



# DRAFT AGENDA

Charleston Area Convention Center | 5000 Coliseum Drive, North Charleston, SC 29418

## Saturday, 20 October 2018

**K-12 Educators Workshop (limited to 30 South Carolina teachers), SC Aquarium**  
0830 – 1500 K-12 Educators Workshop

## Sunday, 21 October 2018

**Decorator Move-in, Exhibit Hall**  
0800 – 1700 Exhibits/Decorator Move-in

**Self-Guided Offsite Tours, Various Charleston Locations**  
1200 – 1700 Hunley: The World's First Combat Submarine (<https://www.hunley.org/>)

**OCEANS Leadership Reception (invitation only), Location TBA**  
1830 – 1930 OCEANS Leadership Reception

**OCEANS Leadership Dinner (invitation only), Location TBA**  
1930 – 2130 OCEANS Leadership Dinner

## Monday, 22 October 2018

**Registration, Location TBD**  
0700 – 1930 Registration

**Exhibitor Set-up, Exhibit Hall**  
0700 – 1800 Exhibitor Set-up

**Tutorials, Workshops, and Technical Demonstrations\***, Parallel Sessions

\*Get the most in-depth learning experience at OCEANS by adding one or more interactive half- or full-day tutorials, workshops, and technical demonstrations to your registration for an additional fee. Sessions must have four or more participants by Friday, October 12<sup>th</sup> in order to be offered at OCEANS.

0800 – 1700 Tutorials, Workshops, and Technical Demonstrations (For exact times, check the [website](#))

1. Tutorial | Underwater Wireless Communications: Theory, Algorithm, and Practice (Wang)
2. Technical Demonstration | Data Access for the Southeast US Coasts and Oceans: An Introduction and Demonstration of the SECOORA Data Portal and Service Offerings (Wilcox)
3. Technical Demonstration | Underwater Communication Prototype (Aggarwal)
4. Tutorial | Setting-up and Using the UUV Simulator for System Integration Tests in Realist AUV Scenarios (Torroba)
5. Tutorial | Unmanned Maritime Systems – Decoding the Alphabet Soup (Part 1) (Manley)
6. Tutorial | Deep Learning: A Renaissance of Neural Networks (Mazhar)
7. Workshop | The Warren Lasch Conservation Center: Conservation of the H.L. Hunley and Beyond (Crette)
8. Workshop | Beyond Standards Compliant Data Flows: The Art of Archotyping and Community Agreed Evolutive O&M Extensions (Stacey)
9. Technical Demonstration | Immersive Technology for the NextGen Workforce (Sanders)
10. Technical Demonstration | Optimizing Ocean Observing: An Instrumentation Workshop (Kontoes)

11. Technical Demonstration | Underwater Communication Prototype (Aggarwal)
12. Tutorial | Underwater Optical Communications (Muth)
13. Tutorial | Unmanned Maritime Systems – Technology and Trends in 2018 (Part 2) (Manley)
14. Tutorial | Underwater Visible Light Communication System (Aggarwal)
15. Tutorial | Oceanography from Space for Everyone: Demystifying Satellite Data for Users (Lance)
16. Workshop | Strategic Thinking for Ground Modeling (Errey)

**Student Orientation, Location TBD**

900 – 1000 Student Orientation

**Volunteer Orientation, Location TBD**

[Time TBD] Volunteer Orientation

**Ice Breaker Reception, Ballroom Foyer**

1700 – 1900 Ice Breaker Reception

**Student Mixer, Courtyard (Ballroom Foyer Patio)**

1900 – 2030 Student Mixer

## Tuesday, 23 October 2018

**Registration, Location TBD**

0700 – 1730 Registration

**Exhibitor Set-up, Exhibit Hall**

0700 – 1000 Exhibitor Set-up

**Speaker Lounge, Location TBD**

0700 – 0900 Continental Breakfast and Snacks Available for Speakers

**Welcome and Plenary Sessions, Ballroom AB**

0800 – 0805 Welcome, Donna Kocak, President, Marine Technology Society

0805 – 0810 Welcome, Christian de Moustier, President, IEEE Oceanic Engineering Society

0810 – 0820 Welcome, Jonathan Zucker, Honorary Chair of OCEANS'18, InterTech and South Carolina Aquarium Board Chairman

0820 – 0830 Welcome, North Charleston Mayor Summey

0830 – 0831 Welcome and Keynote Introduction, OCEANS'18 General Co-Chairs Jeff Payne and John Flynn

