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Association for the Sciences of Limnology and Oceanography
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PLANET WATER - CHALLENGES AND SUCCESSES

A wealth of topics will be discussed at the meeting, many stemming from key areas of importance to the area itself at this crucial time—the role of science at the center of all economic, societal and environmental recovery and development efforts, studies on renewable energy, environmental sustainability, clean water, and rebuilding and maintaining terrestrial ecosystems.

Science and innovative problem-solving are keys to creating a better and more resilient world, and this speaks truth to the residents of Puerto Rico. While ASLO's meeting in San Juan will benefit Puerto Rico for the short-term, the outcomes of the ASLO 2019 Aquatic Sciences Meeting can impact the island for the long-term. This presents an excellent opportunity for ASLO to showcase how they are doing their part to train scientists in communication to the public and to teach effective research skills to future generations.

The scientific program will take place Sunday, 24 February, through Friday, 1 March. The full meeting dates are set Saturday, 23 February, to Saturday, 2 March, to allow meeting participants to take part in educational activities, volunteer opportunities, and culturally relevant events that will focus on environmental and ecosystem restoration as well as the resilience of the land.

Abstracts of papers presented during the meeting will be available on the meeting website. Abstracts also will be archived following the meeting. ASLO no longer publishes an abstract book.

ASSOCIATION FOR THE SCIENCES OF LIMNOLOGY AND OCEANOGRAPHY

The purpose of ASLO is to foster a diverse, international scientific community that creates, integrates and communicates knowledge across the full spectrum of aquatic sciences, advances public awareness and education about aquatic resources and research, and promotes scientific stewardship of aquatic resources for the public interest. Its products and activities are directed toward these ends.

For more than 50 years, ASLO has been the leading professional organization for researchers and educators in the field of aquatic science. ASLO traces its roots to the Limnological Society of America (LSA), which was established in 1936 to further interest and research in limnological science. While the LSA had members working in both freshwater and marine systems, the name did not reflect this diversity until 1948 when the Oceanographic Society of the Pacific merged with the LSA to become the American Society of Limnology and Oceanography. ASLO is incorporated as a non-stock (non-profit) corporation in the State of Wisconsin. Membership in the society is presently more than 3,800 members. Members are drawn from 58 countries including the United States, and more than a quarter of the members reside outside the U.S. In 2011, ASLO members voted to change its name to the Association for the Sciences of Limnology and Oceanography, reflecting the increasingly international nature of the society.

SUPPORTING ORGANIZATIONS

ASLO thanks the following organizations for supporting the 2019 Aquatic Sciences Meeting:

- American Association for the Advancement of Science / AAAS Caribbean
- Brazilian Association of Limnology / Associação Brasileira de Limnologia
- Chilean Society of Limnology / Sociedad Chilena de Limnología (SCL)
- Institute for Socio-Ecological Research, Inc. (ISER)
- Marine Environment Society / Sociedad Ambiente Marino (SAM)
- Sea Grant Puerto Rico

INCLUDED IN THIS PROGRAM

This program is produced for reference on site at the meeting. It contains program information through 1 February 2019. Additional information including changes received after the printing of the program can be found on the conference web site.

WEB SITE AND SOCIAL MEDIA

We encourage you to use the meeting web site for all current information and to navigate the meeting.

Facebook: facebook.com/ASLO.org or Twitter: #ASLO19

OVERVIEW OF THE PROGRAM SCHEDULE

The opening reception will be held on Sunday evening from 18:30 to 20:30 to welcome attendees to Puerto Rico. The meeting begins Monday morning, as it will each day of the week, with concurrent sessions in various rooms at the Puerto Rico Convention Center. There will be a break following the concurrent sessions that will allow attendees time to network with one another before moving into the awards presentations and plenary session in the ballroom on the third floor. Poster sessions and receptions are scheduled Tuesday and Thursday in the exhibit hall following the conclusion of the concurrent oral sessions on those days. Posters will be up beginning Tuesday and will be in place through Thursday evening. Friday's schedule will include a last talk lottery drawing featuring prizes for those who are able to stay through the end of the meeting.
ASLO 2019 AQUATIC SCIENCES MEETING COMMITTEE

MEETING CO-CHAIRS
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John Downing, Minnesota Sea Grant College Program & LLO, University of Minnesota, downing@umn.edu

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THANK YOU TO THE GORDON AND BETTY MOORE FOUNDATION
ASLO thanks the Gordon and Betty Moore Foundation for supporting the ASLO 2019 Meeting. For more information about the foundation, please go to: https://www.moore.org/
PLENARY SESSIONS

MONDAY PLENARY SESSION
Monday, 25 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

WELCOME BY ASLO PRESIDENT
Michael L. Pace, Professor and Department Chair,
University of Virginia, Department of Environmental Sciences,
Charlottesville, Virginia

WELCOME BY MEETING CO-CHAIRS
Deborah A. Bronk, President and CEO, Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine
John A. Downing, Director, Minnesota Sea Grant, and Professor of Biology and Large Lakes Observatory, University of Minnesota, Duluth, Minnesota

WELCOME TO SAN JUAN
Carmen Yulín Cruz, Mayor of San Juan, Puerto Rico

U.S. SENATOR SHELDON WHITEHOUSE (D-RI)
Newport, Rhode Island (Via Video)

*Plenary Presentation: The Importance of the Science-Policy Interface for Marine and Coastal Resources*

*Biographical Information: Sheldon Whitehouse, a member of the Senate Environment and Public Works Committee (EPW), plays a key role in crafting policies addressing environmental protection and climate change. In 2011, he joined with Democrats and Republicans to form the Senate Oceans Caucus to increase awareness of and find common ground on issues facing the oceans and coasts. The Caucus helped gain Senate approval of four international fisheries treaties and passage of the IUU Fishing Enforcement Act that will prevent illegal, unreported, and unregulated fishing. Whitehouse has worked to boost federal support for fisheries science and cooperative fisheries research as well as efforts to improve transparency and efficiency in the commercial and recreational fisheries management process. Senator Whitehouse has long advocated for a dedicated fund to support ocean and coastal research, restoration, and conservation. In 2015, the National Oceans and Coastal Security Fund was created to provide grants that support work for the oceans, coasts, and Great Lakes. It received funding for the first time as part of the FY2018 spending bill. He also led the successful bipartisan effort to reauthorize NOAA’s marine debris program and strengthen the U.S.’s role in combatting the global marine debris crisis. The SOS Act became law in October. A graduate of Yale University and the University of Virginia School of Law, Whitehouse served as United States Attorney and Attorney General of Rhode Island before being elected to the Senate in 2006. In addition to EPW, he is a member of the Budget Committee; the Judiciary Committee; and the Finance Committee. He and his wife Sandra, a marine biologist and environmental advocate, live in Newport, Rhode Island.*

TUESDAY PLENARY SESSION
Tuesday, 26 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

MARÍA FALCÓN
Television Producer, Director, Presenter, and Journalist, Puerto Rico

*Plenary Presentation: Television + Fun + Education... Total Immersion*

*Biographical Information: A University of Puerto Rico graduate with more than 30 years of experience in mass media, María Falcón has distinguished herself as a journalist, producer and director of educational TV programs and documentaries focused on nature, environment and cultural topics. She is most known for her work in GeoAmbiente. Her credits contain hundreds of titles that have resulted in countless recognitions: (10) Emmy Suncoast Awards, the Conservation Filmmaker of the Year Award [Filmmakers for Conservation - Bristol, UK 2008], (3) Excellence in Ecological Journalism Awards [Overseas Press Club], the Accolade Award [California], the Environmental Hero Award [National Oceanographic & Atmospheric Administration - US 2005], the Centennial Award [US Forest Service - 2005], (2) Excellence Awards [Environmental Protection Agency], as well as other achievements at festivals in England, Brazil, Spain, Portugal and the United States. In addition, the Universidad Metropolitana (AGMUS) awarded Falcón an Honorary Doctorate Degree in Sciences - Environmental Management in 2017. Currently, she is a member of the Puerto Rico Climate Change Council, the Sea Grant Program UPR - Advisory Council, the El Yunque Management Plan Review Committee and the international organization Filmmakers for Conservation. Also, as part of her commitment to the conservation of our natural resources and the environmental health, she offers talks and workshops to students of our local schools and universities.*
WEDNESDAY PLENARY SESSION
Wednesday, 27 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

ADA MONZÓN
Chief Meteorologist, WIPR-TV, Univision Radio WKAQ 580 am, and Noticel; Founder and President, EcoExploratorio, Puerto Rico

*Plenary Presentation: Building Resilience through Innovation in Education: Case Study: Hurricane Maria*

**Biographical Information:** Ada Monzón is the commonwealth’s chief meteorologist for WIPR-TV and Univision Radio WKAQ 580 am and Noticel. She is also the founder and president of EcoExploratorio: Science Museum of Puerto Rico. After earning her M.S. in Meteorology at the Florida State University, Ada joined the U.S. NWS Forecast Office in San Juan, where she became a forecaster and the warning and preparedness meteorologist. Ada is the first female American Meteorological Society (AMS) Fellow and Certified Broadcast Meteorologist in Puerto Rico. She is a professional speaker and producer of STEM education programs and disaster mitigation educational campaigns, and she is widely recognized for her successful social media networks with over 1,000,000 followers. Her standout service and commitment during 2017 reassured the Commonwealth of Puerto Rico. She closely followed Irma as it passed near the Caribbean and then provided essential weather information during Hurricane Maria, helping the population prepare and remain calm throughout the most devastating disaster in Puerto Rico’s record. Ada was recognized as the 2018 National Weatherperson of the Year and the 2019 AMS Award for Broadcast Meteorology. Her awards include the AMS Joanne Simpson Mentorship Award and the AMS Award for Excellence in Science Reporting by a Broadcast Meteorologist.

THURSDAY PLENARY SESSION
Thursday, 28 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

Christopher M. Volpe
Executive Director, ScienceCounts, Washington, DC

*Plenary Presentation: Americans’ Views of Science: Separating Fact from Fiction*

**Biographical Information:** Christopher Volpe is the executive director and a founding board member of ScienceCounts. With an academic background in atmospheric chemistry and two decades of private sector experience in marketing and branding, Chris is strong proponent of using traditional marketing techniques to better understand public attitudes about science and its intersection with society. Through ScienceCounts, he is working to foster stronger connections between the scientific community and the general public. Previously, Chris was the president and co-founder of Prismatic Laser Programs LLC, the nation’s leading provider of STEM-based assembly programs to elementary and middle schools. In his free time, Volpe is a demonstration pilot of various types of historically significant WW2 aircraft. Chris received his PhD from Scripps Institution of Oceanography.

FRIDAY PLENARY SESSION
Friday, 1 March 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

Ernesto L. Díaz
Director, Coastal Management and Climate Change Office, Puerto Rico Department of Natural and Environmental Resources, San Juan, Puerto Rico

*Plenary Presentation: The State of the Puerto Rico Climate 2018: An assessment of socio-ecological vulnerabilities for coastal and marine systems*

**Biographical Information:** Ernesto Díaz is Director of the Puerto Rico Coastal Zone Management Program under the Department of Natural and Environmental Resources, National Oceanic and Atmospheric Administration. He also is Co-Incident Commander of Hurricane Maria’s Sunken Vessel and Marine Debris Removal (DNER-USCG) Program and is the lead for coral reefs, beaches and dunes restoration and recovery efforts (DNER-FEMA). Diaz also is the current coordinator of the Puerto Rico Climate Change Council. He has served in various capacities within the DNER since 1995 and before that was Coordinator of Integrated Planning and Institutional Development under the United Nations Environment Program Regional Co-ordinating Unit in Kingston, Jamaica. Diaz is a prolific author and co-author on a number of papers and reports. He has formal training in many areas ranging from remote sensing, to strategic planning to climate change adaptation to national disaster preparedness. He holds degrees in oceanography, coastal and marine biology, engineering management, and has completed post-graduate studies in energy and environment.
2019 ASLO AWARD PRESENTATIONS

Society awards will be presented during the plenary sessions Monday through Friday. Following is a list of the 2019 award recipients and the day on which they will accept their award. Complete information on each award recipient including complete citations for each award are available on the ASLO web site: https://aslo.org/page/2019-award-recipients.

2019 RUTH PATRICK AWARD
Monday, 25 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

JENNIFER TANK
Department of Biological Sciences, University of Notre Dame, Notre Dame, Indiana

The Ruth Patrick Award honors scientists who have made outstanding contributions towards solving environmental problems. This year, ASLO recognizes Jennifer Tank with the 2019 Ruth Patrick Award for her significant contributions to aquatic biogeochemistry, applying those fundamental concepts to human-impacted agricultural landscapes, and informing how conservation practices influence stream management through community engagement. Tank is the Galla Professor of Biological Sciences at the University of Notre Dame and Director of the Notre Dame Environmental Change Initiative.

2019 A.C. REDFIELD LIFETIME ACHIEVEMENT AWARD
Tuesday, 26 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

STEPHEN CARPENTER
Center for Limnology, University of Wisconsin, Madison, Wisconsin

The A.C. Redfield Lifetime Achievement award honors major, long-term achievements in the fields of limnology and oceanography, including research, education, and service to the community and society. Stephen R. Carpenter is the 2019 recipient of the A.C. Redfield Award in recognition of his remarkable contributions to the field of limnology and lake management; including major advances in our understanding of trophic cascades, eutrophication, regime shifts, fisheries sustainability, and social ecological systems via approaches that confront theory with large-scale collaborative experimentation, long-term lake surveys, community outreach, and education.

2019 RAMÓN MARGALEF AWARD
Wednesday, 27 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

DAVID FIELDS
Bigelow Laboratory for Ocean Sciences, East Boothbay, Maine

The Ramón Margalef Award is given to scientists and educators for excellence in teaching and mentoring in the fields of limnology and oceanography. David Fields of the Bigelow Laboratory for Ocean Sciences has been awarded this distinguished honor for his enthusiastic leadership and effusive commitment to developing transformative, hands-on marine science education programs, and for creating opportunities for authentic science experiences for high school and college students from all backgrounds.

2019 YENTSCH-SCHINDLER EARLY CAREER AWARD
Wednesday, 27 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

ROBERT SPENCER
Department of Earth, Ocean, and Atmospheric Science, Florida State University, Tallahassee, Florida

The Yentsch-Schindler Early Career Award honors an early-career scientist for outstanding and balanced contributions to research, education and society. Robert Spencer is the 2019 recipient of the Yentsch-Schindler Award for his contributions to our understanding of the biogeochemical processes involving the production, fate and transport of organic matter in terrestrial, freshwater and marine environments, and his projections on how anthropogenic impacts will affect these processes. Spencer is an associate professor at Florida State University.

2019 JOHN H. MARTIN AWARD
Thursday, 28 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

PHILIP BOYD
Institute for Marine and Antarctic Studies, University of Tasmania, Hobart, Australia

Accepted via video on behalf of co-authors.

ASLO presents the John H. Martin Award to one paper each year that has led to fundamental shifts in research
focus and interpretation of a large body of previous observations. The 2019 John H. Martin Award is for “A mesoscale phytoplankton bloom in the polar Southern Ocean stimulated by iron fertilization,” a paper published in 2000 by Philip Boyd and co-authors that tested how phytoplankton respond to iron fertilization. (Lead author Philip W. Boyd and study co-authors Andrew J. Watson, Cliff S. Law, Edward R. Abraham, Thomas Trull, Rob Murdoch, Dorothee C. E. Bakker, Andrew R. Bowie, K. O. Buesseler, Hoe Chang, Matthew Charette, Peter Croot, Ken Downing, Russell Frew, Mark Gall, Mark Hadfield, Julie Hall, Mike Harvey, Greg Jameson, Julie LaRoche, Malcolm Liddicoat, Roger Ling, Maria T. Maldonado, R. Michael McKay, Scott Nodder, Stu Pickmere, Rick Pridmore, Steve Rintoul, Karl Safi, Philip Sutton, Robert Strzepek, Kim Tanneberger, Suzanne Turner, Anya Waite, and John Zeldis. Citation: Nature. 2000 Oct 12;407(6805): 695-702.

