



Sea Grant Activities at the 25th Biennial CERF Conference

November 2019, Mobile, AL

Notes for readers:

The following provides a guide to events involving Sea Grant personnel at CERF2019. It is based on information provided by the conference website; therefore, be sure to check the official program and signage on-site in case any information has changed. Entries are listed in chronological order of the presentation, and provide the session name, session time and location, presentation time, presentation title, and contribution of the associated Sea Grant personnel. Additional non-Sea Grant authors and co-authors are not listed here. Work may have been supported by non-Sea Grant entities. Co-authors may not be present at the conference.

Saturday, November 2

WORKSHOP:

Concepts and Controversies in Tidal Marsh Ecology Revisited

Dauphin Island Sea Lab

Sponsored by Georgia Sea Grant

Sunday, November 3

WORKSHOP continued:

Concepts and Controversies in Tidal Marsh Ecology Revisited

Dauphin Island Sea Lab

Sponsored by Georgia Sea Grant

WORKSHOP:

Building and Sustaining Effective Community-Researcher Partnerships

1:00 PM - 4:00 PM

Katy Hintzen, Brenda Asuncion, and Dr. Darren T. Lerner (Hawaii Sea Grant)

Sponsored by the National Sea Grant Office

. . . And catch the Krewe de Sea Grant as it marches in the second line procession kicking off the opening social!



Monday, November 4

Fish and Fisheries: Linking Science, Management, and Society

8:00 AM-2:30 PM 201A

8:00 am

A GLOBAL REVIEW OF TESTED AND REPORTED SOUND PRODUCTION IN FISHES

Co-author Laura Reynolds (Florida Sea Grant)

Ecosystems, Human Well-Being and Resilience: Characterizing Socio-Ecological Systems

8:00 AM-9:30 AM 204B

8:30 am

SUSTAINABILITY IN CHESAPEAKE BAY SHORESCAPES: CLIMATE CHANGE, MANAGEMENT DECISIONS, AND ECOLOGICAL FUNCTIONS

Co-authors Shana Jones (Georgia Sea Grant) and Michelle Covi (Virginia Sea Grant)

Social and Natural Sciences: When the Stars Align—or Don't

10:00 AM-11:30 AM 204B

10:00 am

ENHANCING CROSS DISCIPLINARY RESEARCH TO APPLICATION THROUGH BOUNDARY ORGANIZATIONS

Stephen Sempier and LaDon Swann (Mississippi-Alabama Sea Grant Consortium)

Biogeochemical Cycling and Transport Across the Land-Ocean Continuum

8:00 AM-2:30 pm 202A

10:15 am

APPLYING THE ISOTOPE PAIRING TECHNIQUE TO MEASURE NITROGEN DYNAMICS IN A COASTAL LOUISIANA DELTAIC FLOODPLAIN

Co-author Robert Twilley (Louisiana Sea Grant)

Microbes to Maps: Data-Model Integration for Coastal Wetland Blue Carbon

10:00 AM-2:30 PM 203A

10:30 am

ECOSYSTEM LEVEL CARBON STOCKS AND SEQUESTRATION RATES ACROSS COASTAL MORPHOLOGY EXPLAIN MANGROVE BLUE CARBON MITIGATION

Robert Twilley (Louisiana Sea Grant)



Coastal Fisheries Town Hall: Threats, Challenges and Solutions for Coastal Fisheries Sustainability in a Changing World

11:30 AM-1:00 PM

Marcus Drymon (Mississippi-Alabama Sea Grant Consortium)

Julie Lively (Louisiana Sea Grant)

Impacts of Multiple Disturbances on Coastal Ecosystem Structure and Function

8:00 AM-2:30 PM 201C

1:15 pm

THE INFLUENCE OF STRUCTURE ON ECOSYSTEM PROCESSES AMONG SEAGRASS MEADOWS

Co-authors Laura Reynolds and Savanna Barry (Florida Sea Grant)

