatig, Joan Browder, Wei-Iun Cai, Kandhan Matti, Brian Roberts, Zhanfen Liu and Christopher Patrick</td>
<td><strong>Population/community ecology</strong>&lt;br&gt; Sharon Herzka and Joel Fodrie</td>
<td><strong>Seagrasses: sentinel species in a changing world</strong>&lt;br&gt; Robert Orth and Kenneth Heck</td>
<td><strong>Solutions-based science to support coastal environmental management: approaches and challenges</strong>&lt;br&gt; Miranita Chintala, Beth Darrow, William Dennison, Dwight Trueblood and Timothy Gleason</td>
<td><strong>Identifying restoration priorities and evaluating socio-ecological benefits at multiple scales</strong>&lt;br&gt; Lisa Chambers, Rachel Gittman, Ann Hijjotas, Katie Arkena, Bryan DeAngelis, Melinda Donnelly, Jonathan Grabowski, Kelly Kibler and Bethany Kraft</td>
</tr>
<tr>
<td><strong>Historical marsh loss contribution to hurricane surge and wave hazards in Texas</strong>&lt;br&gt; Michelle Hummel</td>
<td><strong>Insect and spider diversity in restored and natural saltwater marshes</strong>&lt;br&gt; Linda Hooper-Bui, Rachel Streeker, Catherine Smith, Hannah Gordon, Michael Polito, Charles Martin, Annette Engel, Eric Swenson, Paola Lopez-Duarte, Olaf Jensen, Nancy Rabalais, Brian Roberts</td>
<td><strong>Seasonal response and recovery of eelgrass (Zostera marina) to short-term reductions in light availability</strong>&lt;br&gt; Melissa Wong, Gwendolyn Griffiths, Benedikt Vercaemst</td>
<td><strong>Interdisciplinary lessons from a decade of solutions-based science in the NERRS</strong>&lt;br&gt; Christine Feurt</td>
<td><strong>Strengthening seagrass research in Costa Rica, Central America</strong>&lt;br&gt; Jimena Samper-Villarreal, Jorge Cortés</td>
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<tr>
<td><strong>Hurricanes interrupt human-driven trophic cascades and may facilitate oyster reef recovery</strong>&lt;br&gt; Delbert Snee, Evan Pettis, Benjamin Belgrad, Joseph Reustle</td>
<td><strong>Implications of land cover change due to sea level rise for native bee communities</strong>&lt;br&gt; Jesse Thuma, T’ai Roulston, Linda Blum</td>
<td><strong>Remote estimation of the seagrass light environment for improved coastal management</strong>&lt;br&gt; Ryan Pearson, Christopher Brown, Catherine Collier, Michael Rasheed, Rod Connolly</td>
<td><strong>Applying Living Shoreline Approaches to Increase Resilience and Reduce Risk in New England</strong>&lt;br&gt; Alison Bowden, Tom Ballester, Curtis Bohlen, David Burdick, Janet Freedman, Kirsten Howard, Julia Knisel, Jennifer Mattes, James O’Donnell, Eric Roberts, Pete Slovinsky</td>
<td><strong>Global trends in mangrove loss</strong>&lt;br&gt; Mischa Turschwell, Rod Connolly, Vy Tullio, Dale Bryan-Brown, Sebastian Lopez-Marcado, Gabby Ahmadia, Dominic Andrade-Brown, Michael Suvers, Ryan Pearson, Christopher Brown</td>
</tr>
<tr>
<td><strong>Effects of a tropical cyclone on marsh insect communities and post-cyclone reassembly processes</strong>&lt;br&gt; Xuan Chen, Benjamin Adams, William Platt, Linda Hooper-Bui</td>
<td><strong>Altered Maturity Schedules of River Herring Returning to Chesapeake Bay River to Spawn</strong>&lt;br&gt; Cj Carroll Schlick, Matthew Ogburn, Keira Heggie, Kim de Mursert</td>
<td><strong>Response of the seagrass Halodule wrightii to light limitation is genotype-specific</strong>&lt;br&gt; Kathryn Tiling, C. Edward Proffitt</td>
<td><strong>Identifying Areas to Address Multiple Chesapeake Restoration and Conservation Goals</strong>&lt;br&gt; Scott Phillips, John Wolf, Renee Thompson, Kristin Saunders</td>
<td><strong>A Planning Approach for Water Quality and Restoration Projects in Delaware’s Inland Bays</strong>&lt;br&gt; Marianne Walch</td>
</tr>
<tr>
<td><strong>Relevance of seagrass faunal community response to Hurricane Irma relative to Everglades restoration</strong>&lt;br&gt; Iain Zink, Joan Browder, Chris Kelble, Erik Stabetau, Christopher Kavanagh, Zachary Fratto</td>
<td><strong>The Marsh Penwinkle (Littoraria neritana) as an Indicator of Deepwater Horizon Oil Spill Effects</strong>&lt;br&gt; Donald Deis, Scott Zengel, John Fleege, David Johnson, Irving Mendelssohn, Sean Graham, Qinxin Lin, Aixin Hou</td>
<td><strong>A quantitative assessment reveals that diatoms dominate benthic primary production in a mixed seagrass bed</strong>&lt;br&gt; T. Eric Cox, Just Cebrian, Mamie Tabor, Laura West, Jeffrey Krause</td>
<td><strong>Preparing for and recovering from disaster, the Sea Grant way</strong>&lt;br&gt; Maddie Kennedy, Christopher Winslow, Nancy Balcom, Stephen Semprev, David Hansen, Joshua Brown</td>
<td><strong>Restoring natural values back to Great Barrier Reef seascaper: converting cane land back to wetlands</strong>&lt;br&gt; Nathan Waltham, Christina Buelow</td>
</tr>
<tr>
<td><strong>Response of a subtropical seagrass-associated nearshore epifauna community to disturbance</strong>&lt;br&gt; Joan Browder, Ian Zink</td>
<td><strong>Persistence and spatial ecology of Gopherus polyphemus throughout federally protected and unprotected lands in Alabama</strong>&lt;br&gt; Robin Lloyd, Adam Chupp</td>
<td><strong>Data synthesis for environmental management: A case study of Chesapeake Bay</strong>&lt;br&gt; J. Brooke Landry, William Dennison, Robert Orth, David Wilcox, Jonathan Leitch, Cassie Gurbisz, Jennifer Keisman, Kenneth Moore, Rebecca Murphy, Christopher Patrick, Donald Weller, Jeremy Testa</td>
<td><strong>Science co-production in the Gulf of Mexico: Funding a two-way network</strong>&lt;br&gt; Caitlin Young, Becky Allee, Kathleen Emst, Julien Lartigue, Frank Parker</td>
<td><strong>The decline and potential for restoration of oysters in coastal Alabama</strong>&lt;br&gt; Sean Powers</td>
</tr>
<tr>
<td><strong>Hurricanes Irma and Maria impact a mangrove fish nursery habitat in St. Croix, USVI</strong>&lt;br&gt; Allie Durdall, Sydney Nick, Caroline Patt, Richard Nemeth, Kristin Wilson Grimes</td>
<td><strong>Evaluation of eelgrass (Zostera marina) restoration methods to improve recovery in Puget Sound, WA (USA)</strong>&lt;br&gt; Jeffrey Gaucke, Sart Christensen, Lisa Fermer, Pete Dovray, Helen Berry</td>
<td><strong>Using satellites and supercomputers to assess wetland degradation and address coastal management needs</strong>&lt;br&gt; Matthew McCarthy, Brita Jessen, Tylor Murray, Jill Schmid, Jessica McIntosh, Frank Muller-Karger</td>
<td><strong>Modeling Oyster Restoration Suitability in Texas Estuaries: a Machine Learning and Big Data Approach</strong>&lt;br&gt; Anthony Reisinger, Jennifer Beseres Pollack, James Gibeaut</td>
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<th>Session 202 A</th>
<th>Session 201 B</th>
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</thead>
</table>
| 3:00  | **Using citizen science to address complex environmental problems**  
Suzanne Spitzer  | **CMECS: A “Common Language” for coastal habitat mapping**  
Kate Rose, Mark Finkbeiner and Monique LaFrance Bartley  | **Artistic pathways to scientific understanding**  
Ayasha Gray, Sarah Kolesar and Karen Haberman  |
| 3:15  | **Online restoration project development toolkit.**  
Elsa Carlisle Schwartz, Lon Clark, Dawn Spilsbury Pucci  |  |  |
| 3:30  | **Engaging citizen scientists to assess large-scale microplastic distributions**  
Amanda Sartain, Caitlin Wessel, Eric Sparks  | **Benthic video monitoring in Narragansett Bay: applying CMECS to evaluate site suitability for habitat restoration**  
Heather Kinney, William Hett, Kevin Ruddock, Patrick Barrett, Eric Schneider  | **Booking it on the boardwalk: Custom storybook walks at Grand Bay National Estuarine Research Reserve**  
Sandra Huynh  |
| 3:45  | **The power of citizen science: 20-years of horseshoe crab community research merging conservation with education.**  
Jennifer Mattei, Jo-Marie Kasinak, Ismael Youssef, Samah Sentiel  | **Connecting resources to needs: Introducing the Natural Infrastructure Opportunity Tool**  
Safra Altman, Rose Dospovic  | **Art-sci collaboration: using shared observation and new perspectives to catalyze coastal change conversations**  
Cora Johnston  |
| 4:00  | **Lessons learned – Exploring the use of citizen science in the Chesapeake Bay Parasite Project**  
Alison Cawood  | **Regional-scale benthic habitat mapping of coastal marine environments using CMECS**  
Monique LaFrance Bartley, John King, Bryan Oakley, Mark Finkbeiner  | **Immersing the Arts: Marine-themed Art Makes Waves**  
Syma Ebbin, Kristian Brevik  |
| 4:15  | **Panel Discussion**  
*Updating CMECS: The Dynamic Standard Process*  
Kate Rose  | **Using Art to Grab Attention, Evoke Emotion and Inspire Action**  
Nancy Pau  |  |
| 4:30  |  | **Panel Discussion**  
*Who’s coming home? The story of juvenile Chinook salmon migratory phenotypes in California’s Central Valley*  
Ayasha Gray  |  |

