



February 3-6, 2020
Tampa, FL

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Welcome to the Eighth Annual Gulf of Mexico Oil Spill & Ecosystem Science Conference

February 3-6, 2020

Tampa Marriott Water Street Hotel, 505 Water Street, Tampa, FL

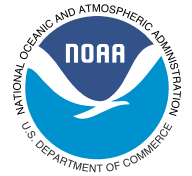
In its eighth year, the Gulf of Mexico Oil Spill and Ecosystem Science (GoMOSES) Conference has cultivated a community actively engaged in collaborations and partnerships to advance scientific discovery and application in the Gulf of Mexico. With the Gulf of Mexico Research Initiative (GoMRI) wrapping up its activities, including GoMOSES, this is a bittersweet moment. However, the focus of this year's program, "2020: A Milestone in Gulf of Mexico Research," celebrates the accomplishments of the last 10 years and considers what the next 10 years may hold for the Gulf science and management community.

On Tuesday, the program opens with a retrospective of the last decade and a look at potential opportunities in the coming one. Rita Colwell, through her keynote address, and invited speaker John Shepherd will summarize GoMRI's achievements and impact on Gulf oil spill and ecosystem science. Larry McKinney will address the current state of Gulf science, followed by an expert panel that will consider the future of research in the Gulf. Twenty-eight scientific sessions will offer a combination of new information, synthesis, and debate. Workshops and events scheduled throughout the program highlight data management, funding programs, and opportunities for early-career scientists. In closing, we will look forward to what opportunities may exist for continued science and collaboration to inform regional, national, and international priorities over the next 10 years.

This year GoMOSES returns to Tampa, Florida, host of the 2016 conference and a dynamic city that feels both familiar and new. We hope you have a chance to enjoy the city's history and traditions, revisit your favorite places, or discover something new. Finally, thank you to the sponsors, the Executive Committee, and the conference staff for your time and dedication — you have again made this event a success.

Thank you for your participation. We look forward to a fantastic week and wish you luck in your future endeavors!

Partners & Supporters



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EARLY-CAREER RESEARCH FELLOWSHIP

Our Early-Career Research Fellows receive two years of funding to focus on improving offshore energy system safety and the well-being of coastal communities and ecosystems.

**Applications are due
February 19, 2020.**



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SCIENCE POLICY FELLOWSHIP

Our Science Policy Fellows gain first-hand experience as they spend one year alongside decision-makers at agencies and organizations across Alabama, Florida, Louisiana, Mississippi, and Texas.

**Applications are due
March 4, 2020.**

Stay Connected!

In order to keep paper usage at a minimum, the GoMOSES Conference is offering most of its content digitally. All the information you need can be found on the conference webpage:

<http://gulfofmexicoconference.org>.

In addition, there are several other ways to stay connected:

Download the official conference app to:

- Get immediate conference updates and schedule changes;
 - Browse the conference schedule and abstracts;
 - Create your own schedule;
 - Use the Maps feature to locate your talks and sessions;
 - Make notes and comments on scientific sessions you attend;
 - Plus more!
1. Download instructions are the same for both Apple and Android phones.
 2. Search for “Crowd Compass Attendee Hub” in your phone’s app store, download, and install
 3. Within the Attendee Hub app, search for “Gulf”
 4. Download the 2020 GoMOSES Conference
 5. Log in by following the directions



Search our online abstracts database at:

<https://event.crowdcompass.com/2020gomoses>

Social Networking:



[www.facebook.com/
gulfscienceconference](http://www.facebook.com/gulfscienceconference)



[@gulfconference](https://twitter.com/gulfconference)
[#GoMOSES](https://twitter.com/gulfconference)

Check-in and On-site Registration:

Check-in and on-site registration will take place in the Grand Foyer (second floor). The registration desk will be open at the following times:

Monday, February 3: 8:00a — 5:30p
 Tuesday, February 4: 7:30a — 5:30p
 Wednesday, February 5: 7:30a — 5:30p
 Thursday, February 6: 7:30a — 12:00p

Meals:

The following meals are provided for conference attendees as part of your registration fees.

Continental breakfast in the Grand Foyer:

Tuesday, February 4: starting at 7:30a
 Wednesday, February 5: starting at 7:30a
 Thursday, February 6: starting at 7:30a

Lunch is not provided. The Tampa Marriott Water Street Hotel has two on-site restaurants on the first floor, as well as a coffee shop. You can also explore options along the Waterfront and in nearby downtown Tampa.

Breaks will take place in the Grand Foyer.

Wi-Fi/Internet:

Complimentary Wi-Fi and Internet are available in the Marriott guest rooms. Wi-Fi is also provided in the conference meeting space.

Username: GulfConference

Passcode: GOMOSSES20

Exhibits:

Exhibits from conference sponsors and partners are located in the Grand Foyer for the duration of the conference. We encourage you to stop by during breaks!

Information for Oral Presenters

Each session you present in will have a laptop with your presentation pre-loaded and a laser pointer.

Presentation upload will take place in the Grand Foyer on the second floor.

You must upload your presentation at least one hour before your session is scheduled to begin. We advise that you upload your presentation the day before your session to avoid lines and to ensure your presentation is uploaded in time.

The Presentation Upload Area will be open at the following times:

Monday, February 3: 12:00p — 5:30p
 Tuesday, February 4: 7:30a — 6:00p
 Wednesday, February 5: 7:30a — 6:00p
 Thursday, February 6: 7:30a — 10:30a

Your presentation should be no more than 12 minutes in length (unless you have been designated a 30-minute time slot). This allows for the transition of speakers and keeps the session running on time.

Please make sure your presentation is in PC-compatible PowerPoint format set at a widescreen (16:9) ratio. Please use standard fonts, and if you include videos, provide the original files to the technical staff. You will not be able to stream videos from an online source. This will minimize technical disruptions during the meeting. You will be able to test your presentation ahead of time in the Presentation Upload Area.

Information for Poster Presenters

All Poster Sessions will take place in the Florida Ballroom on the second floor. The room will be available for you to hang your poster in advance between 2:00p and 5:30p on Monday, February 3.

Posters will hang in the Florida Ballroom from Monday afternoon through the duration of the conference.

Posters must be removed after the Wednesday poster session on February 5. Any posters not removed by their presenters at this time will be discarded.

Poster size should be no more than 48in high x 48in wide.

Media Policy

Media representatives are welcome to attend the 2020 Gulf of Mexico Oil Spill & Ecosystem Science Conference. Media participants will have a separate table to check-in at registration. Please look for the “Media” sign in the registration area in the Grand Foyer (second floor). Interview space can be provided upon request.

The conference’s media policy is designed to ensure a professional forum in which presenters and other meeting registrants can discuss science-based issues freely and in which their concerns about proprietary research data and other information is acknowledged and respected. It is also designed to ensure a forum in which journalists and other media representatives can gather the information they need to deliver factual reporting.

The conference intends to assist media representatives by keeping them updated through press releases, news updates, and social media. The conference will also help journalists by arranging interviews.

In return, the conference would like all media representatives to:

Wear the designated media badge provided by conference organizers and identify themselves as media when attending conference events or talking with any conference participants.

Obtain permission from Communications and Media Staff before filming, taping, or otherwise recording any activity or interview at the conference. Broadcast journalists can record the opening and closing plenaries but audio and video taping of any scientific session is not permitted.

Any media representative who sells, markets, or represents a company for purposes of obtaining advertising or subscriptions from any registrant will immediately forfeit press credentials.

Photo Policy

Attendees are permitted to take photos during the conference, unless a presenter has included the “no photos” image in their slides.

Official conference photographs will be taken. By registering for this meeting, you agree to allow the conference to use your photo in any subsequent conference-related publication or website.

Audio and Video Policy

Attendees are not permitted to record, film, or tape any scientific session.

Cell Phone Policy

Out of courtesy to our speakers and attendees, we request that all cell phones be turned off during sessions and meetings.

Code of Conduct

The Gulf of Mexico Oil Spill & Ecosystem Science Conference is dedicated to providing a harassment-free conference experience for everyone, regardless of gender identity and expression, age, sexual orientation, disability, physical appearance, body size, race, ethnicity, religion (or lack thereof), or technology choices. We do not tolerate harassment of conference participants in any form. Sexual language and imagery are not appropriate for any conference venue, including talks, workshops, parties, Twitter, and other online media. GoMOSES participants violating these rules may be sanctioned or expelled from the conference without a refund at the discretion of the Executive Committee.

Reporting

If you are the subject of unacceptable behavior or have witnessed any such behavior, please immediately notify conference staff at the conference information desk or via email at gulfconference@oceanleadership.org. Anyone experiencing or witnessing behavior that constitutes an immediate or serious threat to individual or public safety at GoMOSES is advised to contact security or local law enforcement.

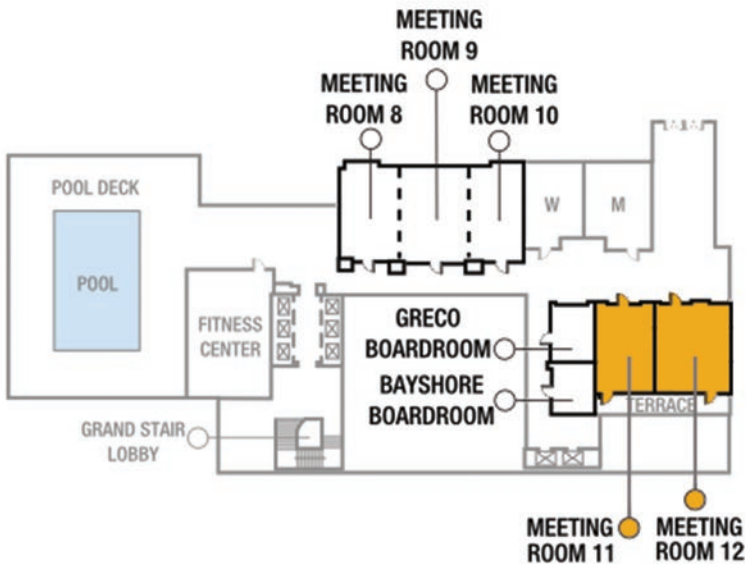
Floorplans

Activities for the 2020 Gulf of Mexico Conference will take place in the Tampa Marriott Water Street Hotel (505 Water Street). Rooms will be noted for each session, meeting, or event. Most conference activities will take place on the second floor of the Tampa Marriott Hotel, including registration, scientific sessions, breakfast, breaks, and plenary sessions.

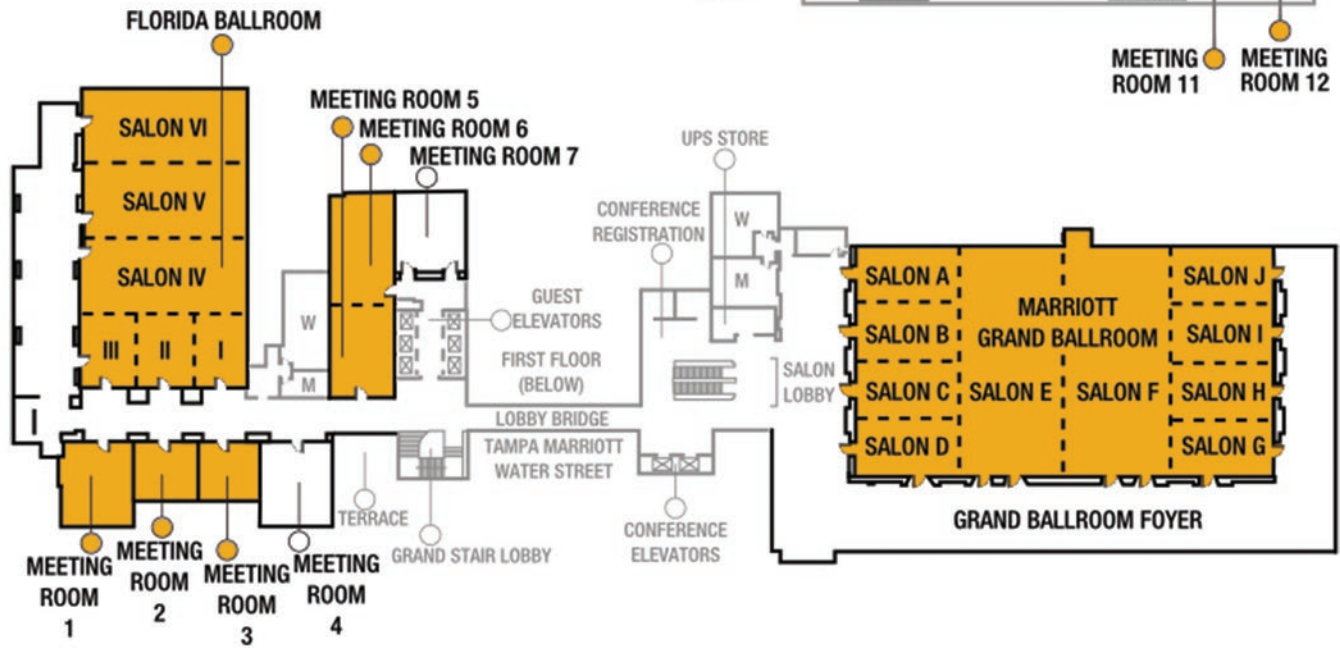
Meetings and workshops held in Meeting Rooms 11 and 12 will be found on the third floor.

The Tuesday and Wednesday night poster sessions and receptions will take place in the Florida Ballroom on the second floor. The Gulf of Mexico Tools Café will be held on Tuesday evening in the Florida Ballroom.

Third Floor

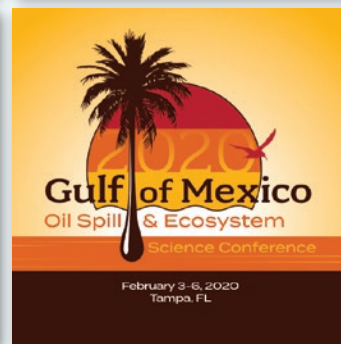


Second Floor





On behalf of the research board, thank you to the Gulf research communities for all your efforts over the past eight years of this conference. Your remarkable findings have dramatically increased our understanding of the Gulf, oil spills, and ecosystem science as a whole. As GoMRI sunsets, we will continue working tirelessly to synthesize and communicate all we have learned to as many different audiences as possible, and look forward to even more incredible scientific advancements in the years to come.



GRIIDC

The legacies of this program and all of its researchers can be discovered on the GRIIDC and GoMRI Synthesis websites.



GoMRI Synthesis



Monday, February 3

Time	Event	Location
8:00a – 5:30p	Registration and Check-In Open	Grand Foyer
12:00p – 5:30p	Presentation Upload Open	Grand Foyer
2:00p – 5:30p	Exhibit Set Up	Grand Foyer
2:00p – 5:30p	Poster Set Up	Florida Ballroom

Workshops and Associated Meetings

1:00p – 5:00p	An Introduction to the Environmental Unit’s Role and Responsibilities During an Oil Spill	Meeting Room 5
1:00p – 5:00p	Recent Advances in Estimating and Measuring Oil Slick Thickness (Closed)	Grand Salon A
5:00p – 7:00p	Graduate Student and Early-Career Networking Reception	Il Terrazzo Room (1st Floor)



tw

Tuesday, February 4

Time	Event	Location
7:30a – 5:30p	Registration and Check-In Open	Grand Foyer
7:30a – 6:00p	Presentation Upload and Exhibits Open	Grand Foyer
7:30a – 7:30p	Poster Hall Open	Florida Ballroom

Opening Plenary Program Schedule

Starting at 7:30a	BREAKFAST	Grand Foyer
9:30a – 10:45a	Welcome and Introduction: The Gulf of Mexico +10 Years and Counting	Grand Salon E/F
10:45a – 11:00a	BREAK	Grand Foyer
11:00a – 12:00p	Panel and Discussion	Grand Salon E/F
12:00p – 2:00p	LUNCH BREAK	

Scientific Program Schedule

2:00p – 3:30p	Session 001	Grand Salon A/B
	Session 002	Grand Salon F
	Session 003	Grand Salon C/D
	Session 004	Grand Salon E
	Session 005	Grand Salon G/H
	Session 006	Grand Salon I/J
3:30p – 4:00p	BREAK	Grand Foyer
4:00p – 5:30p	Session 001	Grand Salon A/B
	Session 002	Grand Salon F
	Session 003	Grand Salon C/D
	Session 004	Grand Salon E
	Session 005	Grand Salon G/H
	Session 007	Grand Salon I/J
5:30p – 7:30p	Poster Session and Reception (Featuring Sessions 001 – 014)	Florida Ballroom

Workshops and Associated Meetings

12:00p – 2:00p	Canada's Multi-Partner Research Initiative	Meeting Room 5
12:30p – 1:30p	<i>Dispatches from the Gulf 3</i> Screening	Grand Salon A/B
12:30p – 2:00p	GRIIDC Advisory Board Lunch (Closed)	Meeting Room 12
5:30p – 7:30p	Gulf of Mexico Data Tools Café	Florida Ballroom

Opening Plenary

The Gulf of Mexico +10 Years and Counting
Tuesday, February 4, 9:30a – 12:00p, Grand Salon E/F

As Aristotle said, “The more you know, the more you know you don’t know.” During the decade since the Deepwater Horizon oil spill, great strides forward have been made in Gulf research — and yet, there is still more to learn about this unique region. The 2020 opening plenary attempts to summarize 10 years of scientific discoveries, innovative technology, and a greater understanding of Gulf of Mexico ecosystems and communities and considers how to shape the Gulf of Mexico research “engine” going forward.