1:30 pm

SEAGRASS ECOSYSTEMS AND ENVIRONMENTAL CHANGE: EFFECTS OF TEMPERATURE, PHOSPHORUS ADDITION, AND TROPICALIZATION ON PLANT-HERBIVORE INTERACTIONS

Co-author Laura Reynolds (Florida Sea Grant)

Microbes to Maps: Data-Model Integration for Coastal Wetland Blue Carbon

10:00 AM-2:30 PM 203A

2:08 pm

TIDAL FRESHWATER WETLANDS ADAPT TO MULTIPLE PLATFORM ELEVATIONS IN RESPONSE TO COASTAL DYNAMICS

Co-author Robert Twilley (Louisiana Sea Grant)

Poster Session

4:30 PM-7:00 pm

HOW'D YOU GET THAT NUMBER? PRACTICAL PROGRAM TOOLS TO CHARACTERIZE ECONOMIC BENEFITS AND IMPACTS

Kelly Samek, Alison Krepp, and Susan Holmes (National Sea Grant Office)

THE INDEPENDENT AND INTERACTIVE EFFECTS OF TBT AND HYPOXIA ON THE OYSTER CRASSOSTREA VIRGINICA

Co-author Stephanie Showalter Otts (National Sea Grant Law Center)

GENE EXPRESSION ANALYSIS IN THE EASTERN OYSTER (CRASSOSTREA VIRGINICA) EXPOSED TO HYPOXIC CONDITIONS

Co-author Stephanie Showalter Otts (National Sea Grant Law Center)



QUANTIFYING MICROPLASTIC POLLUTION IN A FLORIDA ESTUARY

Co-author Vincent Encomio (Florida Sea Grant)

OUR COASTS ARE TRASHED, NOW WHAT? SEEKING EFFECTIVE TRASH SOLUTIONS FROM URBAN CREEK MONITORING DATA

Theresa Talley and Nina Venuti (California Sea Grant)

MICROPLASTICS IN THE MISSISSIPPI RIVER BASIN

Louisiana Sea Grant-supported research

TO WAKE, OR NOT TO WAKE?

Co-author Eric Sparks (Mississippi-Alabama Sea Grant Consortium)

ENGAGING THE FISHING COMMUNITY TO REMOVE MARINE DEBRIS AND QUANTIFY IMPACTS

Co-authors Ben Posadas and Eric Sparks (Mississippi-Alabama Sea Grant Consortium)

IMAGING SPECTROSCOPY AND RADAR DATA INTEGRATION FOR ASSESSING VEGETATION SPECIES ASSEMBLAGE AND BIOMASS

Co-author Robert Twilley (Louisiana Sea Grant)

EVALUATING COASTAL RESTORATION USING DRONES

Louisiana Sea Grant-supported research

EFFECTS OF HYDROPERIOD ON THE DECOMPOSITION OF BELOWGROUND BIOMASS IN WAX LAKE DELTA, COASTAL LOUISIANA

Co-author Robert Twilley (Louisiana Sea Grant)

Tuesday, November 5

Exploring Interdisciplinary and Collaborative Sea-Level Rise Research for Coastal Adaptation

8:00 AM-11:30 AM 201B

Session Co-Chair Renee Collini (Mississippi-Alabama Sea Grant Consortium)

Marine Plastic Pollution From Nano- to Macro-Scale: Fate, Effects, Solutions

8:00 AM-11:30 AM 203B

Session Co-Chair Howard Forbes, Jr. (Puerto Rico Sea Grant)



Carbon Fluxes in Coastal Systems

8:00 AM-4:30 PM 201D

8:00 am

**FACTORS INFLUENCING CARBON STOCKS AND ACCUMULATION RATES
IN NEW ENGLAND**

Co-author Juliet Simpson (MIT Sea Grant)

