



Gulf of Mexico
OIL SPILL
& ECOSYSTEM
SCIENCE CONFERENCE
2018

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About the program...

For the 2018 program, oral sessions were developed based on the abstracts received. Although many sessions are interdisciplinary, they were organized under six topical tracks representing key areas of research identified by the planning committee. Tracks are indicated in the session number and can be identified by the following abbreviations:

- ECO: Gulf Ecology**
- PCC: Physical and Chemical Connectivity**
- MDA: Monitoring, Data Management & Analysis**
- RMP: Science for Restoration, Management, and Policy**
- RSP: Science for Response**
- SER: Social & Ecological Resilience**

The GoMOSES planners thank the 2018 session organizers for their time, expertise, and dedication to review and arrange abstracts and moderate this year’s sessions.

Welcome to the 6th Annual Gulf of Mexico Oil Spill & Ecosystem Science Conference

February 5-8, 2018

Hyatt Regency New Orleans, 601 Loyola Avenue, New Orleans, LA

The Gulf of Mexico Oil Spill and Ecosystem Science (GoMOSES) Conference is an ideal forum, organized by institutions and agencies working in the Gulf, for the exchange of ideas and information between stakeholders to the benefit of the region. Since its inception in 2013, GoMOSES has sought to link fundamental research to practical application and to engage a broad range of Gulf researchers and coastal managers addressing advances in oil spill response and ecosystem restoration. The 2018 theme, “Response, Restoration, and Resilience in the Gulf,” advances this goal, exploring how fundamental science can help restore and maintain ecosystem integrity and inform response strategies. This year’s program will also emphasize cross-cutting discussions about how research can help strengthen resilience in the region’s ecosystems and communities in light of the many pressures on Gulf resources.

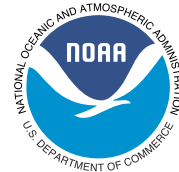
The 2018 conference includes a broad range of findings across key areas of research and builds on highlights of previous conferences. Workshops on February 5 will focus on topics such as the *Oil Pollution Act of 1990* and oil spill preparedness, updates on long-term projects, technical advances for assessing and monitoring key indicators, and effective science communication that reaches a variety of audiences. On February 6, we welcome keynote speaker Geraldine Richmond and fellow presenters Ann Hayward Walker, Robert Twilley, and Larry McKinney as they discuss what science has taught us about response, restoration, and resilience. These lessons are further explored in 24 scientific sessions, featuring approximately 320 oral and 130 poster presentations over three days. This year, the program includes mini-sessions focused on emerging and cross-cutting topics that deserve attention. The conference closes with a look inward at its own resilience, as members of the Executive Committee discuss future scenarios and seek input from attendees as GoMOSES continues to evolve.

Once again, GoMOSES returns to New Orleans, Louisiana – something of a second home now — this year with the added excitement of Mardi Gras activities. A heartfelt thank you to New Orleans for hosting once again; we hope you have a chance to enjoy the city’s history and traditions. Finally, thanks to the sponsors, the Executive Committee, and the conference staff for all of their time and dedication – you have again made this event a success.

Thank you for your participation. We look forward to a fantastic conference and hope to see you again at future events!

2018

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Photo Credit: NOAA Restoration Center, Erik Zobrist

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:

1) 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!

The technical support for the conference app has changed, so even if you have a previous year's app on your phone or tablet, you will need to download the 2018 app. Download instructions are the same for both Apple and Android phones.

- Search for "Crowd Compass Attendee Hub" in your phone's app store, download, and install
- Within the Attendee Hub app, search for "Gulf"
- Download the 2018 GoMOSES Conference
- Log in by following the directions



2) Visit our online searchable abstracts database at: <https://crowd.cc/gomoses2018>

3) Social Networking: www.facebook.com/gulfscienceconference

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

Check-in and On-site Registration:

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

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

Meals:

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

Continental Breakfast in Storyville Hall:

Tuesday, February 6: starting at 7:30a
 Wednesday, February 7: starting at 7:30a
 Thursday, February 8: starting at 7:30a

Lunch is not provided. There are many options for lunch in the Hyatt Regency Hotel, including Addendum, a “grab & go” counter on the third floor. You can also explore options in nearby downtown New Orleans and the French Quarter.

Breaks will take place in Storyville Hall.

Wi-fi/Internet:

Complimentary wi-fi and Internet are available in the Hyatt guest rooms. Wi-fi is also provided in the conference meeting space.

Username: **GulfConference**

Passcode: **gomoses18**

Exhibits:

Exhibits from conference sponsors and partners are located in Storyville Hall 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 Celestin Foyer on the third floor.
- You must upload your presentation in the Speaker Ready Area 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 Speaker Ready Area will be open:
 Monday, February 5: 12:00p – 5:30p
 Tuesday, February 6: 7:30a – 6:00p
 Wednesday, February 7: 7:30a – 6:00p
 Thursday, February 8: 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 PowerPoint format that is PC-compatible and set at a widescreen (16:9) ratio. Please use standard fonts, and if you include videos, provide the original files to the technical staff. This will minimize technical disruptions during the meeting. You will be able to test your presentation ahead of time in the Speaker Ready Area.

Information for Poster Presenters

- All poster sessions will take place in Storyville Hall, on the third floor of the Hyatt Regency New Orleans Hotel, and the space will be available for you to hang your poster in advance.
- Set up for posters begins at 2:00p on Monday, February 5. Conference staff will be available for assisted poster set up between 2:00p and 6:00p on Monday, February 5. Posters will hang in Storyville Hall from Monday afternoon through the duration of the conference.
- Posters must be removed by noon on Thursday, February 8. Any posters not removed by their presenters at this time will be discarded.
- Maximum poster size is 48in high x 48in wide.

Media Policy

Media representatives are welcome to attend the 2018 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 Celestin Foyer (third 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 with speakers and attendees.

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

- Wear the designated media badge given to them by conference organizers and identify themselves as a member of the press 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.

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.

3rd Floor



Activities for the 2018 Gulf of Mexico Conference will take place in the Hyatt Regency Hotel (601 Loyola Avenue). Rooms will be noted for each session, meeting or event. Most conference activities will take place on the third floor of the Hyatt Regency Hotel, including scientific sessions, breakfast, breaks, and plenary sessions.

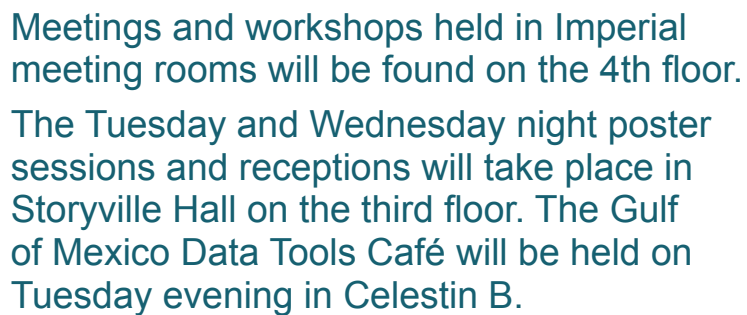




Photo Credit: ECOGIG/Oceaneering



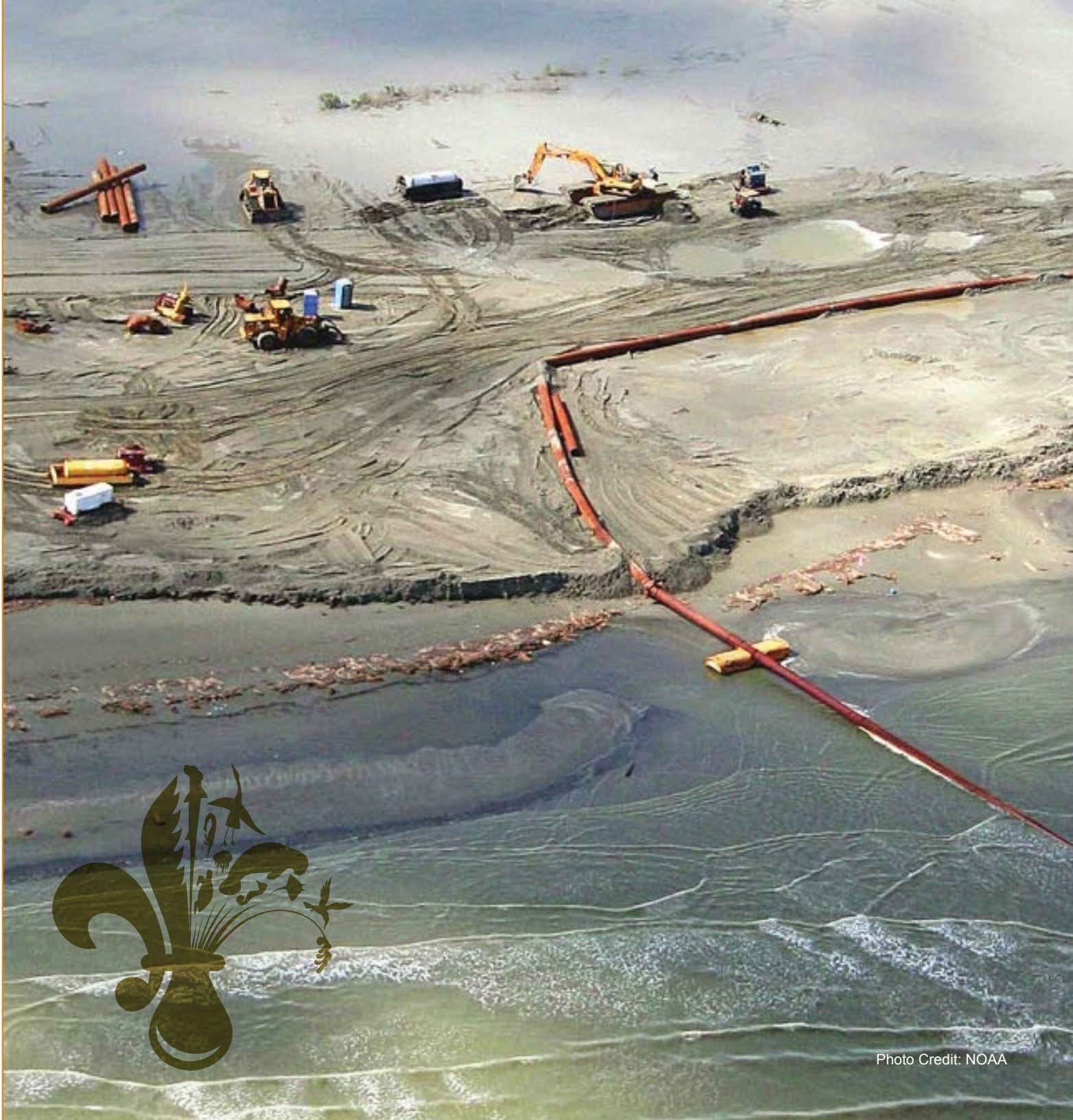
Monday, February 5

Time	Event	Location
8:30a – 3:30p	Registration & check-in open	Celestin Foyer
12:00p – 5:30p	Speaker ready area open	Celestin Foyer
2:00p – 6:00p	Exhibit set up	Storyville Hall
2:00p – 6:00p	Poster set up	Storyville Hall

Associated Meetings and Events

8:00a – 6:00p	MTS TechSurge: Advancing oil spill response	Morial Convention Center
8:00a – 5:00p	OSR 201: Oil spill preparedness & response for scientists and researchers: Bridging science and response	Celestin A
8:30a – 5:00p	Ecological indicators for an ecosystem assessment of Barataria Basin, Louisiana	Celestin H
9:00a – 12:00p	Sharing science effectively: Know your audience and speak their language	Celestin E
9:00a – 1:00p	Assessing the state of Gulf of Mexico benthic habitat maps part 1	Celestin C
9:00a – 12:00p	GRIIDC data management training workshop	Imperial 12
1:00p – 5:00p	Challenges to understanding the potential impacts of environmental disturbances on fish biodiversity in the Gulf of Mexico: Identification, assessments, and data gaps	Celestin D
1:00p – 5:00p	Recent advances in estimating and measuring oil slick thickness	Celestin E
1:00p – 5:00p	Examining the 1990 Oil Pollution Act to improve the governmental and scientific response to future oil spill event	Celestin F
1:00p – 5:00p	Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS): Research updates and related programs	Celestin G
2:00p – 5:00p	Assessing the state of Gulf of Mexico benthic habitat maps part 2	Celestin C

Photo Credit: NOAA



Tuesday, February 6

Time	Event	Location
7:30a – 5:30p	Registration & check-in open	Celestin Foyer
7:30a – 6:00p	Speaker ready area open	Celestin Foyer
7:30a – 7:30p	Poster hall and exhibits open	Storyville Hall

Opening Plenary Program Schedule

Starting at 7:30a	BREAKFAST	
9:00a – 11:00a	The three R's of Gulf research: Response, restoration, and resilience	Celestin D/E
11:30a – 12:30p	Mini-Session: MS-001	Celestin D/E
12:30p – 2:00p	LUNCH	

Scientific Program Schedule

2:00p – 3:30p	ECO-001	Celestin A
	ECO-002	Celestin F
	MDA-001	Celestin H
	PCC-001	Celestin E
	RSP-001	Celestin D
	SER-001	Celestin C
3:30p – 4:00p	BREAK	
4:00p – 5:30p	ECO-001	Celestin A
	ECO-002	Celestin F
	MDA-001	Celestin H
	PCC-001	Celestin E
	RSP-001	Celestin D
	SER-001	Celestin C
5:30p – 7:30p	Poster session & reception (featuring Tracks 001, 003, and 005)	Storyville Hall

Associated Meetings and Events

11:00a – 11:30a	Introduction to the GoMRI Data Management Program	Imperial 12
3:30p – 4:00p	Organizing data – Best practices and GRIIDC submission	Imperial 12
5:30p – 7:30p	Gulf of Mexico Data Tools Café	Celestin B

The Three R's of Gulf Research: Response, Restoration, and Resilience

Tuesday, February 6, 9:00a - 11:00a, Celestin D/E

After years of research targeted on the ecosystems and processes unique to the Gulf of Mexico, what has science taught us about response, restoration, and resilience in the region? How can we translate scientific discovery and advances to inform scientific understanding on ecosystem levels? What do resource managers and policymakers need to assure the economic and environmental sustainability of the Gulf? Our speakers will comment on the current state of science in their respective focal areas, assess how GoMOSES science has contributed to our understanding of the Gulf of Mexico, and expand on what challenges remain to be addressed.

Welcome and Introduction



Rita Colwell, Ph.D., *Chair, GoMRI Research Board*

Dr. Rita Colwell is a distinguished university professor both at the University of Maryland at College Park and Johns Hopkins University's Bloomberg School of Public Health, as well as senior advisor and chairman emeritus at Canon US Life Sciences, Inc., and president and CEO of CosmosID, Inc. Her research focuses on global infectious diseases, water, and health, and she is currently developing an international network to address emerging infectious diseases and water issues, including safe drinking water for both the developed and developing world.