Welcome and Introduction

Chuck Wilson, Gulf of Mexico Research Initiative

Keynote

Basic Research Directed to Societal Benefit: The Gulf of Mexico Research Initiative Paradigm

Rita Colwell, GoMRI Research Board

GoMRI Synthesis & Legacy: Overview and Update

John Shepherd, University of Southampton

How Deepwater Horizon Changed the Trajectory of Gulf Research (Some Winners, Some Losers, and a Few Still Finding Their Footing)

Larry McKinney, Harte Research Institute

A Vision for the Future: Integrating Gulf of Mexico Research

Panel



LaDon Swann (Moderator)
Mississippi-Alabama
Sea Grant Consortium



Christoph Aepli
Bigelow Laboratory
for Ocean Sciences



Ed Buskey
University of Texas
at Austin



Jessica Henkel
Gulf Coast Ecosystem
Restoration Council



Julien Lartigue
NOAA RESTORE Program



Steve Murawski
University of South Florida



Burt Singer
University of Florida



Charles "Chuck" Wilson, *GoMRI*

Charles "Chuck" Wilson serves as the GoMRI Chief Scientific Officer, providing scientific and research advice and leadership to GoMRI. He is a distinguished scientist and academic leader and has held numerous faculty and administrative posts at Louisiana State University.



Rita Colwell, *GoMRI Research Board*

Rita Colwell has held many advisory positions in the U.S. government, nonprofit science policy organizations, and private foundations, as well as in the international scientific research community. In her capacity as Director of the National Science Foundation (1998-2004), she served as Co-chair of the Committee on Science of the National Science and Technology Council. Some of her major interests include K-12 science and mathematics education, graduate science and engineering education, and increased participation of women and minorities in science and engineering. She is a nationally respected scientist and educator and has authored or co-authored 19 books and more than 800 scientific publications. She produced the award-winning film, *Invisible Seas*, and has served on editorial boards of numerous scientific journals. She serves as Chair of the Research Board for the Gulf of Mexico Research Initiative (2010-2020).



John Shepherd, *University of Southampton*

John Shepherd is a Professorial Research Fellow in Earth System Science in the School of Ocean and Earth Science, National Oceanography Centre, University of Southampton, UK. He is a physicist by training and has worked on the transport of pollutants in the atmospheric boundary layer, the dispersion of tracers in the deep ocean, the assessment and control of radioactive waste disposal in the sea, the assessment and management of marine fish stocks, and most recently Earth system modeling and climate change.



Larry McKinney, *Harte Research Institute*

Larry McKinney is the Senior Executive Director of the Harte Research Institute for Gulf of Mexico Studies, leading an interdisciplinary team that integrates science, policy, and socioeconomic expertise to assure an economically and environmentally sustainable Gulf of Mexico. He has more than 50 years of experience working in the Gulf of Mexico as a researcher and resource manager. His publications and reports reflect a diverse range of expertise from benthic ecology to fisheries to ecosystem health.



LaDon Swann, *Mississippi-Alabama Sea Grant Consortium*

LaDon Swann is the director of the Mississippi-Alabama Sea Grant Consortium and serves as the national Sea Grant aquaculture liaison. He is responsible for implementing practical solutions to coastal issues through competitive research, graduate student training, extension, outreach, and K-12 education in Alabama and Mississippi. He has conducted research on shellfish aquaculture and habitat restoration, and he has many years of experience designing, delivering, and evaluating adult education programs.

001: Modeling for Synthesis – Integrated Assessment of Ocean Environment, Ecosystems, Human Health, and Socioeconomics

Tuesday, February 4, 2:00p — 5:30p, Grand Salon A/B

Cameron Ainsworth, University of South Florida
 Cecilie Mauritzen, Norwegian Meteorological Institute
 Helena Solo-Gabriele, University of Miami

Tremendous progress has been made during the GoMRI years in understanding changes in the environment due to a major oil spill, including through new models simulating specific components of the environment. The aim of this session is to assess the current state of integrative models capable of addressing broad questions posed by stakeholders. To answer such questions, the model must be capable of integrating natural and anthropogenic systems at various scales. It should also be quantitative, provide estimates of uncertainty, and be useful for decision-making. One starting point for such a systems-level model is integrating knowledge across four domains: ocean environment, ecosystems, socioeconomics, and human health.

Time	Title	Presenter
2:00p – 2:15p	Towards Integrated Assessment Modeling of the Long-Term Impacts of Oil Spills	Tom Fiddaman, Ventana Systems, Inc.**
2:15p – 2:30p	Integrated Model System for Oil Spill Natural Resource Damage and Risk Assessments	Deborah French-McCay, RPS Ocean Science
2:30p – 2:45p	Regional Earth System Modeling for Integrated Prediction of Hazards and Societal Impact over the Gulf of Mexico	Shuyi Chen, University of Washington
2:45p – 3:00p	A Coupled Modeling System for Simulating Oil-Biological-Sediment Interactions in the Ocean	Steven Morey, Florida A&M University
3:00p – 3:15p	A 3-D Fate and Transport Model Explains Measured Changes in PAH Concentrations from Weathered Oil	Larissa Montas, University of Miami
3:15p – 3:30p	Modeling Hydrodynamics and Environmental Effects of Different Hurricane Types in an Industrialized Estuary	Hanadi Rifai, University of Houston
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Comparison of the Spatial Extent and Ecosystem Impacts of Oil Spill Scenarios in the Gulf of Mexico	Igal Berenshtein, University of Miami
4:15p – 4:30p	Impacts of Deep-Water Spills on Mesopelagic Communities and Implications for the Greater Pelagic Food Web	Cameron Ainsworth, University of South Florida
4:30p – 4:45p	Prey Evolution of Toxicant Resistance Enables Survival of a Stage-Structured Predator	Md Hossain, University of Louisiana at Lafayette
4:45p – 5:00p	Modeling Food Web Dynamics in the Gulf of Mexico	Kyle Strongin, Arizona State University
5:00p – 5:15p	Agent-Based Models as an Integrating Boundary Object for Interdisciplinary Research on Coastal System Dynamics	Allison Reilly, University of Maryland
5:15p – 5:30p	Integrated Assessment and a Participatory Modeling Initiative to Support Ecosystem-Based Fisheries Management in the Gulf of Mexico	Mandy Karnauskas, NOAA Fisheries

* Session Lead
 ** Invited Speaker

002: On the Resiliency of Living Marine Resources to Gulf Oil Spills

Tuesday, February 4, 2:00p — 5:30p, Grand Salon F

Samantha Joye, University of Georgia

Steven Murawski, University of South Florida

Tracey Sutton, Nova Southeastern University

In the intervening decade since Deepwater Horizon, considerable scientific research has been conducted to document the impacts (or lack thereof) and potential recovery of Gulf living marine resources. This session seeks to (1) review the records of resource response to large oil spills in order to evaluate resources potentially at risk from future large spills, and (2) summarize factors of animal life history and oceanographic processes that determine the resiliency potential of resource populations. Implications for resource management strategies that may help strengthen resiliency to future large-scale environmental events will be discussed.

Time	Title	Presenter
2:00p – 2:15p	On the Resilience of Coastal/Nearshore Living Resources to Deepwater Horizon: A Harbinger of Future Coastal Restoration Efforts?	Steven Murawski, University of South Florida
2:15p – 2:30p	A Review of Deepwater Horizon Impacts and Evidence of Resiliency in the Northern Gulf of Mexico Continental Shelf Ecosystem	William Patterson, University of Florida
2:30p – 2:45p	Assembling the Benthic Record of Species and Community Change for the Gulf of Mexico Following the Deepwater Horizon Event	Patrick Schwing, Eckerd College
2:45p – 3:00p	A Summary of Post-Deepwater Horizon Oil Spill Open-Ocean Faunal Population Dynamics: Vulnerability, Resilience, Data Gaps, and Management Implications	Tracey Sutton, Nova Southeastern University
3:00p – 3:15p	On the Age and Growth of Mesopelagic Fishes, with Case Studies of Four Ecologically Important Species from the Gulf of Mexico	Natalie Slayden, Nova Southeastern University
3:15p – 3:30p	Oil and Gas Impacts on Pelagic Food Webs in the Gulf of Mexico: Isotopic Time Series Reveal the Time Scale of Ecosystem Response and Recovery	Joseph Montoya, Georgia Institute of Technology
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Long-Term Monitoring of Deep-Sea Coral-Associated Infaunal Communities in the Gulf of Mexico After the Deepwater Horizon Oil Spill	Amanda Demopoulos, U.S. Geological Survey
4:15p – 4:30p	Health Trends of Bottlenose Dolphins (<i>Tursiops truncatus</i>) in the Eight Years Following the Deepwater Horizon Oil Spill: Evidence for Lack of Resilience	Lori Schwacke, National Marine Mammal Foundation
4:30p – 4:45p	Shrimp Population Resiliency and Response to Potential Large Oil Spills	Adolfo Gracia, Universidad Nacional Autónoma de México
4:45p – 5:00p	Changes in Reef Fish Community Structure Following the Deepwater Horizon Oil Spill	Justin Lewis, University of Florida
5:00p – 5:15p	The Impact of Crude Oil and Chemical Dispersant on Prey Susceptibility to Jellyfish Grazing	Olivia Blondheim, University of South Florida
5:15p – 5:30p	A Multitaxonomic Petrochemical Vulnerability Index for Gulf of Mexico Marine Species	Beth Polidoro, Arizona State University

003: New Tools and New Strategies in the Assessment and Forecasting of MOSSFA in Support of Emergency Response and NRDA

Tuesday, February 4, 2:00p — 5:30p, Grand Salon C/D

Adrian Burd, University of Georgia
 David Hollander, University of South Florida
 Antonietta Quigg, Texas A&M University at Galveston

The ability to predict MOSSFA (Marine Oil Snow Sedimentation and Flocculent Accumulation) events in time and space will help develop more accurate assessments of surface oil budgets and provide information needed to inform decision makers on the application of specific surface oil remediation techniques. This session considers new forecasting/modeling tools and development of predictive strategies for MOSSFA events in diverse areas of known oil exploration and production. It focuses on bridging the gap between the academic community and first-responders, especially how MOSSFA forecasting could improve oil spill response planning, assist environmental and NRDA impact assessment, and support the evaluation of long-term chemical recovery and ecologic/ecosystem health.

Time	Title	Presenter
2:00p – 2:15p	Marine Oil Snow: Particle Size, Shape, and Fractal Dimensions	Kendra Daly, University of South Florida
2:15p – 2:30p	Observed Changes in Particle Abundance Driven by Variations in the Diel Thermocline	Nadine Doiron, University of Southern Mississippi
2:30p – 2:45p	The Effect of Oil on Aggregation of Marine Snow	Tinna Jokulsdottir, University of Georgia
2:45p – 3:00p	Comparison of Estimated Oil Equivalent Half-Lives in ADDOMEx-Controlled Mesocosm MOSSFA Studies	Terry Wade, Texas A&M University
3:00p – 3:15p	Developments in Numerical Modeling of MOSSFA Events and the Challenges Still Remaining	Anusha Dissanayake, RPS Ocean Science
3:15p – 3:30p	Modeling Marine-Oil-Snow and MOSSFA Events: Progress and Perspectives	Adrian Burd, University of Georgia
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Investigation of the Deepwater Horizon Natural Resource Damage Assessment Data for Markers of MOSSFA in the Gulf of Mexico Sediment	Jagoš Radović, University of Calgary
4:15p – 4:30p	Seeding Snow: Mississippi River Plume Interaction with Oil in the Northern Gulf of Mexico	Catherine Edwards, Skidaway Institute of Oceanography
4:30p – 4:45p	Sedimentary Processes on Monthly to Decadal Time Scales: Applications for MOSSFA	Rebekka Larson, Eckerd College
4:45p – 5:00p	Can Regional Assessment of Sediment Accumulation Rates Be Useful to Forecast the Fate of MOSSFA Derived Sedimentation Events? A Case Study from the Southern Gulf of Mexico	Joan-Albert Sanchez-Cabeza, Universidad Nacional Autónoma de México
5:00p – 5:15p	The Potential Role of Marine Snow in the Fate of Spilled Oil in Cook Inlet, Alaska	Jesse Ross, University of New Hampshire
5:15p – 5:30p	A New Approach to Predicting MOSSFA-Prone Areas to Guide Future Oil Spill Response and Natural Resource Damage Assessment	David Hollander, University of South Florida

OO4: Understanding and Predicting the Gulf of Mexico Loop Current

Tuesday, February 4, 2:00p — 5:30p, Grand Salon E

Steve Anderson, Areté Associates

Karina Khazmutdinova, National Academies of Sciences, Engineering, and Medicine

Kelly Oskvig, National Academies of Sciences, Engineering, and Medicine

For the past several years, much effort has been placed on advancing understanding of and forecasting capabilities for the Loop Current and its associated eddies. What has been learned, how can this scientific progress be incorporated into operational models, and what are the remaining gaps in knowledge impeding predictive skill? This session's goals are to discuss the most recent advances in understanding and predicting the Gulf of Mexico Loop Current System as well as the application of those advances towards societal benefit for Gulf Coast communities.

Time	Title	Presenter
2:00p – 2:15p	Predictability in the Deep Gulf of Mexico	Gregg Jacobs, U.S. Naval Research Laboratory
	Understanding and Predicting the Gulf of Mexico Loop Current: A Numerical Modeling Synthesis Study	Ruoying He, North Carolina State University
2:15p – 2:30p	Modeling and Predicting Velocity of Loop Current System Using Auto-Encoders and Recurrent Networks	Ali Muhamed Ali, Florida Atlantic University
	Finding Murphy: A \$200,000 Slocum Glider Saved by a Numerical Ocean Model	Sergio deRada, U.S. Naval Research Laboratory
2:30p – 2:45p	Panel Discussion: Where Are We Right Now?	
2:45p – 3:00p	Understanding the Dynamics of the Gulf of Mexico Loop Current and Associated Eddies Using Satellite Observations and Model Simulations	Richard Brokaw, University of South Carolina
	Observed and Simulated Loop Current Eddy Shedding During the Past Four Decades	Wei Liu, University of California at Riverside
3:00p – 3:15p	Statistical Characteristics of Surface Mesoscale Eddies in the Gulf of Mexico	Yingli Zhu, University of Delaware
	Letting Go: (In)Coherence on the Path to Final Detachment of Loop Current Rings	Helga Huntley, University of Delaware
3:15p – 3:30p	Panel Discussion: New Methods	
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	On the Fundamental Physics of Gap Leaping Systems	Joseph Kuehl, University of Delaware
	The Interaction of West Florida Shelf Anticyclones (WFAs) with the Gulf of Mexico Mesoscale Activity	Nektaria Ntaganou, University of Miami
4:15p – 4:30p	Ageostrophic Flow Observed in the Loop Current System	Luna Hiron, University of Miami
	Instabilities and Multiscale Interactions Underlying the Loop Current Eddy Shedding in the Gulf of Mexico	Yang Yang, University of South Florida
4:30p – 4:45p	Panel Discussion: New Insight	
4:45p – 5:00p	Observed Loop Current Warm Core Eddy Interactions During Hurricanes Nate and Michael from Floats	Lynn Shay, University of Miami
	Understanding Multiscale Variability of the Loop Current and Its Impact on Hurricane and Oil Spill Predictions	Shuyi Chen, University of Washington
5:00p – 5:15p	The West Florida Shelf Pressure Point Control on Shelf Ecology and Loop Current Penetration into the Gulf of Mexico	Robert Weisberg, University of South Florida
	Gulf of Mexico Loop Current and Eddy Observations from HF Radar Systems on Offshore Platforms	Stephen Howden, University of Southern Mississippi
5:15p – 5:30p	Panel Discussion: Societal Benefit	

005: Gulf Restoration: Planning, Tools, and Collaboration

Tuesday, February 4, 2:00p — 5:30p, Grand Salon G/H

Christy Fellas, NOAA Restoration Center
 Matt Love, Gulf Coast Ecosystem Restoration Council
 Ramona Schreiber, NOAA Restoration Center

Ecosystem-scale restoration planning for a large-scale disaster like Deepwater Horizon necessitates a range of approaches and tools to accommodate the magnitude of the effort. This session brings together planning, assessment, tools, and adaptive actions used in restoration projects and shares lessons learned with the Gulf restoration community. Part I showcases assessment planning and provides a review of empirical techniques and types of data necessary to accomplish the broader scale assessments needed to evaluate restoration beyond the single project scale. Part II focuses on the milestones achieved in restoration planning approaches, decision processes, and the implementation of hundreds of projects across the Gulf, showcasing adaptive management and lessons learned to date.