2019 RAYMOND L. LINDEMAN AWARD
Thursday, 28 February 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

ANDREA G. BRAVO
Institute of Marine Sciences, Barcelona, Spain

The Raymond L. Lindeman Award honors a young scientist for an outstanding peer-reviewed, English-language paper in the aquatic sciences. ASLO has awarded Andrea G. Bravo the 2019 Lindeman Award for her paper, “Molecular composition of organic matter controls methylmercury formation in boreal lakes.” Bravo’s research, published in Nature Communications in 2017, challenges the traditional mercury cycle by demonstrating the role of organic matter composition on bacterial activity, and ultimately, on mercury methylation rates in boreal lakes.

2019 G. EVELYN HUTCHINSON AWARD
Friday, 1 March 2019, 11:00 to 12:30
Ballroom A-Puerto Rico Convention Center

OSCAR SCHOFIELD
Department of Marine and Coastal Sciences, Rutgers University, New Brunswick, New Jersey

The G. Evelyn Hutchinson award honors a limnologist or oceanographer who has made considerable contributions to knowledge, and whose future work promises a continued legacy of scientific excellence. Dr. Oscar Schofield is the 2019 recipient of the G. Evelyn Hutchinson Award for transforming our understanding of the physical and chemical processes that govern marine phytoplankton physiology and ecology through the application of novel ocean observing tools, and for his skillful and enthusiastic leadership of the collaborative science necessary for addressing broad scale oceanographic challenges. Schofield is Distinguished Professor in the Department of Marine and Coastal Sciences at Rutgers University.

AT THE PUERTO RICO CONFERENCE CENTER

INTERNET ACCESS
Complimentary wireless Internet access is available at the Puerto Rico Convention Center. To connect to the Wi-Fi at the Convention Center you should enable your wireless access on your device and connect to Wi-Fi SSID PSAV WIFI. Once connected, open your favorite web browser and enter the password: ASLO2019 on the Access Code field. (The password is not case sensitive.) After you enter the access code, you will be asked to click on Connect. By doing so you agree with the terms. Once you log on, you will not be required to do so each day and will remain connected when you are on site at the Convention Center.

FAMILY ROOM
A family room will be open throughout the meeting in the Mezzanine Suite on the 2nd floor of the Puerto Rico Convention Center. This is a room where you may go to relax with your children if you bring them to the conference center. Please keep in mind that this is not a room for childcare, and no service is offered in this room. You may not leave children unattended.

NURSING MOTHERS ROOM
If you are a nursing mother and need a private place for you and your infant, a quiet room and a comfortable chair are available for you in the Mothers’ Room on the 1st floor directly across from the Information Desk. Please go to the PRCC Information desk for instructions on how to access the room.

LACTATION ROOM
A private room for mothers to express breast milk is available on the 3rd floor. This room also includes a small refrigerator for breastmilk and offers storage for pumping necessities and supplies. It will be available throughout the meeting. Please go to the meeting registration desk for instructions on how to access the room.

PRESS ROOM
All members of the media who are attending the meeting must check in at the conference registration desk as soon as they arrive at the convention center to receive a media badge. A press room is set up exclusively for members of the media in Room 210 on the 2nd floor of the convention center. If a room is needed for a media interview, go to the conference registration desk, and conference management personnel can direct you to the Chrysler Conference Room. We remind the media that ASLO policy does not allow recording of individual talks, slides, or poster images during the sessions.
EMERGENCIES AND FIRST AID AT THE PUERTO RICO CONVENTION CENTER
In the event of a medical or other emergency situation, do not call 911 from your cell phone. Please find a member of the convention center staff, dial 0 from any house phone at the PRCC, or go to the conference registration desk on the 1st floor. Client services will call for emergency personnel, if needed.

Should you need minor first aid when you are the convention center, please come to the conference registration desk on Level 1. Staff at the desk will contact someone who can assist you and direct you to the first aid area.

SPECIAL NEEDS
If you have a disability or limitation that may require special consideration to ensure your full participation in this meeting, please see a staff person at the conference registration desk. You also may send an email to business@aslo.org prior to your arrival at the meeting.

LOST AND FOUND
Please come to the Registration Desk for inquiries concerning lost and found items.

RECEIPTS AND LETTERS OF PARTICIPATION
Your registration confirmation that was emailed to you when you registered for the meeting will serve as your receipt. In keeping with our conservation efforts, we will not provide printed receipts to attendees on site at the meeting. If you have misplaced your original receipt and need another copy, please send an email to the conference registrar, Jo Davis, at jdavis@sgmeet.com. Likewise, letters of participation only will be provided to those who are registered for the meeting. If you need a letter of participation, please contact Jo Davis at the email address given.

CONFERENCE REGISTRATION AND INFORMATION
Registration and check in for the meeting will be available all week in the 1st Floor Lobby Area of the Puerto Rico Convention Center. Please check in upon your arrival at the meeting in order to receive your name badge and other important materials and information.

Registration Desk Hours:
- Sunday, 24 February 2019 15:00 to 20:00
- Monday, 25 February 2019 08:00 to 17:30
- Tuesday, 26 February 2019 08:00 to 17:30
- Wednesday, 27 February 2019 08:00 to 17:30
- Thursday, 28 February 2019 08:30 to 17:30
- Friday, 1 March 2019 08:30 to 17:30

WATER BOTTLES
Please join ASLO's continuing sustainability efforts as we try to reduce our plastic footprint in Puerto Rico as much as possible.

To help in this effort, we are asking all participants to bring their own refillable water bottle to the meeting! If you purchased a water bottle from the ASLO Student Committee, you will pick it up at registration. All proceeds after expenses will support ASLO student travel grants.

MESSAGE BOARDS
Message boards are on the 1st Floor Lobby Area near registration. This is where you may post announcements or check for messages throughout the conference.

COFFEE BREAKS
Morning coffee breaks are planned during the transition time between concurrent oral sessions and the plenaries Monday through Friday. Afternoon breaks are planned Monday through Friday as well. Complimentary coffee and tea will be served. Water will be provided in coolers, and attendees are encouraged to bring their own water bottles. Break locations vary throughout the week and are listed on the agenda page of this program.

LUNCH, DAILY ENTERTAINMENT, AND WORKSHOPS AT THE PRCC
To help you relax between mornings and afternoons full of science, multiple lunch options at reasonable prices will be available at the convention center. Rather than rush to find a place for lunch, make plans to stay at the convention center and participate in one of the workshops listed in this program. You also may fuel your creative side by joining the art and science activities planned as part of the WATER MARKS workshop. If you prefer to sit and visit with fellow attendees and colleagues, local musicians will play while you relax in comfortable places and take in the beautiful scenery. For those who want to get up and move, there will be Salsa dance lessons during the week (Monday, Tuesday and Thursday).

The following food options can be found in various locations throughout the convention center. Expect a variety of food from American-style lunches to Puerto Rican dishes like a Mofongo Bowl.

- Alo Grande Café-Located in the Main Lobby
  Opens at 07:00 and offers bakery and breakfast selections, sandwiches, wraps, soups, cookies, brownies and soft drinks throughout the day.
- Espresso Bar-Located on the 2nd and 3rd Floor Foyer Areas
  Opens at 07:00 and offers espresso, select coffees, latte, cappuccino and tea.
- Lobby Bar Lounge-Located in the Main Lobby
  Opens at 11:00 and features nachos, a variety of appetizers, sliders, cocktails, wine and Cava by the glass, domestic and imported beer, soft drinks and spring water.
- Mexican/Puerto Rican Movable Café-Located near the Exhibit Hall
  Open for lunch only. Themed selections will change daily. Soft drinks and water.
• Barbeque Movable Café—Located on the Third Floor Terrace
  Open for lunch only. Offering burgers, barbecued meats, and
  side items. Selections will change daily. Soft drinks and water.

IMPORTANT SAFETY REMINDERS
We want you to enjoy a fun, productive, and informative week
in San Juan. As with all meetings in busy urban areas such as
San Juan, taking measures to ensure your personal safety is very
important. Here are some reminders:
• Make sure you have copies of your ID and passport. Bring
  one copy and store it separately from your original and leave
  another with a friend or relative.
• Streamline your wallet. Only carry the card(s) you plan to
  use on your trip and leave your checkbook and the rest of
  your cards at home.
• Always remove your meeting name badge when you leave the
  convention center.
• If you are walking between any destination and your hotel
  or the convention center, plan your travel route before you
depart.
• Use caution when walking on sidewalks and crossing streets
  and be careful to cross only at designated crosswalks.
• Avoid visible use of cell phones while you are walking.
• Be aware of your surroundings.
• Make sure your belongings are secure.
• Walk with your colleagues.
• When transportation is needed, take or share a taxi or Uber.
• Check the local weather and pack the appropriate gear before
  you leave.

ASLO EVENTS CODE OF CONDUCT
A core goal of ASLO is to foster a scientific community that is
safe, hospitable, and productive for all its members. Thus, ASLO
seeks to provide a welcoming and productive environment for
those attending our meetings, workshops, and events, regardless
of gender, sexual orientation, gender identity, race, ethnicity,
religion, disability, physical appearance, or career level. All
participants, including, but not limited to, attendees, speakers,
vendors, exhibitors, ASLO staff, service providers, and others
are expected to abide by this ASLO Events Code of Conduct.

EXPECTED BEHAVIOR
• All participants, attendees, ASLO staff, and vendors are
  treated with respect and consideration, valuing a diversity of
  views and opinions.
• Be considerate, respectful, and collaborative.
• Communicate openly with respect for others, critiquing ideas
  rather than individuals.

UNACCEPTABLE BEHAVIOR
Examples of unacceptable behavior include, but are not
limited to, verbal comments related to gender, sexual orienta-
tion, disability, physical appearance, body size, race, religion,
national origin, inappropriate use of nudity and/or sexual
images in public spaces or in presentations, or threatening or
stalking any attendee, speaker, volunteer, exhibitor, ASLO
staff member, service provider, or other event guest.
• Harassment, sexual harassment, bullying, or discrimination
  in any form will not be tolerated.
• Physical or verbal abuse of any attendee, speaker, volunteer,
exhibitor, ASLO staff member, service provider, or other
  event guest.
• Examples of unacceptable behavior include, but are not
  limited to, verbal comments related to gender, sexual orienta-
tion, disability, physical appearance, body size, race, religion,
national origin, inappropriate use of nudity and/or sexual
images in public spaces or in presentations, or threatening or
stalking any attendee, speaker, volunteer, exhibitor, ASLO
staff member, service provider, or other event guest.
• Disruption of talks at oral or poster sessions, in the exhibit
  hall, or at other events organized by ASLO at the event
  venue, hotels, or other ASLO-contracted facilities.

CONSEQUENCES
• Anyone requested to stop unacceptable behavior is expected
to comply immediately.
• ASLO staff (or their designee) or security may take any ac-
tion deemed necessary and appropriate, including immediate
  removal from the meeting without warning or refund.
• ASLO reserves the right to prohibit attendance at any future
  meeting.

REPORTING UNACCEPTABLE BEHAVIOR
• If you are the subject of unacceptable behavior or have
  witnessed any such behavior, please immediately notify an
  ASLO staff member or ASLO officer.

EXHIBITORS
Exhibits are in Exhibit Hall B. Exhibitors will set up on Monday,
25 February, and will be in place over the following days and times:
Tuesday, 26 February 2019 .............................................09:00-19:00
Wednesday, 27 February 2019 .........................................09:00-19:00
Thursday, 28 February 2019 ............................................09:00-19:00

Exhibitors will tear down beginning at 19:00 on Thursday follow-
ing the end of the poster session and reception in the Exhibit Hall.
Attendees will have access to the exhibits during the hours listed
above. ASLO appreciates the support of the following organizations
who are exhibiting at the 2019 Aquatic Sciences Meeting:
ASLO/WILEY
ASLO (#E-11 and #E-20)
1105 Wooded Acres, Suite 260
Waco, TX 76710 USA
Contact: Helen Schneider Lemay
Phone: 254-776-3550
Email: business@aslo.org
Website: http://aslo.org

John Wiley & Sons, Inc. (#E-11 and #E-20)
111 River Street-Mail Stop 8-02
Hoboken, NJ 07030 USA
Contact: Fiona Sarne
Phone: 201-748-7850
Email: fsarne@wiley.com
Website: www.wiley.com

EXHIBITORS:

BERMUDA INSTITUTE OF OCEAN SCIENCES (#E-19)
St. Georges GE 01 Bermuda
Contact: Matthew Hayden
Phone: 441-297-1880
Email: matthew.hayden@bios.edu
Website: www.bios.edu

CENTER FOR COASTAL AND MARINE ECOSYSTEMS (CCME) (#E-23)
1601 S. Martin L. King Jr. Blvd.
Tallahassee, FL 32307 USA
Contact: Sharmini Pitter
Phone: 850-561-2017
Email: sharmini.pitter@famu.edu
Website: www.ccme.famu.edu

COASTAL OCEAN VISION, INC. (#E-21)
10 Edgerton Drive, Suite 2
North Falmouth, MA 02556 USA
Contact: Scott Gallagher
Phone: 508-472-5520
Email: sgallager@coastaloceanvision.com
Website: www.coastaloceanvision.com

EUREKA WATER PROBES (#E-22)
2113 Wells Branch Parkway, Suite 4400
Austin, TX 78728 USA
Contact: Stuart Garner
Phone: 512-302-4333
Email: sgarner@waterprobes.com
Website: www.WaterProbes.com

FLORIDA INTERNATIONAL UNIVERSITY (#E-07)
Institute of Water Environment
11200 SW 8th St.
OE-148
Miami, FL 33199 USA
Contact: Bradley Schonhoff
Phone: 305-348-3095
Email: bschonho@fiu.edu
Website: www.inwe.fiu.edu

FLUID IMAGING TECHNOLOGIES (#E-15 AND #E-16)
200 Enterprise Drive
Scarborough, ME 04074 USA
Contact: Harry Nelson
Phone: 207-289-3242
Email: harry.nelson@fluidimaging.com
Website: www.fluidimaging.com

HYDROPTIC (#E-24)
33 route de Ségoufille
L’isle Jourdain 32600 France
Contact: Jérôme Coindat
Phone: +33 (0)9 6324 8220
Mobile: +33 (0)6 7399 5790
Fax: +33 (0)5 6206 2334
Email: jerome.coindat@hydroptic.com
Website: www.hydroptic.com

JFE ADVANTECH CO., LTD (#E-18)
3-48, Takahata-cho
Nishinomiya, Hyogo 663-8202 Japan
Contact: Hua Li
Phone: +81-798-66-1783
Email: lihua@jfe-advantech.co.jp
Website: www.jfe-advantech.co.jp/eng/

MCLANE RESEARCH LABORATORIES, INC. (#E-06)
121 Bernard St. Jean Drive
East Falmouth, MA 02536 USA
Contact: Jon Mogul
Phone: 1-508-495-4000
Email: mclane@mclanelabs.com
Website: www.mclanelabs.com

NOAA NATIONAL SEA GRANT COLLEGE PROGRAM (#E-08)
1315 East West Highway, SSMS3
Silver Spring, MD 20910 USA
Contact: Rebecca Briggs
Phone: 301-734-1084
Email: rebecca.briggs@noaa.gov
Website: www.seagrant.noaa.gov/
### MEETING AGENDA

#### SATURDAY, 23 FEBRUARY 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00-17:00</td>
<td>ASLO Board Meeting</td>
<td>Sheraton Hotel</td>
</tr>
<tr>
<td>07:30-15:30</td>
<td>Outreach Activity: Volunteering with P.E.C.E.S.</td>
<td>PRCC: Check in at 07:00</td>
</tr>
<tr>
<td>07:30-13:00</td>
<td>Outreach Activity: Monitoring Dive at a Coral Reef Ecosystem at Escambron Beach and Condado Lagoon</td>
<td>PRCC: Check in at 07:15</td>
</tr>
</tbody>
</table>