Living Shorelines and Marsh Nature-Based Infrastructure: Lessons Learned

8:00 AM-4:30 PM 204B

8:15 am

**LESSONS LEARNED FROM LIVING SHORELINE IMPLEMENTATION AND
PLANNING IN FLORIDA'S CENTRAL GULF COAST**

Savanna Barry (Florida Sea Grant)

8:45 am

**EVALUATING THE IMPACTS OF LARGE-SCALE BREAKWATERS ON
FRINGING MARSHES IN HIGH WAVE ENERGY ENVIRONMENTS**

Sara Martin and Eric Sparks (Mississippi-Alabama Sea Grant Consortium)

Exploring Interdisciplinary and Collaborative Sea-Level Rise Research for Coastal
Adaptation

8:00 AM-11:30 AM 201B

9:08 am

**A GAMEFIED APPROACH TO ENGAGING RESIDENTS IN THE SCIENCE OF
ADAPTATION AND BUILDING COASTAL RESILIENCE**

Co-author Michelle Covi (Virginia Sea Grant)

Non-Indigenous and Invasive Species in Estuaries and Coasts

10:00 AM-11:30 AM 201A

10:30 am

**ENVIRONMENTAL INFLUENCE ON COMPETITIVE INTERACTIONS
BETWEEN A NATIVE AND INVASIVE SAV SPECIES**

Co-author Laura Reynolds (Florida Sea Grant)

Marine Plastic Pollution From Nano- to Macro-Scale: Fate, Effects, Solutions

8:00 AM-11:30 AM 203B

10:30 am

MICROPLASTICS IN MISSISSIPPI RIVER FISHES

Louisiana Sea Grant-supported research



Exploring Interdisciplinary and Collaborative Sea-Level Rise Research for Coastal Adaptation

8:00 AM-11:30 AM 201B

10:45 am

A PROCESS MODEL FOR THE CO-PRODUCTION OF CLIMATE KNOWLEDGE IN THE TAMPA BAY ESTUARY

Co-author Libby Carnahan (Florida Sea Grant)

CERF Inclusion Luncheon

11:30 AM-1:00 PM Renaissance Riverview Hotel

Sponsored by the Gulf of Mexico Sea Grant Programs and co-organized by Tina Miller-Way (Mississippi-Alabama Sea Grant Consortium)

New Insights in the Gulf of Mexico Nine Years After the *Deepwater Horizon* Oil Spill

1:00 PM-2:30 PM 201C

Session Co-Chair Emily Maung-Douglass (Louisiana Sea Grant)

Living Shorelines and Marsh Nature-Based Infrastructure: Lessons Learned

8:00 AM-4:30 PM 204B

1:45 pm

MAXIMIZING LIVING SHORELINE DESIGNS FOR RUNOFF POLLUTION FILTRATION: LESSONS LEARNED FROM MULTI-YEAR PROJECTS

Co-authors Sara Martin and Eric Sparks (Mississippi-Alabama Sea Grant Consortium)

3:15 pm

TRANSFORMING BULKHEADS AND ERODING SEDIMENTARY SHORELINES INTO HEALTHY LIVING SHORELINES

Co-author Eric Sparks (Mississippi-Alabama Sea Grant Consortium)

3:45 pm

CONNECTING LIVING SHORELINES AND NATURE-BASED INFRASTRUCTURE WITH THE NATIONAL FLOOD INSURANCE PROGRAM'S COMMUNITY RATING SYSTEM

Niki Pace (Louisiana Sea Grant)

4:00 pm

SHORELINES PROTECTION DECISIONS: FACTORS INFLUENCING THE FUTURE OF VIRGINIA'S TIDAL WETLANDS

Michelle Covi (Virginia Sea Grant)



Advances in Coastal Harmful Algal Bloom Science

1:00 PM-4:30 pm 201A

4:00 pm

BUILDING CONSENSUS ON FLORIDA'S HARMFUL ALGAL BLOOMS

Lisa Krinsky and Betty Staugler (Florida Sea Grant)