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**CERFers On The Run**

CERFers On The Run is an informal running club that gets together to run and exercise throughout the cities that the CERF Biennial Conference visits. This year, the CERFers On The Run will be meeting from 6:15 AM to 7:15 AM before the oral sessions start, Monday through Thursday.

Each day, there will be two different group runs, consisting of a long (about 3 miles) and short (about 1 mile) run. We will meet in the courtyard of the Renaissance Mobile Riverview Plaza Hotel at 6:15 AM and do 10-15 minutes of stretching before starting the run. Everyone will receive a ticket for each day they participate to enter to win a running-inspired gift basket!

All of the runs include landmarks throughout Mobile, consisting of Mobile historical landmarks and sites. Other routes will include popular downtown locations to explore during conference downtime.

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**Social Media**

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CERFScience

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**Conference Hashtags:**  
#CERF2019  
#CERFStudents  
#CERF2019Live

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## ORAL SESSIONS  Thursday 07 November | Afternoon ❄️ 3:00PM – 4:30PM

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<tbody>
<tr>
<td>3:00PM</td>
<td>Getting science “In the Room” to impact environmental decision-making</td>
<td>Coastal sediment transport processes</td>
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<td></td>
<td>Jacques Oliver and James Hagy</td>
<td>Kehui Xu, Courtney Harris, Michael Miner, and Davin Wallace</td>
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<tr>
<td>3:00PM</td>
<td>Coastal and Estuarine-related Legislation in the First Session of the</td>
<td>Impacts of dam removals on sediment supply, transport, and deposition</td>
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<td>116th Congress: Year in Review</td>
<td>in the Hudson River estuary</td>
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<td>Eva Lipiec</td>
<td>David Ralston, Brian Yellen, Jonathan Woodruff</td>
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<tr>
<td>3:15PM</td>
<td>Role of science in nonregulatory Estuary Program development and</td>
<td>An examination of vessel wake and ship usage in Charleston Harbor,</td>
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<td>implementation</td>
<td>South Carolina</td>
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<td>Matthew Deitch, Savannah Cain</td>
<td>Richard Styles, Michael Hartman, Brandan Scully, Jarrell Smith</td>
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<tr>
<td>3:30PM</td>
<td>The US coastal research program: addressing research challenges</td>
<td>Texas coast report card: an integrative interdisciplinary approach</td>
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<td>through federal, stakeholder, and academic partnerships.</td>
<td>to assessing and communicating coastal ecosystem health</td>
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<td>Derek Brockbank, Nicole Elko, Julie Rosati, Hilary Stockdon, Britt</td>
<td>James Currie, Rense Kelsey</td>
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<td>3:38PM</td>
<td>Effect of pH on School Prawn (Metapenaeus macleayi) and implications</td>
<td>Morphology And Mineralization Potential of Sediment Organic Nitrogen</td>
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<td>of catchment-derived stressors for fisheries</td>
<td>in Daya Bay, South China Sea</td>
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<td>Matthew Taylor, Catherine McLuckie, Natalie Moltschniawskyj, Troi</td>
<td>Yunchao Wu, Maolin Gan, Zhijian Jiang, Songlin Liu, Xiaoping Huang</td>
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<td>Gaston, Hugh Dunstan, Maria Cromption</td>
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<tr>
<td>3:45PM</td>
<td>Effect of tidal resuspension with oyster biodeposits on the nutrient</td>
<td>Mississippi River diversions: engine of land gain or land loss</td>
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<td></td>
<td>and oxygen dynamics</td>
<td>accelerator?</td>
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<tr>
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<td>Elka Porter, Sara Bickenstaff, Jeffrey Connell, Melanie Jackson</td>
<td>R Eugene Turner, Giovanna Mc Lean, Michael Hyne, Yu Mo, Erick Svenson</td>
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<tr>
<td>3:53PM</td>
<td>A Review of Sediment Diversion in the Mississippi River Deltaic Plain</td>
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<tr>
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<td>Kehui Xu, Samuel Bentley, John Day, Angelina Freeman</td>
<td>and oxygen dynamics</td>
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<tr>
<td>4:00PM</td>
<td>Integration of multiple indicators to establish minimum freshwater</td>
<td>Evaluating wave thrust on salt marshes along US east coast estuaries</td>
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<td>inflow rates to a managed sub-tropical estuary</td>
<td>Alfredo Aretxabaleta, Brian Blanton, Neil Ganju, Tarandeep Kalra,</td>
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<tr>
<td></td>
<td>Christopher Buzzelli, Peter Doering</td>
<td>Julia Moriarty, Zafer Define</td>
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<tr>
<td>4:07PM</td>
<td>Lessons we’ve learned since Amelia Island: Working together to make</td>
<td>How does sediment trapping by invasive submerged aquatic plants vary</td>
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<td>science-based policy</td>
<td>with hydrodynamic conditions?</td>
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<td>James Hagy, Jacques Oliver</td>
<td>Jessica Lacy, Judith Drexler, Rachel Allen, Madeline Foster-Martinez,</td>
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<tr>
<td>4:15PM</td>
<td>Lateral marsh shoreline erosion and sediment deposition: A sediment</td>
<td>Shurti Khanna, Maureen Downing-Kanz, Paul Work</td>
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<td>budget approach</td>
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<td>Bed erodibility variation in sediment transport modeling of estuarine</td>
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| All Presentations are Traditional Oral unless otherwise noted. |