#### SUNDAY, 24 FEBRUARY 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00-17:00</td>
<td>ASLO Board Meeting</td>
<td>Sheraton Hotel</td>
</tr>
<tr>
<td>08:00-17:00</td>
<td>The Science of Science Communication Workshop</td>
<td>Room 103 A</td>
</tr>
<tr>
<td>08:00-17:00</td>
<td>Deep Search Annual Project Meeting</td>
<td>Room 103 B</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Family Room</td>
<td>Mezzanine Suite</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Nursing Mothers' Room</td>
<td>Mothers' Room-1st Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Lactation Room</td>
<td>VIP Room-3rd Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Press Room</td>
<td>Room 210</td>
</tr>
<tr>
<td>10:00-13:00</td>
<td>Make Your Science Communication More Effective Workshop</td>
<td>Room 101</td>
</tr>
<tr>
<td>13:00-17:00</td>
<td>Aquatic Science Education and Outreach Workshop</td>
<td>Room 208 C</td>
</tr>
<tr>
<td>14:00-18:00</td>
<td>LOREX Orientation Workshop (By Invitation Only)</td>
<td>Room 208 AB</td>
</tr>
<tr>
<td>15:00-20:00</td>
<td>Registration</td>
<td>PRCC Lobby-Main Level Prefunction Area</td>
</tr>
<tr>
<td>15:00-21:00</td>
<td>Presentation Room</td>
<td>Room 207</td>
</tr>
<tr>
<td>16:00-18:00</td>
<td>ASLO MP Student Program Training Session (Dr. Ben Cuker)</td>
<td>Ballroom B</td>
</tr>
<tr>
<td>16:30-17:30</td>
<td>Local Artisan Booth Set Up</td>
<td>3rd Floor Foyer</td>
</tr>
<tr>
<td>17:30-18:00</td>
<td>Student Worker Training Session</td>
<td>PRCC Lobby near Registration Desk</td>
</tr>
<tr>
<td>17:30-20:30</td>
<td>Local Artisans (Artesanos de Puerto Rico)</td>
<td>3rd Floor Foyer</td>
</tr>
<tr>
<td>18:30-20:30</td>
<td>Opening Mixer Reception</td>
<td>3rd Floor Terrace &amp; Foyer</td>
</tr>
<tr>
<td>20:30</td>
<td>Sunday Evening Pub Crawl (Organized by ASLO Students)</td>
<td>Off-site: La Taberna Lupulo</td>
</tr>
</tbody>
</table>

#### MONDAY, 25 FEBRUARY 2019

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:00-19:00</td>
<td>Presentation Room</td>
<td>Room 207</td>
</tr>
<tr>
<td>08:00-17:30</td>
<td>Registration</td>
<td>PRCC Lobby-Main Level Prefunction Area</td>
</tr>
<tr>
<td>08:00-19:30</td>
<td>Literature Tables</td>
<td>PRCC-Main Level or 2nd Floor Prefunction Area</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>ASLO Mentor Program Room</td>
<td>Room 203</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Family Room</td>
<td>Mezzanine Suite</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Nursing Mothers' Room</td>
<td>Mothers' Room-1st Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Lactation Room</td>
<td>VIP Room-3rd Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Press Room</td>
<td>Room 210</td>
</tr>
<tr>
<td>09:00-10:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Various Rooms</td>
</tr>
<tr>
<td>10:00-17:00</td>
<td>Exhibitor Set Up</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Coffee Break</td>
<td>Ballroom A Foyer</td>
</tr>
</tbody>
</table>
### Planetary Water Program Book

**11:00-12:30 Opening Plenary & Awards Session**
- Welcome by ASLO President: Michael L. Pace, University of Virginia, Charlottesville, VA
- Welcome by Meeting Co-chairs: Deborah A. Bronk, Bigelow Lab for Ocean Sciences, East Boothbay, ME and John Downing, Minnesota Sea Grant and University of Minnesota, Duluth, MN
- Welcome to San Juan: Carmen Yulín Cruz, Mayor, San Juan, PR
- 2019 Ruth Patrick Award Acceptance: Jennifer Tank, Univ. of Notre Dame, Notre Dame, IN
- Plenary Presentation via Video: U.S. Senator Sheldon Whitehouse (D-RI), Newport, RI

**12:30-14:00**
- WATER MARKS Workshop—Where Science Meets Art
- Teaching Introductory Aquatic Sciences Courses Workshop
- Improv to Improve International Collaborations Workshop
- FlowCam Software Workshop
- Lunch Break
- Poster Set Up by Attendees
- Concurrent Sessions
- Coffee Break
- Concurrent Sessions
- ASLO Fellows and Membership Reception
- ASLO Business and Membership Meeting
- Early Career Mixer
- Student Mixer

**TUESDAY, 26 FEBRUARY 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
</tr>
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<tbody>
<tr>
<td>07:00-19:00</td>
<td>Presentation Room</td>
<td>Room 207</td>
</tr>
<tr>
<td>08:00-17:30</td>
<td>Registration</td>
<td>PRCC Lobby—Main Level Prefunction Area</td>
</tr>
<tr>
<td>08:00-19:30</td>
<td>Literature Tables</td>
<td>PRCC—Main Level or 2nd Floor Prefunction Area</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>ASLO Mentor Program Room</td>
<td>Room 203</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Family Room</td>
<td>Mezzanine Suite</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Nursing Mothers' Room</td>
<td>Mothers' Room—1st Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Lactation Room</td>
<td>VIP Room—3rd Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Press Room</td>
<td>Room 210</td>
</tr>
<tr>
<td>08:00-08:45</td>
<td>Mentor Program Meeting (Includes Light Breakfast for Mentors and Mentees)</td>
<td>Ballroom B</td>
</tr>
<tr>
<td>09:00-19:00</td>
<td>Exhibits Open</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>09:00-19:00</td>
<td>Posters Open</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>09:00-10:30</td>
<td>Concurrent Sessions</td>
<td>PRCC—Various Rooms</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Coffee Break</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
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</tr>
<tr>
<td>11:00-12:30</td>
<td>Plenary &amp; Awards Session</td>
<td>Ballroom A</td>
</tr>
<tr>
<td></td>
<td>2019 Redfield Award Acceptance: Stephen R. Carpenter, University of</td>
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<td></td>
<td>Wisconsin-Madison, Madison, WI</td>
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<tr>
<td></td>
<td>Plenary Presentation: Maria Falcon, Television Producer, Director,</td>
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<td></td>
<td>Presenter, and Journalist, PR</td>
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<tr>
<td>12:30-14:00</td>
<td>WATER MARKS Workshop—Where Science Meets Art</td>
<td>Room 206</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Intidisciplinary Presentations Workshop</td>
<td>Room 102</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Elements of a Teaching Philosophy Statement Workshop</td>
<td>Room 208 C</td>
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<tr>
<td>12:30-14:00</td>
<td>Introducing an Ocean Protein Portal Town Hall</td>
<td>Room 204</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Real-Time QC of pH Data Workshop</td>
<td>Room 209 C</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Research Collaboration Across Borders Panel</td>
<td>Room 101</td>
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<tr>
<td>12:30-14:00</td>
<td>ASLO Student Workshop—I Need the Degree AND the Money</td>
<td>Room 104</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Lunch Break and Salsa Lessons</td>
<td>3rd Floor Terrace</td>
</tr>
<tr>
<td>13:15-16:00</td>
<td>Outreach Activity: Water Quality Monitoring in Different Zones</td>
<td>PRCC: Check in at 13:00</td>
</tr>
<tr>
<td>14:00-15:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Various Rooms</td>
</tr>
<tr>
<td>15:30-15:45</td>
<td>Coffee Break</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>15:45-17:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Various Rooms</td>
</tr>
<tr>
<td>17:30-19:00</td>
<td>Poster Session and Reception</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>19:00-19:30</td>
<td>Society for Women in Marine Science Meeting</td>
<td>Room 204</td>
</tr>
</tbody>
</table>

**WEDNESDAY, 27 FEBRUARY 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td>07:00-19:00</td>
<td>Presentation Room</td>
<td>Room 207</td>
</tr>
<tr>
<td>08:00-17:30</td>
<td>Registration</td>
<td>PRCC Lobby-Main Level Prefunction Area</td>
</tr>
<tr>
<td>08:00-19:00</td>
<td>Literature Tables</td>
<td>PRCC-Main Level or 2nd Floor Prefunction Area</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>ASLO Mentor Program Room</td>
<td>Room 203</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Family Room</td>
<td>Mezzanine Suite</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Nursing Mothers' Room</td>
<td>Mothers' Room-1st Floor</td>
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<tr>
<td>08:00-20:30</td>
<td>Lactation Room</td>
<td>VIP Room-3rd Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Press Room</td>
<td>Room 210</td>
</tr>
<tr>
<td>08:30-12:30</td>
<td>Outreach Activity: Coral Reef Fragments Recovery Dive &amp; Restoration Project</td>
<td>PRCC: Check in at 08:00</td>
</tr>
<tr>
<td>09:00-19:00</td>
<td>Exhibits Open</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>09:00-19:00</td>
<td>Posters Open</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>09:00-10:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Various Rooms</td>
</tr>
<tr>
<td>09:00-10:45</td>
<td>High School Poster Session</td>
<td>Exhibit Hall A</td>
</tr>
<tr>
<td>09:00-10:45</td>
<td>Education Fair</td>
<td>Exhibit Hall A</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>Coffee Break</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>11:00-12:30</td>
<td>Plenary &amp; Awards Session</td>
<td>Ballroom A</td>
</tr>
<tr>
<td></td>
<td>2019 Ramon Margalef Award for Excellence in Education Acceptance:</td>
<td></td>
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<tr>
<td></td>
<td>David Fields, Bigelow Lab for Ocean Sciences, East Boothbay ME</td>
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<td></td>
<td>2019 Yentsch-Schindler Early Career Award Acceptance: Robert Spencer,</td>
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<td></td>
<td>Florida State University, Tallahassee, FL</td>
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<tr>
<td></td>
<td>Plenary Presentation: Ada Monzón, Chief Meteorologist, WIPR-TV,</td>
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<tr>
<td></td>
<td>Univision Radio WKAQ 580 am, and Noticel; Founder and President,</td>
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<td></td>
<td>EcoExploratorio, PR</td>
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</tr>
<tr>
<td>12:30-14:00</td>
<td>WATER MARKS Workshop—Where Science Meets Art</td>
<td>Room 206</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>JPR Editorial Board Get-together and Meeting (By Invitation Only)</td>
<td>Room 208 AB</td>
</tr>
<tr>
<td>Time</td>
<td>Event</td>
<td>Location</td>
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<tr>
<td>12:30-14:00</td>
<td>Limnology and Oceanography Wiki Workshop</td>
<td>Room 204</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>Update and Status of the Arctic COLORS Science Program Town Hall</td>
<td>Room 209 C</td>
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<tr>
<td>12:30-14:00</td>
<td>Project Redefining Recognition Town Hall</td>
<td>Room 101</td>
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<tr>
<td>12:30-14:00</td>
<td>ASLO Early Career Workshop-How to Successfully Write Proposals and Receive Funding</td>
<td>Room 102</td>
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<td>12:30-14:00</td>
<td>Lunch Break and Entertainment</td>
<td>3rd Floor Terrace</td>
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<td>14:00-15:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Variouis Rooms</td>
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<tr>
<td>15:30-15:45</td>
<td>Coffee Break</td>
<td>Exhibit Hall B</td>
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<tr>
<td>15:45-17:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Variouis Rooms</td>
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<tr>
<td>18:00-19:30</td>
<td>Public Discussion-What Can Aquatic Scientists Do for You?</td>
<td>Ballroom A</td>
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<tr>
<td>18:00-21:00</td>
<td>National Science Foundation Ocean Sciences Town Hall</td>
<td>Room 204</td>
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<tr>
<td>18:00-21:00</td>
<td>Mixotrophy Workshop</td>
<td>Room 103 B</td>
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<tr>
<td>20:00-23:00</td>
<td>Jam Session</td>
<td>TBD</td>
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**THURSDAY, 28 FEBRUARY 2019**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>07:00-19:00</td>
<td>Presentation Room</td>
<td>Room 207</td>
</tr>
<tr>
<td>08:00-17:30</td>
<td>Registration</td>
<td>PRCC Lobby-Main Level Prefunction Area</td>
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<tr>
<td>08:00-19:00</td>
<td>Literature Tables</td>
<td>PRCC-Main Level or 2nd Floor Prefunction Area</td>
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<tr>
<td>08:00-20:30</td>
<td>ASLO Mentor Program Room</td>
<td>Room 203</td>
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<td>08:00-20:30</td>
<td>Family Room</td>
<td>Mezzanine Suite</td>
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<td>08:00-20:30</td>
<td>Nursing Mothers' Room</td>
<td>Mothers' Room-1st Floor</td>
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<td>08:00-20:30</td>
<td>Lactation Room</td>
<td>VIP Room-3rd Floor</td>
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<tr>
<td>08:00-20:30</td>
<td>Press Room</td>
<td>Room 210</td>
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<tr>
<td>09:00-19:00</td>
<td>Exhibits Open</td>
<td>Exhibit Hall B</td>
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<tr>
<td>09:00-19:00</td>
<td>Posters Open</td>
<td>Exhibit Hall B</td>
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<tr>
<td>09:00-10:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Variouis Rooms</td>
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<td>10:30-11:00</td>
<td>Coffee Break</td>
<td>Exhibit Hall B</td>
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<tr>
<td>11:00-12:30</td>
<td>Plenary &amp; Awards Session</td>
<td>Ballroom A</td>
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<td></td>
<td>2019 John Martin Award Acceptance Via Video: Philip Boyd, Inst. for Marine and Antarctic Studies, University of Tasmania, Hobart, Tasmania, Australia</td>
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<td>2019 Raymond Lindeman Award Acceptance: Andrea Bravo, IDAEA-CSIC, Barcelona, Spain</td>
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<td>Plenary Presentation: Chris Volpe, Executive Director, ScienceCounts, Inc., Washington, DC</td>
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<tr>
<td>12:30-14:00</td>
<td>WATER MARKS Workshop-Where Science Meets Art</td>
<td>Room 206</td>
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<td>12:30-14:00</td>
<td>Teaching and Mentoring Under the Threat of Climate Change Workshop</td>
<td>Room 204</td>
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<td>12:30-14:00</td>
<td>Strategies for Transboundary HABs Management Town Hall</td>
<td>Room 103 B</td>
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<tr>
<td>12:30-14:00</td>
<td>Blue Carbon Discussion Group</td>
<td>Room 208 C</td>
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<tr>
<td>12:30-14:00</td>
<td>Applying to Graduate School Workshop: Tips from Current Students</td>
<td>Room 103 A</td>
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<td>12:30-14:00</td>
<td>Writing Effective Abstracts and Summaries Workshop</td>
<td>Room 209 C</td>
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<tr>
<td>12:30-14:00</td>
<td>ASLO Student Beach Cleanup</td>
<td>Location TBA</td>
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<tr>
<td>12:30-14:00</td>
<td>Lunch Break and Entertainment</td>
<td>3rd Floor Terrace</td>
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<tr>
<td>13:15-16:00</td>
<td>Outreach Activity: Water Quality Monitoring in Different Zones</td>
<td>PRCC: Check in at 13:00</td>
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<tr>
<td>14:00-15:30</td>
<td>Concurrent Sessions</td>
<td>PRCC-Variouis Rooms</td>
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<tr>
<td>15:30-15:45</td>
<td>Coffee Break</td>
<td>Exhibit Hall B</td>
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**FRIDAY, 1 MARCH 2019**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>07:00-17:00</td>
<td>Presentation Room</td>
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<tr>
<td>08:00-17:30</td>
<td>Registration</td>
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<tr>
<td>08:00-19:00</td>
<td>Literature Tables</td>
<td>PRCC Main Level or 2nd Floor Prefunction Area</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>ASLO Mentor Program Room</td>
<td>Room 203</td>
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<tr>
<td>08:00-20:30</td>
<td>Family Room</td>
<td>Mezzanine Suite</td>
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<td>08:00-20:30</td>
<td>Nursing Mothers’ Room</td>
<td>Mothers’ Room - 1st Floor</td>
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<tr>
<td>08:00-20:30</td>
<td>Lactation Room</td>
<td>VIP Room - 3rd Floor</td>
</tr>
<tr>
<td>08:00-20:30</td>
<td>Press Room</td>
<td>Room 210</td>
</tr>
<tr>
<td>08:00-12:00</td>
<td>Exhibitor Teardown</td>
<td>Exhibit Hall B</td>
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<tr>
<td>08:00-12:00</td>
<td>Poster Teardown</td>
<td>Exhibit Hall B</td>
</tr>
<tr>
<td>09:00-17:30</td>
<td>L&amp;O Spotlight Session</td>
<td>209 AB</td>
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<tr>
<td>09:00-10:30</td>
<td>Concurrent Sessions</td>
<td>PRCC - Various Rooms</td>
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<tr>
<td>10:30-11:00</td>
<td>Coffee Break</td>
<td>Ballroom A Foyer</td>
</tr>
<tr>
<td>11:00-12:30</td>
<td>Plenary &amp; Awards Session</td>
<td>Ballroom A</td>
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2019 G. Evelyn Hutchinson Award Acceptance: Oscar Schofield, Rutgers Univ., New Brunswick, NJ
Plenary Presentation: Ernesto Diaz, Director, Coastal Management and Climate Change Office, PR Dept. of Natural and Environmental Resources, San Juan, PR