Time	Title	Presenter
2:00p – 2:15p	Managing One of the Largest Restoration Initiatives in Modern History: The Need for Research and Scientific Tools to Help Assess Progress and Inform Directions	Buck Sutter, Gulf Coast Ecosystem Restoration Council
2:15p – 2:30p	Strategic Planning for Monitoring and Adaptive Management Within the Deepwater Horizon Open Ocean Trustee Implementation Group	Eric Weissberger, NOAA Fisheries
2:30p – 2:45p	RESTORE Council Monitoring and Assessment Program Inventory of Monitoring Networks in the Gulf of Mexico	Randy Clark, NOAA
2:45p – 3:00p	New Monitoring Guidance for Evaluating Restoration Outcomes from the Deepwater Horizon Natural Resource Damage Assessment	Nadia Martin, Industrial Economics, Inc., on behalf of the State of Florida
3:00p – 3:15p	Coastal Marsh, Dune, and Shoreline Restoration: Case Studies from the U.S. and Europe	Mickey Marcus, SWCA Environmental Consultants
3:15p – 3:30p	The Strategic Conservation Assessment of Gulf Coast Landscapes: Land Conservation Planning Tools Using a Co-Production Science Approach	Kristine Evans, Mississippi State University
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Ecosystem Service Logic Models and Metrics for Gulf Restoration: Linking Project Outcomes to Economic, Health, and Wellbeing Benefits for People	Christine Hale, Harte Research Institute
4:15p – 4:30p	Integrating Messy Data: A Case Study	Thomas Dolan, III, Earth Resources Technology, Inc.
4:30p – 4:45p	Improving Oyster Resources Monitoring in the Gulf of Mexico Using Remotely Sensed Data and Object-Based Image Analysis Techniques	Vincent Lecours, University of Florida
4:45p – 5:00p	Assessing Reef Fish Habitat Restoration and Recreational Fishing Enhancement Efforts Using Fisheries-Dependent Monitoring Methods	Tiffanie Cross, Florida Fish and Wildlife Research Institute
5:00p – 5:15p	Milestones Reached Using Fishery Enforcement Tools to Aid in Implementation and Compliance within the Oceanic Fish Restoration Project	Matthew Walia, NOAA Fisheries
5:15p – 5:30p	Analysis of the Restoration of Fish Populations as Part of the Deepwater Horizon Oceanic Fish Restoration Project	Derek Garvey, Nova Southeastern University

006: Evolution and Development of Spatially Related Response and Restoration Data Collection, Use, and Retrieval Tools

Tuesday, February 4, 2:00p — 3:30p, Grand Salon I/J

Steve Buschang, Texas General Land Office
Mark White, Research Planning, Inc. (RPI)

The rapid and accurate acquisition and assimilation of spatially related data are of primary interest to many areas of spill response efforts. With the advent of personal computing, satellite GPS, internet, and cellular devices, the tools that have been and are being developed for response are changing the definition of a rapid and informed response. Data can now be collected, stored, or directly transmitted to decision makers. This session will focus on understanding the current capabilities, limitations, and projected future development of next generation data sets and assessment.

Time	Title	Presenter
2:00p – 2:15p	The Environmental Response Management Application (ERMA): A Good COP	George Graettinger, NOAA
2:15p – 2:30p	Use of GIS Results from Oil Spill Modeling in Support of Oil Spill Response Drills	Gabrielle McGrath, RPS Ocean Science
2:30p – 2:45p	Using Machine Learning Techniques for Near Real-Time Assessment of Marine Biogeochemistry	Bradley Penta, U.S. Naval Research Laboratory
2:45p – 3:00p	Development of a Nearshore Wave Model Using a Spatially Robust Dataset	Ramin Baghbani, Mississippi State University
3:00p – 3:15p	Observation and Modeling of Low-Salinity Lenses off the Louisiana Coast	Alexander Soloviev, Nova Southeastern University
3:15p – 3:30p	The Application of Integrated HF Radar Network Along the Texas Shelf to Improve Search and Rescue and Oil Spill Response	Chuan-Yuan Hsu, Texas A&M University

007: Tell Your Story: Making Your Data Clear, Understandable, and Usable

Tuesday, February 4, 4:00p — 5:30p, Grand Salon I/J

Emily Frost, Smithsonian National Museum of Natural History
Dave Reed, Florida Fish and Wildlife Research Institute
Lauren Showalter, National Academies of Sciences, Engineering, and Medicine

Over the past 10 years we have seen an influx of information, science, and research related to the Deepwater Horizon event. The questions we face now are how to translate this information to make it clear, understandable, and applicable. This session seeks to explore and highlight efforts within our research community that have taken steps to communicate the science in a way that is functional and easily digestible.

Time	Title	Presenter
4:00p – 4:15p	The Power of Beautiful Data	Laura Bracken, University of Miami
4:15p – 4:30p	When the Numbers Don’t Speak for Themselves: An Ocean Portal StoryMap	Emily Frost, Smithsonian, National Museum of Natural History
4:30p – 4:45p	Beneath the Horizon: An Interactive Tour and Timeline of Oil Spills	Liesl Hotaling, University of South Florida
4:45p – 5:00p	Visualizing the Twitter Record from Hurricane Irma in Florida to Investigate Coastal Storm Impacts	Evan Goldstein, University of North Carolina at Greensboro
5:00p – 5:15p	Online Information Flow and Fast-Paced Information Exchange in a Disaster Context: Characterizing Deepwater Horizon Oil Spill Tweets	Jaishree Beedasy, Columbia University
5:15p – 5:30p	DIVER Field Forms, Data Templates, and Guidelines — Integrating Data into DIVER for Future Access and Assessment	Nicolas Eckhardt, NOAA

Tuesday Poster Sessions

Tuesday, February 4, 5:30p – 7:30p, Florida Ballroom

#	Title	Presenter
P-001:		
121	Towards Integrated Assessment Modeling of the Long-Term Impacts of Oil Spills	T. Fiddaman, Ventana Systems, Inc.
122	Consequences of Climate Change and Sea Level Rise on Cultural and Historical Resources Along the Northern Gulf Coast of Mexico	Jayur Mehta, Florida State University
123	Changes in Remotely Sensed Aerosol Optical Depth from the Deepwater Horizon Oil Spill	Larissa Montas, University of Miami
124	Analyzing the Contribution of Vertically Migrating Mesopelagics to the Diets of Large Pelagic Predators	Rebecca Scott, University of South Florida
P-002:		
41	Oxidative Stress Response of the Seaside Sparrow (<i>Ammodramus maritimus</i>) Following the Deepwater Horizon Oil Spill	Aaron Angel, California State Polytechnic University, Pomona
42	The Effect of Deepwater Horizon Crude Oil on DNA Methylation Patterns in Wild-Caught Juvenile Red Drum (<i>Sciaenops ocellatus</i>) in Louisiana Estuaries	Natalie Beeken, Texas A&M University - Corpus Christi
43	Hepatic Concentrations of Polycyclic Aromatic Hydrocarbons, Polychlorinated Biphenyls, and Organochlorine Pesticides in Snappers from Cuba and the Wider Gulf of Mexico	Brigid Carr, University of South Florida
44	Recovery of the Salt Marsh Periwinkle (<i>Littoraria irrorata</i>) Nine Years After the Deepwater Horizon Oil Spill: Size Matters	Donald Deis, Atkins
45	Microzooplankton Communities Associated with Oiled Marine Snow	Kevin Du Clos, University of South Florida
46	Establishing/Reestablishing Baselines for Invertebrate Populations in Louisiana Tidal Marsh Estuaries	Lane Foil, Louisiana State University Agricultural Center
47	Impact of Fish Liver Health on Population Resiliency	Adolfo Gracia, Universidad Nacional Autónoma de México
48	Population Demographics of Tilefish (<i>Lopholatilus chamaeleonticeps</i>) in the Gulf of Mexico Before and After Deepwater Horizon	Greta Helmueller, Industrial Economics, Inc.
49	The Greenhead Horse Fly as Bioindicator of Marsh Health — Population Decline and Recovery After the Deepwater Horizon Oil Spill	Claudia Husseneder, Louisiana State University Agricultural Center
50	Chronic PAH Exposures and Associated Declines in Fish Health Indices Observed for 10 Grouper Species Collected in the Gulf of Mexico	Erin Pulster, University of South Florida
51	A Comprehensive Petrochemical Vulnerability Ranking for Marine Fishes in the Gulf of Mexico	Megan Woodyard, Arizona State University
52	The Role of Biodiversity on the Resistance and Resilience of Coastal Ecosystems to Oil Disturbance	Robyn Zerebecki, Dauphin Island Sea Lab
P-003:		
7	Synergistic High-Flux Oil–Saltwater Separation and Membrane Desalination with Carbon Quantum Dots Functionalized Membrane	Zhengdong Cheng, Texas A&M University
8	Exposures Methodologies GoMRI Working Group: How to Make Oil and Water Mix	Terry Wade, Texas A&M University

#	Title	Presenter
9	Tracing Microbial Transformation of Diluted Chemically Enhanced Water Accommodated Fraction of Crude Oil Through Targeted Metabolomics	Terry Wade, Texas A&M University
10	A Synoptic Eight-Year Analysis of Microbial Community Associated with Marine Oil Snow Deposits in the Gulf of Mexico Since the Deepwater Horizon Spill	Jason Westrich, University of Georgia
P-004:		
5	Investigation of Variability of Sea Surface Temperature (SST) and Sea Surface Height (SSH) in the Gulf of Mexico Using Multiple Statistical Tools	Geng Li, University of Missouri
6	Predicting the Loop Current System in Gulf of Mexico: A Hybrid Modeling Framework	Yufei Tang, Florida Atlantic University
P-005:		
1	Microparticles Mediated Bioremediation of Crude Oil	Sricharani rao Balmuri, University of Pittsburgh
2	Disruptive Technologies for Oil Spill Response	Jesús Cisneros Aguirre, Universidad de Las Palmas de Gran Canaria
4	Creation of Hard Bottom Habitat: The Texas Artificial Reef Program Is Giving Nature a Helping Hand	Katie O'Shaughnessy, Texas Parks and Wildlife
P-006:		
30	Evaluation of Marsh Terraces as a Restoration Technique Utilizing a Wave Model	Raul Osorio, Mississippi State University
P-010:		
84	Comparative Environmental Sensitivity of Offshore Gulf of Mexico Waters Potentially Impacted by Ultra-Deep Oil Well Blowouts	Emily Chancellor, University of South Florida
85	Movement, Home Range, and Predation of Adult Invasive Lionfish Revealed by Fine-Scale Acoustic Telemetry in the Northern Gulf of Mexico	Kristen Dahl, University of Florida
86	Effects of Oil on Mahi-Mahi (<i>Coryphaena hippurus</i>)—Impacts on Fitness Relevant Physiological and Behavioral Traits	Martin Grosell, University of Miami
87	Does Crude Oil Exposure Alter Behavior in Fish?	Alexis Khursigara, University of Texas at Austin
88	Using Autonomous Underwater Gliders to Track and Map Fish in the Eastern Gulf of Mexico	Chad Lembke, University of South Florida
89	Estimates of Red Drum (<i>Sciaenops ocellatus</i>) Mortality and Movement via Acoustic Telemetry	T. Nelson, Dauphin Island Sea Lab
90	Marine Movements of Gulf Sturgeon	Michael Randall, U.S. Geological Survey Wetland and Aquatic Research Center
P-011:		
61	Addressing Data Gaps in Deep-Pelagic Fauna: A Case Study of an Apex Predatory Fish Family in the Meso- and Bathypelagic Domains	April Cook, Nova Southeastern University
62	Journey into Midnight: Faunal Composition and Vertical Distribution of Whalefishes and Their Allies in the Bathypelagic Gulf of Mexico	Rachel Eckley, Nova Southeastern University
63	Trophic Ecology of Mesopelagic Larval Fishes in the Northern Gulf of Mexico	Frank Hernandez, University of Southern Mississippi
64	The Two Different Sides of Diatom's Response to Oil Exposure	Manoj Kamalanathan, Texas A&M University at Galveston

#	Title	Presenter
65	Do Produced Waters Contribute to Elevated PAH and Other Pollutant Concentrations Found in Large Pelagic Fishes of the Gulf of Mexico?	Steven Murawski, University of South Florida
66	Hepatobiliary PAH Concentrations in Pelagic Fishes of the Gulf of Mexico	Madison Schwaab, University of South Florida
67	Pteropods of the Northern Gulf of Mexico: Abundance and Distribution of Large Thecosomes, and Their Shell Thickness	Sarah Shedler, University of South Florida
68	Analysis of Organic Pollutants in Gulf of Mexico Gelatinous Zooplankton	Olivia Traenkle, University of South Florida

P-O12:

21	Influence of Diurnal Winds on Exchange Through Barrier Island Passes and Associated Biogeochemical Processes in the Mississippi Sound and Bight	Courtney Bouchard, University of Southern Mississippi
22	A Synthesis of Modeling Results to Study Cross-Shelf Transport in Mississippi Bight	Kemal Cambazoglu, University of Southern Mississippi
23	Pathways of Hydrocarbons from Future Oil Exploration Sites Around Cuba: Influence of Local and Regional Ocean Dynamics	Lars Robert Hole, Norwegian Meteorological Institute
24	Numerical Modeling of Sediment Erosion, Deposition, and Transport in the Northern Gulf of Mexico: The Barataria Pass Case Study	Haosheng Huang, Louisiana State University
25	Wave Patterns and Current Velocity Measurements at a Sharp Front Produced by Runoff from the Mississippi River in the Gulf of Mexico	John Kluge, Nova Southeastern University
26	Hydrodynamic/Water Quality Model for Oyster Restoration in the Western Mississippi Sound	Anna Linhoss, Mississippi State University
27	Estimating Kinematic Quantities of Submesoscale Structures Along Mesoscale Fronts Using Large Drifter Data Sets	John Lodise, University of Miami
28	Stressor Impacts on Physical and Biochemical Properties Detected by APEX-EM Floats	Lynn Shay, University of Miami

P-O13:

95	The Influence of PAH Contaminant Loads and Reef Locations on Eastern Oyster Gut Microbiome Compositions	Samantha Ells, University of Southern Mississippi
96	Assessment of Fecal Indicator Bacteria and Potential Pathogens from Multiple Beach Substrates During the BEACHES Project	Maribeth Gidley, University of Miami
97	Expanding What Is Known About the Marine Methane Biofilter in the Gulf of Mexico Using Combined Sequencing Techniques	Katie Howe, Florida State University
98	Traction Force Measurement of Biofilms Under Laminar Flow	Maryam Jalali-Mousavi, Texas A&M University - Corpus Christi
99	Grazing on Prokaryotic Microbes by Nanoplankton in Oil-Polluted Seawater	Chi Hung Tang, University of Texas at Austin Marine Science Institute
100	The Sub-Chronic Effects of Polycyclic Aromatic Hydrocarbons (PAHs) on the Sheepshead Minnow (<i>Cyprinodon variegatus</i>) Gut-Microbiome and Foraging Behavior	Maggie Wigren, Purdue University

P-O14:

69	Incremental Delivery for Exponential Results	Tyler Ortego, Forterra Building Products
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Wednesday, February 5

Time	Event	Location
7:30a – 5:30p	Registration and Check-In Open	Grand Foyer
7:30a – 6:00p	Presentation Upload and Exhibits Open	Grand Foyer
7:30a – 7:30p	Poster Hall Open	Florida Ballroom

Scientific Program Schedule

Starting at 7:30a	BREAKFAST	Grand Foyer
8:30a – 10:00a	Session 008	Meeting Room 5
	Session 009	Grand Salon I/J
	Session 010	Grand Salon C/D
	Session 011	Grand Salon F
	Session 012	Grand Salon E
	Session 013	Grand Salon A/B
	Session 014	Grand Salon G/H
10:00a – 10:30a	BREAK	Grand Foyer
10:30a – 12:00p	Session 008	Meeting Room 5
	Session 009	Grand Salon I/J
	Session 010	Grand Salon C/D
	Session 011	Grand Salon F
	Session 012	Grand Salon E
	Session 013	Grand Salon A/B
	Session 014	Grand Salon G/H
12:00p – 2:00p	LUNCH BREAK	
2:00p – 3:30p	Session 015	Meeting Room 5
	Session 016	Grand Salon A/B
	Session 017	Grand Salon C/D
	Session 018	Grand Salon I/J
	Session 019	Grand Salon E
	Session 020	Grand Salon G/H
	Session 021	Grand Salon F
3:30p – 4:00p	BREAK	Grand Foyer
4:00p – 5:30p	Session 015	Meeting Room 5
	Session 016	Grand Salon A/B
	Session 018	Grand Salon I/J
	Session 019	Grand Salon E
	Session 020	Grand Salon G/H
	Session 021	Grand Salon F
5:30p – 7:30p	Poster Session and Reception (Featuring Sessions 015 – 027)	Florida Ballroom

Workshops and Associated Meetings

7:00a – 8:30a	Gulf Restoration and Science Programs Coordination Forum (Closed)	Meeting Room 11
12:00p – 2:00p	GoMRI Scholars Lunch (Closed)	Meeting Room 12
12:30p – 1:30p	<i>Dispatches from the Gulf 3</i> Screening	Grand Salon A/B
6:30p – 7:30p	Women in Emergency Management Networking	Meeting Room 5

008: Taking Stock: Capacity Building and the Successes of Advanced Academic Scholarship, Professional Training, and Interdisciplinary Mentoring Through the Gulf of Mexico Research Initiative

Wednesday, February 5, 8:30a — 12:00p, Meeting Room 5

Katie Fillingham, Gulf of Mexico Research Initiative
 Sherryl Gilbert, University of South Florida
 David Hollander, University of South Florida
 Liesl Hotaling, University of South Florida

Since its inception in 2011, GoMRI directed substantial resources to and prioritized educating and training the next generation of professionals. Graduate students and those who have graduated and moved into early career positions are considered one of the principal legacies of the program. With priorities placed on professional development, education and outreach, and data sharing, GoMRI students and early career professionals possess unique skill sets compared to their contemporaries trained under other more traditional funding and mentoring mechanisms. What capacity has their training within the program created in the oil spill sciences? Is this unique training/mentoring preparing them adequately for career advancement and future success? This session will highlight student and early career research, training, and graduate history of the GoMRI-supported centers and provides a summary of where the graduates are currently in their career arcs and professional aspirations.