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| Lightning Presentations | Cultural Heritage/Coastal Humanities | CH = Cultural Heritage/Coastal Humanities | CH = Cultural Heritage/Coastal Humanities |

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Sea-level rise thresholds for stability of saltmarshes in a riverine versus a marine dominated estuary
Wei Wu, Patrick Biber, Deepak Mishra, Shuvankar Ghosh [A2]
Automated analysis of geomorphological changes in South Korea’s estuaries using remotely sensed surface water data
Nicholas Wellbrock, Timothy Dellapenna, David Retchless [A3]

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Visual quantification of oil and gas bubbles from MC20
Carrie O'Reilly, Camilo Roa, Ian MacDonald [A10]
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Ian MacDonald, Carrie O'Reilly, Mauricio Silva, Camilo Roa [A11]
North Breton Island: A Deepwater Horizon NRD Early Restoration
Lawrence Malizzi [A12]

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How’d you get that number? Practical program tools to characterize economic benefits and impacts
Alison Krepp, Susan Holmes, Kelly Samek [A6]

SETTING ECOLOGICALLY RELEVANT TARGETS FOR MANAGEMENT OF MARINE PLANT HABITATS
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Calibrating a bio-optical model for submerged aquatic vegetation habitat suitability in coastal Alabama
Dorothy Byron, Kenneth Heck [A9]

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The Battle against Biofouling
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Monitoring inventory and needs assessment for the Delaware Estuary
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Comparison of Gulf of Mexico with Southeast Asian Blue carbon stock: mangroves and seagrasses
Anitra Thorhaug, John Gallagher, Wawan Kiswara, Anchana
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Madison Davis, James Garey [C1]

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The influence of deep-sea shipwreck proximity on microbiome composition and species richness
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Clear as mud: Evaluating soft-bottom habitats in the Great Lakes Using sediment profile imaging (SPI)
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Robert Warren Howarth [C7]

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Recovery of a tidal freshwater marsh after four years of continuous seawater additions, Georgia, USA.
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Tidal elevations of UK saltmarshes: implications for the impacts of rising sea level
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Assessment of marsh vulnerability to sea level change within the Chesapeake Bay Sentinel Site Cooperative
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Gene expression analysis in the Eastern oyster (Crassostrea virginica) exposed to hypoxic conditions
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Blending indigenous knowledge with emerging sensor technologies to alleviate hypoxia in traditional coastal Hawaiian fishponds
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E. Victoria Long, Linda Blum [K2]

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Rising water temperatures in Florida Keys National Marine Sanctuary threaten coral reefs
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Andrea Stumpf, Nathaniel Weston, Lori Sutter [L2]

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Simon Geist, Kristin Wilson Grimes, Caitlin Wessel and Howard Forbes, Jr.

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Casey Craig, Linda Walters, Jessy Wayles, Emily Dark, Kirk Fusco, Vincent Encomio, Glenn Coldren, David Fox Jr, Lei Zhai [L11]

Can polarized light be applied to illuminate microplastic pollution?
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To wake, or not to wake?
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Erin Voigt, David Eggleston [N2]
Spatial variability of submerged aquatic vegetation in the Delaware Estuary
Roger Thomas, Kelly Somers, Kristin Regan, Michael Mansolino, Steve Donohue, Scott Haag, Michael Campagna, Christopher Vito [N3]
Electronics overboard: using an inexpensive Arduino-based GPS-tracking sonde to measure flow in the Satilla River
Courtney Morrison, Michael Laird, Joseph Hauger, Jessica Reichmuth [N4]
Geospatial patterns of marsh dieback development and recovery using aerial photography, DGPS, and climatic conditions
Christine Hladik, Jacque Kelly [N5]
A comparison of seagrass mapping techniques: traditional vs. emerging autonomous mapping at Cat Island, MS
Clint Edrington, Just Cebrian [N6]
Using SONAR methods to document changes in low-salinity submerged aquatic vegetation
Joseph Luczkovich, Noah Gwynn, Jon Sherman, Hilde Speight, W. Judson Kenworthy [N7]
Evaluating coastal restoration using drones
J. Mason Harris, James Nelson, Glenn Suir [N8]

Using drones to determine seasonal variation in the area of seagrass meadows
Emili Garretson, Kenji Sugimoto, Jessie Jarvis, W. Judson Kenworthy, Brandon Puckett [N9]

PLANT-SOIL INTERACTIONS ACROSS COASTAL ECOSYSTEMS IN A GLOBAL CHANGE ERA
Torrance Hanley and Randall Hughes
Belowground traits of coastal dune species may impact rates of erosion
Shannon Walker, Julie Zinnert, Fernando Tenjo [O1]
Understanding below-ground feedbacks on seagrass seed-based restoration outcomes
E. Fay Belshe, Falodun Bunmi, Achim Meyer, Mirta Teichberg [O2]
Use of computed tomography to investigate the influence of elevation on marsh belowground biomass
Gwen Miller, James Morris [O3]
Effects of hydroperiod on the decomposition of belowground biomass in Wax Lake Delta, coastal Louisiana
Denise Poveda, Andre Rovai, Alexandra Christensen, Robert Twilley [O4]
Germination response to salinity of three Florida panhandle coastal dune plants
Gabriel Campbell-Martinez, Mack Thetford, Deborah Miller [O5]
WEDNESDAY POSTER SESSIONS  4:30 PM – 7:00 PM

OUTREACH AND ENGAGEMENT OF OUR ESTUARIES, COASTS, AND OCEANS
Linda Walters
Using interactive activities focused on seagrass ecosystems to teach children marine conservation and trophic ecology
Jamila Roth, Laura Reynolds [A10]
Bald Head Island Conservancy: 30 years of barrier island conservation, preservation, and education
Elizabeth Darrow, Marissa Blackburn [A11]
Conceptualizing human alteration and natural growth in estuaries and savannas (CHANGES): Year 1
Sandra Huynh, Dennis McGrury [A12]
Seagrass Monitoring in Pensacola Bay: A Partnership between Citizens and students
Michael Swords, Victoria Henry, Barbara Albrecht, Rick O’Conner, Christina Verlinde, Jane Caffrey [A9]