12:30-14:00 WATER MARKS Workshop - Where Science Meets Art | Room 206
12:30-14:00 Teaching Aquatic Biology with Aquaponics Workshop | Room 103 A
12:30-14:00 Lunch Break and Entertainment | 3rd Floor Terrace
14:00-15:30 Concurrent Sessions | PRCC - Various Rooms
15:30-15:45 Coffee Break | Ballroom A Foyer
15:45-17:30 Concurrent Sessions | PRCC - Various Rooms
18:00 Outreach Activity: Coral Reef and Mangrove Keys Clean-up at La Parguera | PRCC: Check in at 17:30
18:00-21:00 Closing Fiesta! (Ticketed event) | PRCC - Terrace and 3rd Floor Prefunction Area

**SATURDAY, 2 MARCH 2019**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Location</th>
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<tbody>
<tr>
<td>08:00-19:00</td>
<td>Outreach Activity: Coral Reefs and Mangrove Keys Clean-Up at La Parguera</td>
<td>On-site</td>
</tr>
<tr>
<td>07:30-13:30</td>
<td>Outreach Activity: Guakia Colectivo Agroecologico</td>
<td>PRCC: Check in at 07:00</td>
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<tr>
<td>07:30-13:00</td>
<td>Outreach Activity: Monitoring Dive at a Coral Reef Ecosystem at Escambrón Beach and Condado Lagoon</td>
<td>PRCC: Check in at 07:15</td>
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<tr>
<td>08:00-12:00</td>
<td>Outreach Activity: Educational Workshop About the Role and Importance of Aquatic Macro-Invertebrates in Fresh Water Quality at the Botanical Garden of Rio Pedras</td>
<td>PRCC: Check in at 07:30</td>
</tr>
<tr>
<td>08:30-13:30</td>
<td>Outreach Activity: Restoration, Management and Conservation Project of the Las Cucharillas Marsh</td>
<td>PRCC: Check in at 08:00</td>
</tr>
<tr>
<td>13:00-18:00</td>
<td>Outreach Activity: Educational Workshop About the Role and Importance of Aquatic Macro-Invertebrates in Fresh Water Quality (Quebrada Sonadora River at El Yunque National Forest)</td>
<td>PRCC: Check in at 12:30</td>
</tr>
</tbody>
</table>
EDUCATION ACTIVITIES AND PUBLIC DISCUSSION

ASLO 2019 EDUCATION FAIR
Wednesday, 27 February 2019, 09:00 to 10:45
Location: Exhibit Hall A

Local middle school and high school students and teachers will participate in an education fair. This will include approximately 20 stations with aquatic science demonstrations and materials from organizations related to the aquatic sciences and conservation efforts. Teachers will receive activity manuals and will be advised on how to incorporate these activities and materials into their curriculum.

HIGH SCHOOL POSTER SESSION
Wednesday, 27 February 2019, 09:00 to 10:45
Location: Exhibit Hall A

This is an opportunity for high school students to present their own research. This event is in conjunction with the ASLO 2019 Education Fair. During this poster session, high school scientists will have the opportunity to describe their work and to receive positive feedback from some of the scientists in attendance at the meeting.
PUBLIC DISCUSSION—WHAT CAN AQUATIC SCIENTISTS DO FOR YOU?
Wednesday, 27 February 2019, 18:00 to 19:30
Location: Ballroom A

A panel of aquatic scientists and science communicators will respond to suggestions, comments, and questions from the public audience and community stakeholders. While the aquatic science research community has had limited success in communicating scientific results to the general public, the goal of this discussion is to seek advice and input from the public. There are many environmental problems that diminish the value of the beautiful island of Puerto Rico. Aquatic scientists would like the greater Puerto Rican community to help improve science communication, so we can all understand and improve the use of these valuable resources.

We ask the audience to consider the following questions:

1. What can aquatic scientists do for you?
2. What knowledge, in what form, and at what time would be useful to you?
3. How can we help open a continuing dialog for a better future of Puerto Ricans thriving with the environment?

Moderator: Bob Chen

Panelists and Area of Expertise:

- Jon Sharp, Professor Emeritus, University of Delaware: Estuarine Biogeochemistry
- Brian Palermo, Actor, Comedian: Improvisation, Science Communication
- Mike Pace, President of ASLO, University of Virginia: Aquatic Ecology
- Marie Thoms, Minnesota SeaGrant: Communications and Public Relations Manager
- Maritza Barreto, University of Puerto Rico Rio Piedras: Marine Geology and Coastal Processes
- Jorge Ortiz, University of Puerto Rico Rio Piedras: Limnology, Water Management

Financial support for this event has been received from the Ocean Sciences Division of the U.S. National Science Foundation.

ASLO STORYTELLERS
This will take place at EcoExploratorio (ecoexploratorio.org) on 26-28 February from 15:00-16:00. Scientists attending the meeting will engage eager young minds with storytelling from the ASLO book list. This activity is organized by the ASLO Education and Outreach Committee.

SPECIAL EVENTS
LOCAL ARTISANS OF PUERTO RICO - ARTEZANOS DE PUERTO RICO
Sunday, 24 February, 17:30 to 20:30
Location: 3rd Floor Foyer Area-PRCC

Immerse yourself in the culture of Puerto Rico by visiting artisans during the Opening Reception on Sunday evening. This select group will be available at the PRCC from 17:30 to 20:30 in the 3rd floor lobby and terrace area, adjacent to the reception. Creations include custom jewelry, clay works representative of San Juan architecture, small wood-carved sculpture, leather work, small paintings, and handmade wooden pens, and others. By visiting these artists, you will preserve the artisanal work of Puerto Rico and take home unique, handmade mementos from San Juan and ASLO 2019.

ART AND SCIENCE WORKSHOPS
WATER MARKS: WHERE ART MEETS SCIENCE
Monday, 25 February - Friday, 1 March, 12:00 to 14:30
Location: Room 206

How do artists embrace scientific concerns and translate them across diverse art forms? How can both disciplines benefit from an increased exchange of practices? What new insights and methods might we discover together? Water Marks activities will be facilitated by six artists from across the Americas and Puerto Rico during the 2019 Aquatic Sciences Meeting. Together artists and scientists will be exploring the materials and methods that artists use to investigate scientific themes focused on water. You will also be introduced to the work of local artists, providing you with a personalized vision of environmental challenges on the island. Through a week-long series of workshops, attendees can choose from a wide variety of hands-on activities including: media documentation using cellphone cameras and the 360 camera; guided explorations of the environment through movement; sound composition; and the creation of ephemeral installations using materials sourced from the area. Our goal is to cultivate greater understanding and collaboration between artists and scientists regarding aquatic environments, both during the conference and into the future. Workshops will be scheduled during lunch hours to avoid competition with the science sessions. No prior skills are required. Enjoyment guaranteed. If you have questions about this event, please contact the workshop organizers, Lauren Elder (lelderoakland@gmail.com) or Elizabeth Miller (elizabeth.miller@concordia.ca).
WORKSHOPS, AUXILIARY EVENTS, AND TOWN HALLS

AQUATIC SCIENCE EDUCATION AND OUTREACH WORKSHOP
Sunday, 24 February 2019, 13:00 to 17:00
Location: Room 208 C

This workshop will focus on helping participants develop ideas for effective education and outreach activities based on their research. Featuring active, hands-on learning, small group discussions, and guided inquiry, this workshop will include short presentations on exemplary projects in formal and informal education designed for K-12, undergraduate, graduate, and public audiences to stimulate ideas. Discussions of how people learn, how to assess the effectiveness of outreach activities, and how to develop projects that meet specific goals will help support project development. Participants are welcome to bring ideas that they would like to develop and share, and for which they would like to receive feedback. Organized by Cynthia Hagley (University of Minnesota, Duluth; chagley@d.umn.edu) and Bob Chen (University of Massachusetts Boston; bob.chen@umb.edu) Workshop is open to all attendees; walk-ins are welcome. While there is no need to register for this workshop, if you have any questions, please do not hesitate to email the organizers.

LOREX ORIENTATION WORKSHOP
This is an invitation-only event.
Sunday, 24 February 2019, 14:00 to 18:00
Location: Room 208 AB

The Limnology and Oceanography Research Exchange (LOREX) program Orientation Workshop will create a space for the principal investigators to provide an overview of the LOREX program, provide time for participants to ask questions and express concerns, and create a space for LOREX participants to meet each other at the beginning of the meeting. Additionally, LOREX participants will learn how to integrate improv skills to facilitate international collaboration and communicate their science more effectively from improv actor, Brian Palermo.

NON-LOREX ATTENDANCE
The LOREX program, provide time for participants to ask questions and express concerns, and create a space for LOREX participants to meet each other at the beginning of the meeting. LOREX orientation workshop is open to all attendees; walk-ins are welcome. While there is no need to register for this workshop, if you have any questions, please do not hesitate to email the organizers.

Tentative agenda follows:

14:00-14:30 Welcome, Personnel Introductions, Program Expectations
14:30-16:00 Improv to Improve Collaboration with Brian Palermo
16:00-16:30 Q&A with full group including former IRES students
16:30-17:00 Next Steps for the Program
17:00-17:45 Breakout sessions by site to give hosts and students an opportunity to discuss site-specific concerns/issues
17:45-18:00 Evaluation questionnaire

THE SCIENCE OF SCIENCE COMMUNICATION WORKSHOP
Sunday, 24 February 2019, 08:00 to 17:00
Location: Room 103 A

Science communication is a diverse and transdisciplinary field that has been gaining traction in recent years. In tandem, the expectation that scientists become proficient at science communication to all audiences is rising. Early career scientists (here defined as undergraduate students, graduate students and those within a few years of graduation from a graduate degree program) are particularly in need of effective science communication skills as they are either beginning their science career at the undergraduate level or developing their scientific specialty at the graduate level. In order to bridge the gap between the scientific and public audiences, this workshop will focus on oral and visual communication skills. To register for this event, please sign up for free at http://signup.com/go/oQqqOpo. If you would like more information, you can contact: Hayley Schiebel at hayley.schiebel@gmail.com.

MAKE YOUR SCIENCE COMMUNICATION MORE EFFECTIVE WORKSHOP
Sunday, 24 February 2019, 10:00 to 13:00
Location: Room 101

The Science Communication Lab in Puerto Rico will help you improve your communications skills so you can present your work more effectively. The Hollywood entertainment industry has traditionally been the source of both innovation and perfection of narrative elements. The same approach is applicable to the communication of science to all audiences, from the general public to fellow academics. Communications expert, Brian Palermo, will return to ASLO to lead the 2019 workshop. He is a professional actor and improv instructor (e.g., The Social Network, The Tonight Show with Jay Leno, the Groundlings Theatre, Los Angeles). It will build on the success of previous workshops by Palermo (2012, 2013, 2015, 2016, 2017, 2018) also organized by Jonathan Sharp (University of Delaware) and Adrienne Sponberg (ASLO). There will be a 3-hour workshop on Sunday (10:00-13:00) before the opening of the meeting. The workshop is free and is open to all, but participants must be pre-registered to participate. It will be a hands-on workshop with interaction between Palermo and audience members. Financial support for this workshop has been received from the Ocean Sciences Division of the US National Science Foundation. For more information about this event, please contact: Adrienne Sponberg at sponberg@aslo.org.

TEACHING INTRODUCTORY AQUATIC SCIENCES COURSES WORKSHOP
Monday, 25 February 2019, 12:30 to 14:00
Location: Room 101

Introductory aquatic and environmental science courses provide an excellent opportunity to prepare both majors and non-majors for thinking about some of the largest issues facing society such
as climate change and energy needs. Introductory courses can also serve to recruit students from highly diverse backgrounds into the field and/or to engage students of all majors to think deeply about environmental issues such as climate change. Often, these courses are large (>50 students). This workshop will provide strategies to overcome some of the challenges of these large introductory courses while making your teaching engaging, relevant, and effective for all students. A special emphasis is placed on a few big concepts that can help organize examples and knowledge for students to grapple with future ocean and environmental issues. Come ready to share ideas, to think actively about teaching and learning, and to discuss what works and why. For more information about this event, please contact: Robert Chen at bob.chen@umb.edu.

**IMPROV TO IMPROVE INTERNATIONAL COLLABORATIONS WORKSHOP**

Monday, 25 February 2019, 12:30 to 14:00  
Location: Room 102

Initiating and maintaining collaborative research programs can be daunting. The additional challenges inherent to international research (e.g., language and cultural differences) can stop many potentially fruitful collaborations before they even begin. Join communication expert, actor, and improv comedy instructor, Brian Palermo, to learn how Hollywood narrative structure can help you initiate research collaborations and how Improv training can improve communication across language and cultural barriers. For more information about this event, please contact: Adrienne Sponberg at asponberg@aslo.org

**FLOWCAM SOFTWARE WORKSHOP**

Monday, 25 February 2019, 12:30 to 14:00  
Location: Room 103 A

A demonstration of the newly released FlowCam software-VisualSpreadsheet 5.0. VisualSpreadsheet 5.0 allows the user to analyze multiple runs, enabling the comparison and contrast of data sets. "5.0" is a useful tool for longitudinal studies, time-series analyses, trend spotting, etc. The new FlowCam 8400 will be demonstrated as well. The workshop is geared towards existing users of the FlowCam.

For more information about this event, please contact: Harry Nelson at harry.nelson@fluidimaging.com or Frances Buerkens at frances.buerkens@fluidimaging.com.

**INTERDISCIPLINARY PRESENTATIONS WORKSHOP**

Tuesday, 26 February 2019, 12:30 to 14:00  
Location: Room 102

Limnology and Oceanography as multi-disciplinary sciences, combine aspects of physics, chemistry, biology, and geology; and often include socio-economics. At a meeting like this one, you could make a narrow-scope presentation, without setting up the reason for the project, using specialized terminology and not explaining the relevance of your results. That may be fine for a small number of specialty peers. However, if you want to reach and appeal to a broader interdisciplinary audience, you need another approach. This workshop will address things to make presentations more engaging and appealing to those outside your specialty as well as those in your narrow research area. This workshop is open to all. It is organized by Jonathan Sharp (University of Delaware) and Adrienne Sponberg (ASLO); using the skills of communications expert, Brian Palermo (a professional actor and improv instructor; e.g., The Social Network, The Tonight Show with Jay Leno, the Groundlings Theatre, Los Angeles). We will attend a few presentations early in the 2019 Puerto Rico ASLO Aquatic Sciences Meeting. At the workshop, we will discuss specialty presentations in general, with some specific reference to what we saw in those talks. The main goal is to illustrate how to make improvements to transform a specialty presentation into one that is memorable and compelling to a broad interdisciplinary audience. Similar workshops have been conducted with help from Palermo in 2013, 2015, 2016, 2017 and 2018. For more information about this event, please contact: Jonathan Sharp at jsharp@udel.edu.