Keynote Address



Mulling over emulsions: Interfacial molecular structure and adsorption at oil-water interfaces

Geraldine Richmond, Ph.D., *Presidential Chair in Science, University of Oregon*

Dr. Geraldine (Geri) Richmond is the Presidential Chair in Science and professor of Chemistry at the University of Oregon, where she has been since 1985. A native of Kansas, she received her undergraduate degree in chemistry from Kansas State University and her Ph.D. in physical chemistry from the University of California, Berkeley. Her research examines the chemistry and physics that occur at complex surfaces that have relevance to important problems in energy production, environmental remediation, and atmospheric chemistry. Using a combination of laser-based methods and theoretical simulations, many of her recent studies have focused on understanding molecular interactions and adsorption of surfactants and polymers at oil and water interfaces. Over 200 publications have resulted from the studies conducted in her laboratory with undergraduate and graduate students and postdoctoral associates. A strong advocate throughout her career for diversity in the scientific workforce, Dr. Richmond is the founding and current Director of COACH, a grassroots organization formed in 1998 that has helped in the career advancement of over 20,000 women scientists and engineers in the U.S. and is active in over 20 developing countries in Asia, Africa, and Latin America.



Response: Real-time decisions informed by best available knowledge

Ms. Ann Hayward Walker, *SEA Consulting Group*

Ms. Ann Hayward Walker is an oil spill practitioner who has served as a science coordinator for NOAA, the U.S. Coast Guard, U.S. EPA, and industry. She has responded to over 250 oil spills and hazardous substance incidents from coastal facilities, barges, and ships, including the Exxon Valdez and the Deepwater Horizon. Her preparedness and response specialties are communicating oil spill and dispersant risk; integrating multi-disciplinary knowledge from scientists, academics, and diverse stakeholders to inform real-time, technically-sound, credible decision making; and engaging spill stakeholders. Ms. Walker has a BFA in architecture and environmental planning from University of Hawaii and an MBA in management from Golden Gate University.



Value proposition of monitoring ecosystem restoration projects: Case studies of adaptive management frameworks

Dr. Robert Twilley, *Louisiana State University*

Dr. Robert Twilley is Executive Director of Louisiana Sea Grant College Program and professor in the Department of Oceanography and Coastal Science at LSU. Recently, Dr. Twilley became the past-president of the Coastal and Estuarine Research Federation, an international coastal science society. He has been a Distinguished Professor at both Louisiana University and University of Louisiana at Lafayette. He is founder of the LSU Coastal Sustainability Studio and developed the UL Lafayette Center for Ecology and Environmental Technology. He received his B.S. and M.S. from East Carolina University and his Ph.D. from the University of Florida, and his post-doctoral studies were at the University of Maryland Center for Environmental Studies.



The resilient Gulf of Mexico: Will it continue to snap back?

Dr. Larry McKinney, *Harte Research Institute for Gulf of Mexico Studies*

Dr. Larry McKinney received his doctorate from Texas A&M University in 1976. Dr. McKinney has explored and studied the Gulf of Mexico for almost 50 years, leading research projects in almost every part of the Gulf, including the waters of Mexico and Cuba. Dr. McKinney leads Texas OneGulf, one of six RESTORE Centers of Excellence and is the executive director of the Harte Research Institute for Gulf of Mexico Studies at Texas A&M University - Corpus Christi, where he leads an interdisciplinary team that integrates science, policy, and socio-economic expertise to assure an economically and environmentally sustainable Gulf of Mexico.

Gulf-wide research

Tuesday, February 6, 11:30a - 12:30p, Celestin D/E

Dave Westerholm, NOAA

Time	Title	Presenter
11:30a – 11:45a	Trace metal concentration and fluxes in sediment from the Southern Gulf of Mexico and its relationship with the Ixtoc Oil Spill	Ana Carolina Ruiz-Fernandez, Universidad Nacional Autónoma de México
11:45a – 12:00p	Can oil spills cause toxic algal blooms in the Gulf of Mexico?	Laura Bretherton, Texas A&M University at Galveston
12:00p – 12:15p	All these hosts are yours: Microbial assemblage in benthic meiofauna of the Gulf of Mexico	Krystalle Diaz, University of New Hampshire
12:15p – 12:30p	Physical constraints on biological connectivity in the Gulf of Mexico	Maria Olascoaga, University of Miami

Role of microbes in the response and resiliency of gulf ecosystems

Tuesday, February 6, 2:00p - 5:30p, Celestin A

Joel Kostka, Georgia Institute of Technology

Ariella Chelsky, Louisiana Universities Marine Consortium

Microorganisms provide key services to Gulf ecosystems (including photosynthetic production, breakdown of organic matter, and recycling of nutrients), and these services are impacted by oil spills. The goal of this session is to synthesize observations, experiments, and modeling to elucidate the microbially-mediated mechanisms that underpin the response, recovery, and resilience of Gulf ecosystems to oil impacts.

Time	Title	Presenter
2:00p – 2:15p	Isotopic tracers of petrocarbon contribution to pelagic food webs in the Gulf of Mexico	Joseph Montoya, Georgia Institute of Technology
2:15p – 2:30p	Effect of crude oil and dispersant on the growth and grazing responses of heterotrophic dinoflagellate <i>Oxyrrhis marina</i> and <i>Ciliate Euplotes</i> sp.	Chi Hung Tang, University of Texas at Austin
2:30p – 2:45p	Extracellular enzyme activities in a mesocosm experiment: Insight into the microbial world during Deepwater Horizon Oil Spill	Manoj Kamalanathan, Texas A&M University at Galveston
2:45p – 3:00p	Deepwater coral-associated microbial communities in the Gulf of Mexico are species-specific and include sulfur-oxidizing taxa	Samuel Vohsen, Pennsylvania State University
3:00p – 3:15p	Intestinal microbiota of red drum <i>Sciaenops ocellatus</i> following exposure to South Louisiana crude oil-contaminated feeds	Andrea Tarnecki, Mote Marine Laboratory
3:15p – 3:30p	The impacts of weathered oil on ecosystem function in coastal sands	Joel Kostka, Georgia Institute of Technology
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Biogeography of ammonia oxidizers: Comparisons between the Gulf of Mexico and New England salt marshes	Anne Bernhard, Connecticut College
4:15p – 4:30p	High spatial variability in biogeochemical rates and microbial communities across Louisiana salt marsh landscapes	Ariella Chelsky, Louisiana Universities Marine Consortium
4:30p – 4:45p	Salt marsh resilience in the Anthropocene: Evaluating N removal in response to human-driven disturbances	Corianne Tatariw, Dauphin Island Sea Lab
4:45p – 5:00p	Indigenous microbial communities in Louisiana saltmarsh soils following the Deepwater Horizon Oil Spill	Aixin Hou, Louisiana State University
5:00p – 5:15p	Oil history drives unique responses in the above- and below-ground fungi microbiome of <i>Spartina alterniflora</i>	Candice Lumibao, Tulane University
5:15p – 5:30p	GoM-SCHEMA: The Deepwater Horizon spill's impact on historic shipwreck microbiomes in the northern Gulf of Mexico	Leila Hamdan, University of Southern Mississippi

Characterizing crude oil exposure and effects: From molecular to whole animal approaches

Tuesday, February 6, 2:00p - 5:30p, Celestin F

Christina Pasparakis, University of Miami

Ed Mager, University of North Texas

Anthropogenic releases of fossil fuels, such as oil spills, have profound effects on aquatic ecosystems and the organisms that inhabit them. Besides immediate impacts on survival, oil exposure exerts toxicity through a variety of mechanisms that culminate in effects ranging from the cellular to organismal level. This session explores the sublethal and lethal effects of oil exposure and highlights novel approaches to asses impacts at multiple levels of biological organization.

Time	Title	Presenter
2:00p – 2:15p	Polycyclic aromatic hydrocarbon exposure in seaside sparrows following the 2010 Deepwater Horizon Oil Spill	Anna Perez-Umphrey, Louisiana State University
2:15p – 2:30p	Oxidative stress induced by PAH metabolism: Comparing three exposure routes in red drum, Florida pompano, and Southern flounder to Deepwater surrogate oil	Dana Wetzel, Mote Marine Laboratory
2:30p – 2:45p	Integration of microRNA and mRNA in early life stages of mahi after exposure to Deepwater Horizon oil	Daniel Schlenk, University of California, Riverside
2:45p – 3:00p	Epigenomics of oil-exposed red drum (<i>Sciaenops ocellatus</i>)	Andrew Fields, Texas A&M University – Corpus Christi
3:00p – 3:15p	Early life stage fishes exposed to crude oil have reduced visual development and function	Jason Magnuson, University of North Texas
3:15p – 3:30p	Impacts of crude oil on heart cell function in the mahi mahi (<i>Coryphaena hippurus</i>)	Rachael Heuer, University of Miami
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Combined effects of oil exposure, temperature and ultraviolet radiation on the early life stages of mahi mahi (<i>Coryphaena hippurus</i>)	Christina Pasparakis, University of Miami
4:15p – 4:30p	The effect of temperature on the toxicity of oil to the ghost shrimp (<i>Lepidophthalmus louisianensis</i>)	Alex Kascak, University of Louisiana at Lafayette
4:30p – 4:45p	Why tag a captive fish? Improving our understanding of habitat utilization, swimming speeds, and spawning behaviors in wild mahi mahi exposed to oil	Lela Schlenker, University of Miami
4:45p – 5:00p	Behavioral consequences of dietary exposure to PAHs in the Siamese fighting fish (<i>Betta splendens</i>)	Naim M. Bautista, University of North Texas
5:00p – 5:15p	The effects of acute oil exposure on anti-predator behavior in marine fish	Andrew Esbaugh, University of Texas Marine Science Institute
5:15p – 5:30p	Impacts of multiple predator effects on prey assemblages in the northern Gulf of Mexico: A mesocosm test using additive and substitutive designs	John Valentine, Alabama Marine Environmental Sciences Consortium

Northern Gulf of Mexico marine mammals: Baselines, trends, threats, and new methodologies

Tuesday, February 6, 2:00p - 5:30p, Celestin H

Liza Hernandez, NOAA

Brian Balmer, National Marine Mammal Foundation

Marine mammals in the northern Gulf of Mexico continue to be exposed to numerous natural and anthropogenic stressors. Developing efficient tools and sampling methodologies for long-term data collection are necessary to fully evaluate these current and future threats. The data collected from these projects are key for management agencies to identify and implement effective restoration strategies.

Time	Title	Presenter
2:00p – 2:30p	Whale and dolphin action plan for the Gulf of Mexico: A five-year vision	Laura Engleby, National Marine Fisheries Service
2:30p – 2:45p	Developing baselines using bottlenose dolphins in St. Andrew Bay, Florida to inform restoration efforts following the Deepwater Horizon Oil Spill	Brian Balmer, National Marine Mammal Foundation
2:45p – 3:00p	Examining the effect of multiple disturbances on population persistence with application to marine mammals	Amy Veprauskas, University of Louisiana at Lafayette
3:00p – 3:15p	Is blubber a suitable matrix for endocrine assessment in cetaceans?	Thomas Galligan, Medical University of South Carolina
3:15p – 3:30p	A new method for estimating the probability of detection of Cuvier beaked whales from passive acoustic data near Gulf of Mexico oil spill site	Md Hossain, University of Louisiana at Lafayette
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Trends in deep-diving whale populations in the Gulf of Mexico: 2010 to 2016	John Hildebrand, Scripps Institution of Oceanography
4:15p – 4:30p	Study of sperm whale's long-term abundance trends in the Northern Gulf of Mexico	Kun Li, University of Louisiana at Lafayette
4:30p – 4:45p	Comparisons of sperm whale lengths in the Northern Gulf of Mexico	George Drouant, University of New Orleans
4:45p – 5:00p	Comparing the performance of bottom-moored and unmanned surface vehicle towed passive acoustic monitoring platforms for sperm whale studies	Sakib Mahmud, University of Louisiana at Lafayette
5:00p – 5:15p	Species-specific density estimation of beaked whales in the Northern Gulf of Mexico using long-term passive acoustic monitoring	Jack LeBien, University of New Orleans
5:15p – 5:30p	What we've learned about the health of Gulf of Mexico marine mammals: A retrospective	Lori Schwacke, National Marine Mammal Foundation

Dispersants: Disruption or facilitation of oil degradation?

Tuesday, February 6, 2:00p - 5:30p, Celestin E

Erin Pulster, University of South Florida

The role of dispersants used during oil spills and the subsequent impacts are still controversial. This session examines the interactions and impacts of dispersants on microbial response, toxicity, and mechanisms of marine oil snow (MOS) formation and the impacts of varying hydrodynamic forces. The results from these studies will provide essential information for oil spill responders and assist in predicting the long-term fate of oil spills.

Time	Title	Presenter
2:00p – 2:15p	Aluminosilicate microstructured dispersants stimulate proliferation of ubiquitous marine bacteria and production of biosurfactant	Lauren Swientoniewski, Tulane University School of Medicine
2:15p – 2:30p	Surfactant enhanced bioremediation of oil by <i>Alcanivorax borkumensis</i> using oil dispersed by food-grade amphiphiles	Joseph Rocchio, University of Rhode Island
2:30p – 2:45p	Corexit and oil alter aggregation of extracellular polymeric substances	Meng-Hsuen Chiu, University of California, Merced
2:45p – 3:00p	Laboratory and computational fluid dynamic experiments on oil droplet dynamics in the presence of dispersants	Alexander Soloviev, Nova Southeastern University
3:00p – 3:15p	Additional evidence on the effects of chemical dispersant on the formation of negatively buoyant oil-SPM aggregates (OSAs)	Ali Khelifa, Environment and Climate Change Canada
3:15p – 3:30p	Health risk assessment of exposure to volatile organic compounds and particulate matter emitted from oily seawater treated with dispersant	Nima Afshar-Mohajer, Johns Hopkins Bloomberg School of Public Health
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Macro-scale hydrodynamics and tip streaming in the presence of dispersants during subsea blowouts	Lin Zhao, New Jersey Institute of Technology
4:15p – 4:30p	Bubble bursting aerosolizes slicks of crude oil-dispersant mixtures	Kaushik Sampath, Johns Hopkins University
4:30p – 4:45p	Effects of water-accommodated fraction of Macondo oil and Corexit on oil transport in mesocosm experiments	Chen Xu, Texas A&M University at Galveston
4:45p – 5:00p	Does Corexit impact MOSSFA?	Uta Passow, University of California, Santa Barbara
5:00p – 5:15p	Comparing microbial community responses to oil and Corexit between coastal and offshore waters of the Gulf of Mexico	Shawn Doyle, Texas A&M University
5:15p – 5:30p	Experimental investigation of oil behavior in turbulent flows: Effects of dispersants and gas bubbles on oil droplet formation	Lin Zhao, New Jersey Institute of Technology

Oil spill modeling from droplet formation to risk assessment

Tuesday, February 6, 2:00p - 5:30p, Celestin D

CJ Beegle-Krause, SINTEF Oceans

Chris Barker, NOAA

This session includes numerical model development, implementation, and verification from the well to the shoreline, including dispersant application. Oil droplet formation, breakup, and transport are fundamental processes addressed. Ocean mesoscale transport field experiment results and Arctic oil transport and risk analysis are also included.