EDUCATION PARTNERSHIPS IN COASTAL AND MARINE SCIENCE
Mikell Smith and Richard McLaughlin
Providing fellowship opportunities through partnership, a Sea Grant model
Maddie Kennedy, Nikola Garber, Jonathan Lilley [A1]
A Louisiana Graduate Education Partnership: The Coastal Science Assistantship Program (CSAP)
Summer Langlois [A2]
Moving the Needle: Influencing STEM Identity and Desire among URM students in the USVI
Jarvon Stout, Lawanda Cummings, Resa Berkley [A3]
Restructuring an Undergraduate Marine Science Major to Incorporate Geospatial Intelligence
Deanna Bergondo, Lucy Vietstra, Karina Mrakovich, Victoria Futch [A4]
Tapping in to K-12 students to gather tree-ring data
Clay Tucker, Jill Trepanier, Pamela Blanchard, James Jordan, John Nyman, Mark Schafer [A5]
Coastal Solutions Fellows Program: Building Resiliency Along the Pacific Flyway
Osvel Hinojosa-Huerta, Viviana Ruiz-Gutierrez [A6]

USING CITIZEN SCIENCE TO ADDRESS COMPLEX ENVIRONMENTAL PROBLEMS
Suzanne Spitzer
Using Hospitalized Children as Citizen-Scientists to Collect Data on Wading Bird Diversity and Abundance
Jacob Hromyak, Linda Walters, Megan Nickels, Paul Sacks, Jessica Copertino [A7]
Students help document mangrove disease and insect communities throughout the Caribbean
Ryann Rossi, Craig A. Layman, Caren Cooper, Jean Ristaino, Amy Heemsoth, Olivia Patterson Maura [A8]

EDUCATION: CREATIVE TEACHING TO IMPROVE SUCCESS FOR MARINE-FOCUSED UNDERGRADUATE STUDENTS
Linda Walters and Timothy Dellapenna
Supporting Emerging Aquatic Scientists (SEAS) Your Tomorrow: Bridge to Ph.D. Program and Marine Science Opportunities
Kalieghe Schlender, Kristin Wilson Grimes, Marilyn Brandt, Monica Medina, Carrie Jo Bucklin, Nastassia Jones [B1]
Why are Red Beards So Clean? Collaborative Teaching and Research Investigations into Biofouling
Reuben Macfarlan, Michael Persun [B2]

ISOTOPES, LIPIDS, AND DNA: TROPHIC BIOMARKERS IN COASTAL ECOSYSTEM ECOLOGY
Michael Polito, James Nelson, Amanda Spivak and Sabrina Taylor
Controlled diet mixtures of macroalgae influence the fatty acid composition of juvenile and adult isopods
Julie Schram, Sami Taipale, Aaron Galloway [B10]
Dead or Alive: Elemental Analysis of Stranded Bottlenose Dolphins (Tursiops truncatus)
Ryanne Murray, Ruth Carmichael, Merri Collins, Mackenzie Russell, Alissa Deming [B3]
Ontogenetic changes in trace element ratios track lifetime freshwater exposure in bottlenose dolphins (Tursiops truncatus)
Matthew Hodanbosi, Kayla DaCosta, Alissa Deming, Ruth Carmichael [B4]
Comparison of left and right ear bone chemistry in West Indian manatees
Andrea Mason, Kayla DaCosta, Ruth Carmichael [B5]
Variability in microphytobenthos biomass and isotopic values in northern Gulf of Mexico salt marsh systems
Sharil Deleon, Jeffrey Krause, Ronald Baker [B6]
Trophic niche between male and female California spiny lobsters (Panulirus interruptus) in MPA vs. Non-MPA
Riley Young, Corey Garza, Taylor Eddy, Steven Litvin [B7]
Seafood forensics: Identifying the geographical origin of crawfish using stable isotope analysis
Katherine Kjos, Evelyn Gutierrez Watts, Michael Polito [B8]
Scale microchemistry as a non-lethal alternative for tracking individually variable migration patterns in mobile fish
Ethan Taulbee, Benjamin Walther [B9]

POPULATION/COMMUNITY ECOLOGY
Sharon Herzka and Joel Fodrie
Untangling northern Gulf of Mexico Sargassum food webs with bulk and compound specific stable isotopes
Kevin Dillon, Frank Hernandez [B11]
Pollinator Corridor Design for Native Invertebrates in Southern California
Bailey Young, Bethany Hadley, Torrey Hosey, Christina Simokat [B12]
Effects of Sea Star Wasting Disease on Mussel Recruitment
Emily Chui, Fiorensa Micheli, Alison Haupt [C1]
WEDNESDAY POSTER SESSIONS 4:30 PM – 7:00 PM

**Estimating ecotypic variation in the foundational plant species, Schoenoplectus americanus, for coastal management**
Haley Kodak, Jason McLachlan [C10]

**Evaluating the effects of sporophyte parent origin on gametophyte characteristics of Alaria marginata**
Muriel Dittrich, Annie Raymond, Michael Stekoll [C11]

**Influences on the timing of fertility to an intertidal kelp, Alaria marginata**
Austin Alderfer, Michael Stekoll, Annie Raymond [C12]

**Predator presence does not impact ribbed mussel filtration or biodeposition**
Jennifer Zhu, J. Stephen Gosnell [C2]

**Intertidal distribution of boring sponges and their effects on oysters in Georgia creeks.**
Johanna Dieudonne, John Carroll [C3]

**Recruitment and post-settlement mortality of Mya arenaria**
Shantelle Richards, Rochelle Seitz [C4]

**Understanding the ecology of Atlantic Rangia: Toward better management of freshwater inflows**
George Guillen, Jenny Oakley, Mahmoud Omar [C5]

**Changes in Littoraria irrorata feeding preferences in response to mangrove encroachment**
Emelie Foster, Janelle Goeker, Anna Armitage [C6]

**Secondary Production of Intertidal Consumers on Sandy Beaches**
Michael Cornish, Kyle Emery, Jennifer Dugan, Robert Miller, David Hubbard [C7]

**Impact of Mississippi River diversions on marsh community structure**
Rachel Snider, Linda Hooper-Bui, Rachel Strecker [C8]

**The impacts of marsh raft deposition on high marsh species communities**
Kayla Martinez-Soto, Serina Wittyangham, David Johnson [C9]

**Evaluation of the Daily Release of Perkinsus marinus in the Water Column**
Matilda Newcomb, Katrina Pagenkopp Lohan, Denise Breitburg, Sarah Gignoux-Wolfsohn [D1]

**Impact of thermal-hydric stress on mating behavior and opportunities of fiddler crabs**
Talene Yeghissian, M. Zachary Darnell [D2]

**A Florida-wide experiment of salt marsh and mangrove interactions under multiple stressors**
Glenn Coldren, C. Edward Proffitt [D3]

**Increased grazing on smooth cordgrass, Spartina alterniflora, in the presence of black mangroves, Avicennia germinans**
Emily Jones, Robyn Zerebecki [D4]