**ELEMENTS OF A TEACHING PHILOSOPHY STATEMENT WORKSHOP**

Tuesday, 26 February 2019, 12:30 to 14:00  
Location: Room 208 C

Seeking a career in academia—in teaching, research, or both? Regardless of your academic career path, chances are, you will need to include a teaching philosophy statement in your application package. In this workshop we will cover the elements of a good teaching philosophy statement and how to customize statements to match job descriptions and get your application noticed. Participants will leave the workshop prepared to write their own teaching philosophy statement. For more information about this event, please contact: Kylla Benes at kylla.benes@umontana.edu. Please register for the event online at https://www.surveymonkey.com/r/QWGZ237.

**INTRODUCING AN OCEAN PROTEIN PORTAL TOWN HALL**

Tuesday, 26 February 2019, 12:30 to 14:00  
Location: Room 204

We are announcing the release of the Ocean Protein Portal, an NSF EarthCube Prototype website that allows scientists to explore ocean metaproteomic datasets for research purposes. The event will include a description and demo of the portal, followed by a Q&A period. For more information about this event, please contact: Mak Saito at msaito@whoi.edu.

**REAL-TIME QC OF PH DATA WORKSHOP**

Tuesday, 26 February 2019, 12:30 to 14:00  
Location: Room 209 C

The U.S. IOOS Quality Assurance / Quality Control of Real-Time Oceanographic Data (QARTOD) will kick off the creation of a RT
QC manual for pH observations. All are invited to this workshop to discuss the methods and challenges involved, identify tests to employ, and determine the scope of this manual. For more information about this event, please contact: Mark Bushnell at mark.bushnell@noaa.gov.

RESEARCH COLLABORATION ACROSS BORDERS PANEL DISCUSSION
Tuesday, 26 February 2019, 12:30 to 14:00
Location: Room 101

As challenges in the aquatic sciences become more global in nature, international research collaborations are increasingly prevalent, with over 35% of worldwide publications produced as a result of international partnerships. Join a panel of experts (TBA) that have successfully led international collaborations to discuss the unique set of challenges associated with conducting research internationally. Discussion topics will include identifying and contacting potential collaborators, strengthening ongoing collaborations, addressing language and cultural differences, and determining project goals, timelines, authorship, and logistics for fruitful collaborations. For more information about this event, please contact: Adrienne Sponberg at sponberg@aslo.org.

LIMNOLOGY & OCEANOGRAPHY WIKIWORKSHOP
Wednesday, 27 February 2019, 12:30 to 14:00
Location: Room 204

Wikipedia is among the most common ways people interact with information on the internet. When googling a search term, the Wikipedia article is generally the first hit and most read result, but many Limnology- and Oceanography-related Wikipedia articles are short and/or of low-quality. By improving the quality of Wikipedia articles in our research fields, we can improve general understanding and appreciation of Limnology and Oceanography. The Ecological Dissertations in the Aquatic Sciences (ECODAS) 2018 working group has launched an initiative to improve Wikipedia articles related to Limnology and Oceanography and we would like to expand this initiative to the larger ASLO community. The Limnology & Oceanography WikiWorkshop at ASLO 2019 will include a tutorial for editing Wikipedia pages and a short edit-a-thon. We will provide instructional materials for participants who want to organize similar workshops at their home institutions and we will advertise for future online edit-a-thons. For more information about this event, please contact: Margaret Brisbin at margaret.marsbrisbin@oist.jp.

PROJECT REDEFINING RECOGNITION TOWN HALL
Wednesday, 27 February 2019, 12:30 to 14:00
Location: Room 101

Project Redefining Recognition: Challenging Traditional Research Assessment—In our current system, research assessment and reward are weighted heavily towards scientific inputs and outputs, and research impact is measured in funding dollars awarded and research articles produced. The value of science, however, extends well beyond contributions to the research activity itself. Project Redefining Recognition is a cross-society initiative which seeks to develop a shared future vision and clear set of actions across the Earth, Space, and Environmental Sciences to expand research assessment to explicitly include, recognize, and reward actions that advance open science, broad communication and public engagement. As part of Project Redefining Recognition this session will look closely at the ways in which ASLO researchers are sharing and applying their science, and the challenges and opportunities in our current system to recognize and reward those efforts. ASLO Director of Communications and Science Adrienne Sponberg will moderate a panel discussion and audience Q&A with experts from funding agencies, academia and scientific journals about how key players are changing how they assess research impact. For more information about this event, please contact: Adrienne Sponberg at sponberg@aslo.org.

UPDATE AND STATUS OF THE ARCTIC-COLORS SCIENCE PROGRAM TOWN HALL
Wednesday, 27 February 2019, 12:30 to 14:00
Location: Room 209 C

Arctic-COLORS (AC) is a candidate NASA Ocean Biology and Biogeochemistry Program field campaign program. A NASA panel has reviewed and is endorsing the AC Science Plan. NASA will be moving forward on developing a plan for its implementation. AC proposes an integrative, interdisciplinary approach that combines detailed process studies, field surveys, advanced modeling tools, and enhanced remote-sensing retrievals from various platforms (ship-based, in-situ autonomous, airborne, and space-based). AC aims to quantify the response of the Arctic coastal environment to global change and anthropogenic disturbances—an imperative for developing mitigation and adaptation strategies for the region. The Arctic-COLORS field campaign represents the first attempt to study the nearshore coastal Arctic (from riverine deltas and estuaries out to the coastal sea) as an integrated land-ocean atmosphere-biosphere system, as is required to determine present and future impacts of terrigenous, atmospheric and oceanic fluxes on coastal ecology, biogeochemistry and ecosystem services in the context of environmental (short-term) and climate (long-term) changes. An update on the status of the Arctic-COLORS will be presented with Q&A and community input to follow. For more information about this event, please contact: Joe Salisbury at joe.salisbury@unh.edu.

NATIONAL SCIENCE FOUNDATION OCEAN SCIENCES TOWN HALL
Wednesday, 27 February 2019, 18:00 to 21:00
Location: Room 204

An update from the U.S. National Science Foundation, Division of Ocean Sciences, regarding recent developments in research funding, infrastructure, and education. A budgetary outlook and
discussion of the Division of Ocean Sciences initiatives throughout the Division portfolio will be presented. The Division Director will provide a brief presentation, to be followed by a question-and-answer session. National Science Foundation Program Officers will also be present to provide additional information as needed. For more information about this event, please contact: Terrence Quinn at terrymquinn@gmail.com.

**MIXOTROPHY WORKSHOP**

**Wednesday, 27 February 2019, 18:00 to 21:00**
Location: Room 103 B

During this workshop, participants will discuss ideas and future plans relating to SS062: Mixotrophic Protists: An Underrated Majority In Marine And Freshwater Ecosystems? For more information about this event, please contact: Stella Berger at berger@igb-berlin.de.

**STRATEGIES FOR TRANSBOUNDARY HABS MANAGEMENT TOWN HALL**

**Thursday, 27 February 2019, 12:30 to 14:00**
Location: Room 103 B

All ASLO participants are invited to participate in a town-hall style gathering to share strategies for transboundary HABs management. Many waters suffering from Harmful Algal Blooms are “transboundary”—shared by multiple political jurisdictions. This geo-political reality presents unique challenges and opportunities for HABS research and management. Facilitators will share perspectives from the binational Great Lakes region. Most of the time will be spent asking participants to share their perspectives or experiences in transboundary collaboration to synthesize, translate, and/or deliver science to HABs managers. Participants will also be asked to share experiences with engaging managers to understand their science needs. They will also be asked to share lessons learned about what hasn’t worked and how we can we use those lessons to improve future activities. Finally, participants will document (for their keeping), and have the opportunity to share with others, the strategies from this town hall discussion they plan to take back to their work. For more information about this event, please contact: Victoria Pebbles at vpebbles@glc.org.

**APPLYING TO GRADUATE SCHOOL WORKSHOP: TIPS FROM CURRENT STUDENTS**

**Thursday, 27 February 2019, 12:30 to 14:00**
Location: Room 103 A

Applying to graduate school is a long process and can feel overwhelming at first. In this workshop, future graduate students will hear from current students in a variety of fields and programs who have recently gone through this process. We will discuss many aspects of the application process, including deciding where to apply, writing a personal statement, asking for recommendation letters, and the increasingly important grad school interview. We will focus primarily on ASLO-related fields but hope that this workshop will be valuable to students considering any field of study. This will be a very active workshop—by students, for students. Our goal is that each attendant will leave with a concrete “game plan” for attacking application season and achieving their goals. All are welcome, but this event will be especially helpful to students planning to apply in the next 1-2 years. Advance registration is recommended by filling out the form at https://goo.gl/forms/8U6yALw4tEbiGnLLg1 Contact Noelle Held (nheld@whoi.edu) for more information.

**TEACHING AND MENTORING UNDER THE THREAT OF CLIMATE CHANGE**

**Thursday, 28 February 2019, 12:30 to 14:00**
Location: Room 204

During this workshop, we will discuss strategies for effectively conveying information to students about the impacts of climate change on aquatic environments, as well as methods for combating the anxiety or apathy that may occur while living and working under this existential threat. Climate change is upon us and we are being bombarded with information about the negative effects of global warming. People from all walks of life—scientists, educators, politicians, journalists, and young and adult citizens—talk endlessly about this urgent issue, however, the relentless rhetoric about climate change impacts may result in fatigue and apathy from too much information about a seemingly insurmountable problem. Through guided discussions, we will answer questions, share ideas, and discuss what the best approach may be for educators and mentors to effectively reach students and mentees. But most importantly, we will need to hear from students and mentees about positive and effective ways to teach climate change awareness to new generations of students and scientists while increasing resiliency and optimism about the future for all. For more information about this event, please contact: Diana Varela at dvarela@uvic.ca.

**WRITING EFFECTIVE ABSTRACTS AND SUMMARIES WORKSHOP**

**Thursday, 28 February 2019, 12:30 to 13:30**
Location: Room 209 C

Journal articles are the key means of communicating scientific research. Unfortunately, academic texts are often characterized by a complicated writing style and abundance of jargon, which reduces clarity and effectiveness. Join ASLO Raelyn Cole Editorial Fellows Dr. Laura Falkenberg and Dr. Kelsey Poulson-Ellestad to explore these issues for critical components of your scientific articles, including the title, abstract, keywords, and summary. Our goal for this workshop is to enhance your awareness of these important issues, and increase your ability to write articles that are clear and accessible to a broad audience. For more information about this workshop, please contact Kelsey Poulson-Ellestad at kpoulsonellestad@roosevelt.edu.
TEACHING AQUATIC BIOLOGY WITH AQUAPONICS WORKSHOP
Friday, 1 March 2019, 12:30 to 14:00
Location: Room 103 A

We use fairly inexpensive catalogs bought and DIY aquaponic and hydroponic systems as the context and background for classes in introductory biology, microbiology and more. We have developed free digital content to support this pedagogy. The workshop will focus on digital content delivery as well as modeling systems we have developed for classroom and lab environments. For more information about this event, please contact: Christopher Perle at crperle@gmail.com.

MEETINGS AND WORKING GROUPS

DEEP SEARCH ANNUAL PROJECT MEETING
Sunday, 24 February 2019, 8:00 to 17:00
Location: Room 103 B

Deep Search is a large research program funded by BOEM, USGS, and NOAA OER under the NOPP umbrella. The program is two years into its 5-year duration and three research expeditions have been carried out so far. This meeting will bring together the PIs, their research labs, representatives of the funding agencies, the project’s science review board, and other collaborators to discuss the project. This meeting will review the progress made to date, the plans for the upcoming field work, and discuss plans for synthesis and other potential projects that may not have been part of the original proposal. We welcome members of the community to join the meeting and learn more about the project and potential collaborations. For more information about this event, please contact: Erik Cordes at ecordes@temple.edu.

SOCIETY FOR WOMEN IN MARINE SCIENCE (SWMS) MEETING
Tuesday, 26 February 2019, 19:00 to 19:30
Location: Room 204

We welcome anyone who is currently a member of the Society for Women in Marine Science (SWMS) or anyone who would like to become a member of SWMS to come to this event. We will be providing some snacks and refreshments. Please RSVP here (https://goo.gl/mKQQPq) if you will be attending the meet up so that we can get an accurate headcount. Everyone is welcome to attend, even if they are not participating in the conference. For more information about this event, please contact: Sophie Chu at sochu@uw.edu.

JPR EDITORIAL BOARD GET TOGETHER AND MEETING
This is an invitation-only event.
Wednesday, 27 February 2019, 12:30 to 14:00
Location: Room 208 AB

A chance for all to get to know one another, learn who does what, and offer ideas for improving and strengthening the journal. The informal meeting will be run by the Editor-in-Chief of JPR (John Dolan) and Ian Sherman of Oxford University Press and open only to the Associate Editors and Editorial Board Members of JPR. For more information about this event, please contact: John Dolan at dolan@obs-vlfr.fr.

BLUE CARBON DISCUSSION GROUP
Thursday, 28 February 2019, 12:30 to 14:00
Location: Room 208 C

Following the celebration of the Special Session 19: “Blue Carbon, from the ecosystem to the markets,” this workshop will serve to discuss in-depth some of the key issues presented during the session and to propose new ideas and strategies for this research field. For more information about this event, please contact: Miguel Mateo at mateo@ceab.csic.es.

SOCIETY EVENTS

OPENING MIXER RECEPTION
Sunday, 24 February 2019, 18:30 to 20:30
Location: 3rd Floor Terrace and Foyer

Be sure to arrive in time for the opening mixer on Sunday evening. We will celebrate the culture of Puerto Rico with local artisans displaying their crafts, entertainment to get us into the Latin spirit, and food and drinks with the flavors of the culture that created them. Rums of Puerto Rico will be hosting a rum bar so that attendees can taste the various rums available on the island. (Soft drinks also will be available.) This will be a great time to meet with colleagues and enjoy the beauty of San Juan from the terrace at the Puerto Rico Convention Center. Artesanos de Puerto Rico (Artisans of Puerto Rico) will be set up during the reception. Select unique creations include custom jewelry, clay works representative of San Juan architecture, small wood-carved sculpture, leather work, small paintings, and handmade wooden pens, and others. You will take home unique, handmade mementos from San Juan and ASLO 2019.

ASLO FELLOWS AND MEMBERSHIP RECEPTION
Monday, 25 February 2019, 17:30 to 18:30
Location: Ballroom B

A reception honoring ASLO fellows and sustaining fellows will precede the annual business meeting on Monday evening. This will be a great time to meet and to talk to ASLO officers and board members and to congratulate ASLO fellows. Reception food and drink will be served. Everyone is encouraged to attend the business meeting and the membership reception—especially new ASLO members and student members. The timing is planned so you can attend the business meeting and reception before you head out to the student or early career mixer.
ASLO BUSINESS MEETING
Monday, 25 February 2019, 18:30 to 19:30
Location: Ballroom A

The annual ASLO Business Meeting will be held during the conference on Monday evening. A reception honoring ASLO fellows and sustaining fellows will precede the business meeting, and food and drinks will be available during that time. The business meeting is open to all attendees—members and non-members. This will be a great opportunity to meet and talk to the ASLO officers, board members, and staff.

STUDENT EVENTS

STUDENT WORKER TRAINING SESSION
Students who have signed up to serve as student worker room monitors must attend this training session. Meet at 17:30 near the registration desk area on the first floor (near the entrance to the exhibit hall). Please contact Sue Rulla at suer@sgmeet.com for more information or if you have a travel conflict and will not be available to attend the training session on Sunday.

SUNDAY EVENING PUB CRAWL
Grab an Uber to Old San Juan and join fellow students for the opening pub crawl following the opening mixer on Sunday evening. This is an opportunity to meet up with student participants before the meeting begins! Location: La Taberna Lúpulo at 151 Calle San Sebastián, San Juan, 00901.

ASLO STUDENT MIXER
Monday, 25 February 2019, 19:30 to 20:30
Location: 3rd Floor Terrace and Lobby

Come network with senior scientists and other students at the annual student mixer. This will follow the ASLO business and membership meeting on Monday evening. A limited number of drink tickets will be available!