Wednesday, November 6

Collaborative Modeling for Responsive, Relevant, and Timely Coastal Management

10:00 AM-11:30 AM 203A

Session Co-Chair Samuel J. Lake (Virginia Sea Grant)

10:00 am

OYSTERFUTURES: TESTING A COLLABORATIVE MODELING PROCESS FOR FISHERIES MANAGEMENT

Co-author Troy Hartley (Virginia Sea Grant)

Ecosystem-Based Management: Challenges and Opportunities for Regional Implementation

10:00 AM-11:30 AM 204B

10:00 am

EMERGING RESEARCH NEEDS FOR REGIONAL ECOSYSTEM-BASED MANAGEMENT: TALES FROM THE FIELD

Co-author Fredrika C. Moser (Maryland Sea Grant)

Seagrasses: Sentinel Species in a Changing World

8:00 AM-2:30 PM 204A

10:08 am

GENETIC DIVERSITY OF HALODULE WRIGHTII IS RESISTANT TO LARGE SCALE DIEBACK

Laura Reynolds and Vincent Encomio (Florida Sea Grant)

10:15 am

THE HIDDEN PROMISCUITY OF HALODULE WRIGHTII: OBSERVATIONS OF SEXUAL REPRODUCTION THROUGHOUT FLORIDA, USA

Co-author Laura Reynolds (Florida Sea Grant)



Outreach and Engagement of Our Estuaries, Coasts, and Oceans

10:00 AM-11:30 AM 203B

10:23 am

RECOMMENDATIONS FOR THE INTEGRATION OF OUTREACH WITH RESEARCH: THE GULF OF MEXICO RESEARCH INITIATIVE EXPERIENCE

Tina Miller-Way (Mississippi-Alabama Sea Grant Consortium)

Quantification and Valuation of Ecosystem Services Associated with Shellfish

8:00 AM-11:30 AM 201A

10:30 am

CHARACTERIZING THE HABITAT FUNCTION OF BIVALVE AQUACULTURE USING UNDERWATER VIDEO

Co-author Kate Litle (Washington Sea Grant)

11:00 am

MIND THE GAP: A MULTI-REGIONAL UNDERSTANDING OF THE CULTURAL ECOSYSTEM SERVICES PROVIDED BY SHELLFISH

Co-author William Walton (Mississippi-Alabama Sea Grant Consortium)

11:15 am

ASSESSING THE COSTS AND BENEFITS OF DIFFERENT CULTURE METHODS ON AN ALABAMA COMMERCIAL OYSTER FARM

Co-authors Russell Grice and William Walton (Mississippi-Alabama Sea Grant Consortium)

Estuarine and Coastal Plankton Communities: Sentinels of Evolving Ecosystems

8:00 AM-2:30 PM 201B

1:00 pm

SEASONAL DIFFERENCES IN MESOZOOPLANKTON COMMUNITIES IN A SHALLOW, WIND-DRIVEN ESTUARY IN SOUTHERN LOUISIANA

Louisiana Sea Grant-supported research

Plenary:

Coastal Science Outreach: Citizen Science and Communication

3:00 PM-4:30 PM

Emily Maung-Douglass (Louisiana Sea Grant)



Poster Session

4:30 PM-7:00 pm

PROVIDING FELLOWSHIP OPPORTUNITIES THROUGH PARTNERSHIP, A SEA GRANT MODEL

Maddie Kennedy, Nikola Garber, and Jonathan Lilley (National Sea Grant Office)

A LOUISIANA GRADUATE EDUCATION PARTNERSHIP: THE COASTAL SCIENCE ASSISTANTSHIP PROGRAM (CSAP)

Louisiana Sea Grant partnership

TAPPING IN TO K-12 STUDENTS TO GATHER TREE-RING DATA

Louisiana Sea Grant-supported research

USING INTERACTIVE ACTIVITIES FOCUSED ON SEAGRASS ECOSYSTEMS TO TEACH CHILDREN MARINE CONSERVATION AND TROPHIC ECOLOGY

Co-author Laura Reynolds (Florida Sea Grant)