**The relationship between freshwater discharge and fish communities in a Gulf of Mexico estuary**
Dylan Sinnickson, David Chagaris, Micheal Allen [D5]

**Seagrass landscape relative to fish assemblages in an extensive meadow, southern Gulf of Mexico**
Alfonsina Romo-Curiel [D6]

**ESTUARINE AND COASTAL PLANKTON COMMUNITIES: SENTINELS OF EVOLVING ECOSYSTEMS**
Pedro Morais

**Exploring Copepod Feeding Ecology in San Francisco Estuary Using qPCR**
Cheryl Patel, Michelle Jungbluth, Toni Ignoffo, Anne Slaughter, Wim Kimermer [D10]

**Occurrence and relevance of sub-pycnocline chlorophyll maxima on the Louisiana continental shelf**
John Lehrter, Michael Murrell [D11]

**Spatial variability of benthic microalgae in the South Atlantic Bight**
Sarah Zunbrecher, James Pinckney, Susan Lang [D12]

**Fecundity and genetic differences of Neomysis americana in two tributaries of Chesapeake Bay**
Oliver Autrey, Ryan Woodland, Louis Plough [D7]

**Trophic niche overlap between Chaetognaths and larval Atlantic Croaker in the northern Gulf of Mexico**
Jana Herrmann, Frank Hernandez [D8]

**Are microzooplankton an intermediate trophic link between cyanobacteria and copepods in the San Francisco Estuary?**
Allison Adams [D9]

**Comparison of the responses of estuarine pelagic communities after catastrophic hurricanes**
Hui Liu [E5]

**Effect of Eastern oyster, Crassostrea virginica, biodeposit resuspension on zooplankton abundance**
Habibah Oladosu, Elka Porter [E6]

**NEW CHALLENGES IN ESTUARINE AND COASTAL WATER QUALITY MONITORING**
Jane Caffrey

**Spatiotemporal assessment of water chemistry in Northwest Florida coastal dune lakes**
Dana Stephens, Alexander Hyman [E1]

**Strategic monitoring and resilience training in the Ala Wai watershed: seasonal and episodic variability**
Solomon Chen, Jessica Bullington, Stanley Lio, Brian Glazer [E10]

**How much do watershed changes shift beach water quality results in the U.S. Virgin Islands?**
Sydney Nick, Kristin Wilson Grimes [E11]

**Nitrogen in the Chesapeake Bay Watershed: A Century of Change, 1950 – 2050**
John Clune, Paul Capel, Matthew Miller, Douglas Burns, Richard Smith, Peter Cleggott, Jeff Raffensperger, Joel Blomquist, Rosemary Fanelli, Ana-Maria Garcia, Gary Shenk, Lewis Linker [E12]

**Long-term Water Quality Monitoring within a System of Tidal Creeks in New Hanover County, NC**
Brad Rosov [E2]

**A data-driven approach to simulate temporal-spatial variations of Chlorophyll-a in the Chesapeake Bay**
Xin Yu, Jian Shen, Jiabi Du [E3]
Using high frequency observations to characterize spatial variability in phytoplankton production in San Francisco Bay
Ariella Chelsky, Taylor Winchell, Elizabeth Stumpner, David Senn [E4]

Influence of Bonnet Carré Spillway discharge on Mississippi Sound as revealed by stable isotopes
Alan Shiller, Melissa Gilbert, Amy Moody, Peng Ho, Laura Whitmore, Virginie Sanial [E8]

Quantifying discharge of nutrient-containing groundwater into Moro Cojo Slough
Jacqueline Chisholm, Kimberly Null, Ross Clark, Thomas Connolly [E9]

OCEAN ACIDIFICATION IN A MULTIPLE-CLIMATE-CHANGE-STRESSORS CONTEXT: SCIENCE-BASED TOOLS FOR MANAGEMENT
Faycal Kessouri, Daniele Bianchi, Richard Feely, Elizabeth Turner, Nina Bednarsek, Martha Sutula

Does a Reduced pH Affect Juvenile Dungeness Crab Behavior?
Hannah Hayes, Steven Manos, Julie Schram, Aaron Galloway [E7]

IMPACTS OF HURRICANES ON COASTAL PHYSICAL, ECOLOGICAL, AND BIOGEOCHEMICAL PROCESSES
Ian Zink, John Lehrter, Amber Hardison, Anna Armitage, Joan Browder, Wei-Jun Cai, Kanchan Maiti, John Nelson, John White, Chris DuFore [F6]

Investigating the effect of Hurricane Harvey on mesozooplankton communities over time
Zachary Topor, Simon Geist, Kelly Robinson [F1]

“Coping” with Hurricanes
John Nelson, LaRoy Brandt, Stan Kunigelis [F10]

Impacts of Hurricane Michael on Seagrass and Water Quality in the Florida Panhandle
Michael Poniatowski, Paul Carlson Jr, Laura Yarbro, Elizabeth Johnsey [F2]

Indicators of coastal eutrophication in Charlotte Harbor, FL in the wake of Hurricane Irma
Eric Milbrandt, Alfonse Martignette, David Blewett, Mark Thompson, Micheael Sauer, Melynda Brown [F3]

Effect of hurricane Irma on the coastal and estuarine systems of Everglades National Park
Christopher Kavanagh, Zachary Fratto [F7]

Impacts of hurricanes on forest carbon loss in the coastal US between 2000 and 2018
Chengcheng Gang, Hanqin Tian, Susan Pan, Yuanzhi Yao, Zihao Bian, Rongting Xu [F8]

Flooding caused by hurricane associated extreme rainfall in the Pee Dee Basin, SC
Thomas Williams, Daniel Hitchcock, Thomas O’Halloran, Bo Song [F9]

INCREASING COASTAL AND ESTUARINE HYPOXIA: CAUSES, RESPONSES, AND REMEDIES
James Ammerman and James O’Donnell

Sources and seasonal dynamics of nitrogen within the Tillamook Estuary, OR and its tributaries
Elizabeth Rutila, Cheryl Brown, James Kaldy, Stephen Pacella, T Chris Mochon Collura, William Rugh [F4]

Seasonal dynamic of methane fluxes associated with hypoxia in Jinhae Bay, Korea
Seoyoung Kim, SoonMo An [F5]

Seasonal variability of sediment oxygen consumption in a recently excavated dredge pit in coastal Louisiana
Laura Thompson, Kanchan Maiti, John White, Chris DuFore [F6]

IDENTIFYING RESTORATION PRIORITIES AND EVALUATING SOCIO-ECOLOGICAL BENEFITS AT MULTIPLE SCALES
Lisa Chambers, Rachel Gittman, Ann Hijuelos, Katie Arkema, Bryan DeAngelis, Melinda Donnelly, Jonathan Grabowski, Kelly Kibler and Bethany Kraft

Using oyster fecundity and reproductive capacity to assess individual and metapopulation sustainability and restoration success
Danielle Marshall, Samuel Moore, Alexandra Perez, Malinda Grabowski, Kelly Kibler and Bethany Kraft