ASLO STUDENT WORKSHOP - I NEED THE DEGREE AND THE MONEY
Tuesday, 26 February 2019, 12:30 to 14:00
Location: Room 104

A panel of experts will provide tips and tricks on the negotiations process of the job search. A limited number of box lunches will be available to those who participate in the workshop.

ASLO STUDENT BEACH CLEANUP
Thursday, 28 February 2019, 12:30 to 14:00
Exact location and departure location will be announced.

Join other students as they head over to a local beach to help beautify the area! A limited number of bag lunches will be provided by ASLO to those who participate. Please RSVP to tiaranmoore@gmail.com if you plan to participate in the beach cleanup.

EARLY CAREER EVENTS

EARLY CAREER SOCIAL MIXER
Monday, 25 February 2019, 19:30 to 20:30
Location: 2nd Floor Prefunction Area

A “meet and mix” reception is planned and organized by members of the ASLO early career (EC) committee to give early career members an opportunity to provide feedback on various topics relevant to them, including any concerns or expectations as an early career member. This is a social gathering for early career members to get to know each other and to network. Beverages and snacks will be served, and drink tickets will be available at the door (for soft drinks and limited alcoholic beverages). Come and meet the ASLO Board and members of the EC committee!

ASLO EARLY CAREER WORKSHOP - HOW TO SUCCESSFULLY WRITE PROPOSALS AND RECEIVE FUNDING
Wednesday, 27 February 2019, 12:30 to 14:00
Location: Room 102

A scientist's career depends mainly on research funds. Therefore, writing good applications is fundamental for career building. Based on a recent questionnaire sent to ASLO’s early career researchers (ECRs), we offer a workshop on how to successfully write proposals and receive funding. We will invite both representatives of science foundations (e.g. NSF) and experienced scientists who have been successful in obtaining research funding from various agencies and organizations. There are many possibilities for funding such as the national research foundations for basic and applied sciences, local governments, private foundations, etc. To better navigate through the many funding options, the workshop aims to give you helpful advice. There will be time for questions related to individual cases. We also hope to provide helpful suggestions on how to write a good proposal based on practical aspects which will be put into practice before the writing process begins. The workshop also will allow for active exchange of knowledge and experience among senior scientists and those who participate. ASLO has high interest to provide solid advice pertaining to successful research career development of the community’s young talents, i.e. you. For more information about this workshop, please contact: Hans-Peter Grossart at hgrossart@igb-berlin.de.

ASLO MEETING MENTOR PROGRAM

The ASLO Meeting Mentor Program is open to any participant looking for guidance on navigating the meeting and making new connections. Mentees are grouped with experienced scientists (mentors) who will provide guidance on navigating the meeting and introduce them to other scientists throughout the week. If you are participating as either a mentor or a mentee, please wear your badge ribbon that identifies you as a participant in this program. Ribbons will be available at registration when you pick up your badge and meeting materials. Room 203 on the 2nd floor of the convention...
center is available to mentors and mentees throughout the week. This is set aside as a place to meet and discuss the week’s activities.

MEETING FOR ASLO MEETING MENTORS AND MENTEES
Tuesday, 26 February, 08:00 to 08:45
Location: Ballroom B

This is a time for those who signed up to be ASLO meeting mentors and mentees and will take place first thing Tuesday morning prior to the first concurrent sessions. A light breakfast will be available to those who are participating.

ASLO MULTICULTURAL PROGRAM
Starting in 1990, the ASLO Multicultural Program has brought over 1,000 diverse undergraduate and graduate students to the annual ASLO meetings. The program features pre-conference dinner and field trip, meeting-mentors to help guide the students, a student-symposium, and various other activities. The goal of the program is to increase the human diversity of aquatic scientists and supports the full cost of participation in the meeting including travel, hotel, food and meeting registration. The program for 2019 will feature a special field trip taking advantage of the local environment around in Puerto Rico and a service learning activity. Mentors and students will go to some sessions together, and mentors will help guide their mentees through the meeting and introduce them to other scientists in the field. If you have questions about the program or the requirements, please contact Benjamin Cuker, benjamin.cuker@hamptonu.edu, ASLO Multicultural Program Director.

ASLO 2019 MULTICULTURAL PROGRAM MEETING OF MENTORS AND MENTEES
Sunday, 24 February , 16:00 to 18:00
Location: Ballroom B-3rd Floor

SOCIAL AND EVENING EVENTS
JAM SESSION
Wednesday, 27 February 2019, 20:00 to 23:00
Location: TBD

ASLO scientists-musicians will take the stage to jam for everyone! This event will be an opportunity to enjoy the musical talents of fellow scientists, mercifully supported by a great local band. Plan to experience an evening full of fun that will include dancing and making (or just enjoying) music. Having occurred during the 2010, 2012, 2014, and 2016 Ocean Sciences Meetings, we are continuing the tradition at this meeting. Musicians can bring their own musical instruments, or they can borrow one from the band on stage. For more information on this exciting event, contact Anne Deininger at anne.deininger@posteo.de or John Downing at downing@d.umn.edu. If you’d like to play or sing, please sign up by contacting Anne or John, add your name to the list near the meeting registration area, or just show up!

FIESTA!
Advance tickets are required.
Friday, 1 March 2019, 18:00 to 21:00
Location: 3rd Floor Terrace

An evening carefully planned to enhance the venue of San Juan. You can salsa dance to the sounds of one of San Juan’s finest bands and enjoy a buffet with lots of local flair. You can salsa dance to the sounds of one of San Juan’s finest bands and enjoy a buffet with lots of local flair. A ticket is required for this event, and space is limited. You must purchase tickets in advance, and they may not be available on site. Cost: $75.00 per person for professionals including those who are early career; $45.00 for students.

OUTREACH ACTIVITIES
San Juan’s location makes it a natural host for an Aquatic Sciences Meeting with its freshwater ecosystems, extensive mangroves, seagrass beds, and the surrounding coral reefs. When Hurricane Maria swept across the island in September 2017, the meeting organizers and all of those in ASLO felt a strong attachment to the citizens of Puerto Rico and their struggles amid the devastation. Outreach activities were planned to allow the ASLO community to do its part by providing lots of hands and feet willing to work to help in the restoration efforts while they were here. During this week, meeting participants have signed up to take part in educational activities, volunteer opportunities, and culturally relevant events that will focus on environmental and ecosystem restoration as well as the resilience of the land. Almost of the outreach activities that are planned sold out in October. Participants who are participating in the outreach activities should have been contacted to receive information and instructions from the organizer. If you need more information, please visit the web site at: https://aslo.org/sanjuan2019/outreach. Advance registration is required for the outreach activities.

PRESENTER INFORMATION
ON-SITE SUBMISSION OF ORAL PRESENTATIONS
All oral presentations will need to be submitted in the Presentation Room, Room 207, located on the 2nd floor of the Puerto Rico Convention Center. This room will be staffed and run by audio visual technicians. Presenters may submit their presentations beginning at 15:00 on Sunday, 24 February. If you were assigned to give a talk, and you did not upload your slides in advance, you will need to upload your presentation preferably 24 hours in advance. Those who are presenting on Monday need to arrive in time to upload on Sunday. All presenters are required to check in at the Presentation Room. This is the single most important action you will take to ensure your presentation is a success. Even if you submitted your presentation in advance via the online upload link, please check in at the Presentation Room to make sure that your presentation was
received. This will be your opportunity to review all fonts, images, and animations appear as expected and that all audio or video clips are working properly. You also can make minor changes to your presentation at this time. You must tell the A/V technician you have finalized your presentation file before you leave the Presentation Room. Be sure to bring a backup copy of your presentation with you to the meeting. USB/Flash drives are preferred. Please make sure you have all power, video, and networking adapters with you before you come to the Presentation Room.

Note: Personal laptops cannot be used in the session rooms. Dedicated internet access will not be available in the session rooms and cannot be used for presentations.

Hours for the presentation room are listed below:

Sunday ................................................................. 15:00 to 21:00
Monday ............................................................... 07:00 to 19:00
Tuesday ............................................................... 07:00 to 19:00
Wednesday ....................................................... 07:00 to 19:00
Thursday ............................................................ 07:00 to 19:00
Friday ................................................................. 07:00 to 17:00

POSTER SESSIONS AND RECEPTIONS
Poster sessions and receptions are planned Tuesday and Thursday from 17:30 to 19:00 in Exhibit Hall B. Posters will be organized in topical and session groupings for the entire meeting to maximize opportunities for viewing. Though poster presenters have been assigned a specific day for interaction with attendees during the poster session, you may be at your poster any time the area is open. The poster session times do not conflict with concurrent oral presentations.

POSTER SET UP AND TEARDOWN
Poster numbers are consecutive to placement on poster boards in the exhibit/poster hall. Poster numbers are included in this book under the scientific program schedule. Posters can go up Monday, 25 February, from 12:30 to 17:00 and will remain in place through 19:00 on Thursday, 28 February. They must be removed by 21:00 following the final poster session on Thursday or from 09:00 to 12:00 on Friday. Important note regarding poster presentations: The convention decorator may discard posters if the presenting author does not dismantle and remove them according to the posted times.

POSTER PRINTING IN SAN JUAN
If you had your poster printed locally by Go Print, you may pick it up on Monday from 08:00 to 17:00 near the meeting registration desk. Please call or contact Go Print to confirm that your order will be ready for pick up when you arrive: (787) 200-8085 or http://www.goprintpr.com/
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<th>Time</th>
<th>Room</th>
<th>Session Title</th>
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<td>SS036</td>
<td>Ecological Applications of Earth System Models and Regional Climate Models</td>
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<td>Adaptation of Aquatic Biodiversity to Global Change</td>
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<td>SS063</td>
<td>Ocean, Coastal, and Freshwater Acidification: Research and Education</td>
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<td>Eastern Boundary Upwelling Systems in a Changing Ocean: Recent insights and future perspectives</td>
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<td>10:30-11:00</td>
<td>SS002</td>
<td>COFFEE BREAK (Ballroom A Foyer-3rd Floor)</td>
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<td>11:00-12:30</td>
<td>SS036</td>
<td>PLENARY AND AWARD TALK SESSION (Ballroom A)</td>
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<td>SS013</td>
<td>2019 Ruth Patrick Award Acceptance: Jennifer Tank, University of Notre Dame, Notre Dame, IN</td>
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<td>SS037</td>
<td>Plenary Presentation Via Video: U.S. Senator Sheldon Whitehouse (D-RI), Newport, RI</td>
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<td>12:30-14:00</td>
<td>SS002</td>
<td>LUNCH-WORKSHOPS AND ANCILLARY MEETINGS PLUS ENTERTAINMENT ON THE TERRACE</td>
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<td>SS005</td>
<td>New Views on the Biological Transformation of Metals in the Marine Environment</td>
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<td>SS050</td>
<td>Improving Coral Reef Resilience with Transnational Science</td>
</tr>
<tr>
<td></td>
<td>SS009</td>
<td>Effects of Storm Events on Aquatic, Coastal, and Oceanic Environments and Ecosystems</td>
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<td></td>
<td>SS009</td>
<td>Hagase la luz: Light in aquatic ecosystems: Variability and ecological consequences</td>
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<tr>
<td></td>
<td>SS027</td>
<td>Viruses</td>
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<tr>
<td></td>
<td>SS010</td>
<td>Exploring What Makes Undergraduate Research Experiences Work: Evidence from students and mentors</td>
</tr>
<tr>
<td></td>
<td>SS001</td>
<td>New Views on the Biological Transformation of Metals in the Marine Environment</td>
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<tr>
<td></td>
<td>SS004</td>
<td>Urban Ecosystems</td>
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<tr>
<td></td>
<td>SS028</td>
<td>The Multiple Challenges of Rapidly Changing Tropical Freshwater Ecosystems</td>
</tr>
<tr>
<td></td>
<td>SS003</td>
<td>Adventures, Challenges, and Benefits of Conducting International Collaborative Research</td>
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<tr>
<td>17:30-18:30</td>
<td>SS002</td>
<td>ASLO Fellows and Membership Reception (Ballroom B Foyer-3rd Floor)</td>
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<tr>
<td>18:30-19:30</td>
<td>SS002</td>
<td>ASLO Business Meeting / Membership Meeting (Ballroom A)</td>
</tr>
<tr>
<td>19:30-20:30</td>
<td>SS002</td>
<td>Student Mixer (Terrace and Foyer-3rd Floor)</td>
</tr>
<tr>
<td></td>
<td>SS013</td>
<td>Early Career Mixer (Prefunction Area-2nd Floor)</td>
</tr>
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</table>
## Tuesday Schedule-at-a-Glance

<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00-08:45</td>
<td>CS010</td>
<td>ASLO Mentor Program Meeting (includes light breakfast)</td>
</tr>
<tr>
<td>09:00-10:30</td>
<td>CS010</td>
<td>Nitrogen Biogeochemistry and Cycling</td>
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<tr>
<td></td>
<td>SS005</td>
<td>ASLOMP Student Symposium</td>
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<tr>
<td></td>
<td>SS013</td>
<td>Adaptation of Aquatic Biodiversity to Global Change</td>
</tr>
<tr>
<td></td>
<td>SS034</td>
<td>Forecasting is the Future: Advancing Methods and Applications of Forecasting in the Aquatic Sciences</td>
</tr>
<tr>
<td></td>
<td>SS039</td>
<td>Effects of Storm Events on Aquatic, Coastal, and Oceanic Environments and Ecosystems</td>
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<tr>
<td></td>
<td>CS007</td>
<td>Hypoxia</td>
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<tr>
<td></td>
<td>CS013</td>
<td>Dissolved Organic Matter-DOC, DON, DOP, fDOM, cDOM</td>
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<tr>
<td></td>
<td>CS038</td>
<td>Real World Ecology Landscapes - Up-scaling Community Ecology Experiments in Aquatic Systems</td>
</tr>
<tr>
<td></td>
<td>CS028</td>
<td>Zooplankton Ecology and Physiology</td>
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<tr>
<td></td>
<td>CS043</td>
<td>Beyond the Numbers: Strategies for Inclusive Practices Across the Aquatic Sciences</td>
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<tr>
<td></td>
<td>SS011</td>
<td>Anatomy of a Bloom: Unraveling drivers of biomass change and carbon dynamics over the annual cycle</td>
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<tr>
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<td>CS020</td>
<td>Fish and Fisheries</td>
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<tr>
<td>09:00-10:30</td>
<td>CS010</td>
<td>Nitrogen Biogeochemistry and Cycling</td>
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<td></td>
<td>SS005</td>
<td>ASLOMP Student Symposium</td>
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<tr>
<td></td>
<td>SS063</td>
<td>Ocean, Coastal, and Freshwater Acidification; Research and Education</td>
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<tr>
<td></td>
<td>SS034</td>
<td>Forecasting is the Future: Advancing Methods and Applications of Forecasting in the Aquatic Sciences</td>
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<tr>
<td></td>
<td>SS039</td>
<td>Effects of Storm Events on Aquatic, Coastal, and Oceanic Environments and Ecosystems</td>
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<tr>
<td></td>
<td>CS023</td>
<td>Community Ecology</td>
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<td>CS013</td>
<td>Dissolved Organic Matter-DOC, DON, DOP, fDOM, cDOM</td>
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<tr>
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<td>SS011</td>
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<tr>
<td></td>
<td>SS059</td>
<td>Socio-ecological Research for Actionable Sustainable Solutions: examples, perspectives and challenges</td>
</tr>
<tr>
<td>10:30-11:00</td>
<td>CS010</td>
<td>PLENARY AND AWARD TALK SESSION</td>
</tr>
<tr>
<td>11:00-12:30</td>
<td>SS005</td>
<td>2019 Redfield Award Acceptance: Stephen R. Carpenter, University of Wisconsin-Madison, Madison, WI</td>
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<tr>
<td></td>
<td>SS063</td>
<td>Plenary Presentation: Maria Falcon, Television Producer and Show Host, San Juan, PR</td>
</tr>
<tr>
<td>12:30-14:00</td>
<td>CS010</td>
<td>LUNCH-Student Workshop, Other Workshops and Auxiliary Meetings, Plus Entertainment on the Terrace (Salsa Dance Lessons)</td>
</tr>
<tr>
<td>14:00-15:30</td>
<td>SS005</td>
<td>Nitrogen Biogeochemistry and Cycling</td>
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<td></td>
<td>SS063</td>
<td>ASLOMP Student Symposium</td>
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<tr>
<td></td>
<td>SS059</td>
<td>Socio-ecological Research for Actionable Sustainable Solutions: examples, perspectives and challenges</td>
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<tr>
<td>15:30-15:45</td>
<td>CS025</td>
<td>Phytoplankton Ecology and Physiology</td>
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<tr>
<td></td>
<td>CS006</td>
<td>Trace metals</td>
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<tr>
<td></td>
<td>SS063</td>
<td>Ocean, Coastal, and Freshwater Acidification; Research and Education</td>
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<td></td>
<td>SS034</td>
<td>Forecasting is the Future: Advancing Methods and Applications of Forecasting in the Aquatic Sciences</td>
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<td></td>
<td>SS039</td>
<td>Effects of Storm Events on Aquatic, Coastal, and Oceanic Environments and Ecosystems</td>
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<td>CS023</td>
<td>Community Ecology</td>
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<td>CS013</td>
<td>Dissolved Organic Matter-DOC, DON, DOP, fDOM, cDOM</td>
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<tr>
<td></td>
<td>CS024</td>
<td>Reconstructing Adaptive Responses in Aquatic Ecosystems Using Ancient DNA and Resurrection Ecology</td>
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<tr>
<td></td>
<td>CS028</td>
<td>Zooplankton Ecology and Physiology</td>
</tr>
<tr>
<td></td>
<td>CS070</td>
<td>Engaging Underrepresented Students in Ocean Science to Promote a Diverse Inclusive Workforce</td>
</tr>
<tr>
<td></td>
<td>CS060</td>
<td>The Advent of Sampling Biological Processes in Aquatic Systems Using Autonomous Platforms</td>
</tr>
<tr>
<td></td>
<td>SS059</td>
<td>Socio-ecological Research for Actionable Sustainable Solutions: examples, perspectives and challenges</td>
</tr>
<tr>
<td>17:30-19:00</td>
<td>CS025</td>
<td>POSTER SESSION and Reception</td>
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</tbody>
</table>