SEAGRASS MONITORING IN PENSACOLA BAY: A PARTNERSHIP BETWEEN CITIZENS AND STUDENTS

Co-authors Rick O'Connor and Christina Verlinde (Florida Sea Grant)

SEAFOOD FORENSICS: IDENTIFYING THE GEOGRAPHICAL ORIGIN OF CRAWFISH USING STABLE ISOTOPE ANALYSIS

Co-author Evelyn Gutierrez Watts (Louisiana Sea Grant)

THE RELATIONSHIP BETWEEN FRESHWATER DISCHARGE AND FISH COMMUNITIES IN A GULF OF MEXICO ESTUARY

Co-authors David Chargaris and Micheal Allen (Florida Sea Grant)

ENHANCING LIVING SHORELINE RESTORATION PRACTICES USING NATIVE ECOSYSTEM ENGINEERS: GEUKENSIA GRANOSISSIMA AND SPARTINA ALTERNIFLORA

Louisiana Sea Grant-supported research

PERFORMANCE OF LOW-COST WAVE GAUGES COMPARED TO COMMERCIAL GAUGES

Co-author Eric Sparks (Mississippi-Alabama Sea Grant Consortium)



Thursday, November 7

Putting Ecogeomorphology into Practice: Predicting and Managing Flow-Sediment-Biota Interactions

8:00 AM-9:30 AM 202B

8:15 am

ENVIRONMENTAL FACTORS CONTROLLING NITRATE REMOVAL POTENTIAL IN DELTAIC FLOODPLAIN WETLANDS

Co-author Robert Twilley (Louisiana Sea Grant)

Marshes to Mangroves: The Support of Fisheries by Estuarine Wetlands

8:00 AM-2:30 PM 201A

8:15 am

UNDERSTANDING LANDSCAPE LEVEL IMPACTS OF INCREASED TEMPERATURE—MANGROVE ENCROACHMENT INFLUENCE ON SEAGRASS MEADOWS

Co-author Laura Reynolds (Florida Sea Grant)

Solutions-Based Science to Support Coastal Environmental Management: Approaches and Challenges

8:00 AM-4:30 PM 204B

8:15 am

REFLECTIONS FORM EIGHT YEARS OF COLLABORATIVE SCIENCE IN COASTAL ALABAMA

Eric Sparks (Mississippi-Alabama Sea Grant Consortium)

Education Partnerships in Coastal and Marine Science

8:00 AM-11:30 AM 203B

9:00 am

TEAM SCIENCE APPROACH FOR COASTAL AND MARINE RESILIENCE

Co-author Troy Hartley (Virginia Sea Grant)

Increasing Coastal and Estuarine Hypoxia: Causes, Responses, and Remedies

8:00 AM-9:30 AM 202A

9:15 am

PHYSICAL DRIVERS OF DISSOLVED OXYGEN VARIABILITY IN A SHALLOW HIGHLY STRATIFIED ESTUARY

Co-author Renee Collini (Mississippi-Alabama Sea Grant Consortium)



Solutions-Based Science to Support Coastal Environmental Management: Approaches and Challenges

8:00 AM-4:30 PM 204B

9:15 am

**RESTORATION-INDUCED CHANGES TO PHYTOPLANKTON COMMUNITIES:
DO CYANOBACTERIA AFFECT OYSTER FEEDING AND SELECTIVITY?**

Louisiana Sea Grant-supported research

Seagrasses: Sentinel Species in a Changing World

8:00 AM-4:30 PM 204A

9:15 am

**PREDATION AND HERBIVORY ACROSS SPATIAL AND TEMPORAL
SCALES: A FISHY TALE**

Co-authors Savanna Barry and Laura Reynolds (Florida Sea Grant)