A tool for optimizing salt marsh management decisions at northeastern US National Wildlife Refuges
Hilary Neckles, James Lyons, Jessica Nagel, Susan Adamowicz, Toni Mikula [G10]

“Save Our Indian River Lagoon” living shoreline monitoring for Brevard County, Florida
Suzanne Connor, Michelle Shaffer, Rebecca Fillyaw, Melinda Donnelly, Linda Walters [G11]

Sarah Piazza, Leigh Sharp, William Boshart [G12]

Southwestern Biscayne Bay shoreline relic oyster assemblage identification, abundance, and hydrological feature and substrate associations
Haley Capone, Ian Zink, Joan Browder [G2]

Impact of oyster reef restoration on threatened and endangered bird populations in Mosquito Lagoon
Jessica Copertino, Linda Walters, Melinda Donnelly, Michelle Shaffer, Katherine Harris [G3]

Ecosystem service logic models and metrics: linking Gulf oyster restoration outcomes to socio-economic benefits
Lydia Olander, Christine Shepard, Heather Tallis, David Yuskovitz, Kara Coffey, Rachel Karasik, Sara Mason, Katya Wowk, Lauren Hutch Williams, Katie Warnell [G4]

Quantifying the effects of habitat restoration on fish communities in a dynamic coastal estuary
Richard Mahoney, Jeffrey Beal, Dakota Lewis, Geoffrey Cook [G5]

Using oral histories to improve coastal restoration
Paul Sacks, Melinda Donnelly, Linda Walters [G6]
Beach mice use of restored dunes: build it and they will come
Margo Stoddard, Deborah Miller, Mack Thetford, Lyn Branch [G8]

How do fragmented habitats differ in their foundation species
demography and their associated biodiversity?
Rick Leong, Ana Bugnot, Ezequiel Marzinelli, Will Figueira, Alistair
Poore, Paul Gribben [G9]

QUANTIFICATION AND VALUATION OF ECOSYSTEM SERVICES
ASSOCIATED WITH SHELLFISH
Julie Rose, Suzanne Bricker, William Walton

Linking water quality, oyster restoration and citizen science in the
Pensacola Bay watershed
Emily Hotinger, Jane Caffrey, Wilfredo Quiles, Barbara Albrecht [H1]

Salinity effects on oyster reef population demography in inlet and
swash tidal creek systems
Christopher Williams, Keith Walters [H2]

Enhancing living shoreline restoration practices using native
ecosystem engineers: Geukensia granosissima and Spartina
alterniflora
Jordan Logarbo, Ryann Rossi, Megan La Peyre, Brian Roberts [H3]

RESPONSIVE, RELEVANT, READY: NEW DIRECTIONS IN COASTAL
SCIENCE AND MODELING
Linker Lewis, Gopal Bhatt, Carl Cerco and Gary Shenk
Managing for climate change in the Chesapeake Bay watershed
Laurel Abowd [G7]

smartcoastlines.org: Adapting open-source electronics and
software to enable affordable strategic monitoring and resilience
training
Brian Glazer, Stanley Lio [H4]

Performance of Low-cost Wave Gauges Compared to Commercial
Gauges
Nigel Temple, Matthew Virden, Bret Webb, Anna Linhoss, Eric
Sparks [H5]

Long-term monitoring data and science-based assessment
approaches combined to reveal water-quality changes in
Chesapeake Bay
Qian Zhang, Peter Tango, Rebecca Murphy, Melinda Forsyth,
Richard Tian, Jennifer Keisman, Emily Trentacoste [H6]

SOLUTIONS-BASED SCIENCE TO SUPPORT COASTAL
ENVIRONMENTAL MANAGEMENT: APPROACHES
AND CHALLENGES
Marnita Chintala, Beth Darrow, William Dennison, Dwight Trueblood
and Timothy Gleason
Developing management-informing monitoring tools for a
Mississippi Delta freshwater wetland landscape
Julie Whittbeck [H10]

Efficacy of utilizing shell plantings to mitigate ocean acidification
impacts on oyster (Crassostrea gigas) health
Sophia Wensman, Alyssa Shiel, George Waldbusser [H11]

Spatial variation in oyster population sustainability within a
Florida estuary: implications for management and restoration
J. Wilson White, David Kimbro, Nikki Dix, Kaitlyn Dietz, Laura Storch
[H12]

An assessment of microplastic presence and knowledge in the
Pensacola metropolitan area
Linda Ivey, Aleigh Rowe, Kwame Owusu-Daaku, Alexis Janosik [H7]

Living on burrowed time: effects of coarse fill sand on burrowing
of intertidal macroinvertebrates
Megan Guidry, Nicholas Schouler, Jenifer Dugan [H8]

Coastal Zone Soil Survey: Linking subaqueous and terrestrial
landscapes for better understanding of estuary functions
Sanderson Page, Jerome Langlinais, Zamir Libohova, Joey Shaw [H9]

ADVANCING GULF OF MEXICO RESILIENCE THROUGH
INTEGRATIVE, CROSS-DISCIPLINARY SCIENCE
Lauren Showalter, William “Monty” Graham and Jerry Melillo

Data Synthesis to characterize stressors and effects of restoration
and protection projects: Terrebonne Basin, Louisiana
Elizabeth Robinson, Angelina Freeman [I1]

A bibliometric analysis of scientific collaboration in the Gulf of
Mexico
Juliet Valleejo, Andrew Song, Dongkyu Kim, Owen Temby [I2]

Spring-Neap tidal variability of the vertical structure of the tidal
ellipses in a highly-stratified estuary
Rosario Sanay-González, Héctor Perales-Valdivia, Mark Marin-
Hernández, Arnoldo Valle-Levinson [I3]

PUTTING ECOCHEMISTRY INTO PRACTICE: PREDICTING
AND MANAGING FLOW–SEDIMENT–BIOTA INTERACTIONS
Christopher Esposito, Heidi Nepf and Theryn Henkel

Initial effects of nutrient and sediment enrichment on porewater
and biomass in brackish marsh mesocosms
Alex Ameen, Sean Graham [I10]

Sediment Retention Processes in Coastal Marshes
Christopher Esposito, Maricel Beltrán-Burgos, Heidi Nepf, Melissa
Baustian [I11]

Geomorphological Changes to Intertidal Marshes in 25 Different
Microenvironments in South Carolina
William Doar, III, Katherine Luciano, Brooke Czurtacki, Tanner
Arrington [I12]

Comparison of nekton community stability with changes in
salinity across the Suwanee Sound, Florida
Scott Alford, José Ponciano, Charles Martin [I7]

Long-term vertical accretion, mineral accumulation, and land loss
patterns in Barataria Basin, Louisiana
Carol Wilson, Samuel Shrull, Samuel Bentley, Gregg Snedden, Brady
Couvillon [I8]

Effects of vegetation on sediment dynamics
Maricel Beltrán-Burgos, Christopher Esposito, Melissa Baustian [I9]
**MIXING AND TRANSPORT IN ESTUARIES AND COASTAL WATERS**
Meng Xia, Yongsheng Wu, and Zhankun Wang

The modulation of near-inertial waves by mesoscale processes on the Mississippi Shelf
Jordan Earls, Maarten Buijsman, Davin Wallace [I4]