Time	Title	Presenter
8:30a – 8:45a	Session Introduction and Review of GoMRI Graduate Student and Postgraduate Capacity Building Survey Results	Sherryl Gilbert, University of South Florida
8:45a – 9:15a	How to Get There from Here: The Not-So-Straight Career Path	David Palandro, ExxonMobil Upstream Research Company**
9:15a – 9:30a	Educational and Research Principles and Strategies Followed by CARTHE	Tamay Özgökmen, University of Miami
9:30a – 9:45a	$[(26+23+(22+6))PIs \gg [(7+15+8)PDoc] + [20+10+10)PhD] + [(14+8+5)MS] + [(26+50+13)UG] + [(8+10+7)REU)] = CWC-I+CWC-II+CWC-III = A LOT$	Nancy Rabalais, Louisiana Universities Marine Consortium
9:45a – 10:00a	Graduate Student Training in Collaborative Research	Vijay John, Tulane University
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Developing Nanoparticle-Based, Concentration-Independent Dispersants: From Fundamental to Applied Science	Daniel Savin, University of Florida
10:45a – 11:00a	Introducing Engineers to Sea Butterflies: Lessons Learned in Interdisciplinary Research	David Murphy, University of South Florida
11:00a – 11:15a	Training Through the Gulf of Mexico Research Initiative Funding	Anusha Dissanayake, RPS Ocean Science
11:15a – 11:30a	Early Career Advancement Through the Gulf of Mexico Research Initiative	Patrick Schwing, Eckerd College
11:30a – 11:45a	Insights into How My Training as a Postdoc in the DROPPS Consortium Prepared and Aided My Success as a Faculty Member	Brad Gemmell, University of South Florida
11:45a – 12:00p	Growing Up in GoMRI: Finding a Career in Passive Acoustics	Kaitlin Frasier, Scripps Institution of Oceanography

* Session Lead
 ** Invited Speaker

009: RESTORE Act Centers of Excellence Research Grant Programs – Filling Gaps in Gulf Research to Inform Policy and Management

Wednesday, February 5, 8:30a — 12:00p, Grand Salon I/J

Melissa Baustian, The Water Institute of the Gulf
 Kelly Darnell, University of Southern Mississippi*
 Alyssa Dausman, The Water Institute of the Gulf
 Elizabeth Fetherston-Resch, Florida RESTORE Act Centers of Excellence Program

This session will highlight the Centers of Excellence Research Grant Programs (CERGP), whose ultimate goal is to inform state and federal management of coastal and marine systems and resources. Invited speakers from each of the state CERGP will discuss how their Center of Excellence is working to identify and fill critical knowledge gaps in support of state and regional management needs. Following the successful model from last year's Louisiana-based conference, the Florida program will highlight some of their funded projects and the state and federal partners they are designed to support.

Time	Title	Presenter
8:30a – 8:45a	Research and Results from the First Four Years of the Florida RESTORE Act Centers of Excellence Research Grants Program	Elizabeth Fetherston-Resch, Florida RESTORE Act Centers of Excellence Program
8:45a – 9:00a	Benthic Habitat Mapping in the Gulf: Integrating Data from Multiple Sources Is Essential for a Comprehensive View of Seafloor	Sean Keenan, Florida Fish and Wildlife Research Institute
9:00a – 9:15a	Overview of FLRACEP's SHELF Project: Spawning Habitat and Early-Life Linkages to Fisheries	Ernst Peebles, University of South Florida
9:15a – 9:30a	Supporting Scientific Discovery and Science-Based Guidance for Restoration and Management Through the Mississippi Based RESTORE Act Center of Excellence (MBRACE)	Kelly Darnell, University of Southern Mississippi
9:30a – 9:45a	Surface Currents over the Oyster Reefs in the Western Mississippi Bight Measured from MBRACE High Frequency Radar	Stephen Howden, University of Southern Mississippi
9:45a – 10:00a	Alabama's Center of Excellence: Ready for Kick-Off	John Valentine, Dauphin Island Sea Lab
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	LA-COE: Funding Applied Research to Support the Implementation of Louisiana's Coastal Master Plan	Melissa Baustian, The Water Institute of the Gulf
10:45a – 11:00a	Texas OneGulf: Building Regional Resilience Across Communities, Economies, and Ecosystems	Katya Wowk, Texas OneGulf
11:00a – 11:15a	Improving Adaptive Management in Louisiana: Louisiana Center of Excellence Contributions	Alyssa Dausman, The Water Institute of the Gulf
11:15a – 12:00p	Panel Discussion: Funding Strategies to Fill Knowledge Gaps	

* Session Lead

** Invited Speaker

O10: Movement Ecology and Ecosystem-Based Management in the Gulf of Mexico: Lessons Learned and Solutions for Moving Forward

Wednesday, February 5, 8:30a — 12:00p, Grand Salon C/D

Claudia Friess, Florida Fish and Wildlife Research Institute
 Susan Lowerre-Barbieri, University of Florida
 Skyler Sagarese, NOAA

Initiatives such as the Gulf of Mexico Integrated Tracking of Aquatic Animals (iTAG) network seek to improve our understanding of movement ecology through increased tagging, monitoring, and synthesis of results from tracking studies. This session draws on lessons learned from the past five years of iTAG and other satellite tracking studies that help add greater spatial complexity to ecosystem-based models, identify data gaps and emerging technology, and begin forming a Gulf-wide strategy to improve our understanding and protection of Gulf ecosystems. This is especially critical as management objectives shift from maximizing single species sustainable yields to understanding the role fisheries play in marine ecosystems and protecting ocean health under the many stressors of the Anthropocene.

Time	Title	Presenter
8:30a – 8:45a	Integrative Tracking of Marine Fish in the Gulf of Mexico	Susan Lowerre-Barbieri, University of Florida
8:45a – 9:15a	Predictive Movement Ecology: We Need to Act Fast to Catch Up to the Problems	Kenneth Rose, University of Maryland Center for Environmental Science**
9:15a – 9:30a	Advances in Acoustic Telemetry: Unifying Data Systems and Developing New Technical Capabilities to Increase Research Relevance and Reach	Frederick Whoriskey, Dalhousie University
9:30a – 9:45a	Application of 3-D Acoustic Telemetry to Estimate Reef Fish Discard Mortality and Evaluate the Benefit of Releasing Fish with Descender Devices	Erin Bohaboy, University of Florida
9:45a – 10:00a	Effects of Oil on Mahi-Mahi (<i>Coryphaena hippurus</i>) — Using Pop-Up Satellite Archival Tags to Reveal the Movement Ecology of Wild Fish	Lela Schlenker, University of Miami
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Spatial Scales of Stock Dynamics, Fisher Behavior, and Governance Arrangements in the Gulf of Mexico’s Coastal Sport Fisheries: A Case for Place-Based Management?	Kai Lorenzen, University of Florida**
10:45a – 11:00a	Red Drum Recruitment: Spatial Scales and Implications for Management	Edward Camp, University of Florida
11:00a – 11:15a	Movements and Habitat Use Patterns of Whale Sharks (<i>Rhincodon typus</i>) Tagged in the Northern Gulf of Mexico	Eric Hoffmayer, NOAA
11:15a – 11:30a	Seasonal Movement Patterns and Habitat Use of Blue Marlin and White Marlin in the Gulf of Mexico	Michael Dance, Louisiana State University
11:30a – 11:45a	The RAFOS Ocean Acoustic Monitoring (ROAM) Tag: A New Satellite Tag for Accurate Tracking of Pelagic Fishes in the Open Ocean	Simon Thorrold, Woods Hole Oceanographic Institution**
11:45a – 12:00p	Moving On: An Evaluation of the Contribution of Movement Ecology-Related Research to Implementing Ecosystem-Based Fisheries Management in the Gulf of Mexico	Claudia Friess, Florida Fish and Wildlife Research Institute

* Session Lead
 ** Invited Speaker

O11: Understanding the Drivers of Biological Patterns in the Pelagic Seascape of the Gulf of Mexico

Wednesday, February 5, 8:30a — 12:00p, Grand Salon F

Frank Hernandez, University of Southern Mississippi

Rosanna Milligan, Nova Southeastern University

Kelly Robinson, University of Louisiana at Lafayette

In the decade since the Deepwater Horizon oil spill, research efforts in the complex and dynamic pelagic Gulf have demonstrated it to be a highly integrated ecosystem: Biotic connections are created by trophic linkages and by horizontal and vertical faunal migrations, which are influenced in turn by the dynamic hydrography of the Gulf and other environmental drivers. However, the extent to which different drivers influence different components of the faunae, and when, remains poorly understood. In the 10 years since the Deepwater Horizon oil spill, multidisciplinary research in the offshore Gulf has produced a suite of exceptionally valuable time series examining faunal patterns in the plankton, micronekton, and nekton, and placing them in the physical and biogeochemical context of the dynamic Gulf seascape.

Time	Title	Presenter
8:30a – 8:45a	Using a Coupled Ecosystem Modeling Approach to Evaluate Effects of Reductions in Nutrients and Hypoxia on Living Marine Resources	Kim de Mutsert, George Mason University
8:45a – 9:00a	Impact of Diurnal Sea Breeze on the Ecological and Biogeochemical Processes in Mississippi Sound	Jerry Wiggert, University of Southern Mississippi
9:00a – 9:15a	Are Pelagic Fish Embryos Really Floating at the Sea Surface?	Robin Faillettaz, University of Miami
9:15a – 9:30a	Pelagic Habitat Partitioning of Late-Larval and Juvenile Tuna in the Oceanic Gulf of Mexico	Nina Pruzinsky, Nova Southeastern University
9:30a – 9:45a	The Interannual Variability of Sargassum in the Gulf of Mexico and the Driving Forces	Mengqiu Wang, University of South Florida
9:45a – 10:00a	Exploring the Association of Gray Triggerfish (<i>Balistes capricus</i>) with Sargassum Habitat in the Gulf of Mexico and Its Implication on Recruitment	Glenn Zapfe, NOAA Fisheries
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Modeling the Deep: A Vertically Resolved, End-to-End ECOTRAN Model of the Oceanic Gulf of Mexico	Stacy Calhoun, University of Louisiana at Lafayette
10:45a – 11:00a	Evaluating the Role of Trophic Vertical Exchange Processes Within the Oceanic Gulf of Mexico: GoMex-ECOTRAN	James Ruzicka, Oregon State University
11:00a – 11:15a	Environmental Drivers Structuring Horizontal and Vertical Distributions of Mesopelagic Larval Fishes in the Northern Gulf of Mexico	Verena Wang, University of Southern Mississippi
11:15a – 11:30a	Temporal Changes in the Micronektonic Crustacean Assemblage in the Gulf of Mexico Since the Deepwater Horizon Oil Spill	Tamara Frank, Nova Southeastern University
11:30a – 11:45a	To Stay or Go? Understanding the Behavioral Drivers of Diel Vertical Migration in Deep-Living Fishes	Rosanna Milligan, Nova Southeastern University
11:45a – 12:00p	Summer Hypoxia, Layering, and Dynamic Physical Features Alter Fine-Scale Abundances of Meso zooplankton and Marine Snow	Adam Greer, University of Southern Mississippi

O12: Transport, Dispersal, and Connectivity in the Gulf of Mexico: Patterns, Processes, and Implications

Wednesday, February 5, 8:30a — 12:00p, Grand Salon E

Cheryl Harrison, University of Texas Rio Grande Valley
 Santiago Herrera, Lehigh University
 M. Josephina Olascoaga, University of Miami

Transport in the Gulf of Mexico has implications for a wide range of studies, from oil spill dispersal to biological connectivity. In this session we invite researchers from across the disciplines to share their research on ocean transport, biological and pollutant dispersal, and the biological and environmental implications of transport processes in the Gulf of Mexico. At the end of this session, we will discuss and identify future research priorities in this interdisciplinary topic.

Time	Title	Presenter
8:30a – 9:00a	Lagrangian Observations of Transport, Dispersal, and Connectivity Patterns Across Scales: A GoMRI Legacy	Denny Kirwan, Jr., University of Delaware**
9:00a – 9:15a	Influence of the Loop Current on the Connectivity and the Main Pathways of the Gulf of Mexico	Philippe Miron, University of Miami
9:15a – 9:30a	Can Neural Networks Learn Realistic Ocean Trajectories?	Matthew Grossi, University of Miami
9:30a – 9:45a	Advances in Oil Transport and Fate Modeling for Deep-Sea Oil Spills Using the Oil Application of the Connectivity Modeling System (Oil-CMS)	Natalie Perlin, University of Miami
9:45a – 10:00a	Modeling the Effects of Mississippi River Diversions on Estuarine-Shelf Connectivity and Transport Pathways in the North-Central Gulf of Mexico	Dubravko Justic, Louisiana State University
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	<i>In-situ</i> Measurements of Circulation Features Influencing Cross-Shelf Transport Around Northwest Cuba	Matthieu Le Henaff, University of Miami
10:45a – 11:00a	Cuban Eddy and Upwelling Processes Influencing Regional Gulf Stream Variability in the Gulf of Mexico	Yannis Androulidakis, University of Miami
11:00a – 11:15a	Wind-Based Estimation of Ocean Surface Currents from Massive Clusters of Drifters in the Gulf of Mexico	Angelique Haza, University of Miami
11:15a – 11:30a	Drifter-Derived, Submesoscale Velocity Gradient Statistics in the DeSoto Canyon in Summer and Winter	Andrew Poje, City University of New York – College of Staten Island
11:30a – 11:45a	Transport and Landfall of Marine Oil Spills: Laboratory and Field Observations	Guillaume Novelli, University of Miami
11:45a – 12:00p	Discussion	

* Session Lead
 ** Invited Speaker

O13: Microbial Genomics to Improve Predictive Understanding of Disturbance in the Global Ocean System

Wednesday, February 5, 8:30a — 12:00p, Grand Salon A/B

Rita Colwell, Gulf of Mexico Research Initiative
Samantha Joye, University of Georgia
Kostas Konstantinidis, Georgia Institute of Technology
Joel Kostka, Georgia Institute of Technology

Microorganisms mediate biogeochemical cycles in the global ocean and play a critical role in the response of marine ecosystems to perturbations, such as oil spills, catastrophic storms, or climate change. Next generation sequencing, advanced bioinformatics tools, and the extensive application of genomics to marine microbiology have revolutionized our understanding of the structure and function of microbial communities in the world ocean. The Deepwater Horizon oil spill was the first large-scale environmental disaster where genomics techniques were applied to track the microbial response to perturbation. This session seeks to synthesize scientific achievements in microbial genomics to present advanced understanding and improved practices for assessing disturbance and environmental change in the global ocean system.

Time	Title	Presenter
8:30a – 9:00a	The Oil Microbiome Webserver: An Interactive, Searchable Genome Repository Expanding the Catalogued Diversity of Crude Oil-Associated Microbes	Smruthi Karthikeyan, Georgia Institute of Technology**
9:00a – 9:15a	Improved Metagenomic Methods to Monitor Meiofaunal Communities	Joseph Sevigny, University of New Hampshire
9:15a – 9:30a	Metabolic Plasticity and Nutrient Acquisition Strategies of Hydrocarbon Degrading Isolates from the Deepwater Horizon Disaster	Rachael Storo, University of Georgia
9:30a – 9:45a	Niche Partitioning Between Coastal and Offshore Shelf Waters Results in Differential Expression of Alkane and PAH Catabolic Pathways	Shawn Doyle, Texas A&M University
9:45a – 10:00a	Bacterial Community Structure and Functional Potential in the Northeastern Chukchi Sea	Kelly McFarlin, ExxonMobil Biomedical Sciences
10:00a – 10:30a	Coffee Break	
10:30a – 11:00a	Laying a Foundation to Investigate the Role of Microbes in the Response of Corals to Oil Spills and Other Stressors: Discovery of Parasites, Chemoautotrophs, and Abundant Symbionts in Deep-Sea Corals	Sam Vohsen, Pennsylvania State University**
11:00a – 11:15a	Investigating the Immunosuppressive Effects of Oil Exposure on the Dermal Microbiome of Red Snapper (<i>Lutjanus campechanus</i>)	Andrea Tarnecki, Mote Marine Laboratory
11:15a – 11:30a	Role of Micron-Scale Aggregates in Hydrocarbon Oxidation	Amanda Achberger, Texas A&M University
11:30a – 11:45a	Crude Oil Disturbance Selects for Generalists, Not Specialists, in a Beach Sand Microbial Community	Patrick Heritier-Robbins, Georgia Institute of Technology
11:45a – 12:00p	Microbial Analysis of Sea Surface Microlayer Slicks in the Florida Keys in Coordination with Synthetic Aperture Radar Imagery	Georgia Parks, Nova Southeastern University

* Session Lead

** Invited Speaker

O14: Science to Action: Co-Production of Science to Support Resource Management in the Gulf of Mexico

Wednesday, February 5, 8:30a — 12:00p, Grand Salon G/H

Julien Lartigue, NOAA RESTORE Science Program
 John Tirpak, U.S. Fish and Wildlife Service
 Caitlin Young, NOAA RESTORE Science Program

Co-production is the practice of researchers and end users working together in an iterative manner to produce scientific knowledge, findings, methods, or products that are directly applicable to end users’ needs. During the co-production process, end user needs are incorporated when designing the research approach, and outputs from the research are applied by the end user in the near-term, informing how they think about future challenges. If the goal is application of research information and products, co-production is an effective approach for translating science into action. This session will explore the use of co-production in coastal and marine environments in the Gulf of Mexico region.