0831 – 0900 Keynote: RADM David J. Hahn, Chief of Naval Research, Director of Innovation, Technology Requirements and Test & Evaluation

0900 – 0945 “Oceans and Technology: A View Forward” Plenary, RDML Gallaudet (NOAA) and NOAA Ship Okeanos Explorer, and US Navy Ship Atlantis

0945 – 1000 Break (in the back of the room)

1000 – 1045 “International Perspectives” Plenary, Mr. Craig McLean (NOAA), Dr. Peter Haugan (IOC), Dr. Scott McLean (Ocean Networks Canada), Mr. Max Gruenig (Ecologic Institute US), and Prof. Hiroyuki Nakahara (Research Institute for Ocean Economics) (invited)

1045 – 1145 Marine Technology Society Business Meeting and Awards

**Speaker Lounge, Location TBD**

1100 – 1500 Snacks Available for Speakers

**Exhibit Hall Grand Opening, Exhibit Hall**

1145 Exhibit Hall Ribbon Cutting

1145 VIP Tours of Exhibit Hall Begin

1145 – 1900 Exhibit Hall Open

**Lunch, Exhibit Hall**

1200 – 1340 Buffet Lunch

**Exhibitor Track Presentation, Exhibit Hall Theater**

1230 – 1315 Saildrone: A Global Fleet for Ocean Observations

**Exhibitor Track Presentation, Exhibit Hall Theater**

1330 – 1415 Office of Naval Research: Ocean Sciences at the Office of Naval Research

**Technical Sessions, Parallel Sessions**

1340 – 1500 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Town Hall, Ballroom C2**

1340 – 1500 The Future of the International Space Station (Moderated by Scimemi (NASA) and featuring Freilich (NASA), Bouthot (Center for the Advancement of Science in Space), and Gallaudet (NOAA))

**Exhibitor Track Presentation, Exhibit Hall Theater**

1430 – 1545 German Embassy: Transatlantic Climate Bridge

**Break (with Exhibitors), Exhibit Hall**

1500 – 1540 Refreshments

**Technical Sessions, Parallel Sessions**

1540 – 1700 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C2**

1540 – 1700 Blue Economy: Global and Domestic Perspectives

**Exhibitor Track Presentation, Exhibit Hall Theater**

1600 – 1645 NASA Earth Science: Understanding Our Planet

**Exhibitor Reception, Exhibit Hall**

1700 – 1900 Refreshments and Hors D'oeuvres

## Wednesday, 24 October 2018

**Registration, Location TBD**

0700 – 1700 Registration

**Speaker Lounge, Location TBD**

0700 – 0900 Continental Breakfast and Snacks Available for Speakers

**Career Panel Breakfast, Embassy Suites Wando Room**

0730 – 0900 A panel of individuals diverse in their career stages, employment type, and experiences will share their perspectives and answer questions about career paths and how to advance. [RSVP required](#) and space is limited to 50 participants.

**Welcome and Plenary Sessions, Ballroom AB**

0800 – 0805 Welcome, OCEANS'18 General Co-Chairs Jeff Payne and John Flynn

0805 – 0815 Welcome, Ms. Heather Walker (Charleston Defense Contractors Association) (invited)

0815 – 0930 "Preparing for Change: Addressing Regional and Local Coastal Resilience Challenges" Plenary, Dr. Anne D. Cope (IBHS), The Honorable Joseph P. Riley, Jr. (College of Charleston and The Citadel), Dr. David E. Rivers (Medical University of South Carolina), and Mark J. Wilbert (City of Charleston)

0930 – 1000 "The International Space Station: An Oceans View from Space" Plenary, RADM Michael Silah (NOAA), NASA Astronaut "Nick" Tyler N. Hague (Col., US Air Force), and NASA Astronaut Serena M. Aunon-Chancellor