Time	Title	Presenter
2:00p – 2:15p	Fundamental prediction of oil droplet sizes during blowout	Zachary Aman, University of Western Australia
2:15p – 2:30p	Integrating the dynamics of jets and plumes for the prediction of the oil droplet size distribution	Michel Boufadel, New Jersey Institute of Technology
2:30p – 2:45p	Large-eddy simulation of nearfield hydrocarbon plume with gas dissolution	Chen Peng, University of Houston
2:45p – 3:00p	Large-eddy simulation including population dynamics model for polydisperse droplet evolution in turbulence	Aditya Aiyer, Johns Hopkins University
3:00p – 3:15p	Numerical simulation of the hydrodynamics of the Deepwater Horizon Blowout: Impact of the GOR, dissolution, and temperature	Feng Gao, New Jersey Institute of Technology
3:15p – 3:30p	The unobserved behaviors of petroleum bubbles and droplets during ascent towards the sea surface: Lifting a corner of the veil with simulations	Jonas Gros, Texas A&M University
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Modeling subsurface exposure concentrations resulting from the Deepwater Horizon Oil Spill, with and without subsea dispersant application	Deborah French-McCay, RPS ASA
4:15p – 4:30p	Wind-based Lagrangian parameterization for near surface flows during LASER	Angelique Haza, University of Miami
4:30p – 4:45p	Modeling of oil droplets transport subject to breaking waves: coupling Eulerian RANS with Lagrangian particle tracking	Fangda Cui, New Jersey Institute of Technology
4:45p – 5:00p	Applying real-time atmospheric science verification techniques to spill trajectory models	William Lehr, NOAA
5:00p – 5:15p	Dispersant application simulation with BLOSOM	Patrick Wingo, National Energy Technology Laboratory
5:15p – 5:30p	Oil-spill risk analysis for the Liberty Development and Production Plan in the Beaufort Sea	Zhen Li, BOEM

Fostering individual, social, and community resources to build resilience to oil spills and other disasters in the Gulf

Tuesday, February 8, 2:00p - 5:30p, Celestin C

Becky Allee, NOAA

This session presents research on individual and community preparedness and resiliency following natural or manmade disasters. Experience with multiple disasters is examined to determine how communities learn and become more resilient. Social connectedness, economic status, and presence of health and social workers in the communities are examined.

Time	Title	Presenter
2:00p – 2:15p	Understanding social capital's effects on health: Opportunities for resilience activation in the Gulf Coast region	Vanessa Parks, Louisiana State University
2:15p – 2:30p	Building disaster resilience with community health workers	Keith Nicholls, University of South Alabama
2:30p – 2:45p	Time after time: A case study in longitudinal disaster survey research protocol in South Louisiana	Kathryn Keating, Louisiana State University
2:45p – 3:00p	Community resilience, experience, and perception as factors associated with disaster preparedness among coastal Mississippi residents	David Cochran, University of Southern Mississippi
3:00p – 3:15p	Experience with past disaster: Influences on impact from and preparation for future disasters	Braden Bagley, University of Southern Mississippi
3:15p – 3:30p	The role of perception in anthropogenic and natural disaster preparedness	Elizabeth "Betsy" Lopez, Tulane University
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Gender differences in resilience, social support, and preparedness in post-disaster settings	Jessica Liddell, Tulane University
4:15p – 4:30p	The role of place in predicting individual resilience: Lessons from the Deepwater Horizon Oil Spill	Megha Patel, Tulane University
4:30p – 4:45p	The Deepwater Horizon Oil Spill – Predictors of individual resilience	Regardt Ferreira, Tulane University
4:45p – 5:00p	Measuring social media use as a source of resilience during and after the Deepwater Horizon Oil Spill	Thomas Chandler, Columbia University
5:00p – 5:15p	Social resources, community religiosity, and depression among Gulf Coast residents	Leah Drakeford, Louisiana State University
5:15p – 5:30p	Financial capability among residents in the Gulf Coast after the Deepwater Horizon Oil Spill	Rajeev Ramchand, RAND Corporation

Please join us for a lunchtime screening of
Screenscope's latest documentary,

Dispatches from the Gulf 2.

This second film continues the remarkable
stories about the global scientific team
studying the Deepwater Horizon oil spill.

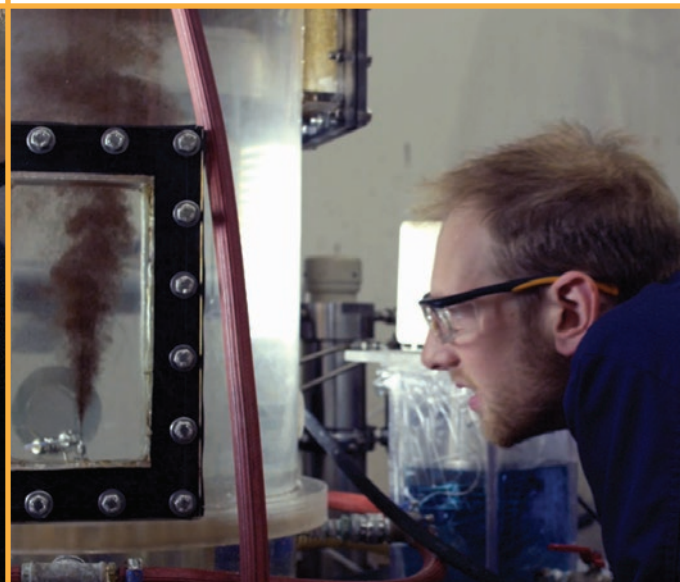
Showings in Celestin F:

Wednesday, Feb. 7 12:30PM - 1:30PM

Thursday, Feb. 8 12:30PM - 1:30PM



GoMRI is a 10 year program with the mission of supporting research to improve society's ability to understand, respond to, and mitigate the impacts of petroleum pollution and related stressors on marine and coastal ecosystems, with an emphasis on conditions found in the Gulf of Mexico. As GoMRI enters its eighth year, the knowledge accrued will be applied to the areas of response, restoration, and resilience in maintaining the long-term environmental health of the Gulf.



Tuesday, February 6, 5:30p – 7:30p

Storyville Hall

#	Title	Presenter
P-001: Science for Restoration, Management, and Policy		
1	Growth responses of three dominant wetland plant species to various flooding and nutrient levels	Shelby Barrett, Southeastern Louisiana University
2	Lasting impacts of fertilizer application on soil microbial community in an oil-impacted salt marsh	Grace Cagle, Louisiana State University
3	Fate of eroding crude oil asphalt and emulsion in shallow marsh embayments	Will Coronel, Louisiana State University
4	Supporting science and restoration through the Mississippi Based RESTORE Act Center of Excellence (MBRACE)	Kelly Darnell, University of Southern Mississippi
5	Linking habitat to recruitment: Evaluating the importance of pelagic <i>Sargassum</i> to fisheries management in the Gulf of Mexico	Frank Hernandez, University of Southern Mississippi
6	Visualizing the distribution of petrogenic PAHs in <i>Spartina</i> and <i>Avicennia</i> tissues from Barataria Basin, Louisiana	Kristina Sebastian, Louisiana State University
7	Hepatic accumulation of polycyclic aromatic hydrocarbons and prevalence of hepatic and external skin lesions in golden tilefish from the Gulf of Mexico	Susan Snyder, University of South Florida
8	Using IUCN data to prioritize conservation needs in the Gulf of Mexico	Kyle Strongin, Arizona State University
P-003: Social & Ecological Resilience		
31	Supplementing public high school students' access to science education and careers: The Emerging Scholars Environmental Health Sciences Academy	Hannah Covert, Tulane University
32	<i>In-vitro</i> oily marine aerosol exposure alters human bronchial epithelial function	Kristine Nishida, Johns Hopkins University
33	Framework for assessing oil spill chemical risks to children during beach play	Helena Solo-Gabriele, University of Miami
34	Communicating the expected frequency of extreme floods to the public: Insights from recent events in the Gulf of Mexico Region	Clay Tucker, Louisiana State University
P-005: Physical & Chemical Connectivity		
69	Evaluation of molecular ratios as geochemical proxies for source characterization and tracking weathering processes of hydrocarbons in coastal sediments impacted by Deepwater Horizon Oil spill	Puspa Adhikari, Louisiana State University
70	Characterization of chemical fractions from MC252 Oil	Ahmad Alqassim, Tulane University
71	Time-resolved phosphorescence spectroscopy for the isomeric determination of polycyclic aromatic sulfur heterocycles with MW 234 in the Gulf of Mexico	Sadia Arif, University of Central Florida
72	Thirty-six year depositional history of Ixtoc-1 Oil Spill hydrocarbons: Persistence, sources and potential impacts	Thea Bartlett, University of South Florida
73	Exposure and uptake of oil hydrocarbons and oxygenated oil weathering products in fish egg incubation experiments using weathered oil	Erin Beirne, Bigelow Laboratory for Ocean Sciences
74	Temporal varying spatial patterns in Mobile Bay outflow	Jeffrey Book, U.S. Naval Research Laboratory

#	Title	Presenter
75	Applying measures of local turbulence from simulations to correlate droplet sizes across experimental configurations and length scales	Craig Booth, University of Western Australia
76	Recent sedimentation patterns off Northwest Cuba: comparison with Deepwater Horizon oil and Ixtoc-1 impacted sediments	Gregg Brooks, Eckerd College
77	A new in vitro exposure device to assess the health impacts of oily marine aerosols on the human respiratory system	Lakshmana dora Chandrala, Johns Hopkins University
78	Seasonal variation of DOC concentration predicted from CDOM absorption coefficients in the northern Gulf of Mexico	Brendan Kelly, Louisiana Universities Marine Consortium
79	Copepods toxicity of photo-irradiated oil: The role of PAHs and oxygenated photo-products	Haining Chen, Bigelow Laboratory for Ocean Sciences
80	Molecular characterization of interfacial material isolated from environmental samples impacted by the Deepwater Horizon Oil Spill	Huan Chen, National High Magnetic Field Laboratory
81	Phytoplankton derived transparent exopolymer particle response to oiling	Liesl Cole, Dauphin Island Sea Lab
82	LES simulations of multiphase plumes with crossflow	William Dewar, Florida State University
83	Scales of re-suspension in the northern Gulf of Mexico	Arne Diercks, University of Southern Mississippi
84	Stratigraphic fingerprinting and source identification of oil present in recent marine sediments from the southern Gulf of Mexico	Khoi Duong, University of Calgary
85	The effect of tidal and super tidal motions on sediment resuspension	Jordan Earls, University of Southern Mississippi
86	Mississippi River plume interaction with surface oil in the northern Gulf of Mexico	Catherine Edwards, Skidaway Institute of Oceanography, University of Georgia
87	Using volcanic sediment as an independent dating tool of the 1979 Ixtoc-1 Event	Jacob Fillingham, Eckerd College
88	Determining the acute and sublethal toxicity of oxygenated hydrocarbons in weathered oil	Nina Forziati, Simmons College
89	The effect of removing carbon limitation on diatom aggregation and physiological responses when exposed to oil	Jennifer Genzer, Texas A&M University at Galveston
90	Small scale biological responses of phytoplankton species exposed to oil and surfactant	Jessica Hillhouse, Texas A&M University at Galveston
91	An unstructured-grid coupled hydrodynamic-wave-sediment model for the Barataria Bay, Louisiana	Haosheng Huang, Louisiana State University
92	A practical oxygen enrichment system for mesocosms without vigorous mixing	Anthony Knap, Texas A&M University
93	Evaluating sub-mesoscale frontal eddies over a broad, low-energy continental shelf	Daijiro Kobashi, Texas A&M University
94	The use of single-phase scale-resolving simulations to estimate droplet sizes produced by an oil-in-water jet	Jeremy Leggoe, University of Western Australia
95	Horizontal material dispersion by boundary layer currents	JunHong Liang, Louisiana State University

#	Title	Presenter
96	Molecular responses to alkylated chrysenes found in crude oil in murine lung and liver cells	Rebecca Lichtler, Tulane University
97	Analysis of 18S rRNA defined eukaryotic community composition in coastal and offshore Gulf of Mexico upon exposure to oil and dispersants	Genmei Lin, Ocean University of China
98	Production of exopolymeric substances and the roles in oil transport in water-accommodated fraction of oil and Corexit/oil contaminated mesocosms	Peng Lin, Texas A&M University at Galveston
99	Comparison between ambient and enhanced nutrient mesocosms in short and long term experiments	Maya Morales-McDevitt, Texas A&M University
100	Investigating multiple inputs of oil residues to Gulf of Mexico beaches	Alexandra Morrison, Haverford College
101	The influence of hydrostatic pressure on microbial motility and hydrocarbon chemotaxis	Kelli Mullane, Scripps Institution of Oceanography
102	Transcriptome-wide responses of aggregates of the diatom <i>Odontella aurita</i> to oil	Deepak Nanjappa, Mount Allison University
103	Microbial community composition of Gulf of Mexico sediments in response to crude oil	Uyen Nguyen, Pennsylvania State University
104	Targeted analysis of ketone-containing transformation products in photo-ox specific microcosms and field samples	Sydney Niles, Florida State University
105	Biodegradation of different hydrocarbon mixtures by similar microbial communities in deep and shallow arctic marine sediments	Amy Noël, University of Calgary
106	Direct fractionation methods for MC252 crude oil coupled with an aryl hydrocarbon receptor signaling assay identifies novel compounds of toxicological interest	Deepa Pangeni, Louisiana State University
107	DEEPEND: A tool for classification of mesoscale water mass structure for pelagic community analyses	Bradley Penta, U.S. Naval Research Laboratory
108	Comparison of mixing energy from high and low energy oil in water preparations to that found in the marine environment	Aaron Redman, ExxonMobil Biomedical Science, Inc
109	Behavior of sea spray particles in very high wind conditions	Glorianne Rivera, University of Miami
110	Comparison of exopolymeric substances (EPS) with transparent exopolymeric particles (TEP) and microgels in mesocosms	Peter Santschi, Texas A&M University at Galveston

#	Title	Presenter
111	Characterization of particulate formation in and rheological properties of suspensions of microbial consortia exposed to crude with and without dispersant	Helen Schawe, Veterans Memorial High School
112	The variability of winds observed near submesoscale fronts	Mingming Shao, University of Miami
113	Light rare earth element depletion during Deepwater Horizon methanotrophy	Alan Shiller, University of Southern Mississippi
114	Mixing and wind-response in submesoscale fronts	Aviv Solodoch, University of California, Los Angeles
115	Advection of <i>Karenia brevis</i> blooms from the Florida Panhandle towards Mississippi coastal waters	Mustafa Kemal Cambazoglu, University of Southern Mississippi
116	Langmuir turbulence interaction with crosswind currents and bottom boundary layer turbulence	Andres Tejada-Martinez, University of South Florida
117	Velocity measurements from a drifting sediment trap in the Northeastern Gulf	Andreas Thurnherr, Lamont-Doherty Earth Observatory
118	Modeling sediment resuspension and methane distribution in the deep Gulf of Mexico under the effect of near-seabottom flow	Yu Wang, University of Georgia
119	Forming mechanism of Ordovician microbial carbonate reservoir in northern slope of Tazhong uplift, Tarim Basin, China	Yuwei Wang, China University of Geosciences
120	Hydrocarbon charging history within Shun 1 strike-slip fault belt of the super-deep reservoir, Tarim Basin, China	Yuwei Wang, China University of Geosciences
121	Simultaneous PLIF and PIV measurements on refractive index matched immiscible buoyant oil jet fragmentation in water	Xinzhi Xue, Johns Hopkins University
122	Decision-making in bacteria: An integrated chemotactic response to multiple chemical cues	Xueying Zhao, University of Virginia