Time	Title	Presenter
8:30a – 8:45a	What Indicators Should We Use to Track Progress Towards Ecosystem Restoration Goals in Southeast Louisiana?	Shannon Martin, University of Miami
8:45a – 9:00a	Improved Data to Better Inform Management: The Gulf Fishery Independent Survey of Habitat and Ecosystem Resources (G-FISHER) Program	Theodore Switzer, Florida Fish and Wildlife Research Institute
9:00a – 9:15a	Scientific Decision Support for Deliberations of the Flower Garden Banks National Marine Sanctuary Boundary Expansion	Dan Dorfman, CSS Inc.
9:15a – 9:30a	Understanding Habitat Use to Conserve Migratory Landbirds Along the Northern Gulf of Mexico Coast	Theodore Zenzal, U.S. Geological Survey
9:30a – 9:45a	A Conceptual Framework for Assessing Ecosystem Health	Larry McKinney, Harte Research Institute
9:45a – 10:00a	Engaging Students in Co-Produced Research to Build Resilience: Examples from Escambia County, Florida	Kwame Owusu-Daaku, University of West Florida
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	The Development of the Living Shoreline Decision Support Tool for the Gulf of Mexico	Marcia Berman, Virginia Institute of Marine Science
10:45a – 11:00a	Estimating Historical Oyster Body Sizes from Paleoecological Records to Address an Information Gap for Habitat Management in Florida	Stephen Durham, Florida Department of Environmental Protection
11:00a – 11:15a	Designing Climate Model Projections for Puerto Rico: Co-Production by Scientists and Resource Managers	Ryan Boyles, U.S. Geological Survey Southeast Climate Adaptation Science Center
11:15a – 12:00p	Panel Discussion	

O15: Lessons Learned from Implementing Oil Spill Science Outreach and Education Programs: Reflections 10 Years After a Major Oil Spill

Wednesday, February 5, 2:00p — 5:30p, Meeting Room 5

Katie Fillingham, Consortium for Ocean Leadership
 Karena Ruggiero, National Academies of Sciences, Engineering, and Medicine
 Steve Sempier, Mississippi-Alabama Sea Grant Consortium

The Deepwater Horizon oil spill provided an unprecedented opportunity to engage a variety of audiences in oil spill science. To provide target audiences and communities with answers and resources, many outreach and education initiatives were created or expanded to share scientific discoveries from research focused on understanding the impacts of the spill and the Gulf of Mexico ecosystem more broadly. This session focuses on best practices and lessons learned from developing and implementing oil spill science outreach and education programs and activities, which are broadly defined. They may include informal education, formal education, extension, outreach, sponsoring fellowships, and others.

Time	Title	Presenter
2:00p – 2:15p	Lessons Learned During DEEPEND Consortium Outreach Activities	Ruth Musgrave, Whale Times, Inc.
2:15p – 2:30p	Engaging Audiences: C-IMAGE's Recipes for Success	Liesl Hotaling, University of South Florida
2:30p – 2:45p	Experiential Learning Activities for the Classroom: Lessons Learned Developing Standards-Aligned Science Curricula for Middle and High School Students	Tracy Ippolito, Florida State University
2:45p – 3:00p	RECOVER Virtual Lab — A Virtual Lab Application to Disseminate and Communicate Oil Spill Science for Educators	Alexandra Karaczynski, University of Miami
3:00p – 3:15p	Ten Years of Sharing Oil Spill Science Accurately and Interestingly via the GoMRI Website	Nilde Dannreuther, Mississippi State University Northern Gulf Institute
3:15p – 3:30p	Integrating Outreach and Research: Recommendations from the Gulf of Mexico Research Initiative Consortia	Tina Miller-Way, Dauphin Island Sea Lab
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Outreach and Engagement Strategies for a Proposed Gulf of Mexico Community Health Observing System	Landon Knapp, College of Charleston
4:15p – 4:30p	Community-Researcher Partnerships, Dissemination, and Outreach in a Gulf Coast Disaster Resilience and Preparedness Survey Project	Amy Lesen, Tulane University
4:30p – 4:45p	Adapting Oil Spill-Related Extension and Outreach Programming to Meet End Users' Dynamic Needs	Stephen Sempier, Mississippi-Alabama Sea Grant Consortium
4:45p – 5:00p	The Role of Engagement in Developing Shared Knowledge Among Local Communities, Researchers, and the GoMRI User Community	Ann Hayward Walker, SEA Consulting Group
5:00p – 5:15p	Meeting Educators' Needs After a Disaster in a Timely and Cost-Effective Manner Through the Use of Video Conferencing Technology	Tina Miller-Way, Dauphin Island Sea Lab
5:15p – 5:30p	Discussion	

O16: Human Health Effects of Oil Spills and Other Disasters: What Do We Know, What Don't We Know, What Do We Need to Know, and How Can We Get There?

Wednesday, February 5, 2:00p — 5:30p, Grand Salon A/B

Landon Knapp, South Carolina Sea Grant Consortium/College of Charleston
 Paul Sandifer, College of Charleston
 Burton Singer, University of Florida

The Gulf of Mexico is one of the most threatened areas in the United States from the point of view of natural and technological disasters, as shown in recent history. Each of these disasters by themselves have had significant and long-lasting negative effects on the health and wellbeing of people who live, work, or recreate along the Gulf coast. Perhaps more important than the impacts of a single incident — even at the scale of Hurricane Katrina (2005) or Deepwater Horizon (2010) — are the repetitive and cumulative effects of exposures to multiple traumas. This session will focus on what we have learned and what we still need to know about the mental, physical, psychosocial, and socioeconomic impacts of disasters on the individuals, vulnerable populations, and communities of the Gulf of Mexico. Presentations will describe both single and multiple disasters and include compounding effects of repeated disaster trauma.

Time	Title	Presenter
2:00p – 2:15p	Quantified Videotaped Exposure Activities for 122 Children from Beach Play	Alesia Ferguson, North Carolina A&T State University
2:15p – 2:30p	Skin-Sediment Adherence Estimated from Hand Press and Body Rinses for Children at Beaches Relevant for Exposure Estimates	Alesia Ferguson, North Carolina A&T State University
2:30p – 2:45p	Impact of Dispersant on Aerosolization of Crude Oil Content of the Airborne Fine and Ultrafine Particulate Matter	Nima Afshar-Mohajer, Johns Hopkins University
2:45p – 3:00p	Application of Risk Assessment Modeling for Chemicals Found in Shoreline Contamination from an Oil Spill	Tanu Altomare, University of Texas
3:00p – 3:15p	DOSS Studies Towards Optimizing GOM Residents' Preparation for and Recovery from Future Disasters	Demetri Spyropoulos, Medical University of South Carolina
3:15p – 3:30p	Characterization of the Incidence of Children Presenting with, and Acquiring New Skin Abrasions During the BEACHES Study	Maribeth Gidley, University of Miami
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Communication, Preparation, and Response: Environmental Threats Affect Health and Behaviors	Gabrielle Wong-Parodi, Stanford University
4:15p – 4:30p	Deepwater Horizon Oil Spill Exposure and Child Health: A Longitudinal Cohort Analysis	Tim Slack, Louisiana State University
4:30p – 4:45p	Oil Spills and Human Health: Contributions of the Gulf of Mexico Research Initiative	Ruth Eklund, College of Charleston
4:45p – 5:00p	Understanding Cultural Relationships with Water	Raul Basilio, University of Georgia
5:00p – 5:15p	How Disasters Drive Media Channel Preferences: Tracing News Consumption Before, During, and After Hurricane Harvey	Andrew Parker, RAND Corporation
5:15p – 5:30p	A Conceptual Framework for a Community Environmental Health Observing System in the Gulf of Mexico Region	Paul Sandifer, College of Charleston

O17: Application of Remote Sensing to Oil Spill Monitoring and Classification

Wednesday, February 5, 2:00p — 3:30p, Grand Salon C/D

Lisa DiPinto, NOAA
Benjamin Holt, California Institute of Technology
Frank Monaldo, University of Maryland

The size of the Gulf of Mexico and the quantity of marine activity make the monitoring and classification of oil spills an important ongoing challenge. As a consequence, the use of both optical and microwave (active and passive) remote sensing, particularly from space, is an important tool in locating and characterizing oil spills. Such efforts are important for both enforcement and damage mitigation. The goal of the session is to explore state-of-art uses of remote sensing techniques, emphasizing the potential use of these tools in an operational, near-real time environment.

Time	Title	Presenter
2:00p – 2:15p	Comparison of Aircraft L-Band SAR Imagery with <i>in-situ</i> Oil Spill Thickness Measurements	Benjamin Holt, California Institute of Technology
2:15p – 2:30p	Optical Interpretation of Oil Emulsions: From Laboratory Measurements to Remote Sensing Applications	YingCheng Lu, Nanjing University
2:30p – 2:45p	UAS Remote Sensing of Oil Spills for Operational Response and <i>in-situ</i> Characterization of Oil Detections Obtained by SAR and Optical Satellites	Oscar Garcia-Pineda, Water Mapping, LLC
2:45p – 3:00p	Surface and Subsurface Data Integration, Visualization, and Decision-Making Support	George Graettinger, NOAA
3:00p – 3:15p	Remote Sensing Techniques for Oil Spill Monitoring and Storm Damage Assessment in an Operational Context	Frank Monaldo, University of Maryland
3:15p – 3:30p	Characterization of Sound Induced by Bubbles Released from Nozzles	Likun Zhang, University of Mississippi

O18: Impact of Multiple Stressors on Gulf Ecosystems After Oil Spills

Wednesday, February 5, 2:00p — 5:30p, Grand Salon I/J

Huan Chen, National High Magnetic Field Laboratory*
 Carl Childs, NOAA
 Marie DeLorenzo, NOAA
 Aixin Hou, Louisiana State University
 Amy McKenna, National High Magnetic Field Laboratory

Coastal marshes support a host of environmental and economic services that depend on a healthy, well-functioning plant-soil-microbial complex to drive the food web base. Oil contamination of sensitive coastal salt marsh ecosystems causes direct and indirect effects on plants, animals, and microbial communities. The cumulative and interactive stressors of chemical contaminants combined with environmental factors can significantly alter the degradation mechanism of oil and change the chemical composition and subsequent toxicity. This session will synthesize research efforts on the cumulative effects of multiple stressors to the Gulf ecosystems, focusing on studies that characterize how abiotic and additional chemical stressors alter oil toxicity for coastal species and affect the long-term natural recovery and resilience of plants and microbial communities.

Time	Title	Presenter
2:00p – 2:15p	Toxicity of Common Environmental Contaminants on Two Estuarine Species Following Multi-Stressor Impacts	Peter Key, NOAA**
2:15p – 2:30p	Effects of Polycyclic Aromatic Hydrocarbons and Abiotic Stressors on <i>Fundulus grandis</i> Transcriptomics	Elizabeth Allmon, Purdue University
2:30p – 2:45p	Sex Change and Reproductive Development of the Hermaphroditic <i>Centropristis philadelphica</i> In and Around the Gulf of Mexico Hypoxic Zone	Michael Cyrana, Tulane University
2:45p – 3:00p	The Relative Toxicity to Fish Embryos of PAHs and Photo-Products in Weathered Oil Residues	Christoph Aeppli, Bigelow Laboratory for Ocean Sciences
3:00p – 3:30p	Fates of Petroleum Hydrocarbons in Louisiana Coastal Marshes Since the 2010 Deepwater Horizon Oil Spill	Edward Overton, Louisiana State University**
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Multiple Stressors and Marsh Shoreline Erosion Following the Deepwater Horizon Oil Spill	Scott Zengel, Research Planning Inc.**
4:15p – 4:30p	The Role of Sulfur Functionality in the Production of Photogenerated Water-Soluble Compounds from Surrogate and MC252 Crude Oils	Sydney Niles, Florida State University
4:30p – 4:45p	The Response of Indigenous Microbial Communities in Louisianan Saltmarshes to the Deepwater Horizon Oil Spill over Time	Jiusheng Ren, Louisiana State University
4:45p – 5:00p	Environmental Factors Influencing the Recovery of Soil Microbial Communities in Heavily Oiled Salt Marshes Eight Years After Deepwater Horizon	Grace Cagle, Louisiana State University
5:00p – 5:15p	The Influence of the <i>Spartina alterniflora</i> Microbiome on Removal of Oil from Marsh Soil	Stephen Formel, Tulane University
5:15p – 5:30p	A Decade-Long Response and Recovery of Coastal Salt Marshes Following the Deepwater Horizon Oil Spill	Qianxin Lin, Louisiana State University

* Session Lead
 ** Invited Speaker

O19: Fate of Dispersed Oil

Wednesday, February 5, 2:00p — 5:30p, Grand Salon E

Kelly McFarlin, ExxonMobil Biomedical Sciences

Roger Prince, Stonybrook Apiary

Oil disperses naturally under some conditions and is degraded quite rapidly in dilute suspension. The dispersion process can be greatly enhanced by the addition of chemical dispersants, which ought to similarly encourage biodegradation. Nevertheless, some believe that dispersants may inhibit the natural biodegradation process — a conclusion that may be due to radically different experimental protocols and designs in different laboratories. This session will focus on the environmental fate of dispersed oil in the marine environment and how understanding this fate will help optimize spill response.

Time	Title	Presenter
2:00p – 2:30p	Biodegradation of Chemically Dispersed Oil — Experiences from Lab Studies After the Deepwater Horizon Accident	Odd Brakstad, SINTEF Ocean**
2:30p – 3:00p	The Role of Nutrient Availability in Regulating the Fate of Dispersed Oil—A Cross-Site Comparison	Samantha Joye, University of Georgia**
3:00p – 3:30p	Role of Molecular Structure in the Production of Water-Soluble Species by Photo-Oxidation of Petroleum Compounds	Martha Chacon-Patino, National High Magnetic Field Laboratory
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Transformation of Macondo Oil Deposited on the Seafloor: Early (2010-2014) Temporal Compositional Changes Due to Weathering Using FTICR-MS Technology	Damien Weleschuk, University of Calgary
4:15p – 4:30p	Eight-Year Evolution of Oil Transformation Compounds in Louisiana Salt Marsh Sediments Revealed by FT-ICR Mass Spectrometry	Huan Chen, National High Magnetic Field Laboratory
4:30p – 4:45p	Oil Droplet and Particle Retention in Turbulent Vertical Flow	Carlowen Smith, University of South Florida
4:45p – 5:00p	Solar Induced Emulsification of Petroleum in Neat Films and Films on Water	C. Nacaya Brown, University of New Orleans
5:00p – 5:15p	Viscoelasticity of Polymeric Streamers Formed by Bacteria over a Rising Oil Droplet	Jian Sheng, Texas A&M University
5:15p – 5:30p	Impacts of Particle Properties and Mixing Intensity on Oil-Particle Aggregates by Silica and Modified Kaolinite	Michel Boufadel, New Jersey Institute of Technology

* Session Lead

** Invited Speaker

O20: The Deep Gulf of Mexico: Knowns and Unknowns After the Deepwater Horizon Spill

Wednesday, February 5, 2:00p — 5:30p, Grand Salon G/H

Arne Diercks, University of Southern Mississippi
 Isabel Romero, University of South Florida*
 Patrick Schwing, University of South Florida

The deep ocean is the largest habitat in the Gulf of Mexico affected by the Deepwater Horizon spill. Intense research for the last eight years has contributed to a much better understanding of the dynamics of this habitat influencing the fate of oil residues from the oil spill. Given the increasing motivation toward deep-water exploration, a recompilation of findings and gaps is needed between deep-water pelagic and benthic habitats, including the interplay among physical, chemical, and biological processes. This session shares results from the water column, sediments, and biota over a wide range of environments with the goal of developing a conceptual model to generate an overall “big picture” of deep-ocean dynamics from the water column to the seafloor.