1000 – 1045 IEEE Oceanic Engineering Society Awards

**Exhibit Hall Open, Exhibit Hall**

1045 VIP Tours of Exhibit Hall Begin

1045 – 1700 Exhibit Hall Open

**Break (with Exhibitors), Exhibit Hall**

1045 – 1110 Refreshments

**Speaker Lounge, Location TBD**

1100 – 1500 Snacks Available for Speakers

**Technical Sessions, Parallel Sessions**

1110 – 1230 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C2**

1110 – 1230 UN Decade of Ocean Science for Sustainable Development

**Exhibitor Track Town Hall, Exhibit Hall Theater**

1110 – 1230 New Economic Data for the Marine Technology Industry

**Lunch, Exhibit Hall**

1230 – 1340 Buffet Lunch

**Exhibitor Track Presentation, Exhibit Hall Theater**

1230 – 1315 General Dynamics

**Inaugural General Student Poster Session, Exhibit Hall**

1230 – 1600 Poster Presentations

1. Geomorphological Analysis of Complex Sand Waves off the Southeast Coast of Ireland (Dawson)
2. Prospective Deep Sea Coral Habitats on Musicians Seamounts, Pacific Ocean (DeBenedictis)
3. Analysis of Structural Geomorphology in Ballycotton Bay Bedrock on the South Irish Coast (Drennon)
4. Geological Correlation of Terrestrial and Marine Bedrock Formations of Courtmacsherry Bay, Southwest Coast of Ireland (Gleaton)
5. In-Situ Towed Sampling Device for Integrated Calibration and Monitoring of Surface Water Microplastics (Guerin)
6. A hand-held optical sensor platform for particle and bacteria measurement (Hansen)
7. Advancing Ocean Data Visualization Through Augmented Reality Technology (Harper)
8. The Icefin ROV/AUV: Redesigning the Electronics for Increased Robustness in a Hostile World (Hurwitz)
9. Satellite-derived bathymetry using multispectral remote sensing (Ilori)
10. Development of the Underwater Swarm Using Visible Light Nonlinear Synchronization (Ito)
11. Rates of nitrogen fixation by the Sargassum community in the Gulf Stream off the coast of North Carolina (Johnson)
12. Design of Surface Monitoring System for Unmanned Submersible (Li)
13. Assessing the relationship between geomorphology and deep-sea coral community on the West Florida Escarpment (Proux)
14. Underwater Sensor Bench-Test Network Hub: An Instructional Tool in Communicating Cabled Observatory Ocean Science (Scott)
15. Simulation of Gas Influx Flow Detection in Deepwater Drilling (Wang)
16. Comparing model-based and image processing techniques for estimating source range using the waveguide invariant (Young)

**Exhibitor Track Presentation, Exhibit Hall Theater**

1330 – 1415 Under Florence's Wake: Gliders, Hurricanes, and Ocean Observing (Presented by NOAA)

**Technical Sessions, Parallel Sessions**

1340 – 1500 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C1**

1340 – 1500 Panel on Monitoring and Modeling of Underwater Sound from Offshore Wind Farms

**Town Hall, Ballroom C2**

1340 – 1500 The Future of the Federal Oceanographic Research Fleet (RADM David J. Hahn (Navy), Dr. William Brown (BOEM), RADM Michael Silah (NOAA), Lisa Clough (NSF), Moderated by Dr. Claudia Benitez-Nelson (USC))

**MTS UUV Committee Meeting, Ballroom C3**

1400 – 1430 Marine Technology Society Underwater Unmanned Vehicle Committee Meeting

**Town Hall, Ballroom C3**

1430 – 1600 Underwater Unmanned Vehicles

**Break (with Exhibitors), Exhibit Hall**

1500 – 1540 Refreshments

**Exhibitor Track Presentation, Exhibit Hall Theater**

1500 – 1540 Kongsberg

**Technical Sessions, Parallel Sessions**

1540 – 1700 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C1**

1340 – 1500 Opportunities for Private Sector/NOAA Collaboration Through the National Oceanographic Partnership Program

**Special Session, Ballroom C2**

1340 – 1500 Ocean Observations for the Next Decade

**Buses Depart for Gala, [TBD Departure Point]**

1700 – 1900 Refreshments and Hors D'oeuvres

**Optional Self-Guided Tour, Ft. Sumter Museum (on Liberty Square adjacent to SC Aquarium)**

1700 – 1930 Ft. Sumter Museum Open to Gala Guests

**Gala, SC Aquarium**

1900 – 2100 Refreshments and Hors D'oeuvres

## Thursday, 25 October 2018

**Registration, Location TBD**

0700 – 1600 Registration

**Speaker Lounge, Location TBD**

0700 – 0900 Continental Breakfast and Snacks Available for Speakers

**Women in Engineering (WIE) PROGRESS Panel Breakfast, Embassy Suites Wando Room**

0730 – 0900 A panel of women diverse in their nationality, career stages, employment type, and experiences will share their perspectives and answer questions about career paths, how to advance and face challenges women experience in STEM fields. [RSVP required](#) and space is limited to 50 participants.