Note: CS = Poster Session; SS = Student Workshop; C = Seminar; AB = Annual Business Meeting; B = Break; A = Award; P = Poster; O = Official; E = Entertainment; L = Lunch; D = Dinner.
<table>
<thead>
<tr>
<th>Time</th>
<th>Room</th>
<th>Topic</th>
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<tbody>
<tr>
<td>09:00-10:30</td>
<td>101</td>
<td>Microbial Ecology and Physiology</td>
</tr>
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<td></td>
<td></td>
<td>Acidiification</td>
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<tr>
<td></td>
<td>102</td>
<td>Turning the Lights on for Deep-Sea Ecosystems in the Caribbean, Gulf of Mexico, and US SE Atlantic</td>
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<tr>
<td></td>
<td>103 A</td>
<td>Biodiversity</td>
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<tr>
<td></td>
<td>103 B</td>
<td>Coastal Ecosystems</td>
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<tr>
<td></td>
<td>104</td>
<td>Gas Fluxes</td>
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<td></td>
<td>201</td>
<td>Fish and Fisheries</td>
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<tr>
<td></td>
<td>202</td>
<td>Engaging Underrepresented Students in Ocean Science to Promote a Diverse Inclusive Workforce</td>
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<tr>
<td></td>
<td>204</td>
<td>Nitrogen Biogeochemistry and Cycling</td>
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<tr>
<td></td>
<td>208 AB</td>
<td>Carbon Cycling Across Gradients in the Land-Ocean Continuum</td>
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<td></td>
<td>208 C</td>
<td>Phytoplankton-bacteria Interactions: Molecular insights, chemical drivers, and behavioral dynamics</td>
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<tr>
<td></td>
<td>209 AB</td>
<td>Halophila Stipulacea: Ecology and management of the globally invasive seagrass</td>
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<td></td>
<td>209 C</td>
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<tr>
<td>09:00-10:45</td>
<td></td>
<td>EDUCATION FAIR AND POSTER SESSION FOR LOCAL HIGH SCHOOL STUDENTS (Exhibit Hall A)</td>
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<tr>
<td>10:30-11:00</td>
<td></td>
<td>COFFEE BREAK (Exhibit Hall B)</td>
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<tr>
<td>11:00-12:30</td>
<td></td>
<td>PLENARY AND AWARD TALK SESSION (Ballroom A)</td>
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<td></td>
<td>2019 Ramon Margalef Award for Excellence in Education Acceptance: David Fields, Bigelow Lab for Ocean Sciences, East Boothbay ME</td>
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<td>2019 Yentsch-Schindler Early Career Award Acceptance: Robert Spencer, Florida State University, Tallahassee, FL</td>
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<td></td>
<td>Plenary Presentation: Ada Monzon, Local Television Meteorologist, San Juan, PR</td>
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<tr>
<td>12:30-14:00</td>
<td></td>
<td>LUNCH-EARLY CAREER WORKSHOP, OTHER WORKSHOPS AND AUXILIARY MEETINGS PLUS ENTERTAINMENT ON THE TERRACE (San Juan Music)</td>
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<tr>
<td>14:00-15:30</td>
<td></td>
<td>Microbial Ecology and Physiology</td>
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<td>Acidiification</td>
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<tr>
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<td>103 B</td>
<td>Gas Fluxes</td>
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<tr>
<td></td>
<td>104</td>
<td>Large Rivers of the World as Pipes, Chimneys and Reactors</td>
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<tr>
<td></td>
<td>201</td>
<td>The Next Generation: Undergraduate Research in Puerto Rico and the US Virgin Islands</td>
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<tr>
<td></td>
<td>202</td>
<td>Nitrogen Biogeochemistry and Cycling</td>
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<td>Carbon Cycling Across Gradients in the Land-Ocean Continuum</td>
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<tr>
<td></td>
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<td>Tracing the Natural and Anthropogenic Carbon Cycle Across Aquatic Environments</td>
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<td></td>
<td>208 C</td>
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<td></td>
<td>209 AB</td>
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<td>209 C</td>
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<tr>
<td>15:30-15:45</td>
<td></td>
<td>COFFEE BREAK (Exhibit Hall B)</td>
</tr>
<tr>
<td>15:45-17:30</td>
<td></td>
<td>Microbial Ecology and Physiology</td>
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<td>Acidiification</td>
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<tr>
<td></td>
<td>101</td>
<td>Turning the Lights on for Deep-Sea Ecosystems in the Caribbean, Gulf of Mexico, and US SE Atlantic</td>
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<tr>
<td></td>
<td>102</td>
<td>Mixotrophic Protists: An underrated majority in marine and freshwater ecosystems?</td>
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<tr>
<td></td>
<td>103 A</td>
<td>Physical Dynamics</td>
</tr>
<tr>
<td></td>
<td>103 B</td>
<td>The 2017 Hurricane Season: Challenges, Innovations, and Resiliency in Formal and Informal Education</td>
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<tr>
<td></td>
<td>104</td>
<td>Large Rivers of the World as Pipes, Chimneys and Reactors</td>
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<td>201</td>
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<tr>
<td></td>
<td>202</td>
<td>Primary Production</td>
</tr>
<tr>
<td></td>
<td>204</td>
<td>The Challenge of Coral Reef Rehabilitation in the Context of Climate Change</td>
</tr>
<tr>
<td></td>
<td>208 AB</td>
<td>Tracing the Natural and Anthropogenic Carbon Cycle Across Aquatic Environments</td>
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<tr>
<td></td>
<td>208 C</td>
<td>Ecosystem Based Management: Holistic Approaches to Effective Management of Regional Ecosystem</td>
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<td>209 AB</td>
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<td>209 C</td>
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<tr>
<td>18:30-20:00</td>
<td></td>
<td>Public Discussion--“What Can Aquatic Scientists Do For You?” (Ballroom A)</td>
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<tr>
<td>20:00</td>
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<td>JAM SESSION (Off-site)</td>
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<tr>
<td>Time</td>
<td>Room</td>
<td>SS072</td>
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<tr>
<td>10:30</td>
<td>COFFEE BREAK (Exhibit Hall B)</td>
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<tr>
<td>11:00</td>
<td>PLENARY AND AWARD TALK SESSION (Ballroom A)</td>
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<tr>
<td>12:30</td>
<td>LUNCH - STUDENT BEACH CLEAN UP, OTHER WORKSHOPS AND AUXILIARY MEETINGS PLUS ENTERTAINMENT ON THE TERRACE (Salsa Dance Lessons)</td>
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<tr>
<td>15:30</td>
<td>COFFEE BREAK (Exhibit Hall B)</td>
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<tr>
<td>17:30</td>
<td>POSTER SESSION and RECEPTION (Exhibit Hall B)</td>
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<tr>
<td>Time</td>
<td>Session/Room</td>
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<tr>
<td>09:00</td>
<td>Bioluminescent Bays of the Caribbean: Science, Management, Outreach, and Recovery</td>
<td>Room 101</td>
</tr>
<tr>
<td>10:30</td>
<td>Phytoplankton Ecology and Physiology</td>
<td>Room 102</td>
</tr>
<tr>
<td>11:00</td>
<td>Environmental Change</td>
<td>Room 103</td>
</tr>
<tr>
<td>12:30</td>
<td>Aquatic Food Webs</td>
<td>Room 104</td>
</tr>
<tr>
<td>13:00</td>
<td>Coral Reef Ecosystems</td>
<td>Room 105</td>
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<tr>
<td>14:00</td>
<td>Plastics in the Aquatic Environment</td>
<td>Room 106</td>
</tr>
<tr>
<td>15:00</td>
<td>Changing Biogeochemistry and Ecology Across Polar Aquatic Systems in the 21st Century</td>
<td>Room 107</td>
</tr>
<tr>
<td>15:30</td>
<td>Aquatic Food Webs</td>
<td>Room 108</td>
</tr>
<tr>
<td>16:00</td>
<td>Coral Reef Ecosystems</td>
<td>Room 109</td>
</tr>
<tr>
<td>17:00</td>
<td>Remote Sensing of Water Quality and Quantity</td>
<td>Room 110</td>
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<tr>
<td>18:00</td>
<td>Blue Carbon: From the Ecosystem to the Markets</td>
<td>Room 111</td>
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<tr>
<td>19:00</td>
<td>Brave New World: The Ecology of Highly Impacted Waterbodies</td>
<td>Room 112</td>
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<tr>
<td>20:00</td>
<td>Publications Spotlight Session</td>
<td>Room 113</td>
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<tr>
<td>21:00</td>
<td>COFFEE BREAK</td>
<td>Ballroom A Foyer-3rd Floor</td>
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<tr>
<td>22:00</td>
<td>CLOSING FIESTA featuring La Bomba Show and Band</td>
<td>Terrace and 3rd Floor Prefunction Area</td>
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**FRIDAY SCHEDULE-AT-A-GLANCE**

- **9:00-10:30**: Bioluminescent Bays of the Caribbean: Science, Management, Outreach, and Recovery (Room 101)
- **10:30-11:00**: COFFEE BREAK (Ballroom A Foyer-3rd Floor)
- **11:00-12:30**: Plenary and Award Talk Session (Ballroom A)
  - 2019 G. Evelyn Hutchinson Award Acceptance: Oscar Schofield, Rutgers University, New Brunswick, NJ
  - Plenary Presentation: Ernesto Diaz, Director, Coastal Management and Climate Change Office, PR Dept. of Natural and Environmental Resources, San Juan, Puerto Rico
- **12:30-14:00**: Lunch - Workshops and Auxiliary Meetings Plus Entertainment on the Terrace (Music of the Island)
- **14:00-15:30**: Carbon Fluxes in FW and Marine Environment (Room 102)
- **15:30-15:45**: COFFEE BREAK (Ballroom A Foyer-3rd Floor)
- **15:45-17:30**: Remote Sensing of Water Quality and Quantity (Room 103)
- **18:00-21:00**: CLOSING FIESTA featuring La Bomba Show and Band (Ballroom A Foyer-3rd Floor)
PUERTO RICO CONVENTION CENTER MAPS

LEVEL 1

EXHIBIT HALL

Elephant Door
22 ft. w x 27 ft. h
(6.7 m w x 8.2 m h)

Exhibit Hall A
40,500 sq. ft.
(3,800 sq. m)

Exhibit Hall B
71,300 sq. ft.
(6,624 sq. m)

Exhibit Hall C
40,500 sq. ft.
(3,762 sq. m)

39 ft.
(27 m)

150 ft.
(46 m)

Main Entrance

Loading Docks

304

503

101

102

103

104
MONDAY ORALs

AS002 HUMAN AND SOCIAL DIMENSIONS - RESEARCH MEETS MANAGEMENT: WHERE AND HOW THE RUBBER HITS THE ROAD (AND GETS TRACTION)

Chair(s): Lucinda Johnson, University of Minnesota Duluth (ljohnson@d.umn.edu)
Cynthia Hagley, University of Minnesota Duluth (chagley@d.umn.edu)

Location: Room 101 A/B
15:45 Leon-Perez, M.; Menez-Estralla, T.; Diaz-Velázquez, E.: LESSONS LEARNED FROM THE FIRST STEPS OF AN ADAPTIVE MANAGEMENT EXERCISE TOWARDS STRENGTHENING PUERTO RICO’S CORAL REEF MONITORING PROGRAM
16:00 Suleiman Ramos, S.; Hernandez Delgado, E.; Candelas, F.; Mercado, A.: INFORMAL EDUCATION FOR THE DEVELOPMENT OF COMMUNITY-BASED SCIENTIFIC CITIZEN AS STRATEGY TO MANAGE COASTAL RESOURCES.
16:45 Pebbles, V.; Evans, M.; Gibbons, K.: THE GREAT LAKES HABS COLLABORATORY: BUILDING A BOUNDARY SPACE FOR SCIENTISTS AND MANAGERS
17:00 Bradu, S.; Snook, H.; Haney J.; Hobbs, J.: THE CYANOBACTERIA MONITORING COLLABORATIVE – A SHINING EXAMPLE AND A CAUTIONARY TALE OF COLLABORATIVE EFFORTS TO MONITOR AND REPORT CYANOBACTERIA IN SURFACE WATERS

CS004 URBAN ECOSYSTEMS

Chair(s): Lisette de Senerpont Domis, Netherlands Institute of Ecology (L.deSenerpontDomis@nioo.knaw.nl)
Sven Teurlincx, Netherlands Institute of Ecology (S.Teurlincx@nioo.knaw.nl)

Location: Room 208 C
16:00 Martinez, G.; Pérez-Alegria, L.; Sotomayor, D.: SEARCHING FOR A NEEDLE IN A HAYSTACK: DEVELOPMENT OF A SYSTEMATIC STRATEGY FOR THE IDENTIFICATION OF CRITICAL SANITARY SPILLS ON A METROPOLITAN WATERSHED OF PUERTO RICO
16:15 Sowah, R.; Snyder, B.; Georgacopoulos, O.; Molina, M.: ABUNDANCE AND CHARACTERISTICS OF SUL AND TET GENES AND Fecal INDICATORS IN AN URBAN WATERSHED
16:30 Snyder, B.; Molina, M.; Georgacopoulos, O.; Sowah, R.; Cyterski, M.: SEASONALITY OF FECAL INDICATOR BACTERIA, MICROBIAL SOURCE TRACKING MARKERS, AND PATHOGEN OCCURRENCE IN AN URBANIZED STREAM

16:45 Lurling, M.; Wajen, G.: IMPORTANCE OF A SYSTEM ANALYSIS IN URBAN LAKE AND POND RESTORATION
17:00 Muccii, M.; Teurlincx, S.; Lurling, M.; de Senerpont Domis, L.: MANAGING EUTROPHICATION IN AN URBAN WATER THROUGH IRON-RICH SAND APPLICATION AND OXYGENATION