Time	Title	Presenter
2:00p – 2:15p	Oil Spill Impacts to Seafloor Sediments on Monthly to Decadal Time Scales	Gregg Brooks, Eckerd College**
2:15p – 2:30p	Short-Term Sedimentary Processes Using $^{234}\text{Th}_{\text{xs}}$: Detecting Events and Developing New Baselines	Rebekka Larson, Eckerd College
2:30p – 2:45p	Resuspension and Redistribution of Sediments in the Deep Gulf of Mexico — A Laboratory Sed-Flume Study	Arne Diercks, University of Southern Mississippi
2:45p – 3:00p	Grain Size Analysis of Resuspended Deep Gulf of Mexico Sediments	Austin Harris, University of Southern Mississippi
3:00p – 3:15p	Microbes Produce Copious Amounts of Exopolymeric Substances as Biosurfactants: What Happens to All the Excess Organic Carbon?	Kai Ziervogel, University of New Hampshire
3:15p – 3:30p	Following the Flow—An Approach to Analyze the Rise of Particles Throughout the Water Column	Fabian Laukotka, Hamburg University of Technology
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	<i>In-situ</i> Lander Measurements of Methane Concentrations, Transport, and Oxidation in the Deep-Sea Benthic Boundary Layer	Christopher Martens, University of North Carolina-Chapel Hill
4:15p – 4:30p	Ocean Dumping of Chlorinated Hydrocarbons Under the Marine Protection, Research, and Sanctuaries Act of 1972	Charles McCreery, Bureau of Ocean Energy Management (retired)
4:30p – 4:45p	Pleistocene Aged Terrestrial Sediments in the Northeast Gulf of Mexico at 1,800-3,000 Meters Water Depth	Jeff Chanton, Florida State University
4:45p – 5:00p	Development of a Benthic Foraminifera-Based Marine Biotic Index for the Gulf of Mexico	Bryan O'Malley, University of South Florida
5:00p – 5:15p	Predicting Deep-Sea Coral Distribution in the Area Impacted by the Deepwater Horizon Oil Spill: Was the Damage Greater Than We Thought?	Erik Cordes, Temple University
5:15p – 5:30p	The Deep-Sea Benthic Footprint of the Deepwater Horizon Oil Spill Was Bigger Than We Thought, Which Is Why Sampling Plans Matter	Paul Montagna, Texas A&M University - Corpus Christi

* Session Lead
 ** Invited Speaker

O21: Outcomes from Large-Scale Fishery Monitoring Projects Following the Deepwater Horizon Oil Spill: What Have We Learned and Where Do We Go from Here?

Wednesday, February 5, 2:00p — 5:30p, Grand Salon F

David Reeves, National Fish and Wildlife Foundation
Theodore Switzer, Florida Fish and Wildlife Research Institute
Kevin Thompson, Florida Fish and Wildlife Research Institute

The assessment and management of living marine resources in the Gulf have long been hampered by limited availability of statistically robust fishery monitoring data. These deficiencies became ever more apparent following the Deepwater Horizon oil spill as scientists and managers attempted to quantify impacts of the spill on fish populations and users of fisheries resources. To alleviate these deficiencies and provide additional data to monitor potential recovery of living resources following the spill, fishery monitoring projects were implemented in Mississippi, Alabama, and Florida with support from NFWF's Gulf Environmental Benefit Fund. This session features these and other large-scale fishery monitoring projects implemented following Deepwater Horizon.

Time	Title	Presenter
2:00p – 2:15p	Restoring Fishes with Enhanced Monitoring: A Funder's Perspective on the Benefits of Investing in Fisheries	David Reeves, National Fish and Wildlife Foundation**
2:15p – 2:30p	Importance of Benthic Habitat Mapping and Species Characterization for Informing Oil and Gas Extraction Policies and Recovery of Wildlife Injured as a Result of Oil Spills	Steven Murawski, University of South Florida
2:30p – 2:45p	Highlighting the Importance of Sustaining Enhanced Fishery Monitoring Efforts: The Influence of the 2018 Red Tide Event on Gulf Reef Fish Populations	Theodore Switzer, Florida Fish and Wildlife Research Institute
2:45p – 3:00p	Can Monitoring Inform the Debate About the Use of Artificial Reefs in Fisheries Management?	Sean Powers, Dauphin Island Sea Lab
3:00p – 3:15p	The Importance of Depth and Artificial Structure to Female Red Snapper Reproductive Parameters	Nancy Brown-Peterson, University of Southern Mississippi
3:15p – 3:30p	Incorporating Data from Artificial and Natural Reefs into Indices of Relative Abundance to Support Improved Assessment and Management of Reef Fishes	Kevin Thompson, Florida Fish and Wildlife Research Institute
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Monitoring Pelagic Bait Fish in the Tidal Rivers of Mobile Bay	John Mareska, Alabama Marine Resources
4:15p – 4:30p	Evaluating a Juvenile Reef Fish Survey to Improve Statistical Inferences for Estimating Temporal Changes in Population Abundances	Meagan Schrandt, Florida Fish and Wildlife Conservation Commission
4:30p – 4:45p	Improving Management of Mississippi's Recreational Red Snapper Fishery Using the Tails n' Scales Electronic Reporting System	Carly Somerset, Mississippi Department of Marine Resources
4:45p – 5:00p	Improving Recreational Fishing Statistics for Important Reef Fishes in the Eastern Gulf of Mexico	Beverly Sauls, Florida Fish and Wildlife Research Institute
5:00p – 5:15p	Results from a Decade of Fishery Observer Coverage in the Eastern Gulf of Mexico	Oscar Ayala, Florida Fish and Wildlife Research Institute
5:15p – 5:30p	Contributions of Fishery-Independent Surveys Funded by the Gulf Environmental Benefit Fund to Reef Fish Stock Assessments in the Gulf of Mexico	Skyler Sagarese, NOAA Fisheries**

** *Invited Speaker*

Wednesday Poster Sessions

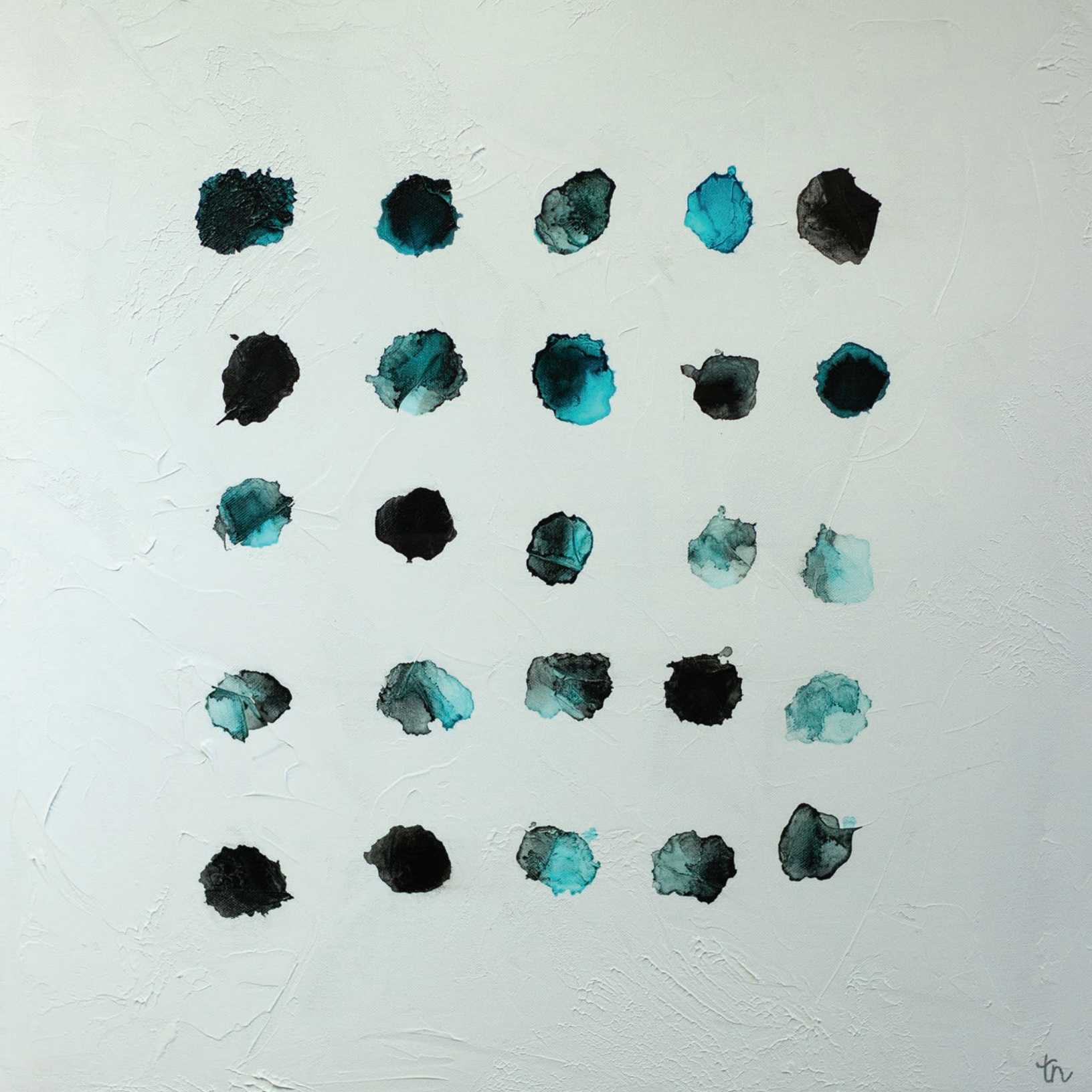
Wednesday, February 5, 5:30p – 7:30p, Florida Ballroom

#	Title	Presenter
P-O16:		
92	Analysis of Multidimensional Fluorescence Data Recorded from Benzo[a]pyrene Metabolites in Frozen Matrixes with Machine Learning	Mohammadreza Chehelamirani, University of Central Florida
93	Maternal and Infant Health Needs Among Laotian Families in Mobile County, Alabama	Sarah DeYoung, University of Delaware
94	Environmental Trauma Response: Risks and Resilience in Cambodian and Laotian Refugee Communities in Coastal Alabama	Chad Steacy, University of Georgia
P-O17:		
57	Mobile Application for Oyster Gape Measurement Study	Kamal Ali, Jackson State University
58	Effects of Aerosolized Droplets on Aerodynamic Roughness in the Marine Atmospheric Boundary Layer	Yajat Pandya, University of Texas at Dallas
60	Experimental Study of DOA-Based Bubble Sources Localization for Oil Spill Detection	Xing Yang, University of Mississippi
P-O18:		
31	Impacts of Oil Exposure, Low Oxygen, and Temperature on Aerobic Performance of Red Drum (<i>Sciaenops ocellatus</i>)	Kerri Ackerly, University of Texas at Austin
32	Oil, Mercury Levels, and Stable Isotopes in Seaside Sparrows and Marsh Rice Rats Across the Mississippi River Plume	Andrea Bonisoli-Alquati, California State Polytechnic University, Pomona
33	The Effects of Photo-Oxidized Oil and Increased Nutrient Availability on Marine Phytoplankton Communities	Noah Claflin, Texas A&M University at Galveston
34	Effects of Crude Oil Vapors on the Cardiovascular Flow of Embryonic Gulf Killifish	Sanjib Gurung, University of South Florida
35	Role of Nutrient Availability on the Diatom <i>Phaeodactylum tricornutum</i> in the Presence of Oil	Jessica Hillhouse, Texas A&M University at Galveston
36	Toxicity Assessment of Novel Oil Dispersant Based on Silica Nanoparticle: An Update Testing Different Chemical Composition and Endpoints	Hajime Kurita Oyamada, University of Florida
37	The Gulf of Mexico Hypoxic Zone and Its Effect on the Gonadal Structure of Protogynous <i>Centropristis philadelphica</i>	Caroline Pollard, Tulane University
38	Oiling Impacts on Salt Marsh Ecosystem Processes: Insights from a Large-Scale Marsh Mesocosm Experiment	Brian Roberts, Louisiana Universities Marine Consortium
39	Microbial Symbionts of <i>Spartina alterniflora</i> and the Plant Genetic Response in an Oiled Environment	Sunshine Van Bael, Tulane University
40	Multi-Climate Stressor Effects and Louisiana Sweet Crude Oil Sheen Toxicity in Larval Eastern Oysters (<i>Crassostrea virginica</i>)	Max Zavell, University of Rhode Island
P-O19:		
53	Computational Fluid Dynamics and the Prediction of Droplet Sizes	Craig Booth, University of Western Australia
54	Biodegradation of Oil and Gas in Seawater at Oxygen-Reduced and -Saturated Conditions	Odd Brakstad, SINTEF Ocean

#	Title	Presenter
55	Nanoparticle-Micelle Oil Dispersants from SiO ₂ -poly(caprolactone)-b-poly(oligo ethylene glycol methyl methacrylate) Amphiphilic Grafted Nanoparticles	Christopher Keller, Tulane University
56	Amphiphilic Grafted Nanoparticles as a Platform for Dispersants with Improved Efficiency and Biocompatibility	Susan Walley, University of Florida
P-O20:		
11	Bacterial Degradation of Crude Oil and Methane at Elevated Pressure	Paul Bubenheim, Technical University of Hamburg
12	Factors Influencing ²¹⁰ Pb _{xs} Inventories in Northeast Gulf of Mexico Bottom Sediments	Sophia Chernoch, Eckerd College
13	Elemental Composition in JS-0815 Southern Gulf of Mexico Cores	Jacob Giles, Eckerd College
14	Annual- to Decadal-Scale Sedimentation Patterns off Northwest Cuba over the Past 100 Years	Debanhi Jimenez Reyes, Eckerd College
15	Near-Inertial Currents in the Deep Gulf of Mexico	Xinfeng Liang, University of Delaware
16	Benthic Foraminifera Before and After the Ixtoc 1 Oil Spill in the Southern Gulf of Mexico	Maria Machain-Castillo, Universidad Nacional Autónoma de México
17	Assessing the Presence of Oil Residues in Marine Sponges from the Gulf of Mexico	Isabel Romero, University of South Florida
18	The Chemical Legacy of Oil Spills in the Gulf of Mexico: Lessons Learned from Organic Geochemical Analyses of Sediment Samples	Isabel Romero, University of South Florida
19	Organic Carbon Burial Rates and Efficiency in Sediment Cores from the Gulf of Mexico	Ana-Carolina Ruiz-Fernández, Universidad Nacional Autónoma de México
20	Deployable, Networked Ammonium-Nitrate Sensors to Enable Monitoring of Deep-Water Nitrogen	William Tarpeh, Stanford University
P-O21:		
71	Characterization of Sea Turtle Habitat Use on the West Florida Shelf Using Benthic Mapping Techniques	Heather Broadbent, University of South Florida
72	Disentangling the Role of Time, Space, and Environmental Conditions in Structuring West Florida Shelf Demersal Fish Communities	David Gandy, Florida Fish and Wildlife Research Institute
73	Gag Grouper Ontogenetic Movement on the West Florida Shelf	Rachel Germeroth, Florida Fish and Wildlife Research Institute
74	Combining Multibeam Sonar and Towed Camera Technologies for Habitat Mapping and Reef Fish Assessments in the Eastern Gulf of Mexico	Sarah Grasty, University of South Florida
75	Foraminiferal Biomonitoring as an Effective Tool for Investigating the Dispersion of Bio-Deposits from a Cage Culture Farm in the Persian Gulf	Seyed Abbas Haghshenas, University of Tehran
76	A Hydroacoustic Spatial Evaluation of the Effective Area Sampled by Baited Underwater Camera Surveys in the Eastern Gulf of Mexico	Jennifer Herting, Florida Fish and Wildlife Research Institute
77	Mapping Benthic Habitat on the West Florida Shelf Using Multibeam Acoustics and Towed Underwater Video to Improve Fisheries Science and Management	Alexander Ilich, University of South Florida
78	Spatial Dynamics of the Quantity and Quality of Natural and Artificial Reef Habitats in the Eastern Gulf of Mexico	Sean Keenan, Florida Fish and Wildlife Research Institute
79	Evaluating the Usefulness of GoPro Cameras Deployed in Conjunction with Fisheries-Independent Hooked Gear Sampling Along the West Florida Shelf	Brian Klimek, Florida Fish and Wildlife Conservation Commission