Photo © Carlton Ward for The Nature Conservancy

Wednesday, February 7

Time	Event	Location
7:30a – 5:30p	Registration & check-in open	Celestin Foyer
7:30a – 6:00p	Speaker ready area open	Celestin Foyer
7:30a – 7:30p	Poster hall and exhibits open	Storyville Hall

Scientific Program Schedule

Starting at 7:30a	BREAKFAST	
8:30a – 10:00a	ECO-003	Celestin D
	MDA-002	Celestin C
	PCC-002	Celestin F
	PCC-003	Celestin E
	RMP-001	Celestin A
	RSP-002	Celestin H
10:00a – 10:30a	BREAK	
10:30a – 12:00p	ECO-003	Celestin D
	MDA-002	Celestin C
	PCC-002	Celestin F
	PCC-003	Celestin E
	RMP-001	Celestin A
	RSP-002	Celestin H
12:00p – 2:00p	LUNCH	
12:30p – 1:30p	Mini-Session: MS-002	Celestin C
	Mini-Session: MS-003	Celestin A
	Mini-Session: MS-004	Celestin H
2:00p – 3:30p	ECO-004	Celestin D
	MDA-003	Celestin C
	PCC-004	Celestin H
	PCC-005	Celestin F
	RMP-002	Celestin A
	RSP-003	Celestin E
3:30p – 4:00p	BREAK	
4:00p – 5:30p	ECO-004	Celestin D
	MDA-003	Celestin C
	PCC-004	Celestin H
	PCC-005	Celestin F
	RMP-002	Celestin A
	RSP-003	Celestin E
5:30p – 7:30p	Poster session & reception (featuring Tracks 002, 004, and 006)	Storyville Hall

Associated Meetings and Events

8:00a – 8:30a	How to submit data to GRIIDC	Imperial 12
10:00a – 10:30a	Introduction to the GoMRI Data Management Program	Imperial 12
12:15p – 1:15p	Understanding and predicting the Gulf of Mexico Loop Current: Overview of NASEM report and upcoming GRP funding opportunity	Imperial 10
12:30p – 1:30p	"Dispatches from the Gulf 2"	Celestin F
3:30p – 4:00p	Organizing data – Best practices and GRIIDC submission	Imperial 12
6:00p – 6:30p	"Jewels of the Gulf" short film and discussion: deep sea coral research and outreach	Celestin F

Gulf-wide impacts, recovery and connectivity of marine invertebrates in the context of oil spills and environmental variability

Wednesday, February 7, 8:30a – 12:00p, Celestin D

Patrick Schwing, University of South Florida

Yadong Wang, University of Miami

The Deepwater Horizon (DWH) event released a large volume of petroleum contaminants into the Gulf of Mexico, causing biological impacts in many marine ecosystems. Since the DWH event, researchers have documented profound changes to marine invertebrate communities associated with DWH and other petroleum spills throughout the GoM. The affected communities include, but are not limited to, benthic (meiofauna, macrofauna, and megafauna), deep and mid-water pelagic, and plankton (phytoplankton, zooplankton, ichthyoplankton) communities. Evaluation and integration of marine invertebrate studies are needed to develop a comprehensive understanding of the spatial and temporal impacts, recovery, and connectivity between invertebrate communities in the context of petroleum contamination and natural environmental variability.

Time	Title	Presenter
8:30a – 8:45a	Using benthic foraminifera to assess oil spill impact, resilience, long-term preservation, and to provide a measure of Gulf-wide benthic baselines	Patrick Schwing, University of South Florida
8:45a – 9:00a	How quickly will the deep sea ecosystem recover from the 2010 Deepwater Horizon Oil Spill? Lessons learned from the 1979 Ixtoc-1 Oil Well Blowout Event	Melissa Rohal, Harte Research Institute
9:00a – 9:15a	How suitable are species level and family level identifications of Gulf of Mexico polychaetes for multivariate biodiversity assessments?	Michael Reuscher, Texas A&M University – Corpus Christi
9:15a – 9:30a	Persistent and significant impacts of the Deepwater Horizon Oil Spill on deep-sea megafauna seven years later	Craig McClain, Louisiana Universities Marine Consortium
9:30a – 9:45a	Stratification drives taxon-specific distribution of gelatinous plankton at fine scales in the northern Gulf of Mexico	Luciano Chiaverano, University of Southern Mississippi
9:45a – 10:00a	Resilience of zooplankton communities during and after the Deepwater Horizon Oil Spill	Kendra Daly, University of South Florida
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Zooplankton community structure in the northeastern Gulf of Mexico: Impacts of environmental variability and the Deepwater Horizon Oil Spill	Kate Dubickas, University of South Florida
10:45a – 11:00a	Species abundance, spatial and vertical distributions of heteropods (Pterotracheoidea) in the northern Gulf of Mexico	Kristine Clark, University of South Florida
11:00a – 11:15a	DEEPEND: What have we learned since 2011 about cephalopods of the northern Gulf of Mexico?	Heather Judkins, University of South Florida St. Petersburg
11:15a – 11:30a	DEEPEND: DNA barcoding enhances large-scale biodiversity initiatives of crustaceans in the Gulf of Mexico	Heather Bracken-Grissom, Florida International University – Biscayne Bay Campus
11:30a – 11:45a	DEEPEND: Does the Atlantic serve as a genetic reservoir for the Gulf of Mexico? A comparative population genomics investigation of six midwater invertebrate species	Laura Timm, Florida International University
11:45a – 12:00p	Asymmetric larval connectivity between oceanographic provinces of the Gulf of Mexico and resilience of fish communities to disturbances	Claire Paris, University of Miami

Remote sensing assessment of surface oil and related ocean observing

Wednesday, February 7, 8:30a – 12:00p, Celestin C

Lisa DiPinto, NOAA

George Graettinger, NOAA

This session will look at current and emerging trends in the effort to understand the appropriate use of remote sensing for environmental monitoring, oil spill response, and damage assessment. These presentations will examine subjects such as ocean color and salinity, extent and oil characterization (thickness), fate and transport of surface oil in the near shore and open waters of the Gulf of Mexico.

Time	Title	Presenter
8:30a – 8:45a	Where did the Deepwater Horizon surface oil go? A time series of advection and fate, 24 April – 3 August 2010	Samira Daneshgar Asl, Florida State University
8:45a – 9:00a	Tactical oil spill observations with drones, satellites, and drifters	Oscar Garcia, Water Mapping, LLC
9:00a – 9:15a	Assessment of offshore oil/gas platform status in the Northern Gulf of Mexico using multi-source satellite time-series images	Chuanmin Hu, University of South Florida
9:15a – 9:30a	Design of adaptive and dynamic offshore oil spill wireless sensor networks	Waleed Al-Assadi, University of South Alabama
9:30a – 9:45a	Remote sensing of persistent oil slicks in Mississippi Canyon 20	Ian MacDonald, Florida State University
9:45a – 10:00a	Monitoring acoustic signature of deep-sea hydrocarbon seeps in the Gulf of Mexico	Mahdi Razaz, University of Georgia
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Satellite mapping of sea surface salinity in the Northern Gulf of Mexico: Near real-time data products	Shuangling Chen, University of South Florida
10:45a – 11:00a	Identifying seasonal trends in physical-biological properties and anomalies across the Mississippi Shelf waters between coastal and offshore waters	Robert Arnone, University of Southern Mississippi
11:00a – 11:15a	Evaluation of episodic events using satellite bio-optical observations and circulation model output in the Northern Gulf of Mexico	Erin Jones, University of Southern Mississippi
11:15a – 11:30a	Assessing coastal marshes biomass using spectroscopy	Yu Mo, University of Maryland
11:30a – 11:45a	Innovative technologies used for ocean observing	Thomas Wims, Independent Consultant
11:45a – 12:00p	Frontal density of northern Gulf of Mexico derived from satellite ocean color measurements	Chuanmin Hu, University of South Florida

Sedimentary evidence for the fate of oil

Wednesday, February 7, 8:30a – 12:00p, Celestin F

Aprami Jaggi, University of Calgary

This session characterizes the physical and chemical interactions taking place at the ocean floor to better understand the sedimentary fate of oil. It will discuss the resiliency of sediments in context of isotopic baseline measurements and resident microbes in the Gulf of Mexico. This session will also deliberate on (1) the physical properties of sediments dictating the fate of oil at the ocean floor in terms of: accumulation rates, radiocarbon age-dating and marine snow events, and (2) the chemistry of oil transformation using various mass spectrometric techniques.

Time	Title	Presenter
8:30a – 8:45a	Assessing transformations of oil deposited on the seafloor of the Gulf of Mexico using ramped oxidation and 14C analysis	Kelsey Rogers, Florida State University
8:45a – 9:00a	Isotopic composition of sinking particles: Oil effects, recovery and baselines in the Gulf of Mexico, 2010-2016	Jeff Chanton, Florida State University
9:00a – 9:15a	Structural insights into weathered Deepwater Horizon oil on coastlines using ramped pyrolysis GC-MS	Zhanfei Liu, University of Texas at Austin
9:15a – 9:30a	A preliminary synthesis of recent sediment accumulation rates in the Southern Gulf of Mexico	Joan Sanchez-Cabeza, Universidad Nacional Autonoma de Mexico
9:30a – 9:45a	High-resolution sedimentary record of the Deepwater Horizon Event: Impacts and recovery	Rebekka Larson, Eckerd College
9:45a – 10:00a	Mechanisms of sediment attachment to oil in turbulent flows	Lin Zhao, New Jersey Institute of Technology
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Elevated rates of biogenic silica deposition in the sediment from the Northern Gulf of Mexico during the Deepwater Horizon Oil Spill	Jong Jin Lee, University of South Florida
10:45a – 11:00a	Changes in Sedimentary redox conditions following the Deepwater Horizon Blowout and Ixtoc-1 Events: Geochemical and ecological implications	David Hastings, Eckerd College
11:00a – 11:15a	Assessing the weathering of residual oil deposited in Mexico coastal environments 37 years after the Ixtoc-1 spill using novel techniques	Isabel Romero, University of South Florida
11:15a – 11:30a	A sedimentary comparison of MOSSFA events from the Ixtoc-1 (1979) and Deepwater Horizon (2010) sub-marine oil well blowouts in the Gulf of Mexico	David Hollander, University of South Florida
11:30a – 11:45a	Is the Gulf of Mexico uniquely primed for hydrocarbon degradation?	Sara Lincoln, Pennsylvania State University
11:45a – 12:00p	Geochemical connectivity in the southern Gulf of Mexico: Old and new organic proxies for the Ixtoc-1 Spill	Jagoš Radović, University of Calgary

Hydrocarbon transformation processes and products at the sea surface

Wednesday, February 7, 8:30a – 12:00p, Celestin E

Christoph Aeppli, Bigelow Laboratory for Ocean Sciences

About 10 percent of the spilled Deepwater Horizon oil formed a layer at the sea surface. This session addresses the fate of this important oil fraction. Physical as well as biotic and abiotic chemical processes that changed the composition of the oil residues will be discussed.

Time	Title	Presenter
8:30a – 8:45a	In search of the missing Macondo Oil: A Case for photochemical and biological solubilization en route to refractory dissolved organic matter	David Podgorski, University of New Orleans
8:45a – 9:00a	Partial photochemical oxidation was a dominant fate of Deepwater Horizon surface oil	Collin Ward, Woods Hole Oceanographic Institution
9:00a – 9:15a	A comparison of the optical and molecular-level composition of photodegraded Macondo Well oil in the presence of dispersant	Phoebe Zito, University of New Orleans
9:15a – 9:30a	Photoproducts in gas phase of solar irradiated crude oil-seawater systems determined by SPME-GC-MS	Matthew Tarr, University of New Orleans
9:30a – 9:45a	Molecular-level insights into the biotic / abiotic compositional changes of weathered oils exposes the importance of photo-oxidation	Ryan Rodgers, National High Magnetic Field Laboratory
9:45a – 10:00a	Photoperiod, exposure duration, timing, and latent mortality: Effects of photo-induced toxicity on aquatic organisms	Kristin Bridges, University of North Texas
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	New methods to determine the toxicity of oxygenated oil transformation products in weathered Deepwater Horizon oil residues	Christoph Aeppli, Bigelow Laboratory for Ocean Sciences
10:45a – 11:00a	Novel techniques for exposure and analysis of effects of airborne toxicants from crude oil in terrestrial animals	Benjamin Dubansky, University of North Texas
11:00a – 11:15a	Examining inputs of biogenic and oil-derived hydrocarbons in surface waters following the Deepwater Horizon Oil Spill	Charles Marx, Haverford College
11:15a – 11:30a	The effects of sunlight on the composition of exopolymeric substances affecting aggregate formation during oil spills	Luni Sun, Texas A&M University at Galveston
11:30a – 11:45a	Microbial analysis of the sea surface microlayer with a focus on surfactant-associated bacteria and applications to satellite oceanography	Cayla Dean, Nova Southeastern University
11:45a – 12:00p	Partitioning of oil into marine waters is influenced by the interaction between oil type and season	Alice Ortmann, Fisheries and Oceans Canada

Linking monitoring, adaptive management, and restoration at the local, state, and regional scale

Wednesday, February 7, 8:30a – 12:00p, Celestin A

Julien Lartigue, NOAA

Christina Mohrman, Gulf of Mexico Alliance

This session will broadly address the linkages between monitoring, adaptive management, and restoration. Speakers will review 1) how monitoring in the Gulf of Mexico is being organized and integrated to inform and assess restoration activities, 2) approaches for employing adaptive management, and 3) novel decision support tools and ways of training restoration practitioners. Collectively, the presentations will cover activities occurring at the local, state, and regional scales.