Education Partnerships in Coastal and Marine Science

8:00 AM-11:30 AM 203B

10:30 am

**A PATHWAY AND PARTNERSHIP PROGRAM TO ENGAGE U.S. VIRGIN
ISLANDERS IN THE MARINE SCIENCES**

Co-author Howard Forbes, Jr. (Puerto Rico Sea Grant)

10:45am

**ENVIRON-MENTORS: FOSTERING AN INTEREST IN STEM THROUGH
COASTAL AND MARINE SCIENCE EDUCATION**

Louisiana Sea Grant partnership

Solutions-Based Science to Support Coastal Environmental Management: Approaches and Challenges

8:00 AM-4:30 PM 204B

10:45 am

**CHALLENGES AND OPPORTUNITIES FOR SUSTAINING SOUTHEASTERN
US COASTAL WETLANDS AND OYSTER REEFS**

Co-author Eric Sparks (Mississippi-Alabama Sea Grant Consortium)

Coastal Sediment Transport Processes

10:00 AM-4:30 PM 202B

10:45 am

**MODELING MARSH EDGE RETREAT ACCOUNTING FOR WAVES, WATER
LEVEL, SALINITY, AND PONDING**

Louisiana Sea Grant-supported research



Education Partnerships in Coastal and Marine Science

8:00 AM-11:30 AM 203B

11:15 am

YOUTH OCEAN EXPLORERS: A PATHWAY TO DIVERSIFYING THE FIELD OF MARINE SCIENCE

Howard Forbes, Jr. (Puerto Rico Sea Grant)

Identifying Restoration Priorities and Evaluating Socio-Ecological Benefits at Multiple Scales

8:00 AM-4:30 pm 203A

1:00 pm

EVALUATING CUMULATIVE EFFECTS TO EFFECTIVELY PLAN AND ASSESS REGIONAL RESTORATION EFFORTS IN LOUISIANA, USA

Co-author Robert Twilley (Louisiana Sea Grant)

Solutions-Based Science to Support Coastal Environmental Management: Approaches and Challenges

8:00 AM-4:30 PM 204B

1:30 pm

USING SENTINEL SITE COOPERATIVES TO FACILITATE SCIENTIST-STAKEHOLDER ENGAGEMENT: EXAMPLES FROM THE CHESAPEAKE BAY

Taryn A. Sudol (Maryland Sea Grant)

Artistic Pathways to Scientific Understanding

3:00 PM-4:30 pm 201B

Session Co-Chair Sarah E. Kolesar (Oregon Sea Grant)

Using Citizen Science to Address Complex Environmental Problems

1:00 PM-4:30 pm 203B

3:15 pm

ENGAGING CITIZEN SCIENTISTS TO ASSESS LARGE-SCALE MICROPLASTIC DISTRIBUTIONS

Amanda Sartain and Eric Sparks (Mississippi-Alabama Sea Grant Consortium)



Solutions-Based Science to Support Coastal Environmental Management: Approaches and Challenges

8:00 AM-4:30 PM 204B

3:45 pm

PREPARING FOR AND RECOVERING FROM DISASTER, THE SEA GRANT WAY

Maddie Kennedy (National Sea Grant Office), Christopher Winslow (Ohio Sea Grant), Nancy Balcom (Connecticut Sea Grant), Stephen Sempier (Mississippi-Alabama Sea Grant Consortium), David Hansen (Oregon Sea Grant), Joshua Brown (National Sea Grant Office)

Artistic Pathways to Scientific Understanding

3:00 PM-4:30 pm 201B

3:45 pm

IMMERSING THE ARTS: MARINE-THEMED ART MAKES WAVES

Syma Ebbin (Connecticut Sea Grant)

Identifying Restoration Priorities and Evaluating Socio-Ecological Benefits at Multiple Scales

8:00 AM-4:30 pm 203A

4:15 pm

MODELING OYSTER RESTORATION SUITABILITY IN TEXAS ESTUARIES: A MACHINE LEARNING AND BIG DATA APPROACH

Anthony Reisinger (Texas Sea Grant)



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