#	Title	Presenter
80	Differences in Habitat Use by Female Red Snapper: Comparison of Mature and Immature Fish	Andrea Leontiou, University of Southern Mississippi
81	Improved Understanding of the Spatial and Habitat Dynamics of the Size Composition of Reef Fishes Using Stereo-Baited Remote Underwater Video	Sheri Parks, Florida Fish and Wildlife Research Institute
82	NOAA/NFWF Deepwater Horizon Oceanic Fish Restoration Project Lessons Learned	George Silva, NOAA Fisheries
83	Seasonal Dietary Shifts of Red Snapper (<i>Lutjanus campechanus</i>) from Northern Gulf of Mexico Waters off of Mississippi	Caitlin Slife, University of Southern Mississippi
P-O23:		
91	Visual Quantification of Oil and Gas Bubbles from MC20	Carrie O'Reilly, Florida State University
P-O24:		
113	Interfacial Phenomena of Natural Dispersants for Crude Oil Spills	Fei Guo, University of South Florida
114	Aerogels: Improving Oil Spill Response with Advanced Materials	Osman Karatum, Florida Gulf Coast University
115	Exploring a Novel Adsorption Material for Decanting Water Treatment	Jingjing Ling, Memorial University
116	Assessing the Genotoxicity and Tumorigenic Potential of Crude Oil and Dispersants in Mice	Yao Liu, Tulane University School of Public Health and Tropical Medicine
117	An Interpretation of Factors Accounting for Deep Oil Plumes Following Deepwater Horizon	Steven Murawski, University of South Florida
118	Evaluating the Relative Sensitivity of Atlantic Scleractinian Corals to Oil and Dispersed Oil to Better Inform Spill Response Decision Making	Nicholas Turner, Nova Southeastern University
119	Development of an Oil Dispersant Using Biosurfactants for Oil Spill Treatment in the North Atlantic Ocean	Zhiwen Zhu, Memorial University
P-O25:		
101	Distribution Patterns of Sperm Whale and Oceanic Dolphin Sightings from Vessel Surveys Conducted Before and After the Deepwater Horizon Spill	Laura Aichinger Dias, University of Miami
102	Developing a Novel Remote Tag Attachment Technique to Better Understand Small Cetacean Movement Patterns in the Northern Gulf of Mexico	Brian Balmer, National Marine Mammal Foundation
103	Spatial, Temporal, and Individual-Level Variation in Northern Gulf of Mexico Common Bottlenose Dolphin Diet	Carl Cloyed, Dauphin Island Sea Lab
104	Changes in Bottlenose Dolphin Immune Functions Associated with the Deepwater Horizon Oil Spill in the Northern Gulf of Mexico — A Recurrence?	Sylvain De Guise, University of Connecticut
105	Assessment of Sublethal Cardiac Injury in Bottlenose Dolphins (<i>Tursiops truncatus</i>) in the Gulf of Mexico Following Exposure to Deepwater Horizon Oil-Associated Chemicals	Forrest Gomez, National Marine Mammal Foundation
106	Sparse Representation-Based Classification of Sperm Whale and Beaked Whale Clicks from the Gulf of Mexico	Thomas Guilment, University of Louisiana at Lafayette
107	Estimation of Long-Term Regional Density Variations of Sperm Whales in the Mississippi Canyon Area of the Gulf of Mexico from Acoustic Recordings	Kun Li, University of Louisiana at Lafayette
108	Transcriptomic Analyses of Bottlenose Dolphin Blood and Skin to Identify Additional Biomarkers and Pathways to Inform Cetacean Health Assessment	Jeanine Morey, National Marine Mammal Foundation
109	Health and Behavioral Responses of Common Bottlenose Dolphins (<i>Tursiops truncatus</i>) in Low Salinity Waters Within the Barataria Basin in Louisiana	Ryan Takeshita, National Marine Mammal Foundation

#	Title	Presenter
110	Population Modelling to Predict Recovery Trajectories of Marine Mammal Stocks Impacted by the Deepwater Horizon Oil Spill	Len Thomas, University of St. Andrews
111	Developing an Operational Sea Turtle Stranding Analysis System to Improve Understanding of Sea Turtle Mortality in the Gulf of Mexico	Zhankun Wang, National Centers for Environmental Information
112	Bottlenose Dolphins and Red Tide Harmful Algal Blooms: Are Patterns of Dolphin Responses Emerging from Repeated Events?	Randall Wells, Chicago Zoological Society
P-O26:		
130	Formation and Fate of Oil Particle Aggregates in the Gulf of Mexico Continental Shelf: Numerical Modeling	Linlin Cui, Virginia Institute of Marine Science
131	SOSim: A Probabilistic Bayesian Model for Submerged Oil Tracking	Chao Ji, University of Miami
132	Developing a Tool for Generating the Oil Spill Contingency Planning Statistics in the U.S. Arctic Outer Continental Shelf	Zhen Li, Bureau of Ocean Energy Management
133	Effects of Diluted Bitumen Oil Products with Sediment on Benthic Organisms	Elizabeth Moso, U.S. Environmental Protection Agency
135	Vertical Dispersion of Oil Droplets Induced by Langmuir Supercells in the Coastal Ocean	Andres Tejada-Martinez, University of South Florida
136	Simulation of Hypothetical Oil Blowout in Walker Ridge Field (Gulf of Mexico Region)	Luciana Tessarolo, National Institute for Space Research
137	Impact of Bubble Size on the Budget of Turbulent Kinetic Energy and Mean Flow Structure in a Bubble Plume	Huijie Wu, University of Missouri
138	Use of Chemical Concentration Changes in Coastal Sediments to Compute Oil Impact Dates and Regions	Junfei Xia, University of Miami
139	Large-Eddy Simulations of Oil Aerosol Plume Dispersion in Marine Atmospheric Boundary Layer	Di Yang, University of Houston
140	A Multi-Agent-Based Multi-Objective Particle Swarm Optimization (MMP SO) for the Optimal Planning of Offshore Oil Decanting System	Xudong Ye, Memorial University
P-O27:		
127	Sinking POC from Sediment Traps in the Northern Gulf: The Rest of the Story	Samantha Bosman, Florida State University
128	Fluorescence Spectroscopy of Oil-Impacted Waters in the Gulf of Mexico: Enhancing Detection with a Microfluidic Platform Using Solid Phase Extraction	Eurico D'Sa, Louisiana State University
129	Dissolved Trace Metals in Surface Waters of the Texas-Louisiana Shelf: Pollutant Transport and Potential Water Mass Tracers	Jessica Fitzsimmons, Texas A&M University



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Thursday, February 6

Time	Event	Location
7:30a – 12:00p	Registration and Check-In Open	Grand Foyer
7:30a – 10:30a	Presentation Upload Open	Grand Foyer
7:30a – 12:00p	Poster Hall and Exhibits Open	Florida Ballroom

Scientific Program Schedule

Starting at 7:30a	BREAKFAST	Grand Foyer
8:30a – 10:00a	Session 022	Grand Salon I/J
	Session 023	Grand Salon C/D
	Session 024	Grand Salon E
	Session 025	Grand Salon F
	Session 026	Grand Salon G/H
	Session 027	Grand Salon A/B
10:00a – 10:30a	BREAK	Grand Foyer
10:30a – 12:00p	Session 022	Grand Salon I/J
	Session 023	Grand Salon C/D
	Session 024	Grand Salon E
	Session 025	Grand Salon F
	Session 026	Grand Salon G/H
	Session 028	Grand Salon A/B
12:00p – 2:00p	LUNCH BREAK	

Closing Plenary Program Schedule

2:00p – 3:30p	Wes Tunnell Award Gulf Science in the Next 10 Years Conference Wrap Up	Grand Salon E/F
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Workshops and Associated Meetings

12:30p – 1:30p	<i>Dispatches from the Gulf 3</i> Screening	Grand Salon A/B
3:00p – 5:00p	NOAA RESTORE <i>Sargassum</i> Project Annual Site Visit Meeting (Closed)	Grand Salon A/B

O22: Next Steps in Human Dimensions Research and Practice: Priority Actions for Building Community Resilience to Oil Spills

Thursday, February 6, 8:30a — 12:00p, Grand Salon I/J

David Cochran, University of Southern Mississippi
Melissa Finucane, RAND Gulf States Policy Institute
Andrew Parker, RAND Gulf States Policy Institute

Diverse stakeholders have keen interest in the lessons emerging from 10 years of research on community impacts of the Deepwater Horizon oil spill. This session will present syntheses of what researchers have learned about the health, social, and economic trajectories of Gulf Coast residents following the disaster. Discussions will focus on recommendations for practitioners and policymakers about enhancing community resilience in advance of future, similar disasters. Outcomes of this session will include a prioritized list of next steps for research and practice — delineated for specific types of stakeholders — to ensure that scarce resources are used to optimize resilience-building efforts in the Gulf of Mexico region.

Time	Title	Presenter
8:30a – 8:45a	Building Community Resilience: Recommendations from a Synthesis of Research on the Health, Social, and Economic Impacts of the Deepwater Horizon Oil Spill	Melissa Finucane, RAND Gulf States Policy Institute
8:45a – 9:00a	Developing Culturally Responsive Emergency Management with Community Engagement	Brandon Moss, University of South Alabama
9:00a – 9:15a	The Cambodian and Laotian Disaster Experience from Respondents and Their Close People	Hosik Min, University of South Alabama
9:15a – 9:30a	An Interdisciplinary Framework for Building the Infrastructure of Social Capital and Resilience: Focus Groups and Tabletop Exercises	Shoon Lio, University of South Alabama
9:30a – 9:45a	Translating Research Findings into Suggested Oil Spill Practices to Support Community Resilience	Ann Hayward Walker, SEA Consulting Group
9:45a – 10:00a	Discussion	
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Recognizing, Measuring, and Leveraging the Human Health Protecting and Promoting Effects of Natural and Restored Coastal Wetlands	Paul Sandifer, College of Charleston
10:45a – 11:00a	Comparing Perceptions and Reality: Convergence Among Gulf Coast Residents and Government Data on Water Quality in the Mississippi Sound	David Cochran, University of Southern Mississippi
11:00a – 11:15a	Environmental Restoration and Catastrophe: Analyzing Frames and Claims in Oyster Restoration News Stories	Hannah Brown, University of Florida
11:15a – 11:30a	Natural or Natech? Understanding the Relationship Between Hazard Perceptions, Institutional Trust, and Views of Recovery Following Hurricane Harvey	Tim Slack, Louisiana State University
11:30a – 11:45a	Predicting the Sequence and Duration of Post-Hurricane Housing Stages for Equitable Recovery Resource Allocation	Elaina Sutley, University of Kansas
11:45a – 12:00p	Discussion	

O23: Understanding Processes Associated with Sub-Surface Oil and Gas Releases, with Special Focus on the MC20 Site in the Northern Gulf of Mexico

Thursday, February 6, 8:30a — 12:00p, Grand Salon C/D

Lisa DiPinto, NOAA
 Ian MacDonald, Florida State University
 Andrew Mason, NOAA

Oil and gas releases, including persistent surface slicks, have been observed in the Mississippi Canyon Block 20 (MC20) site in the northern Gulf since the 2004 destruction of a production platform by Hurricane Ivan. The magnitude and fate of these hydrocarbons have been topics of active research in several disciplines. There have been many recent advances in our ability to characterize source, composition, and extent of gas and oil discharging from the site, as well as for subsurface oil collection and containment. Presentations will describe physical models, remote sensing data collection and analyses, field testing of developing techniques and methods for characterizing oil in the environment, and other related *in-situ* sampling. The session includes updated results from a NOAA/BSEE field project that developed and applied multiple novel technologies for characterizing the discharging oil.

Time	Title	Presenter
8:30a – 8:45a	The Physics of Multiphase Fluid Flow as an Essential Guide for Incident Response	Richard Camilli, Navistry Corp.
8:45a – 9:00a	Estimates of Oil Flux to the Ocean at MC20 Using Acoustical Methods	Chris Taylor, NOAA Ocean Service
9:00a – 9:15a	Visual Assessment of an Oil and Gas Bubble Plume at MC20	Ian MacDonald, Florida State University
9:15a – 9:30a	Temporal Variations in the Weathering and Source Characteristics of Crude Oil Escaping the Seafloor, MC20 Site, Northern Gulf of Mexico	Scott Stout, NewFields
9:30a – 9:45a	Molecular Understanding of Source Oil and Weathered Surface Sheens from Mississippi Block 20 Site	Huan Chen, National High Magnetic Field Laboratory
9:45a – 10:00a	An Assessment of Oil-Related Chemical Contaminants in the Sediment, Water, and Oil from the MC20 Site in the Northern Gulf of Mexico	Andrew Mason, NOAA
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Characterization and Source Type Identification of Gas Bubbles Observed at Mississippi Canyon Block 20 in the Gulf of Mexico	Michael Gaskins, TDI-Brooks International
10:45a – 11:00a	Atmospheric Methane Concentrations at the MC20 Site in the Northern Gulf of Mexico	Mauricio Silva, Florida State University
11:00a – 11:15a	Thin Water Films Encapsulating Oil Droplets Delay Their Mixing with an Oil Slick	Omri Ram, Johns Hopkins University
11:15a – 11:30a	A Rapid Response Solution Designed and Deployed at MC20 in the Gulf of Mexico to Successfully Contain the Longest Active Oil Spill in U.S. History	Timothy Couvillion, Couvillion Group, LLC
11:30a – 11:45a	Detection of the Oil Slick from the MC20 Site with Aerial and Satellite Remote Sensing Before and After the Installation of the Containment Dome	Oscar Garcia-Pineda, Water Mapping, LLC
11:45a – 12:00p	Discussion	

O24: To Disperse or Not to Disperse? That Is the Question

Thursday, February 6, 8:30a — 12:00p, Grand Salon E

Thomas Coolbaugh, Exxon Mobil Corporation
Joseph Katz, Johns Hopkins University
Steven Murawski, University of South Florida

Some of the most persistent and pervasive questions arising from significant oil spills, including Deepwater Horizon and Ixtoc 1, relate to the decision to deploy chemical dispersants at the sea surface and at the source of the blown-out well as response countermeasures. This session will summarize the state of current research from various perspectives, including those of industry, academia, and the recently completed National Academies’ study. Unresolved issues and next steps for additional research will be discussed.

Time	Title	Presenter
8:30a – 9:00a	Findings of the National Academies of Sciences, Engineering, and Medicine on the Use of Dispersants in Oil Spill Response	Susan Roberts, The National Academies of Sciences, Engineering, and Medicine
9:00a – 9:15a	An Evaluation of Models to Calculate Droplet Size and Subsurface Oil Releases	Cortis Cooper, Chevron (Retired)
9:15a – 9:30a	Investigation of Droplet Dispersion and Distribution in Experiments and Modeling — Relevant Findings for Decision-Making and Dispersant Use	Simeon Pesch, Hamburg University of Technology
9:30a – 9:45a	The Effect of Blockages on the Formation of a Free Jet	Craig Booth, University of Western Australia
9:45a – 10:00a	Modeling Degassing in Live Oil Droplets Rising from Deep-Sea Blowouts Settles the Droplet Size Debate	Claire Paris, University of Miami
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Making the SMART Field Dispersant Effectiveness Protocol Smarter	Tim Nedwed, ExxonMobil Upstream Research Company
10:45a – 11:00a	Comparative Risk Assessment of Response Alternatives for the Deepwater Horizon Spill	Deborah French-McCay, RPS Ocean Science
11:00a – 11:15a	Emulsification of Water in Crude Oil and Structural Changes Caused by Dispersants	Diego Muriel, Johns Hopkins University
11:15a – 11:30a	Investigating the Influence of Oil Weathering on Dispersant Effectiveness	Christoph Aeppli, Bigelow Laboratory for Ocean Sciences
11:30a – 11:45a	Effect of Surfactants on the Generation of Sea Spray During Tropical Cyclones	Breanna Vanderplow, Nova Southeastern University
11:45a – 12:00p	Forgotten Lessons? Revisiting Dispersant Use in Light of the Baffin Island Oil Spill Experiment	Roger Prince, Stonybrook Apiary

O25: Large Marine Vertebrates in the Northern Gulf of Mexico 10 Years After the Spill: New Findings, Synergies, Collaborations, and Opportunities

Thursday, February 6, 8:30a — 12:00p, Grand Salon F

Kaitlin Frasier, University of California San Diego

Pamela Michael, South Carolina Cooperative Fish and Wildlife Research Unit*

Nathan Putman, LGL Ecological Research Associates

Studies conducted on northern Gulf of Mexico large marine vertebrates (LMVs) since the Deepwater Horizon oil spill have revealed significant individual- and population-level effects resulting from spill-related hydrocarbon exposure and response efforts. Research and surveys conducted in the 10 years since the spill have revealed important new insights into the distribution, abundance, habitat use, and health of LMVs, reflecting these species as sentinels of healthy ecosystems. This session will showcase recent and continuing research throughout the region across a range of spatiotemporal scales and utilize new technologies to elucidate relationships between habitat features and individual-, species-, and population-level dynamics.