Time	Title	Presenter
8:30a – 8:45a	Progress in building a monitoring and adaptive management framework for Deepwater Horizon Natural Resource Damage Assessment restoration	Melissa Carle, NOAA
8:45a – 9:00a	Monitoring and adaptive management manual to support integrated ecosystem restoration under the Deepwater Horizon Natural Resources Damage Assessment	Ann Hijuelos, Cherokee Nation Technologies
9:00a – 9:15a	Monitoring guidelines for evaluating restoration outcomes from the Deepwater Horizon Natural Resource Damage Assessment	Nadia Martin, Industrial Economics, Incorporated
9:15a – 9:30a	RESTORE Council Monitoring and Assessment Program: Developing a shared monitoring and adaptive management vision through coordination and collaboration	Jessica Henkel, Gulf Coast Ecosystem Restoration Council
9:30a – 10:00a	Deepwater Horizon Cross-Program Coordination: Connecting the dots to evaluate holistic Gulf restoration	Randy Clark, NOAA
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Integrating adaptive management into NEPA	Natalie Peyronnin, Environmental Defense Fund
10:45a – 11:00a	GulfCorps Project – A new model of Conservation Corps work	Laurel Jennings, ERT
11:00a – 11:15a	Development of a next-generation decision support tool for coastal ecosystem restoration: Adaptation of Coastal Urban and Natural Ecosystems (ACUNE)	Y. Peter Sheng, University of Florida
11:15a – 11:30a	Moving beyond restoration in the Gulf of Mexico: Using Gulf science to implement conservation in a highly altered, large marine ecosystem	Richard Wallace, Ursinus College
11:30a – 12:00p	State agency approaches to monitoring and adaptive management	George Ramseur, Mississippi Department of Marine Resources Carl Ferraro, Alabama Department of Conservation and Natural Resources

Laboratory and field experiments and measurements

Wednesday, February 7, 8:30a – 12:00p, Celestin H

Scott Socolofsky, Texas A&M University

Anusha Lakmali Dissanayake, University of Georgia

Laboratory and field experiments and observations provide important information to understand the chemical, physical and biological processes that control the transport and the eventual fate of petroleum fluids spilled in the environment. This session will focus on some of the laboratory observations carried out to study the droplet size distribution in blowout plumes, phase changes of droplets under high pressure, field measurements used to understand the hydrodynamic conditions of the ambient environment, and on the methods used to collect the data.

Time	Title	Presenter
8:30a – 8:45a	Testing at the <i>in-situ</i> burn pan at Joint Maritime Test Facility (JMTF), Mobile, AL, USA	Kurt Hansen, U.S. Coast Guard
8:45a – 9:00a	Experimental investigation of the rise behavior of gas-saturated crude-oil droplets under high pressure	Simeon Pesch, Hamburg University of Technology
9:00a – 9:15a	High-pressure oil-in-water droplet size distribution measurements	Zachary Aman, University of Western Australia
9:15a – 9:30a	Experimental study of oil droplet size distribution of deep-sea blowouts: Effects of reservoir pressure and phase changes	Karen Malone, Hamburg University of Technology
9:30a – 9:45a	Polarimetric lidar measurements of aquatic turbulence – laboratory experiment	Darek Bogucki, Texas A&M University – Corpus Christi
9:45a – 10:00a	Particulate matter resuspension in the Mississippi Bight assessed with biophysical modeling and <i>in-situ</i> measurements	Stephan O'Brien, University of Southern Mississippi
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Seasonality of across-shelf transport pathway patterns in Mississippi Bight	Mustafa Kemal Cambazoglu, University of Southern Mississippi
10:45a – 11:00a	Coastal Langmuir circulations under misaligned currents, wind, and wave forcing	Kalyan Shrestha, University of Texas at Dallas
11:00a – 11:15a	Rapid spill response: CARTHE drifters used during active sewage leaks	Laura Bracken, University of Miami
11:15a – 11:30a	Observations of the vertical profile of near surface currents in the Gulf of Mexico	Brian Haus, University of Miami
11:30a – 11:45a	Can artificial intelligence predict the dispersion of spilled oil?	Matthew Grossi, University of Miami
11:45a – 12:00p	Simulating the dynamics and water properties of Mississippi Sound and Bight using the CONCORDE synthesis model	Chudong Pan, University of Southern Mississippi

Wednesday, February 7, 12:30p – 1:30p

MS-002: Microbial communities at depth (Celestin C)

Joel Kostka, Georgia Institute of Technology

Time	Title	Presenter
12:30p – 12:45p	Microbial crude oil degradation under the influence of dispersant and elevated pressure	Steffen Hackbusch, Technical University Hamburg Harburg
12:45p – 1:00p	<i>In-situ</i> pressure acts as a selective force on the structure and function of deepsea microbial communities that mediate petroleum hydrocarbon degradation	Xiaoxu Sun, Georgia Institute of Technology
1:00p – 1:15p	Effect of elevated pressure on bacterial communities	Nuttapol Noirungsee, Hamburg University of Technology

MS-003: Oil degradation in coastal sediments (Celestin A)

David Hollander, University of South Florida

Time	Title	Presenter
12:30p – 12:45p	Compositional changes in Deepwater Horizon oil impacting coastal marshes	Edward Overton, Louisiana State University
12:45p – 1:00p	Water and air flows affecting degradation of buried crude oil	Markus Huettel, Florida State University
1:00p – 1:15p	Three-year time series monitoring Deepwater Horizon oil degradation in Pensacola beach sand	Ioana Bociu, Florida State University
1:15p – 1:30p	Characterization of weathered petroleum in the coastal samples from the Southern Gulf of Mexico using FTICR-MS	Jagoš Radović, University of Calgary

MS-004: The last mile before landfall: measuring coastal transport (Celestin H)

Tamay Özgökmen, University of Miami

Time	Title	Presenter
12:30p – 12:45p	Fine-scale features on the sea surface observed in the vicinity of an oil seep in the Gulf of Mexico during SPLASH	Alexander Soloviev, Nova Southeastern University
12:45p – 1:00p	Drifter analysis of surface transport of oil onto the shore in the Louisiana Bight	Jeroen Molemaker, University of California Los Angeles
1:00p – 1:15p	Airborne survey of sea fronts as a guidance for <i>in-situ</i> response activities during the SPLASH experiment	Maristella Berta, CNR-ISMAR
1:15p – 1:30p	Quantifying the influence of wind and waves on the upper transport in the Gulf of Mexico	John Lodise, University of Miami

Offshore fishes: Deepwater Horizon Oil Spill research from the shelf to the deep ocean

Wednesday, February 7, 2:00p – 5:30p, Celestin D

Tracey Sutton, Nova Southeastern University
 Isabel Romero, University of South Florida
 Yadong Wang, University of Miami

This session will comprise presentations of the results of Deepwater Horizon-related studies on a range of fishes that utilize offshore habitat, from pelagic-spawning coastal fishes to permanent residents of the deep-pelagic domain and multiple habitat types in between. Topics covered include direct contamination, ecology, biophysical coupling, distribution, resilience, and longer-term abundance trends. A wide range of methodologies will be presented, including laboratory biochemical analysis, direct sampling and empirical analysis, and large-scale numerical modeling. These studies illuminate the importance of spatial and temporal scales when considering the impacts and recovery of an ecosystem-level disturbance event.

Time	Title	Presenter
2:00p – 2:15p	A spatiotemporal analysis of hepatic polycyclic aromatic hydrocarbon levels and pathological findings in red snapper (<i>Lutjanus campechanus</i>), post-Deepwater Horizon	Erin Pulster, University of South Florida
2:15p – 2:30p	Ecosystem impacts of Deepwater Horizon	Cameron Ainsworth, University of South Florida
2:30p – 2:45p	Movement ecology and reproductive resilience in Gulf of Mexico marine fish	Sue Lowerre-Barbieri, University of Florida
2:45p – 3:00p	Tracking oil's toxicological transgressions through tilefish transcriptomics	Kristina Deak, University of South Florida
3:00p – 3:15p	Female-specific highly-dense linkage map for golden tilefish	Shannon O'Leary, Harte Research Institute
3:15p – 3:30p	Establishing a baseline and analyzing resilience of golden tilefish and deep-water grouper species in the Gulf of Mexico	Greta Helmueller, University of South Florida
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Factors determining observed patterns of continental shelf fish species distribution and apparent connectivity in the Gulf of Mexico	Steve Murawski, University of South Florida
4:15p – 4:30p	Fish-based isoscapes for the American, Mexican and Cuban continental-shelf habitats of the Gulf of Mexico	Ernst Peebles, University of South Florida
4:30p – 4:45p	Has abundance of continental shelf fish species declined after Deepwater Horizon?	Steven Murawski, University of South Florida
4:45p – 5:00p	Bioenergetics and trophic demands of mahi mahi (<i>Coryphaena hippurus</i>)	Martin Grosell, University of Miami
5:00p – 5:15p	How do warm-core eddies structure the deep-pelagic fish fauna of the Gulf of Mexico?	Rosanna Milligan, NOVA Southeastern University
5:15p – 5:30p	DEEPEND: Evidence of dramatic and persistent declines in deep-pelagic fish abundances in the oceanic Gulf after Deepwater Horizon	Tracey Sutton, Nova Southeastern University

Innovative mainstream designs

Wednesday, February 7, 2:00p - 5:30p, Celestin C

Lauren Showalter, Gulf Research Program of the National Academies of Sciences, Engineering, & Medicine
Dave Reed, Fish and Wildlife Research Institute

Navigating the large volume of data collection and tool/application development over the past half-decade can be challenging if not overwhelming; from how we organize and manage data to examples of how this information can be used to facilitate answering ‘Big Picture’ questions. This session aims to share best practices, lessons learned, structured decision-making development, decision support tools for planning and risk analysis, reporting, restoration and public access. Topics range from microbes to migratory species; a potpourri of pragmatic practical practices and projects.

Time	Title	Presenter
2:00p – 2:15p	Gulf of Mexico collaboration on long-term data management post-Deepwater Horizon	Marti Goss, NOAA
2:15p – 2:30p	Swimming through the data deluge to inform oil spill prevention needs	Jennifer Bauer, National Energy Technology Laboratory
2:30p – 2:45p	Managing Deepwater Horizon restoration project information for reporting and public access	Mike Peccini, NOAA
2:45p – 3:00p	Louisiana’s System Wide Assessment and Monitoring Program (SWAMP)	Syed Khalil, Coastal Protection and Restoration Authority
3:00p – 3:15p	DIVER application: Accessing project and environmental data and developing data services	Ben Shorr, NOAA
3:15p – 3:30p	Using structured decision making in development of a Gulf-wide avian monitoring network	Randy Wilson, U.S. Fish & Wildlife Service
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Migratory species conservation decision support tool: Tools for planning and risk analysis	Jorge Brenner, The Nature Conservancy
4:15p – 4:30p	Data management of environmental monitoring data from Mobile Bay: Best practices and lessons learned	Lei Hu, Dauphin Island Sea lab
4:30p – 4:45p	A computational aid tool for visualization of acoustical data in the Northern Gulf of Mexico	SydniCherise Austin, University of New Orleans
4:45p – 5:00p	DIVER application: Using common data models for data integration and data queries	Ben Shorr, NOAA
5:00p – 5:15p	Organizing monitoring data from the bottom up to facilitate answering big picture questions	Ann Jones, Industrial Economics
5:15p – 5:30p	Discussion	

Currents, winds and waves: Moving oil in the Gulf of Mexico

Wednesday, February 7, 2:00p - 5:30p, Celestin H

Helga Huntley, University of Delaware

The fate of oil spilled into the Gulf of Mexico is determined to a large extent by the chemical and biological break-down processes, on the one hand, and by the physical redistribution of the oil and its derivatives, on the other hand. Therefore, an understanding of the physical processes is critical for effective response efforts, prioritizing restoration projects, and building the resiliency of the Gulf to oil spills. In this session, we will explore the driving mechanisms of the oil redistribution in the ocean, including currents, winds, and waves. Contributions may focus on insights into the ocean flow itself or specifically on its impact on oil.

Time	Title	Presenter
2:00p – 2:15p	The movement of deepwater horizon oil to northern Gulf beaches	Robert Weisberg, University of South Florida
2:15p – 2:30p	Effects of near-inertial wind forcing on baroclinic instabilities over the Texas-Louisiana Shelf	Robert Hetland, Texas A&M University
2:30p – 2:45p	Analysis of the Lagrangian flow in the top centimeter of the water column using the GISR drift card data set and a new surface drift model	Allan Clarke, Florida State University
2:45p – 3:00p	Dispersion and clustering experiments in the Gulf of Mexico	A.D. Kirwan, University of Delaware
3:00p – 3:15p	Study on Langmuir turbulence based on wave-phase-resolved simulations	Anqing Xuan, University of Minnesota
3:15p – 3:30p	Clustering, deformation, and dispersion of buoyant material	Helga Huntley, University of Delaware
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	The dynamical role of horizontal divergence in submesoscale frontogenesis	Roy Barkan, University of California, Los Angeles
4:15p – 4:30p	Topographic enhancement of diapycnal diffusivity on the continental slope in the Northern Gulf of Mexico and its application to the oil droplet dynamics	Zhankun Wang, NOAA
4:30p – 4:45p	APEX-EM float performance measuring ocean structure	Lynn Shay, University of Miami
4:45p – 5:00p	Numerical simulations of oil droplet breakup in homogeneous isotropic turbulence	Andrew Poje, City University of New York – College of Staten Island
5:00p – 5:15p	Numerical study of the variation of upper-ocean light field induced by oil plumes	Shuolin Xiao, University of Houston
5:15p – 5:30p	Spatiotemporal oil droplet size distribution datasets generated by breaking waves in supporting new oil spill fate models	Cheng Li, Johns Hopkins University

Microbial processes at oil-water interfaces

Wednesday, February 7, 2:00p - 5:30p, Celestin F

Roseanne Ford, University of Virginia

Arezoo Ardekani, Purdue University

One responsive action to the continuous release of crude oil over a period of 87 days following the Deepwater Horizon blow-out was the addition of chemical dispersants to break up the oil plume into smaller droplets and thereby increase the oil-water interfacial area. The overall impact of this strategy on cleanup efforts is still being assessed. This session will focus on microbial processes at or near the oil-water interface and the effect of dispersant on those processes. Presentations will feature experimental, modeling, and computational studies on microbial transport, adhesion, exopolymer secretion, proliferation, biodegradation, aggregation, sedimentation, and community dynamics. Understanding these processes is critical for evaluating their role in bioremediation, marine snow formation, oil droplet stability, and phytoplankton community dynamics.