Improvement of eddy detection algorithm based on vector geometry and its application
Weiqiang Zeng, Shuwen Zhang, Hao Ning [I5]

Water quality modeling for Maryland’s Coastal Bays
Haoran Liu, Meng Xia [I6]

**COASTAL SEDIMENT TRANSPORT PROCESSES**
Kehui Xu, Courtney Harris, Michael Miner, and Davin Wallace

Marsh channel morphological response to sea level rise and sediment supply
Giulio Mariotti [J1]

Morphological change and sediment transport in a dredge pit on the Louisiana shelf
Kelli Moran, Kehui Xu, Haoran Liu, Carol Wilson, Matthew Barley [I10]

An assessment of sediment transport and water quality between contrasting dredge pits of Louisiana shelf
Robert Bales, Kehui Xu, Guandong Li, Sibel Bargu, Samuel Bentley, Kanchan Maiti, John White, Carol Wilson, Z. George Xue [J11]

Development of an oil particle aggregation model for the Gulf of Mexico continental shelf
Linlin Cui, Courtney Harris, Danielle Tarpley [J12]

Temporal and spatial variability in tidal marsh sedimentation and surface elevation change, Mid-Atlantic USA
Laura Reynolds, Lisa Auermuller, Joseph Grzyb, LeAnn Haaf, Robert Kopp, Richard Lathrop, Julie Lockwood, Martha Maxwell-Doyle, Drexel Sick, Kari St. Laurent [J2]

Relating soil and vegetation characteristics to shear strength and edge erodibility in Louisiana marshes
Grayton Bruno, Kendall Valentine, Tracy Quirk, Giulio Mariotti [J3]

Intertidal Creeks and Overmarsh Circulation for a Small Salt Marsh Basin
Jessica Sullivan, Raymond Torres, Alfred Garrett [J4]

Development of vertical marsh growth dynamics in a 3-D Coupled Wave-Flow-Sediment Transport Model (COAWST)

Modelling seasonal impacts of seagrass on coupled marsh-tidal flat sediment dynamics
Qingguang Zhu, Patricia Wiberg [J6]

Planform stability of Copacabana beach, Rio de Janeiro, Brazil
Marcia Costa, Josefa Guerra [J7]

The Baker Bay Enigma: Keeping up with a Dynamic Estuary
Jarod Norton, Rod Moritz, Austin Hudson, Terrance Geroux, James McMillan [J8]

**ECOSYSTEM ASSESSMENTS FOR COASTAL WETLANDS**
Michael Sievers, Viv Tulloch, Anusha Rajkaran and Rod Connolly

Evaluating Functional Equivalence of Restored Marshes on Deer Island, MS
Emelia Marshall, Patrick Biber, M. Zachary Darnell [K10]

Carbon and nutrient storage by coastal wetland habitats — towards the quantification of ecosystem services.
Jessica Els, Janine Adams, Lucienne Human [K11]

Advancing a nitrogen management strategy for southwest Florida tidal creeks through additional water quality indicators
Jay Leverone, Mike Wessel, Emily Hall [K12]

Evaluation of ecosystem services in newly restored and well-established salt marshes in Connecticut.
Jo-Marie Kasinak, Jamie Vaudrey, Jennifer Mattei [K9]

**WEDNESDAY POSTER SESSIONS** 4:30 PM – 7:00 PM

Impacts of organic-rich near surface stratigraphy on subsidence in Mississippi deltaic wetlands
Autumn Murray, Mead Allison [J9]

Characterization of Sedimentology and Infill Rates for Borrow Areas in Coastal Louisiana
Matthew Barley, Carol Wilson, Kehui Xu, Haoran Liu, Samuel Bentley [K1]

The evolution of St. Louis Bay, Mississippi since the MIS 2 Lowstand
Clayton Dike, Davin Wallace, Nina Gal, Robert Hollis, John Anderson, Rebecca Minzoni [K2]

Paleovalleys: A Treasure Trove of Information About Past Coastal System Response
Erin Miller, Davin Wallace [K3]

Managing coastal marsh impoundments for vertical accretion in the face of sea level rise
Scott Graham, Sammy King, John Nyman [K8]
WEDNESDAY POSTER SESSIONS  4:30 PM–7:00 PM

MARPES TO MANGROVES: THE SUPPORT OF FISHERIES BY ESTUARINE WETLANDS
Ronald Baker, Matthew Kimball, Jennifer Doerr and Philine zu Ermgassen

Salt marsh restoration in a mega-tidal and ice-influenced environment (Atlantic Canada)
Myriam Barbeau, Spencer Virgin, Allen Beck, Gregory Norris, Laura Boone, Jeff Ollerhead, Nic McLellan [L10]

Effect of Belowground Warming on Spartina alterniflora and Avicennia germinans species interactions and growth responses
Harris Stevens, Mark Hester [L11]

Assessing the air and soil warming potential of passive warming chambers using HOBO data loggers
Gabriela Canas, Nicole Dix, Samantha Chapman [L12]

Assessment of marsh-dependent nekton in restored salt marshes
Paola Lopez-Duarte, Olaf Jensen, Charles Martin, Michael Polito, Jill Olin [L2]

The energy storage of nekton species across a continuum of coastal Louisiana habitats
Laura McDonald, W. Ryan James, Kelly Robinson, James Nelson [L3]

Do marsh and mangrove vegetation provide different refuge values for a vertically migrating species?
Rachael Glazner, Anna Armitage [L4]

Periphyton Communities in The Atchafalaya Floodplain
Kamela Gallardo, Reagan Errera, Michael Kaller, William Kelso [L5]

The influence of vegetation type on benthic microalgae within a Florida salt marsh-mangrove ecotone
Olivia Butler, Gabriela Canas, Nicole Dix [L6]

Exogenous application of glycine betaine increases tolerance to abiotic stress in Avicennia germinans
Audrey Shor, Rosa Maurer, Alyssa Sloan, Meghan Tapia [L9]

TIDAL FRESHWATER WETLANDS: TRANSITIONAL ECOSYSTEMS UNDER CLIMATE CHANGE
Judith Drexler, Gregory Noe and Kai Jensen

Phosphorus Uptake in Floating Wetlands: A Mass Balance Approach
Olivia Lopez, Lora Harris, Isabel Sanchez-Viruet, Jeremy Testa [L7]

Survival and growth of baldcypress under abiotic stressors from climate change and restoration practices
George Washburn, Linda Hooper-Bui, Rachel Strecker [L8]

Temporal trend in water salinity of the Florida coast and the effects sea level rise
Jiahua Zhou, Matthew Deitch [M1]

Understanding mechanisms for coastal marsh sustainability in the face of sea level rise
Ashley Booth, Sammy King, John Nyman [M2]

Modeling carbon storage and fluxes in tidal freshwater forested wetlands in response to saltwater intrusion
Hongqing Wang, Zhaohua Dai, Ken Krauss, Carl Trettin, Gregory Noe [M3]

Effects of simulated seawater intrusion on soil biomarkers distribution in a tidal freshwater marsh wetland
Rachel Martineac, Christopher Craft, Patricia Medeiros [M4]

Integrating estuarine hydrodynamics with remotely sensed data to assess marsh migration patterns
David Muñoz, Hamed Moftakhari [M5]