Time	Title	Presenter
8:30a – 8:45a	Large Marine Vertebrates in the Gulf of Mexico: Assessing Population Status and Habitat in a Changing Environment	Lance Garrison, NOAA Fisheries**
8:45a – 9:00a	Cetacean Abundance Trends in the Northern Gulf of Mexico	Joel Ortega-Ortiz, University of Miami
9:00a – 9:15a	Gulf-Wide Marine Mammal Population Monitoring: Integrating Data Sources to Improve Spatiotemporal Prediction	Kaitlin Frasier, Scripps Institution of Oceanography
9:15a – 9:30a	Diversity and Distribution of Seabirds in Pelagic Waters of the Northern Gulf of Mexico	Pamela Michael, South Carolina Cooperative Fish and Wildlife Research Unit
9:30a – 9:45a	Aerial Seabird Surveys in Northern Gulf of Mexico: Progress and Pitfalls	Randy Wilson, U.S. Fish and Wildlife Service
9:45a – 10:00a	Synthesis of Sea Turtle Dive Patterns in the Gulf of Mexico: Getting to Abundance Through Aerial Correction Factors	Kristen Hart, U.S. Geological Survey
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Sustained Maternal Illness and Low Reproductive Success Rate in Barataria Bay Bottlenose Dolphins Following the Deepwater Horizon Oil Spill	Cynthia Smith, National Marine Mammal Foundation
10:45a – 11:00a	Insights on Gulf of Mexico Bryde's Whale Foraging from Suction Cup Tagging	John Hildebrand, Scripps Institution of Oceanography
11:00a – 11:15a	Gulf of Mexico Bryde's Whale Distribution from Moored Passive Acoustic Monitoring: Call Variation and Occurrence in the Northwestern Gulf	Melissa Soldevilla, NOAA Southeast Fisheries Science Center
11:15a – 11:30a	Loggerhead Sea Turtle (<i>Caretta caretta</i>) Nest Productivity in the Northern Gulf of Mexico Considering Disturbances	Mariana Fuentes, Florida State University
11:30a – 11:45a	Space-Use Patterns Among Surface-Pelagic Juvenile Sea Turtles in the Gulf of Mexico	Katrina Phillips, University of Central Florida
11:45a – 12:00p	Slow Science: Sea Turtle Ontogeny 10 Years After the Deepwater Horizon Oil Spill	Kate Mansfield, University of Central Florida**

* Session Lead

** Invited Speaker

O26: Modeling Oil Spills from Small- to Large-Scales: Recent Research Results and Synthesis Toward Improving Oil Spill Response

Thursday, February 6, 8:30a — 12:00p, Grand Salon G/H

Christopher Barker, NOAA Office of Response and Restoration
CJ Beegle-Krause, SINTEF Ocean

Oil spill modeling leverages research from individual fields into interdisciplinary understanding and decision support. Research on transport, weathering and fate, and effects as well as response options are building blocks for more sophisticated models and analysis. These models are crucial for improving planning and preparedness for and response to potential oil spills. Deciding among response options such as *in-situ* burning, chemical dispersant application, or even no response requires understanding where the oil will go, how it could change, and how it will interact with the environment. This session focuses on research results and efforts to bridge new research into response applications

Time	Title	Presenter
8:30a – 8:45a	Transfer of Hydrocarbons from a Natural Seep to the Water Column and Its Footprint on the Sea Surface	Mahdi Razaz, University of Georgia
8:45a – 9:00a	Prediction of Transport and Dissolution of Oil and Gas Released from Accidental Subsea Spills: A Coupled Near- and Far-Field Model	Inok Jun, Texas A&M University
9:00a – 9:15a	Coupling an Earth System Model to the Connectivity Modeling System Allows Dynamic Estimates of Oil Photo-Oxidation in the Gulf of Mexico	Claire Paris, University of Miami
9:15a – 9:30a	Reynolds-Averaged Simulations of Langmuir Circulation in Shallow Water	Andres Tejada-Martinez, University of South Florida
9:30a – 9:45a	Development of a Predictive Bayesian Oil Spill Model for Tracking of Sunken Oil	Mary Jacketti, University of Miami
9:45a – 10:00a	Numerical Study of Oil Droplet Dispersion Under Breaking Waves by Coupling Computational Fluid Dynamics with a Population Balance Model	Fangda Cui, New Jersey Institute of Technology
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Transport of Oil Droplets in the Upper Ocean: Impact of the Eddy Diffusivity Profile	Ruixue Liu, New Jersey Institute of Technology
10:45a – 11:00a	Turbulence and Dynamics in the Wake of Stabilized Bubbles in a Water Tunnel	Soobum Bae, Texas A&M University
11:00a – 11:15a	Investigation of Turbulent Mixing and Primary Breakup for Turbulent Oil Jets	Cosan Daskiran, New Jersey Institute of Technology
11:15a – 11:30a	Measurements of Flow Structure and Turbulence in the Nearfield of an Oil Jet in Water	Xinzhi Xue, Johns Hopkins University
11:30a – 11:45a	High Resolution Simulations of Oil and Gas Blowouts	Nico Wienders, Florida State University
11:45a – 12:00p	Effect of Chemical Herders on the Structure of Breaking Waves	Lakshmana Dora Chandrala, Johns Hopkins University

O27: Biogeochemical Tracers in Oil Spill Science: Advances, Lessons Learned, and Future Directions

Thursday, February 6, 8:30a — 10:00a, Grand Salon A/B

Jeff Chanton, Florida State University

Will Patterson, University of Florida

A variety of biogeochemical tracers have been applied to measure the distribution of hydrocarbons from the Deepwater Horizon oil spill, as well as their fate and effects. The use of tracers has included fingerprinting and tracking petroleum compounds in the environment, utilizing ^{210}Pb to examine hydrocarbon sedimentation rates, estimating the assimilation and transfer of petrocarbon in northern Gulf of Mexico food webs with ^{14}C , and examining food web impacts of the spill via stable isotope ecology. Results of nearly a decade of applying biogeochemical tracers to examine these and other post-Deepwater Horizon processes provide an opportunity to synthesize advances made and lessons learned.

Time	Title	Presenter
8:30a – 8:45a	History of Persistent Organic Pollutants in Offshore Cuban Sediments: Understanding Pollution Preservation in a Tropical Coastal Environment	Thea Bartlett, University of South Florida
8:45a – 9:00a	Oil-Derived Trace Metal Signature in <i>Crassostrea virginica</i> Shell May Provide Historical Record of Oil Exposure	Kimberly Peter, Dauphin Island Sea Lab
9:00a – 9:15a	Using Hopanes and Steranes for Assessment of Petroleum Contamination in Marine Invertebrates	Hannah Hamontree, University of South Florida
9:15a – 9:30a	The Potential of Radium-224 as a Tracer of Timescales of Gulf of Mexico Crude Oil Exposure to the Marine Environment	Matthew Kurpiel, Coastal Carolina University
9:30a – 9:45a	Application of Natural Radioisotope Tracers to Understand Transport and Accumulation of PAHs in Marine Environments	Puspa Adhikari, Florida Gulf Coast University
9:45a – 10:00a	Stable and Radioisotopes in Tissues and Otoliths as Natural Biogeochemical Tracers of Food Web Effects of the Deepwater Horizon Oil Spill	Beverly Barnett, NOAA Southeast Fisheries Science Center

O28: From Databases to End Users – Transforming the Myriad of Coastal Information and Data Sets into Wickedly Useful Tools

Thursday, February 6, 10:30a—12:00p, Grand Salon A/B

Barb Kirkpatrick, Gulf of Mexico Coastal Ocean Observing System
Kirsten Larsen, NOAA
Emily Maung-Douglass, Louisiana Sea Grant College Program

The number of large datasets that illustrate conditions in the Gulf of Mexico is ever-growing. The value of these datasets is increasing at an even faster rate as computing power becomes more readily accessible and tool development easier. However, with an abundance of data tools available, end users and developers alike are often left wondering what makes tools successful. From data collectors to tool developers and end users, contributions to this session include innovative and multidisciplinary examples, lessons learned from past tool experiences, and the next “big (wicked) ideas” for tool development that make data more relevant and usable to both the scientific communities and the public.

Time	Title	Presenter
10:30a – 10:45a	NOAA's DIVER Data Warehouse Platform for Emergency Response, Assessment, and Restoration Data Collection and Sharing	Ben Shorr, NOAA
10:45a – 11:00a	Mapping Hydrologic Response to Land-Use Change in the Gulf Coast	Andrew Shamaskin, Mississippi State University
11:00a – 11:15a	Gulf TREE: Your Ultimate Climate Tool Selection Guide	Heather Young, Tampa Bay Regional Planning Council**
11:15a – 11:30a	Ocean Reports — Investigating Ocean Neighborhoods	Christine Taylor, BOEM**
11:30a – 11:45a	Development of an International Response Oil Assay	Dalina Thrift-Viveros, NOAA
11:45a – 12:00p	A Science-Based Land Conservation Prioritization Framework-Based Multicriteria Acceptability Analysis	Sathishkumar Samiappan, Mississippi State University

* Session Lead
** Invited Speaker



Thank you to the members
of the GoMRI Research
Board for their efforts over
the 10 years of the program.

A big thanks to all current and
past Management Team members
and partners for their continuous,
excellent work over the 10 years
of this important program.



Rita Colwell, PhD



Margaret Leinen, PhD



Debra Benoit, MEd



Peter Brewer, PhD



Richard Dodge, PhD



John Farrington, PhD



Kenneth Halanych, PhD



David Halpern, PhD



William Hogarth, PhD



Cecilie Mauritzen, PhD



Raymond Orbach, PhD



Jürgen Rullkötter, PhD



David Shaw, PhD



Richard Shaw, PhD



John Shepherd, PhD



Bob Shipp, PhD



Burton Singer, PhD



Ciro Sumaya, MD



Denis Wiesenburg, PhD



Dana Yoerger, PhD

Closing Plenary

Thursday, February 6, 2:00p — 3:30p, Grand Salon E/F

Wes Tunnell Lifetime Recognition for Gulf Science and Conservation *Honoring Chuck Wilson, Gulf of Mexico Research Initiative*

Presented by Kelly Lucas, Thad Cochran Marine Aquaculture Center, and Tina Miller-Way, Dauphin Island Sea Lab

Gulf Science in the Next 10 Years

The past 10 years have seen a wealth of scientific discovery and innovation and have fostered relationships between researchers, managers, and decision-makers. What opportunities exist or can be created to sustain collaboration within this dynamic community, keep science in the forefront of management and policy, and add to the knowledge base of the nation's most valuable coastal resource?

Embrace the Gulf

Laura Bowie, Gulf of Mexico Alliance

U.S. Ocean Science and Technology Vision

Nicole LeBoeuf, NOAA

The Gulf of Mexico Management, Restoration, and Ecosystem Science Conference (GoMMRESC)

Larry McKinney, Harte Research Institute and GoMOSES Executive Committee Chair; and Laura Bowie, Gulf of Mexico Alliance



Laura Bowie, *Gulf of Mexico Alliance*

Laura Bowie serves as the Executive Director for the Gulf of Mexico Alliance, a partnership of the five Gulf states with the goal to significantly increase regional collaboration to enhance the ecological and economic health of the Gulf of Mexico. She began her career in Houston, Texas, at Texas Eastern Pipeline Company and served Continental Airlines as a Senior Manager in the Environmental Affairs Department. Since moving to Mississippi, she has supported local nonprofits spearheading watershed and grant programs. She holds a bachelor's degree in chemistry from Mississippi State University and a master's degree in environmental management from the University of Houston.



Nicole LeBoeuf, *NOAA*

Nicole LeBoeuf has over 20 years of scientific and program management experience, with emphasis on the connections between science and policy. As Acting Assistant Administrator at NOAA's National Ocean Service (NOS), Ms. LeBoeuf provides strategic vision for the agency and leads the implementation of activities that support NOS priorities, including safe and efficient transportation and commerce; preparedness and risk reduction; and stewardship, tourism and recreation. Ms. LeBoeuf is passionate about establishing and growing partnerships with other federal agencies, nongovernmental organizations, and industry.



Larry McKinney, *Harte Research Institute*

Larry McKinney is the Senior Executive Director of the Harte Research Institute for Gulf of Mexico Studies, leading an interdisciplinary team that integrates science, policy, and socioeconomic expertise to assure an economically and environmentally sustainable Gulf of Mexico. He has more than 50 years of experience working in the Gulf of Mexico as a researcher and resource manager. His publications and reports reflect a diverse range of expertise from benthic ecology to fisheries to ecosystem health.

Student Presenter Support

Thank you to our sponsors for their generous support of student participation at the conference!



The Gulf of Mexico University Research Collaborative (GOMURC) and Harte Research Institute provided Student Presenter Awards, which covered registration fees for students from GOMURC institutions who are making oral presentations. Congratulations to the student awardees and thank you for presenting your research at the 2020 GoMOSES Conference!

About the Artwork



This year's program features artwork commissioned from Tampa area artists for the two-volume book series, "Deep Oil Spills" and "Scenarios and Responses to Future Deep Oil Spills," published by the Center of the Integrated Modeling and Analysis of the Gulf Ecosystem (C-IMAGE).

The original artwork represents research topics that C-IMAGE addressed in the books, such as deep blowout dynamics, sedimented oil, ecotoxicology, and ecosystem impacts. The artists will be available to discuss their work during the Wednesday evening poster reception and will have other artwork for sale and review.

Page 10: Ecotone (Watercolor on aquaboard)
Curtis Whitwam @curtiswhitwam

Page 12: Perfect Plumes (Ink and motor oil on canvas)
Tessa Wilson @TheWildflowerPress

Page 26: Snapper School (Watercolor on aquaboard)
Curtis Whitwam @curtiswhitwam

Page 46: A Speck in the Sea (Acrylic and ink on canvas)
Teresa Navajo

THANK YOU!

Since the first GoMOSES in 2013, this conference has generated at least 150 sessions; some 2000 presentations; and countless discussions, partnerships, and new projects. None of this would have been possible without the leadership and dedication of the Executive Committee:

Larry McKinney
GOMURC (Chair)

Laura Bowie
Gulf of Mexico Alliance

Thomas Coolbaugh
API/ExxonMobil

Elizabeth Fetherston-Resch
*RESTORE Centers of Excellence
Research Grants Programs*

Bethany Kraft
Volkert

Scott Lundgren
NOAA

Stacey McLeroy
U.S. Food and Drug Administration

Jonathan Porthouse
National Fish & Wildlife Foundation

Chris Robbins
Ocean Conservancy

David Shaw
GoMRI

Kevin Sligh
U.S. Coast Guard

Gregory Steyer
U.S. Geological Survey

Buck Sutter
Gulf Coast Ecosystem Restoration Council

LaDon Swann
Sea Grant in the Gulf of Mexico

Evonne Tang
*Gulf Research Program of the National Academies of
Sciences, Engineering, and Medicine*

Gregory Wilson
U.S. Environmental Protection Agency

Denis Wiesenburg
GoMRI

Chuck Wilson
GoMRI

As the conference moves into a new phase, we also thank the staff of the Gulf of Mexico Research Initiative Management Team and our many volunteers who have been working so diligently behind the scenes to ensure a successful conference year after year.

Workshops and Associated Meetings

Descriptions are available on the conference website, online program planner, and mobile app.

Recent Advances in Estimating and Measuring Oil Slick Thickness (Closed)

Monday, February 3, 1:00p – 5:00p

Grand Salon A

An Introduction to the Environmental Unit's Role and Responsibilities During an Oil Spill

Monday, February 3, 1:00p – 5:00p

Meeting Room 5

Graduate Student and Early-Career Networking Reception

Monday, February 3, 5:00p – 7:00p

Il Terrazzo

Canada's Multi-Partner Research Initiative

Tuesday, February 4, 12:00p – 2:00p

Meeting Room 5

GRIIDC Advisory Board Meeting (Closed)

Tuesday, February 4, 12:30p – 2:00p

Meeting Room 12

Dispatches from the Gulf 3 Screening

Tuesday, February 4, 12:30p – 1:30p

Grand Salon A/B

Gulf of Mexico Data Tools Café

Tuesday, February 4, 5:30p – 7:30p

Florida Ballroom

Gulf Restoration and Science Programs Coordination Forum (Closed)

Wednesday, February 5, 7:00a – 8:30a

Meeting Room 11

GoMRI Scholars Lunch (Closed)

Wednesday, February 5, 12:00p – 2:00p

Meeting Room 12

Dispatches from the Gulf 3 Screening

Wednesday, February 5, 12:30p – 1:30p

Grand Salon A/B

Women in Emergency Management Networking

Wednesday, February 5, 6:30p – 7:30p

Meeting Room 5

Dispatches from the Gulf 3 Screening

Thursday, February 6, 12:30p – 1:30p

Grand Salon A/B

NOAA RESTORE Sargassum Project Annual Site Visit Meeting (Closed)

Thursday, February 6, 3:00p – 5:00p

Grand Salon A/B

Conference Exhibitors



What comes after GoMOSES?

Why, GoMMRESC, of course!

Gulf of Mexico Management, Restoration
and Ecosystem Sciences Conference
(GoMMRESC)

Where: **Baton Rouge, Louisiana**

When: **The three-day conference
will happen in April 2021**

GO M M



GOMMRESC is the successor to the Gulf of Mexico Oil Spill and Ecosystem Science Conference (GoMOSES), established by the Gulf of Mexico Research Initiative (GoMRI). The Gulf of Mexico Oil Spill & Ecosystem Science conference has convened annually since 2013 to incorporate new discoveries into our knowledge base and to identify what questions remain. GoMOSES 2020 is the concluding conference of the 10-year GoMRI program. GoMMRESC continues the vital work of GoMOSES and incorporates the added value of two long-standing Gulf-wide meetings: The Gulf of Mexico Alliance's (GOMA) All Hands and the Harte Research Institute's (HRI) State of the Gulf Summit.

Go to the online program for more information about GoMMRESC; a link to the website; and the most current information on specific dates, meeting structure, and more. Be sure to attend the closing plenary on Thursday, February 6, for a presentation on the conference.