Time	Title	Presenter
2:00p – 2:15p	Cargo-carrying bacteria at oil-water interfaces	Nicholas Chisholm, University of Pennsylvania
2:15p – 2:30p	Hydrodynamic interaction of marine bacteria and oil droplets	Arezoo Ardekani, Purdue University
2:30p – 2:45p	Accumulation of marine bacteria on and near oil-water interfaces	Jacinta Conrad, University of Houston
2:45p – 3:00p	Monitoring morphological changes of crude oil microdroplets exposed to different bacteria species and consortia	Maryam Jalali-Mousavi, Texas A&M University – Corpus Christi
3:00p – 3:15p	How does marine oil snow initiate on a rising micro-scale crude oil droplet?	Andrew White, Texas A&M University – Corpus Christi
3:15p – 3:30p	Time evolution of surface oil layers and surfactant stabilized droplets – bacterial colonization, biofilm generation and biodegradation	Marzhana Omarova, Tulane University
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	Bacterial proliferation on clay nanotube Pickering emulsions for oil spill bioremediation	Abhishek Panchal, Louisiana Tech University
4:15p – 4:30p	Flat-sheet clays sequester oil-degrading bacteria and stabilize oil dispersions providing insights on marine snow and oil-mineral aggregates	Marzhana Omarova, Tulane University
4:30p – 4:45p	Antibody-based assays to monitor polycyclic aromatic hydrocarbon degradation by marine bacteria	Sicheng Zhang, Tulane University School of Medicine
4:45p – 5:00p	Influence of associated bacteria on phytoplankton oil response	Tatiana Severin, University of Texas at Austin
5:00p – 5:15p	The interaction between phytoplankton and bacteria responding to oil and/or dispersants	Samantha Setta, Texas A&M University at Galveston
5:15p – 5:30p	Regulation and dynamics of microbial oil degradation in nearshore and offshore waters	Samantha Joye, University of Georgia

Managing ecosystems for resilience: From coastal communities to the deep ocean

Wednesday, February 7, 2:00p - 5:30p, Celestin A

Rebecca Green, BOEM

Melissa Carle, NOAA

This session will explore recent scientific studies, early restoration projects, and evolving strategic frameworks for preserving and restoring ecosystem integrity to the Gulf of Mexico at both the species- and ecosystem-specific level. A range of topics will be considered, including: (1) Post-DWH measurements of species injury and recovery, (2) Early plans and strategic frameworks for restoration, and (3) Expanding benthic habitat mapping and characterization. All talks are linked by the common goal of using data and information to design appropriate restoration and management strategies for the region.

Time	Title	Presenter
2:00p – 2:15p	Is the cart ahead of the horse? Benthic habitat mapping and characterization in the Eastern Gulf of Mexico	Brian Walker, Nova Southeastern University
2:15p – 2:30p	You can't conserve or restore what you don't know: Benthic habitat characterization on Gulf of Mexico continental shelves	Steven Murawski, University of South Florida
2:30p – 2:45p	Cold-water corals as indicators of anthropogenic impact in the deep sea: Lessons learned from the Deepwater Horizon oil spill	Fanny Girard, Pennsylvania State University
2:45p – 3:00p	Restoration planning for mesophotic and deep benthic communities by the Deepwater Horizon Open Ocean Trustee Implementation Group	Kristopher Benson, NOAA
3:00p – 3:15p	Deepwater Horizon Early Restoration Phase IV, Sea Turtle Restoration Project status update	Laurel Jennings, ERT
3:15p – 3:30p	An overview of the Deepwater Horizon Trustees' Strategic Frameworks for Restoration of Sea Turtles, Marine Mammals, Oysters and Birds	Christy Fellas, NOAA
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	North Breton Island Early Restoration Project	Lawrence Malizzi, OBG
4:15p – 4:30p	Soil binding ability of <i>Spartina alterniflora</i> , smooth cord grass, established on dredged soils in Louisiana coastal area	Sujan Baral, Louisiana Tech University
4:30p – 4:45p	Effect of restoration on recovery of coastal salt marshes impacted by the Deepwater Horizon Oil Spill	Qianxin Lin, Louisiana State University
4:45p – 5:00p	Physiological resilience to salinity and hypoxia in subadult Gulf brown shrimp (<i>Farfantepenaeus aztecus</i>)	Abigail Bockus, Louisiana Universities Marine Consortium
5:00p – 5:15p	Why were saltmarsh species assemblages so resilient to the Deepwater Horizon oil spill?	Kiva Oken, Rutgers University
5:15p – 5:30p	Oxygen oscillation effects on microbial community activity and nitrogen metabolism in oil contaminated beachsands	Patrick Heritier-Robbins, Georgia Institute of Technology

How's the weathering? Oil chemistry, dispersants, toxicity

Wednesday, February 7, 2:00p - 5:30p, Celestin E

Robyn Conmy, U.S. EPA

Chris DuFore, BOEM

Spilled oil undergoes physical, biological, and chemical transformations as a function of environmental conditions and weathering. These transformations ultimately dictate the behavior, dispersability, and toxicity of oil. Improved understanding of the interplay between oil chemistry, behavior, and toxicity helps to inform oil spill planning and preparedness for future response efforts. Introductory remarks will be provided by Dana Tulis, Director of Incident Management and Preparedness, U.S. Coast Guard.

Time	Title	Presenter
2:00p – 2:15p	Cyclic of PAHs in aboveground marsh vegetation: A new paradigm for response and recovery for oil spills in marshes	John Pardue, Louisiana State University
2:15p – 2:30p	Qualitative characterization of SRM 2779 Gulf of Mexico crude oil for polycyclic aromatic compounds via normal-phase liquid chromatography and gas chromatography/mass spectrometry	Hugh Hayes, University of Central Florida
2:30p – 2:45p	Synthesis and investigation of amphiphilic polypeptoid- functionalized halloysites nanotubes (HNTs) as stabilizer towards oil spill remediation	Tianyi Yu, Louisiana State University
2:45p – 3:00p	Ontogony of urea and ammonia transporters in mahi mahi (<i>Coryphaena hippurus</i>) early life stages	Yadong Wang, University of Miami
3:00p – 3:15p	Toxicity of oil to <i>Americamysis bahia</i> and deep-water column micronekton with comparisons to model predictions	Nicholas Turner, Nova Southeastern University
3:15p – 3:30p	Assessment of ultraviolet light enhanced toxicity of oil to early life stages of estuarine species	Marie DeLorenzo, NOAA
3:30p – 4:00p	Coffee Break	
4:00p – 4:15p	How results from the Dispersion Research on Oil: Physics and Plankton Studies (DROPPS II) can be leveraged to improve oil spill planning, response and outcome	CJ Beegle-Krause, SINTEF Oceans
4:15p – 4:30p	The impact of the solvent base for a dispersant on the efficiency of crude-oil dispersion	Niti Agrawal, University of Maryland
4:30p – 4:45p	Characterizing dispersant effectiveness at varying salinities	Devi Sundaravadivelu, Pegasus Technical Services, Inc.
4:45p – 5:00p	A comprehensive view of an effective alternative dispersant system using food grade surfactants	Igor Kevin Tsengam, Tulane University
5:00p – 5:15p	Photochemical oxidation reduces the efficacy of aerial dispersants applied in response to oil spills	Collin Ward, Woods Hole Oceanographic Institution
5:15p – 5:30p	Using an artificial oil system to assess dissolution of PAHs from droplets	Piero Gardinali, Florida International University

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Wednesday, February 7, 5:30p – 7:30p

Storyville Hall

#	Title	Presenter
P-002: Science for Response		
9	The effect of dispersion retention on surface oil during the Deepwater Horizon Oil Spill	CJ Beegle Krause, SINTEF Oceans
10	Comparing aquatic toxicity of oil: PETROTOX model vs measured	Gopal Bera, Texas A&M University
11	Seasonal variability of triplets deformation and current field kinematic properties from LASER and GLAD experiments	Maristella Berta, CNR-ISMAR
12	Air entrainment and bubble plume in wave breaking	Qiang Gao, University of Minnesota
13	Oil spill bio-remediation with bacteria	Jesús Cisneros Aguirre, Universidad de Las Palmas de Gran Canaria
14	New foam reusable absorbents for oil spill	Jesús Cisneros Aguirre, Universidad de Las Palmas de Gran Canaria
15	Granulates absorbents for oil spill	Jesús Cisneros Aguirre, Universidad de Las Palmas de Gran Canaria
16	Predicting the behaviors of oil compounds within a few kilometers of the Macondo wellhead over the course of the Deepwater Horizon timeline	Jonas Gros, Texas A&M University
17	Airdropped drifter design for the tracking of oil spills and surface currents	Cedric Guigand, University of Miami
18	Modular synthesis of amphiphilic grafted nanoparticles (AGNs) for oil spill remediation	Christopher Keller, Tulane University
19	High resolution SAR remote sensing of oil seepage during SPLASH	Susanne Lehner, German Aerospace Center (DLR)
20	Measurement of body burden by polycyclic aromatic hydrocarbon concentrations in adult Southern flounder exposed to South Louisiana crude oil	Christelle Miller, Mote Marine Laboratory
21	Cardiovascular responses of the red drum (<i>Sciaenops ocellatus</i>) to the combined environmental stressors of hypoxia and crude oil	Derek Nelson, University of North Texas
22	Near-infrared spectroscopic reactor for on-line monitoring of gas biodegradation at high pressure	Nuttapol Noirungsee, Hamburg University of Technology
23	Surface dispersion measurements combining drone-tracked drift cards and GPS-drifters	Guillaume Novelli, University of Miami
24	Modeling the time dependent vertical mixing and dispersion of oil	Juan Restrepo, Oregon State University
25	<i>Lysmata wurdemanni</i> as a proxy for deep-water column micronekton in hydrocarbon toxicity studies	Abigail Renegar, Nova Southeastern University
26	Hydrocarbon toxicity to <i>Porites divaricata</i> : Comparison of observed and predicted thresholds	Abigail Renegar, Nova Southeastern University
27	Soft boom oil containment and recovery system	Christopher Smith, ALGAENTIS HazMat Sponge
28	Impact of vertical resolution in Lagrangian analysis on the shelf	Peter Spence, Vencore Corp.

#	Title	Presenter
29	Kinetics of crude oil biodegradation under high pressure conditions	Juan Viamonte, Hamburg University of Technology
30	Numerical modeling of time-dependent subsidence in a gas field in coastal Louisiana	George Voyiadjis, Louisiana State University
P-004: Gulf Ecology		
35	Determining bioindicators for coastal tidal marsh health using the food web of larvae of the greenhead horse fly (<i>Tabanus nigrovittatus</i>)	Devika Bhalerao, Louisiana State University Agricultural Center
36	The lingering effect of crude oil from the Macondo oil spill on the community composition of epiphytes	Samantha Blonder, Florida Gulf Coast University
37	Integrity of the mouse blood-brain barrier is reduced by polyaromatic hydrocarbons	Warren Burggren, University of North Texas
38	A spatiotemporal analysis of hepatic and biliary PAHs in groupers from around the Gulf of Mexico	Brigid Carr, University of South Florida
39	The effect of temperature and UV on marine protozoa following exposure to chemically dispersed crude oil	Sarah Cosgrove, University of Texas Marine Science Institute
40	Tales told by two hundred tilefish: A baseline health assessment of the Gulf of Mexico 2015-2017	Kristina Deak, University of South Florida
41	The marsh periwinkle (<i>Littoraria irrorata</i>) as an indicator of Deepwater Horizon Oil Spill effects	Donald Deis, Atkins
42	Oiling effects on oxygen and hydrogen sulfide depth profiles in coastal marine sediments	Megan Feeney, Florida Gulf Coast University
43	Quantification of functional marker genes for denitrifying microbial populations in the Chandeleur Islands impacted by the 2010 Gulf of Mexico Oil Spill	Nikaela Flournoy, University of Alabama
44	The role of the plant-microbe relationship in oiled salt marsh management	Stephen Formel, Tulane University
45	Patch structure and Diel vertical migration of zooplankton in hypoxic waters measured with <i>in-situ</i> imaging and multibeam acoustics	Adam Greer, University of Southern Mississippi
46	Impacts of crude oil and dispersant on marine microbial biofilms: Implications for the preservation historic Gulf of Mexico shipwrecks	Rachel Mugge, University of Southern Mississippi
47	Larval gulf menhaden (<i>Brevoortia patronus</i>) diet, growth and condition during an anomalous high freshwater discharge event	Angie Hoover, University of Southern Mississippi
48	The occurrence and distribution of large siliceous particles on the Mississippi-Alabama shelf during Spring	Sarah Kelso, Dauphin Island Sea Lab
49	Competition in a marine teleost is altered by exposure to crude oil	Alexis Khursigara, University of Texas at Austin
50	Isotopic and mercury analyses of coastal seabirds collected from Louisiana in 2010 during the Deepwater Horizon Natural Resource Damage Assessment	Katelyn Lamb, Louisiana State University
51	Evaluating the accuracy of metabarcoding based biodiversity analysis	Francesca Leasi, University of New Hampshire

#	Title	Presenter
52	How were microphytobenthic communities influenced by the Deepwater Horizon Oil Spill?	Michael Lindsey, Florida Gulf Coast University
54	The effects of <i>Geukensia granosissima</i> on <i>Spartina alterniflora</i> and nitrogen cycling in a Louisiana salt marsh	Ashley McDonald, Eckerd College
55	Short-term changes in mesozooplankton abundance and community structure in response to the presence of dispersed crude oil: A mesocosm study	Maud Moison, University of Texas Marine Science Institute
56	Feeding behaviors of <i>Americamysis bahia</i> : Observations, experiments, and the impact on crude oil	Ai Nihongi, University of Wisconsin – Milwaukee
57	Benthic foraminifera as indicators for environmental baselines and anthropogenic influence on the northern Cuban continental slope	Bryan O'Malley, University of South Florida
58	Growth promotion of dinoflagellates by oil-degrading bacteria isolated from oil polluted sites after the Texas City "Y" Oil Spill	Bum Soo Park, University of Texas Marine Science Institute
59	LADC-GEMM: Towed-hydrophone surveys of the Northern Gulf of Mexico	Chris Pierpoint, Seiche Limited
60	Polycyclic aromatic hydrocarbons in sediment and gafftopsail catfish (<i>Bagre marinus</i>) collected in the Bay of Campeche	Erin Pulster, University of South Florida
61	Impacts of Deepwater Horizon oil exposure on the Southern ribbed mussel (<i>Geukensia granosissima</i>): Implications for salt marsh-stabilizing facilitation	Adam Quade, Nicholls State University
62	Microphytobenthos as indicators of oiling and food web dynamics	Nancy Rabalais, Louisiana State University
63	The impacts of an expanded set of meiofaunal genome references on the analyses of metagenomic samples collected from the Gulf of Mexico	Joseph Seigniy, University of New Hampshire
64	Role of hydrocarbon seeps in structuring the microbial community	Ajit Subramaniam, Lamont Doherty Earth Observatory
65	Epiphytic and sediment diatom production in Mississippi Sound	Marnie Tabor, Athens State University
66	The effects of crude oil on Northern Gulf of Mexico salt marsh nitrogen cycling	Derek Tollette, Dauphin Island Sea Lab
67	Juvenile assemblages of families Lutjanidae and Serranidae in the Gulf of Mexico, with respect to the loop current and other hydrographic features	Sebastian Velez, Florida Atlantic University
68	DEEPEND: molecular evidence for environmental change in the deep-sea in the Gulf of Mexico	Max Weber, Texas A&M University at Galveston