Influence of salinity and vegetation on tidal marsh soil shear strength
Megan Gillen, Tyler Messerschmidt, Matthew Kirwan [M6]

SEAGRASSES: SENTINEL SPECIES IN A CHANGING WORLD
Robert Orth and Kenneth Heck

Nutrient and sediment retention in submersed aquatic vegetation (SAV) in the upper Chesapeake Bay
Miles Bolton, Cindy Palinkas, Cassie Gurbisz [M10]

Observations of the tidal influence on porewater nutrients in a submarine groundwater discharge zone
Nathaniel Winn, Haley McQueen, Matthew Schwartz [M11]

Seagrass Impacts on Porewater Biogeochemistry: A Comparison of 3 Species
Mackenzie Rothfus, Olivia Sanders, Katherina Smyth, Florian Cesbron, Jane Caffrey [M12]

Measuring Stable Isotopes to Trace Groundwater Transport of Dissolved Nitrogen in Seagrass Beds
Haley McQueen, Matthew Schwartz [M7]

Evaluating temporal seagrass conditions and water quality trends at Fire Island National Seashore
Brittney Scannell, Stephen Heck, Bradley Peterson [M8]

Spatial Patterns in Porewater Nutrients in Halodule wrightii Seagrass Beds
Olivia Sanders, Michael Swords, Sean Gordon, Mackenzie Rothfus, Jane Caffrey [M9]

Spatial patterns of fishes and invertebrates across a restored seagrass landscape
Elizabeth Daly, Kinsey Tedford, Selina Cheng, Michael Cornish, Max Castorani [N1]

Components of a standardized eelgrass assessment framework: Defining relationships between structure, environment and function
Kenneth McCune, Christine Whitcraft [N10]

Investigating Northern Biscayne Bay's declining seagrass beds and water quality
Claire Burgett, Laura Eldredge, Sarah Gumbleton [N11]

Abrupt and extensive seagrass loss in the Indian River Lagoon: indication of a regime shift?
Lori Morris, Robert Virmstein, Charles Jacoby, Lauren Hall, Robert Chamberlain [N12]

Drivers of regional-scale patterns of seagrass epifaunal invertebrates in the Chesapeake Bay, USA
Claire Murphy, Jonathan Lefcheck, Robert Orth [N2]
WEDNESDAY POSTER SESSIONS  4:30 PM – 7:00 PM

Impact of two seagrass species on macroinvertebrate community composition within an urbanized Southern California lagoon
Nicholas DaSilva, Christine Whitcraft [N3]

Image analysis as a tool to explore seagrass-epiphyte relationships
Chi Huang, Carissa Pinon, Mehrube Mehrubeoglu, Kirk Cammarata [N4]

Changes in epiphyte accumulation and community composition for Thalassia testudinum exposed to wastewater effluent
Carissa Pinon, John Garcia, Hudson DeYoe, Chi Huang, Kirk Cammarata [N5]

The role of hypersalinity and overlying water pO2 on internal seagrass O2 and H2S dynamics
Christopher Johnson, Marguerite Koch, Ole Pedersen, Christopher Madden [N6]

Temporal patterns in turtlegrass habitat use by larval and juvenile nekton at Chandeleur Islands, Louisiana
Smith Samantha, Christian Hayes, M. Zachary Darnell, Kelly Darnell [N8]

What can stable isotopes tell us about eelgrass habitat health in a eutrophic estuary?
Melanie Hayn, Roxanne Marino, Katherine Haviland, Robert Howarth, Karen McGlathery [N9]

Mechanisms of tropicalization: how enhanced grazing and abiotic interactions affect turtlegrass
Samantha Linhardt, Alex Rodriguez, Kenneth Heck [O1]

Regional variation in turtlegrass complexity drives changes in community structure across Northern Gulf of Mexico
Christian Hayes, M. Zachary Darnell, Delbert Smee, Charles Martin, Margaret Hall, Bradley Furman, Smith Samantha, Benjamin Belgrad, Kelly Darnell [O2]

How ‘clone’ can you go? Genotypic diversity and clonal architecture in the seagrass Halodule wrightii
Patrick Larkin, Ashley Hamilton, Anthony Lopez, Sebastian Rubiano-Rincon [O3]

The population genetic structure of Zostera marina along a temperature gradient in Tomales Bay, CA
Kenzie Pollard, Katherine DuBois, Nicole Kollars, John Stachowicz [O4]

Utilizing an in situ flume to quantify the limit of Zostera marina pCO2 foliar uptake
Flynn DeLany, Alyson Lowell, Amber Stubler, Bradley Peterson [O5]

WORKSHOPS
The Scientific Program Committee scheduled a series of 11 pre-conference workshops on Sunday, 3 November 2019 as an exciting kickoff to a great CERF conference, covering a wide array of topics. Limited tickets for some of the workshops may still be available at the registration desk on Sunday morning.
- Beginner GIS for Ecologists
- Building and Sustaining Effective Community-Research Partnerships
- Concepts and Controversies in Tidal Marsh Ecology Revisited
- Democratizing Access to Ocean Observing Technology
- Engaging in Coastal Science After Retirement: Brainstorming Options and Opportunities
- Out in the Open: Identifying, Understanding, and Addressing Implicit Bias
- Putting Science “In the Room:” Science Communication to Support Decision-Making
- Sharing and Applying Best Practices for Mapping/Monitoring Coastal SAV

FIELD TRIPS
CERF is proud to sponsor a series of pre-conference field trips on Sunday, 3 November 2019 appealing to a wide variety of interests. Limited tickets for some of the excursions may still be available at the registration desk on Sunday morning.
- America’s Amazon: 5 Rivers Delta Resource Center & Delta Safari
- For the Birds: Coastal Nature and Birding Tour of Grand Bay NERR
- Island Time: Dauphin Island Sea Lab and Historic Fort Gaines
- From Farm to Table: Oyster Aquaculture Tour and Tasting
Notes
INSTRUCTIONS:
Visit each exhibit booth and ask them about their product/services. Ask each exhibitor to initial or stamp their company name.
Name: ________________________________

Once you’ve visited at least 20 booths, fill in your name to the left and drop this page off at the registration desk to be entered to win a variety of prizes. Drawing will take place on Thursday, 7 October, during the Close Out Party & Student Awards Presentation from 5:30 pm – 8:30 pm. You must be present to win!

Exhibitors and Sponsors

- American Shore & Beach Preservation Association
- Aquatic Informatics Inc.
- Bay Instruments
- BioSonic, Inc.
- CERF and CERF Allies (shared)
- Dauphin Island Sea Lab
- Department of Marine Science – TAMUG
- East Carolina University
- Georgia Sea Grant
- Gulf of Mexico Research Initiative
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- Lowell Instruments LLC
- Louisiana State University
- LSU Coastal Sustainability Studio and Chevron
- Moffatt & Nichol
- National Academies of Sciences, Engineering, and Medicine Gulf Research Program
- NOAA Center for Coastal and Marine Ecosystems (CCME)
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- Richmond Region Tourism
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- University of Maryland Center for Environmental Science (UMCES)
- University of South Alabama Marine Sciences
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