**Technical Sessions, Parallel Sessions**

0910 – 1030 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C1**

0910 – 1030 High-Resolution Seabed Mapping I

**Special Session, Ballroom C2**

0910 – 1030 Marine Technology Society Cybersecurity and Infrastructure Committee Meeting

**Exhibit Hall Open, Exhibit Hall**

1030 – 1540 Exhibit Hall Open

**Break (with Exhibitors), Exhibit Hall**

1030 – 1110 Refreshments

**Speaker Lounge, Location TBD**

1100 – 1500 Snacks Available for Speakers

**Technical Sessions, Parallel Sessions**

1110 – 1230 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C1**

1110 – 1230 High-Resolution Seabed Mapping II

**Special Session, Ballroom C2**

1110 – 1230 Social Challenges with a Changing Climate

**Special Session, Ballroom C3**

1110 – 1230 Marine Pollution I

**Student Poster Competition Awards, Exhibit Hall**

1230 – 1245 Student Awards

1. Coding for Short Messages in Multipath Underwater Acoustic Communication Channels (Behgam)
2. Using LAUVs in highly dynamic environments: influence of the tidal estuarine outflow in the thermocline structure (Borges de Sousa)
3. Gaussian Process Regression for Estimating Wind Speed From X-band Marine Radar Images (Chen)
4. Structural design of an innovative multifunctional artificial reef (Cruz)
5. AUV self-localization in structured environments using a scanning sonar and an extended Kalman filter (Fula)
6. Calibration and Direction of Arrival Performance of Sonar Arrays Composed of Multiple Sub-arrays (Ganti)
7. Autonomous Marine Sampling Enhanced by Strategically Deployed Drifters in Marine Flow Fields (Hansen)
8. Communication Constrained Trajectory Alignment For Multi-Agent Inspection via Linear Programming (Mangelson)
9. MDNet: Multi-Patch Dense Network for Coral Classification (Modasshir)
10. Investigation of a Novel Approach for Ocean Current Power Generation: The Inclined-Axis Coaxial Turbine (Nand Kishore Khatri)
11. Synthetic Data Generation for Deep Learning of Underwater Disparity Estimation (Olson)
12. Development of an Efficient Compressor for Ocean Compressed Air Energy Storage (Patil)
13. ALARS - Automated Launching And Recovering System for AUVs (Pinto)
14. AUVs Telemetry Range Extension through a Multimodal Underwater Acoustic Network (Rizzo)
15. Altitude control of an underwater vehicle based on computer vision (Rodrigues)
16. Kinodynamic Path Planning for Following and Tracking Vehicles (Willners)
17. An Improved Nonlinear Extraction of Directional Ocean Wave Spectrum from Bistatic HFSWR Using Tikhonov Regularization in Hilbert Scales (Silva)
18. Characterization of Miniature Underwater Actuator for Biomimetic Propulsion (Soltan)

**Lunch, Exhibit Hall**

1245 – 1340 Buffet Lunch

**Young Professionals Lunch Meeting, Ballroom C2**

1245 – 1340 BYO Lunch and discuss career-building opportunities with the IEEE OES Young Professionals. Young professionals, students and more senior professionals are welcome.

**Exhibitor Track Presentation, Exhibit Hall Theater**

1300 – 1330 General Dynamics

**Technical Sessions, Parallel Sessions**

1340 – 1500 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C2**

1340 – 1500 Oceans and Human Health I

**Special Session, Ballroom C3**

1340 – 1500 Marine Pollution II

**Break (with Exhibitors), Exhibit Hall**

1500 – 1540 Refreshments

**Technical Sessions, Parallel Sessions**

1540 – 1700 Technical Sessions (For exact sessions and presenters, check the [website](#).)

**Special Session, Ballroom C2**

1540 – 1700 Oceans and Human Health II

**Special Session, Ballroom C3**

1540 – 1700 Remotely Operated Vehicles

**Exhibitor Move-out, Exhibit Hall**

1600 – 2000 Exhibitor Move-out

**Conference Adjourns**

1700 Conference Adjourns

**Local Organizing Committee Hot Wash, [Location TBD]**

1730 – 1830 OCEANS'18 Hot Wash