#	Title	Presenter
P-006: Monitoring, Data Management & Analysis		
123	Heat flux of upper ocean in the Northern Gulf of Mexico in the LASER January 2016 and SPLASH April 2017	Mohammad Barzegar paiin lamouki, Texas A&M University – Corpus Christi
124	Sedimentary signatures of the 2010 Deepwater Horizon Event: A time series analysis	Savannah Carter, Eckerd College
125	Oil slick thickness measurement with a novel mechanical sampler	Oscar Garcia, Water Mapping, LLC
126	Abundance and deformity of foraminifera as an effective monitoring scale for contamination in the Persian Gulf	Seyed Abbas Haghshenas, University of Tehran
127	Determining the variability and accuracy of high frequency radar surface currents in the Mississippi Bight	Laura Hode, University of Southern Mississippi
128	Do methane seeps on the northern US Atlantic margin stimulate chlorophyll-a concentration levels?	Yao Li, Texas A&M University
129	Improved measurements of waves spectra and stokes drift using a novel miniature Lagrangian wave buoy: Observations from SPLASH 2017	Sanchit Mehta, University of Miami
130	Parallel factor analysis for the determination of polycyclic aromatic hydrocarbons in the Gulf of Mexico	Nirvani Mujumdar, University of Central Florida
131	The environmental monitoring of operational discharges of oil and gas activity in the North Sea: Linking field monitoring to risk assessment	Daniela Pampanin, International Research Institute of Stavanger
132	The NOAA Satellite and Information Service, Marine Pollution Surveillance Program	Ellen Ramirez, NOAA
133	Evaluation of potential impacts of oil platforms on the marine environment in the northwestern Gulf of Mexico	Shaojie Sun, University of South Florida
134	Using satellite images to characterize the Galveston Bay tidal plume	Kristen Thyng, Texas A&M University
135	A new drifter to track ocean pollutions and the very surface circulation	Nico Wienders, Florida State University
136	Innovative technologies used for ocean observing	Thomas Wims, Independent Consultant
137	Versatile instrument for rapid collection of luminescence data from polycyclic aromatic compounds in oil-contaminated environmental samples	Stacy Wise, University of Central Florida



Photo Credit: Harle Research Institute



Thursday, February 8

Time	Event	Location
7:30a – 12:00p	Registration & check-in open	Celestin Foyer
7:30a – 10:30a	Speaker ready area open	Celestin Foyer
7:30a – 12:00p	Poster hall and exhibits open	Storyville Hall

Scientific Program Schedule

Starting at 7:30a	BREAKFAST	
8:30a – 10:00a	ECO-005	Celestin E
	PCC-006	Celestin A
	PCC-007	Celestin D
	RMP-003	Celestin H
	RSP-004	Celestin F
	SER-002	Celestin C
10:00a – 10:30a	BREAK	
10:30a – 12:00p	ECO-005	Celestin E
	PCC-006	Celestin A
	PCC-007	Celestin D
	RMP-003	Celestin H
	RSP-004	Celestin F
	SER-002	Celestin C
12:00p – 2:00p	LUNCH	
12:30p – 1:30p	Mini-Session: MS-005	Celestin A
	Mini-Session: MS-006	Celestin H
	Mini-Session: MS-007	Celestin C

Closing Plenary Program Schedule

2:00p – 3:30p	Research Awards The Future of GOMOSEs: Maintaining Momentum – Seeking Synergy Conference Wrap-Up	Celestin D/E
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Associated Meetings and Events

10:00a – 10:30a	How to submit data to GRIIDC	Imperial 12
12:30p – 1:30p	"Dispatches from the Gulf 2"	Celestin F

Development of sampling techniques and identification of indicator species to assess coastal ecosystem health and recovery in the northern Gulf of Mexico

Thursday, February 8, 8:30a – 12:00p, Celestin E

Brian Balmer, National Marine Mammal Foundation
 Frank Parker, NOAA

Coastal ecosystems in the northern Gulf of Mexico are highly productive on both biological and economic levels. However, they are also extremely susceptible to stressors. Development of robust sampling methodologies, collection of baseline data, and assessment of indicator species are all essential components to better understand the long-term biological and economic impacts for assessing the overall health and recovery of coastal ecosystems.

Time	Title	Presenter
8:30a – 8:45a	Controls on Louisiana wetland soil greenhouse gas fluxes	Brian Roberts, Louisiana Universities Marine Consortium
8:45a – 9:00a	What drives the long-term recovery of saltmarsh benthos after oil spills; recovery of foundation species, soil quality or food resources?	John Fleegeer, Louisiana State University
9:00a – 9:15a	Recovery of horse fly populations in the aftermath of the 2010 Deepwater Horizon Oil Spill in Louisiana marshes	Claudia Husseneder, Louisiana State University Agricultural Center
9:15a – 9:30a	Saltmarsh insect community response to oil and hurricane: A lesson in resiliency	Linda Hooper-Bui, Louisiana State University
9:30a – 9:45a	Genetic assessment of the long-term diet of seaside sparrows (<i>Ammodramus maritimus</i>) in response to oil and altered prey communities	Allison Snider, Louisiana State University
9:45a – 10:00a	Daily nest survival and nest predators of seaside sparrows (<i>Ammodramus maritimus</i>) following the Deepwater Horizon Oil Spill	Stefan Woltmann, Austin Peay State University
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Shrinking fish, changing food webs, apex predators and oil	R. Eugene Turner, Louisiana State University
10:45a – 11:00a	Evaluating trophic relationships in a saltmarsh food web using stable isotopes	Paola Lopez-Duarte, Rutgers University Marine Field Station
11:00a – 11:15a	Evaluating trophic relationships in a saltmarsh food web using fatty acids	Jill Olin, Stony Brook University
11:15a – 11:30a	Ixtoc Oil Spill impact on coastal areas of the southwest Gulf of Mexico	Maria Luisa Machain Castillo, Universidad Nacional Autónoma de México
11:30a – 11:45a	Preparing a defensible ecosystem baseline for coastal marine environments using mechanistic models	Eldon Blancher, Moffatt & Nichol
11:45a – 12:00p	The sea level rise tipping point of delta survival	R. Eugene Turner, Louisiana State University

Marine snow – formation, chemistry, impacts

Thursday, February 8, 8:30a – 12:00p, Celestin A

Laura Bretherton, Texas A&M University at Galveston

Marine oil snow formation and flocculation are important export processes that can determine the fate of hydrocarbons in the marine environment. This session explores the factors involved in the formation, composition and structure of aggregates and the roles they play in the oxidation and sedimentation of oil. It also discusses the extent and wider impacts of flocculation events in the Gulf of Mexico.

Time	Title	Presenter
8:30a – 8:45a	Formation mechanisms and sedimentation of marine oil snow: New insights through an oil compound-specific approach	Marisa Wirth, Institute for Baltic Sea Research Warnemuende
8:45a – 9:00a	The effect of EPS composition on the aggregate formation on a crude oil drop interface	Andrew White, Texas A&M University – Corpus Christi
9:00a – 9:15a	Long term marine oil snow mesocosm experiment	Terry Wade, Texas A&M University
9:15a – 9:30a	Does oil aggregate or emulsify with colloidal EPS? Importance of protein/carbohydrate interactions in oil and/or dispersant experiments	Kathleen Schwehr, Texas A&M University at Galveston
9:30a – 9:45a	Role of micron-scale aggregates in hydrocarbon oxidation	Amanda Achberger, Texas A&M University
9:45a – 10:00a	Marine snow aggregates are enriched in polycyclic aromatic hydrocarbon (PAHs) in oil contaminated waters of the Gulf of Mexico; insights from a mesocosm study	Hernando Bacosa, Texas A&M University at Galveston
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Rapid degradation of marine snow-associated oil during mesocosm simulations of the Deepwater Horizon Oil Spill Event revealed by FTICR MS	Patrick Hatcher, Old Dominion University
10:45a – 11:00a	Establishing gulf-wide baselines and the spatial extent of marine oil snow sedimentation and flocculent accumulation (MOSSFA) from contemporary and past oil spills using 210Pb	Patrick Schwing University of South Florida
11:00a – 11:15a	Numerical modeling of the interactions of oil, marine snow and riverine sediments in the ocean	Anusha Dissanayake, University of Georgia
11:15a – 11:30a	Transport of dispersed oil to the seafloor by sinking phytoplankton aggregates: A modeling study	Uta Passow, University of California Santa Barbara
11:30a – 11:45a	The fractal dimension of marine oil snow aggregates: Changing aggregate characteristics	Adrian Burd, University of Georgia
11:45a – 12:00p	Insights in the consequences of MOSFFA events for the benthic community	AlberTinka Murk, Wageningen University

Impact of freshwater discharge on coast-deep ocean connectivity

Thursday, February 8, 8:30a – 12:00p, Celestin D

Caitlin Young, NOAA

Freshwater discharge to the coastal ocean plays a critical role in transporting and transforming terrestrial materials to the deep ocean. This session investigates the way freshwater inputs to the coastal ocean impact physical, chemical, and biological processes at the continental margin. Oral presentations include recent advances in remote sensing of freshwater plumes, potential impacts of river diversions on oil transport pathways, and seasonal events that tie freshwater at the coastal margin to the deep ocean.

Time	Title	Presenter
8:30a – 8:45a	The impact of river plumes and winds on cross-isopycnal transport in the Northern Gulf of Mexico	Sally Warner, Oregon State University
8:45a – 9:00a	The role of freshwater discharge on coastal transport	Steven Dykstra, Dauphin Island Sea Lab
9:00a – 9:15a	Cross shelf transport during a Mississippi River plume event in December 2015	Stephan Howden, University of Southern Mississippi
9:15a – 9:30a	Episodes of offshore export of coastal waters from the Mississippi Delta and Campeche Bank in the Gulf of Mexico: Characterization based on satellite imagery	Matthieu Le Henaff, University of Miami
9:30a – 9:45a	Tracking Mississippi River plume using MODIS color index imagery	Chuanmin Hu, University of South Florida
9:45a – 10:00a	A multi-platform observational study on hydrocarbon transport under the influence of river induced fronts	Villy Kourafalou, University of Miami
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	<i>In-situ</i> observations of stratification and circulation on the Louisiana Bight Shelf	Andrey Shcherbina, University of Washington
10:45a – 11:00a	Water column stability and the role of velocity shear on shelf stratification in the Mississippi Bight, the forgotten region of freshwater influence	Brian Dzwonkowski, University of South Alabama
11:00a – 11:15a	Assessing the effects of Mississippi River diversions on estuarine-shelf exchanges and oil transport pathways in the Northcentral Gulf of Mexico	Dubravko Justic, Louisiana State University
11:15a – 11:30a	The seasonality of submesoscale mixing across the mixed layer in the Northern Gulf of Mexico	Guangpeng Liu, Georgia Institute of Technology
11:30a – 11:45a	Modeling and observations of oil drift in the Northern Gulf of Mexico: The role of river induced fronts	Lars Robert Hole, Norwegian Meteorological Institute
11:45a – 12:00p	Exchange at tidal inlets: Numerical modeling of idealized laboratory experiments for tidal jet vortices and coherent structures	Scott Socolofsky, Texas A&M University

Fisheries science and management tools for recovery and restoration following Deepwater Horizon

Thursday, February 8, 8:30a – 12:00p, Celestin H

Rachael Heuer, University of Miami

Steven Murawski, University of South Florida

This session aims to examine fisheries science and management in the Gulf of Mexico following the Deepwater Horizon oil spill. Speakers in this interdisciplinary session will discuss the following themes in the context of recovery and restoration: (1) tools for assessing recruitment, abundance, and fish movement patterns, (2) fisheries closures and implications for stock assessment, and (3) the role of fishing effort and human decision-making in considering the recovery of fisheries.

Time	Title	Presenter
8:30a – 8:45a	Fish stock resiliency to environmental PAH	Adolfo Gracia, Universidad Nacional Autónoma de México
8:45a – 9:00a	Restoration strategies following open ocean oil spills: Potential for stock enhancement of apex pelagic fish species	John Stieglitz University of Miami
9:00a – 9:15a	Developing a holopelagic <i>Sargassum</i> habitat index for fisheries management in the Northern Gulf of Mexico	Glenn Zapfe, National Marine Fisheries Service
9:15a – 9:30a	Juvenile assemblages of families Lutjanidae and Serranidae in the Gulf of Mexico, with respect to the Loop Current and other hydrographic features	Sebastian Velez, Florida Atlantic University
9:30a – 9:45a	Predicting and quantifying spatial distribution of fish populations in the Gulf of Mexico based on habitat characteristics	Jessi Ruiz, Arizona State University
9:45a – 10:00a	Statistical methods for spatial analysis of reef fish abundance in the Gulf of Mexico	Xuetao Lu, Arizona State University
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Simulating fish migration trails in the Gulf of Mexico using a biased random path in continuous space	Brian Powers, Arizona State University
10:45a – 11:00a	Fishery closure areas following the Deepwater Horizon Oil Spill – revisited	Igal Berenshtein, University of Miami
11:00a – 11:15a	Deepwater Horizon Oceanic Fish Restoration Project: Updates and lessons learned after completing the pilot year	Amy Piko, ERT
11:15a – 11:30a	Quantifying and comparing fisher decision-making strategies before and after the Deepwater Horizon Oil Spill	Steven Saul, Arizona State University
11:30a – 11:45a	The impacts of the 2010 Deepwater Horizon Oil Spill on the Gulf fisheries and tourism industries	Jacqueline Fiore, Tulane University
11:45a – 12:00p	Are more explorative fishing vessels less vulnerable to disturbance?	Steven Murawski, University of South Florida

Biological aspects and recovery and operational methods

Thursday, February 8, 8:30a – 12:00p, Celestin F

Osman Karatum, Duke University

Suzanne Smith, Amazon River Dolphin Conservation Foundation

Considering the achievements in physical and biological sciences over the past decades, this session focuses on advancements in oil spill response methods and technologies.

Time	Title	Presenter
8:30a – 8:45a	A bioremediation field trial for buried oil on a coastal headland beach	Olivia Bramlet, Louisiana State University
8:45a – 9:00a	Nutrient amended biodegradation of hydrocarbon contamination along Canada's Labrador Coast	Sean Murphy, University of Calgary
9:00a – 9:15a	Computational modeling of biofilm chemotaxis stimulated by the dissolution of oil droplets trapped in sediments	George Kapellos, University of Patras
9:15a – 9:30a	Detection and monitoring of oil by snare	Jesse Ross, University of New Hampshire
9:30a – 9:45a	A novel material solution to an old problem: Aerogel fabrics for oil capture and recovery	Osman Karatum, Exponent Inc.
9:45a – 10:00a	Clay nanotube-bacteria liquid marbles for oil spill remediation	Abhishek Panchal, Louisiana Tech University
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Airborne oil spill remote sensing: POSEIDON a new operational approach	Alessandro Vagata, Fototerra Aerial Survey LLC
10:45a – 11:00a	Impact of <i>in-situ</i> burning on transformation and solubilization of spilled oil and the production of dissolved organic matter	Aprami Jaggi, University of Calgary
11:00a – 11:15a	Changes in the beach microbial community during treatment of buried oil with <i>in-situ</i> chemical oxidation and bioremediation	Vijai Krishnah Elango, Louisiana State University
11:15a – 11:30a	Vegetation recovery in an oil-impacted and burned <i>Phragmites australis</i> tidal freshwater marsh	Scott Zengel, Research Planning, Inc.
11:30a – 11:45a	A geographic perspective for protecting sensitive coastal areas with exclusion booms during oil spill events	Tony Grubestic, Arizona State University
11:45a – 12:00p	<i>Macondimonas diazotrophicus</i> : A novel hydrocarbonoclastic Gammaproteobacterium as a potential biomarker for ecosystem recovery from oil spills	Smruthi Karthikeyan, Georgia Institute of Technology

Measuring, understanding, and responding to human health factors in the wake of an oil spill

Thursday, February 8, 8:30a – 12:00p, Celestin C

Melissa Finucane, RAND Gulf States Policy Institute
Rajeev Ramchand, RAND Corporation

This session presents research on mental and behavioral health outcomes after an oil spill. Attention is focused on long-term trajectories and special populations such as children, adolescents, and first responders. The importance of community preparedness and resilience and a sustainable and integrated disaster response are examined.

Time	Title	Presenter
8:30a – 8:45a	Strengthening community preparedness through the long-term perspectives of Louisiana first responders involved in the 2010 Deepwater Horizon Oil Spill	Kevin Moore, University of Miami
8:45a – 9:00a	Federally designated primary healthcare need as a dimension of resilience following the Deepwater Horizon Oil Spill	Kathryn Keating, Louisiana State University
9:00a – 9:15a	Lessons learned from the Louisiana Mental and Behavioral Capacity Project as a post disaster service model	Joy Osofsky, Louisiana State University Health Sciences Center
9:15a – 9:30a	Applied research with integrated behavioral health care: Sustainability of disaster response	Anthony Speier, Louisiana State University Health Sciences Center
9:30a – 9:45a	Long-term depression rates among adults impacted by Hurricane Katrina and the Deepwater Horizon Oil Spill on the Mississippi Gulf Coast	Bret Blackmon, University of Southern Mississippi – Gulf Coast
9:45a – 10:00a	Identifying trajectories of change to integrated healthcare for patients with PTSD symptoms post environmental disaster	Howard Osofsky, Louisiana State University Health Sciences Center
10:00a – 10:30a	Coffee Break	
10:30a – 10:45a	Environmental disasters and life stressors contributing to increased mental health symptoms, decreased resilience and substance use	Tonya Hansel, Louisiana State University Health Sciences Center
10:45a – 11:00a	Trauma history, oil spill exposure and their associations with mental health symptoms among residents in the Gulf of Mexico	Lynsay Ayer, RAND Corporation
11:00a – 11:15a	Distribution of oil spill chemicals in nearshore beach environments	Helena Solo-Gabriele, University of Miami
11:15a – 11:30a	Long term health effects on children and adolescents in areas heavily impacted by the Deepwater Horizon Oil Spill	Jaishree Beedasy, Columbia University
11:30a – 11:45a	Videotaping and video-translation techniques to improve children risk assessment to oil-spill chemical	Alesia Ferguson, University of Arkansas for Medical Sciences
11:45a – 12:00p	Human health risk assessment for children playing at beaches following an oil spill	Kristina Mena, University of Texas Health Science Center at Houston

Thursday, February 8, 12:30p – 1:30p

MS-005: Oil and gas plumes (Celestin A)

Laura Lapham, University of Maryland Center for Environmental Science

Time	Title	Presenter
12:30p – 12:45p	Rotating plumes and spinning tops	Daria Frank, University of Cambridge
12:45p – 1:00p	Methane plumes in the deep Northern Gulf of Mexico	Christopher Martens, University of North Carolina – Chapel Hill
1:00p – 1:15p	Predicting dissolved concentrations in the water column for natural seep plumes in the Gulf of Mexico	Inok Jun, Texas A&M University
1:15p – 1:30p	The effect of oil droplet size on the surface signature of oil plumes under free-convection	Tomas Chor, University of California Los Angeles

MS-006: Let's give them something to talk about – the importance of communication and public engagement in Gulf research (Celestin H)

Tim Slack, Louisiana State University

Time	Title	Presenter
12:30p – 12:45p	Citizen science in oil spill research: An evaluation of trust and value in CONCORDE	Jessie Kastler, University of Southern Mississippi
12:45p – 1:00p	Effectiveness of a web-based virtual lab application to disseminate and communicate GoMRI science	Dan DiNicola, University of Miami
1:00p – 1:15p	Evaluating interdisciplinary program performance and impact	Melissa Finucane, RAND Gulf States Policy Institute

MS-007: Response planning and management in the international arena (Celestin C)

CJ Beegle-Krause, SINTEF Oceans

Time	Title	Presenter
12:30p – 12:45p	Field trials using conventional and unconventional drifters to support the Canadian operational oil spill modelling in the Northeast Atlantic	Ali Khelifa, Environment and Climate Change Canada
12:45p – 1:00p	Exposure assessment of Rayong Oil Spill cleanup workers	Thammasin Ingviya, Johns Hopkins Bloomberg School of Public Health
1:00p – 1:15p	How should China improve offshore oil spill governance? – In the light of Deepwater Horizon	Zijian Huang, Xiamen University
1:15p – 1:30p	MT Dawn Oil Spill trajectory simulation along the Chennai coast, India	K. Gurumoorthi, National Institute of Oceanography

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, Harte Research Institute, and Gulf Research Program of the National Academies of Sciences, Engineering, and Medicine provided student presenter support, which covered registration fees for student presenters. Congratulations to the student awardees and thank you for presenting your research at the 2018 Gulf of Mexico Oil Spill and Ecosystem Science Conference!



Thank You

We would like to thank the Executive Committee for its time and direction in planning the Conference.

Dave Westerholm (Chair)
National Oceanic and Atmospheric Administration

Laura Bowie
Gulf of Mexico Alliance

Stacey DeGrasse
U.S. Food and Drug Administration

Chris Elfring
Gulf Research Program of The National Academies

Elizabeth Fetherston-Resch
Gulf of Mexico RESTORE Centers of Excellence

Jessica Henkel
Gulf Coast Ecosystem Restoration Council

Captain Joseph Loring
U.S. Coast Guard

Larry McKinney
Gulf of Mexico University Research Collaborative

Jonathan Porthouse
National Fish & Wildlife Foundation

David Shaw
Gulf of Mexico Research Initiative

Gregory Steyer
U.S. Geological Survey

LaDon Swann
Sea Grant in the Gulf of Mexico

Suzanne van Drunick
Environmental Protection Agency

Denis Wiesenburg
Gulf of Mexico Research Initiative

Charles Wilson
Gulf of Mexico Research Initiative

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 everything runs smoothly.

Thursday, February 8, 2:00p – 3:30p, Celestin D/E

James D. Watkins Student Awards for Excellence in Research

Presented by Evonne Tang, Ph.D., Associate Executive Director, Gulf Research Program of the National Academies of Sciences, Engineering, and Medicine

NOPP Excellence in Partnering Award

Presented by Walter Johnson, Ph.D., Chief, Branch of Physical and Chemical Sciences, Bureau of Ocean Energy Management

The Future of GoMOSES: Maintaining Momentum – Seeking Synergy

What will happen to GoMOSES once GoMRI concludes its 10-year research program? Members of the GoMOSES Executive Committee explore how to evolve the conference while retaining the essence of what has become one of the most important and successful science meetings about the Gulf of Mexico. As other ongoing conferences emphasize regional perspectives or state-oriented concerns and the RESTORE Centers of Excellence are beginning to communicate their results, the panel will discuss the possibility of integrating and/or coordinating these and other meetings. This would maximize benefits to all interested stakeholders and minimize the cost of potentially duplicative meetings. Another important goal is to develop a format that integrates science, management, and policy into a future version of GoMOSES. There will be opportunity for questions and comments from the audience and an ongoing effort to keep interested parties informed of progress towards the goal of a sustainable and impactful successor to GoMOSES.

Panelists:



Laura Bowie (Moderator)

*Executive Director,
Gulf of Mexico Alliance*



Larry McKinney, Ph.D.

*Executive Director, Harte Research
Institute for Gulf of Mexico Studies*



Chuck Wilson, Ph.D.

*Chief Science Officer, Gulf of Mexico
Research Initiative*



Evonne Tang, Ph.D.

*Associate Executive Director, Gulf Research
Program of the National Academies of
Sciences, Engineering, and Medicine*



Libby Fetherston-Resch

*Program Director, Florida RESTORE
Act Center of Excellence*



Christopher D'Elia, Ph.D.

*Dean, College of the Coast and
Environment, Louisiana State University*

James D. Watkins Student Award for Excellence in Research

The James D. Watkins Student Awards for Excellence in Research are given out annually to exceptional student presentations at the conference. The Watkins Awards strive to recognize outstanding research in order to cultivate the next generation of scientists and to encourage excitement for presenting their work. Thank you to the award judges for their assistance in evaluating student presentations and to the Consortium for Ocean Leadership and the Gulf Research Program of the National Academies of Sciences, Engineering, and Medicine for sponsoring the 2018 awards.



The National Oceanographic Partnership Program's (NOPP) Excellence in Partnering Award is given annually to a NOPP project that best exemplifies the program's objective of developing a successful network of partnerships to advance the ocean sciences. The 2017 award recognizes the Gulf of Mexico Shipwreck Corrosion, Hydrocarbon Exposure, Microbiology, and Archaeology Project (GOM-SCHEMA) led by Dr. Leila J. Hamdan (University of Southern Mississippi) and Melanie Damour (Bureau of Ocean Energy Management). GOM-SCHEMA's 11 partners investigated the impact of oil exposure on historic shipwrecks from the microscopic to the macro scale during a four-year period and the subsequent recovery of these sensitive deepwater habitats in the Gulf of Mexico.

Panel Moderator:



Laura Bowie, *Executive Director, Gulf of Mexico Alliance*

Mrs. 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 non profits spear-heading 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.



Associated Workshops & Meetings

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

OSR 201: Oil spill preparedness & response for scientists and researchers; bridging science and response

Monday, February 5, 8:00a – 5:00p

Celestin A

MTS TechSurge: Advancing oil spill response

Monday, February 5, 8:00a – 6:00p

Morial Convention Center

Ecological indicators and thresholds for an ecosystem assessment of Barataria Basin, Louisiana

Monday, February 5, 8:30a – 5:00p

Celestin H

GRIIDC data management training workshop

Monday, February 5, 9:00a – 12:00p

Imperial 12

Sharing science effectively: Know your audience and speak their language

Monday, February 5, 9:00a – 12:00p

Celestin E

Assessing the state of Gulf of Mexico benthic habitat maps part 1

Monday, February 5, 9:00a – 1:00p

Celestin C

Assessing the state of Gulf of Mexico benthic habitat maps part 2

Monday, February 5, 2:00p – 5:00p

Celestin C

Challenges to understanding the potential impacts of environmental disturbances on fish biodiversity in the Gulf of Mexico: Identification, assessments, and data gaps

Monday, February 5, 1:00p – 5:00p

Celestin D

Recent advances in estimating and measuring oil slick thickness

Monday, February 5, 1:00p – 5:00p

Celestin E

Examining the 1990 Oil Pollution Act to improve the governmental and scientific response to future oil spill event

Monday, February 5, 1:00p – 5:00p

Celestin F

Gulf of Mexico Marine Assessment Program for Protected Species (GoMMAPPS): Research updates and related programs

Monday, February 5, 1:00p – 5:00p

Celestin G



Introduction to the GoMRI Data Management Program

Tuesday, February 6, 10:00a
Wednesday, February 7, 10:00a
Imperial 12

Organizing Data – Best practices and GRIIDC submission

Tuesday, February 6, 3:30p
Wednesday, February 7, 3:30p
Imperial 12

How to submit data to GRIIDC

Wednesday, February 7, 8:00a
Thursday, February 8, 10:00a
Imperial 12

Gulf of Mexico Data Tools Café

Tuesday, February 6, 5:30p – 7:30p
Celestin B

Understanding and predicting the Gulf of Mexico Loop Current: Overview of NASEM report and upcoming GRP funding opportunity

Wednesday, February 7, 12:15p – 1:15p
Imperial 10

“Dispatches from the Gulf 2”

Wednesday, February 7, 12:30p – 1:30p
Thursday, February 8, 12:30p – 1:30p
Celestin F

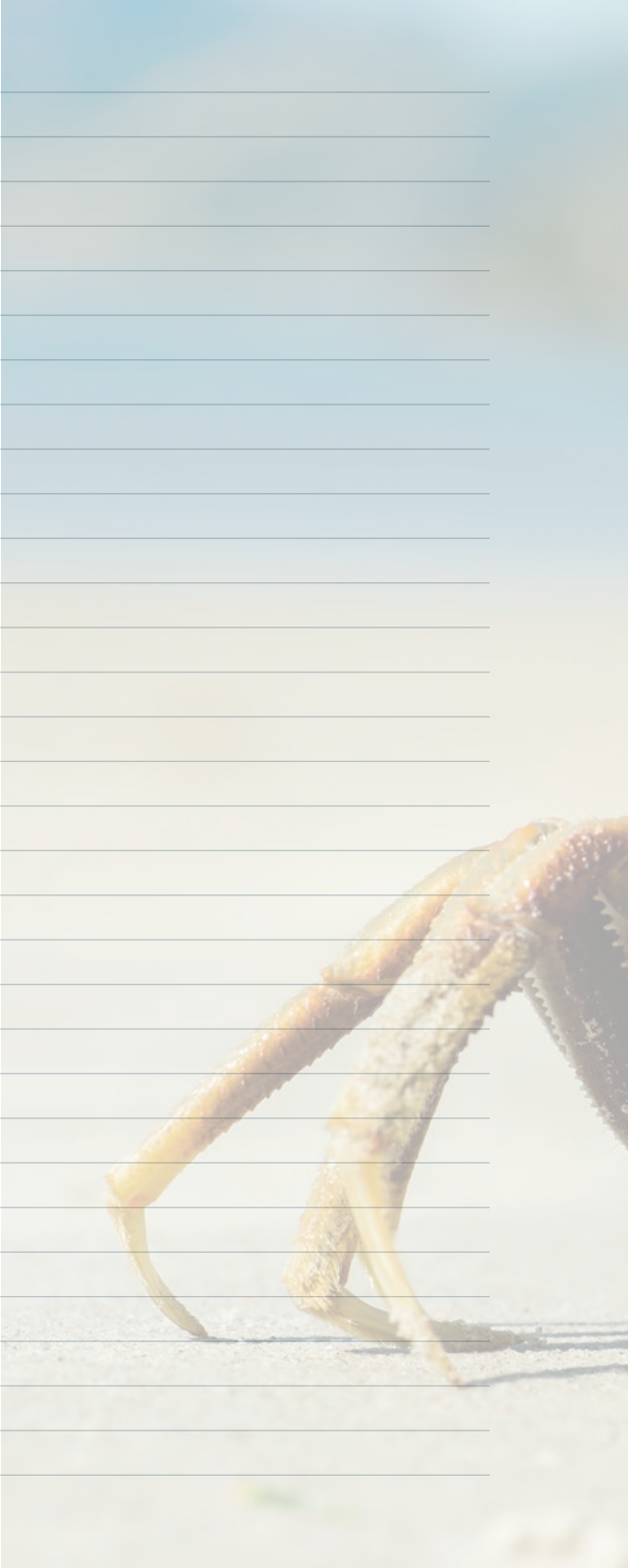
“Jewels of the Gulf” short film and discussion: deep sea coral research and outreach

Wednesday, February 7, 6:00p – 6:30p
Celestin F

2018 Exhibitors







See you next year!