CS013 DISSOLVED ORGANIC MATTER - DOC, DON, DOP, FDOM, CDOM

Chair(s): Rainer Amon, Texas A&M University at Galveston (amonr@tamu.edu)
Brittany Widner, Woods Hole Oceanographic Institution (bwidner@whoi.edu)
Rachel Sipler, Memorial University of Newfoundland (rasipler@mun.ca)
Angela Knapp, Florida State University (anknapp@fsu.edu)
Robert Letscher, University of New Hampshire (robert.letscher@unh.edu)
Boris Koch, Alfred-Wegener-Institut (bkoch@awi.de)
Michael Gaison; UMCES-CBL (gonisori@umces.edu)

Location: Room 202
09:00 Herndl, G.; Zhao, Z.: CHARACTERIZING SOURCES OF MARINE DISSOLVED ORGANIC MATTER USING – OMICS APPROACHES 1
09:45 Avarachen, M.; Ardalan, M.; Vadstein, O.; Gonzalez, S.; S. Vezhapparambu, V.; Olsen, Y.: BACTERIAL DEGRADATION OF DISSOLVED ORGANIC CARBON
10:00 Yao, X.; Sipler, R.; Stanley, B.; Roberts, Q.; Sanderson, M.; Boru, C.; Brook, D.: QUANTIFYING EFFLUENT DISSOLVED ORGANIC NITROGEN (EDON) UPTAKE BY MICROBIAL COMMUNITIES ALONG A SALINITY GRADIENT IN THE YORK RIVER
14:30 Wymore, A.; Krueger, S.; Van Der Hout, J.; McDowell, W.: EXPLORING THE ECOLOGICAL DUALITY OF DISSOLVED ORGANIC NITROGEN WITH FIELD BASED EXPERIMENTAL EVIDENCE
14:45 Zhang, R.; Wang, X.: DON CYCLING IN THE SURFACE SOUTH CHINA SEA AS INFERRED FROM ISOTOPE SIGNATURES

1 REPRESENTS INVITED PRESENTATIONS
15:00  Xu, M.; Kao, S.: COUPLED EFFECT OF SUBSTRATE AND LIGHT ON ASSIMILATION AND OXIDATION OF REGENERATED NITROGEN IN THE EUPHOTIC OCEAN

15:15  Knapp, A.; Buck, K.; Boiteau, R.; Mirand, C.; McKenna, A.; Cordo, Y.; Caprara, S.; Chappell, P.: NOVEL OBSERVATIONS OF POSITIVELY-CORELATED DISSOLVED ORGANIC NITROGEN AND DISSOLVED IRON CONCENTRATIONS IN GULF OF MEXICO SURFACE WATERS

CS027 VIRUSES
Chair(s): Joaquin Martinez, Bigelow Lab for Ocean Sciences (jmartinez@bigelow.org)
Location: Room 202
15:45  Veglia, A.; Milford, C.; Schizas, N.: ISOLATING, CULTURING, AND GENOTYPING OF NOVEL CYANOPHAGES INHABITING CORAL REEF HOLOBIOTNS
16:00  Endo, H.; Li, Y.; Blanc-Mathieu, R.; Ogata, H.: GLOBAL DISTRIBUTION OF NUCLEOCYTOPLASMIC LARGE DNA VIRUSES IN THE OCEAN
16:30  Rathwell, C.; Lachko, I.; Rocap, G.: HI-C AT SEA: UNCOVERING VIRUS-HOST PAIRS IN A MARINE METAGENOME THROUGH PHYSICAL LINKAGES
16:45  Coello-Camba, A.: CLADE COMPOSITION DURING A NUTRIENT-INDUCED SYNECHOCOCCUS BLOOM AND COLLAPSE BY CYANOPHAGES
17:00  Ignacio Esperanza, J.; Allgren, N.; Yeh, Y.; Fuhrman, J.: LONG-TERM VIRUS COMMUNITY STABILITY FACILITATED BY RED QUEEN DYNAMICS

SS003 ADVENTURES, CHALLENGES, AND BENEFITS OF CONDUCTING INTERNATIONAL COLLABORATIVE RESEARCH
Chair(s): Adina Paytan, UCSC (apaytan@ucsc.edu)
Adrienne Sponberg, ASLO (sponberg@aslo.org)
Linda Dugua, USC (dugua@usc.edu)
Michael Pace, U. Virginia (mpace@virginia.edu)
Location: Room 209 C
09:30  Cormann, J.: TE AMO CUATRO CIENEGAS: LEARNING TO SAY GOOD-BYE
09:45  Cineros, A.; Jimenez, F.; Elshb, I.; Miranda, A.; Brison, S.; Cherepanova, O.: NEW FRONTIERS FOR INTEGRATED MARINE SCIENCES: DEVELOPING THE FIRST SOCIAL IMPACT ASSESSMENTS FOR OFFSHORE EXPLORATORY O&G PROJECTS IN THE GULF OF MEXICO
10:00  Mantzouki, E.; Ibelings, B.: SNAPSHOT SURVEYS FOR LAKE MONITORING: MORE THAN A SHOT IN THE DARK
14:00  Lecher, A.: ACOUSTIC DATA SHARING PLATFORM FOR FEDERATING RESPONSIBLE RESEARCH AND INNOVATION COMMUNITIES – EU H2020: MARINA PROJECT
14:45  Mesioglou, E.; Paytan, A.: INTENSE REWARDING EXCITING SCIENCE (RES) IN ISRAEL
15:00  Bitterwolf, S.: WHY YOU SHOULD PARTICIPATE IN AN INTERNATIONAL RESEARCH EXPERIENCE PROGRAM AND WHY YOU SHOULDN'T GO ALONE
15:15  Lykkebo Petersen, K.: EARLY-CAREER SCIENTISTS BENEFIT FROM INTERNATIONAL COLLABORATION
15:45  Bitterwolf, K.: BRIDGING BARRIERS WITH BARIUM (BA) ISOTOPES
16:00  Martinez Fernandez, A.: COORDINATING RESEARCH REMOTELY – LESSONS I LEARNT AFTER THINGS DID NOT WORK
16:30  Sullivan, S.: MINIMIZING RISK AND MAXIMIZING IMPACT IN INTERNATIONAL RESEARCH
16:45  Broach, K.; Tofstein, A.; Paytan, A.: MULTIPLE METHODS OF COMMUNICATION PROBABLY IMPROVE OUTCOMES OF INTERNATIONAL COLLABORATION
17:00  Chien, C.: WHAT I LEARNED FROM AN INTERNATIONAL COLLABORATIVE RESEARCH: A POINT OF VIEW FROM AN INTERNATIONAL STUDENT

SS005 ASLOMP STUDENT SYMPOSIUM
Chair(s): Benjamin Cuker, Hampton University (benjamin.cuker@hamptonu.edu)
Location: Room 208 C
09:00  Layton, J.: THE FEEDING ECOLOGY OF PACIFIC LAMPREYS ASSESSED BY GUT FULLNESS AND PREY IDENTIFICATION
09:15  Stephens, D.: SONSENSE: AN INVENTORY FOR CHANNEL ISLANDS NATIONAL MARINE SANCTUARY (CNMS)
09:30  McCarthy, J.; Faulkner, P.; Petersen, L.: IMPACT OF SEX AND SALINITY ON THE SWIMMING PERFORMANCE AND METABOLISM OF SHEEPSHEAD MINNOWS (CYPRIODON VARIEGATUS)
09:45  Ward, K.; Carlisle, A.: A CHARACTERIZATION OF MIDWATER MICRONEKTON FOOD WEB DYNAMICS IN THE NORTH PACIFIC SUBTROPICAL GYRE AS DETERMINED THROUGH STABLE ISOTOPIC ANALYSIS
10:00  Min, M.; Head, M.; Hastie, J.: LIMITATIONS AND APPLICATIONS OF MACROSCOPIC MATURITY ANALYSES: A COMPARISON OF HISTOLOGICAL AND VISUAL MATURITY STAGING IN MULTIPLE WEST COAST GROUNDFISH
14:00  Williams-McLeod, S.; Bril, R.; Horodyak, A.; Turner, C.: THE EFFECTS OF OCEAN ACIDIFICATION ON AUDITORY NEUROBIOLOGY IN A COASTAL FISH SPECIES.


14:45 Eddy, T.; Litvin, S.; Young, R.; Garza, C.: SEASONAL CHANGES IN DIET OF CALIFORNIA SPINY LOBSTER (PANULIRUS INTERRUPTUS) IN RELATION TO MARINE PROTECTED AREAS

SS009 HÁGASE LA LUZ- LIGHT IN AQUATIC ECOSYSTEMS: VARIABILITY AND ECOLOGICAL CONSEQUENCES

Chair(s): Rebecca North, University of Missouri (northr@missouri.edu)  
Maren Striebel, University of Oldenburg (maren.striebel@uol.de)  
Greg Siulbe, University of Maryland (gsilbe@umces.edu)  
Nur Ili Hamizah Mustaffa, University of Oldenburg (nur.ili.hamizah.mustaffa@uni-oldenburg.de)  
Kevin Rose, Rensselaer Polytechnic Institute (rosek4@rpi.edu)  
Jochen Wöllschläger, University of Oldenburg (jochen.wollschlaeger@uni-oldenburg.de)  
Robyn Smyth, Bard College (rsmyth@bard.edu)  
Oliver Zielinski, University of Oldenburg (oliver.zielinski@uni-oldenburg.de)  
Ruchi Bhattacharya, University of Missouri (bhattacharya@missouri.edu)  
Patrick Neale, Smithsonian Environmental Research Center (nealep@si.edu)

Location: Room 201

09:00 Neale, P.; Smyth, R.: ARE WARMER WATERS BRIGHTER WATERS?: THE IRRIADANCE ENVIRONMENT OF LAKES AND OCEANS IN A CHANGING CLIMATE


09:30 Köhler, J.; Guislain, A.: INFLUENCE OF VERTICAL MIXING ON LIGHT DEPENDENCY OF PHOTOSYNTHESIS, RESPIRATION AND GROWTH OF PHYTOPLANKTON COMMUNITIES

09:45 Trench, S.; Fink, P.: EXTREME IRRIADANCE LEVELS IN A HIGH-ALTITUDE ECOSYSTEM AFFECT FUNCTIONAL GENE EXPRESSION PROFILES IN AQUATIC MICROEUKARYOTES


14:30 Petty, E.; Obrecht, D.; North, R.: PHYTOPLANKTON'S MOST WANTED: DOES LIGHT-NUTRIENT CO-DEFICIENCY LIMIT PHYTOPLANKTON COMMUNITIES IN TURBID MIDWESTERN USA RESERVOIRS?


15:00 Hrycik, A.; Steckwell, J.: UNDER-ICE MESOSOSMS TO TEST INTERACTIONS OF LIGHT LIMITATION AND ZOOPLANKTON GRAZING ON PHYTOPLANKTON COMMUNITIES


16:00 Mustaffa, N.; Kallajoki, L.; Wiel, O.; Sreipl, M.: THE UPPER SEA SURFACE PHYTOPLANKTON COMMUNITIES’ RESPONSES TO NUTRIENT AND LIGHT CHANGES


16:30 Wollashlaeger, J.; Tieren, B.; Zielinski, O.: AN EFFICIENT BIMODAL PARAMETRIZATION OF THE UNDERWATER LIGHT FIELD IN COASTAL WATERS

16:45 Williamon, C.; OSheeh, E.; Pilla, R.; Knoese, L.; Berry, N.; Wilkins, K.: ECOSYSTEM LEVEL CONSEQUENCES AND ZOOPLANKTON RESPONSES TO LONG-TERM BROWNING IN LAKES EXPERIENCING INCREASES IN DISSOLVED ORGANIC MATTER

17:00 Goncalves-Araujo, R.; Markage, S.: LIGHT IN THE DARK: ESTIMATING LIGHT ATTENUATION FOR DANISH WATERS FROM IOP MEASUREMENTS

17:15 Mirbakak Erohan, M.; Hedley, J.; Lajeunesse, T.; Diersen, H.: ANALYSIS OF HYBRIDSPETRAL REFLECTANCE OF CORALS IN RESPONSE TO THEIR HABITAT AND SYMBIOTICS

SS010 EXPLORING WHAT MAKES UNDERGRADUATE RESEARCH EXPERIENCES WORK: EVIDENCE FROM STUDENTS AND MENTORS

Chair(s): Alan Wilson, Auburn University (wilson@auburn.edu)  
Patrick Crumrine, Rowan University (crumrine@rowan.edu)  
Gretchen Hofmann, University of California Santa Barbara (hofmann@uab.edu)  
David Fields, Bigelow Laboratory for Ocean Sciences (dfields@bigelow.org)  
Shane Rogers, Clarkson University (srogers@clarkson.edu)  
Sarah Cohen, San Francisco State University (sarahcoh@sfsu.edu)

Location: Room 204

09:00 Rogers, S.; Twiss, M.: ATYPICAL REU SITE FEATURES LEAD TO PROGRAM SUCCESS


09:30 Savoe, A.; Newell, S.; McCarthy, M.; Hayes, C.; McClendon, J.: DISHES TO DEFENSE: ADVENTURES OF AN UNDERGRAD IN RESEARCH

10:00  Barber, P.; Fong, C.; Habtes, S.; Fong, P.: THE DIVERSITY PROJECT: MAXIMIZING THE IMPACT OF UNDERGRADUATE RESEARCH EXPERIENCES THROUGH STUDENT DRIVEN RESEARCH INQUIRY


14:00  Hofmann, G.: Leach, T.: PROFESSIONAL DEVELOPMENT SERIES PROMOTES INCLUSION AND COMMUNITY: REPORT FROM THE SITE REU AT UC SANTA BARBARA

14:15  Crumrine, P.; Zwick, M.: FACTORS INFLUENCING MENTOR SELECTION IN UNDERGRADUATE RESEARCH EXPERIENCES

14:30  Reed, M.; McCarthy, M.; Newell, S.: UNDERGRADUATE RESEARCH: THE OPPORTUNITY FOR LEARNING AS A MENTOR AND MENTEE IN A RESEARCH LAB

14:45  Coldson, K.: UNDERGRADUATE RESEARCH CAN BE A CRUCIAL EXPERIENCE AND MENTORS AT ALL STAGES PLAY A HUGE ROLE.


15:15  Walsh, E.; Brown, P.; Pina, A.; Geller, H.; Hotchkim, P.; Loughheed, V.: USING AQUATIC SYSTEMS TO INTRODUCE COMMUNITY COLLEGE STUDENTS TO UNIVERSITY RESEARCH THROUGH MENTORING

15:45  Greengrove, C.; Masura, J.; Nuwer, M.; Kelley, D.: INTEGRATING OCEAN OBSERVATORIES INITIATIVE (OOI) DATA INTO UNDERGRADUATE INTRODUCTORY OCEANOGRAPHY COURSES

16:00  Ramirez-Lugo, J.; Velez Gonzalez, J.; Toledo Hernandez, C.; Ruiz Diaz, C.: A COURSE-BASED UNDERGRADUATE RESEARCH EXPERIENCE TO INVESTIGATE THE RESPONSES OF THE CORAL ACROPORA CERVICORNIS TO ENVIRONMENTAL STRESS

16:15  Duke, J.; Scott, T.: A COMPREHENSIVE INVESTIGATION-BASED AND COMMUNICATIONS-INTENSIVE UNDERGRADUATE COURSE IN AQUATIC SYSTEMS BIOLOGY

16:30  Dziewczynski, T.: USING FISH ON DRUGS TO TRAIN THE NEXT GENERATION OF CRITICAL THINKERS

16:45  Brown, M.: LESSONS FROM THE LIBERAL ARTS ABOUT SUCCESSFUL ACADEMIC-YEAR RESEARCH WITH UNDERGRADUATE COLLEAGUES


SS028 THE MULTIPLE CHALLENGES OF RAPIDLY CHANGING TROPICAL FRESHWATER ECOSYSTEMS
Chair(s): Ed Hall, Colorado State University (ed.hall@colorado.edu)
Flavia Tromboni, University of Nevada, Reno (flavia.tromboni@gmail.com)
Location: Room 209 A/B
09:00 Benito-Granell, X.; Schneider, T.; Fritz, S.; Ruhi, A.: A PALEOECOLOGICAL PERSPECTIVE OF RESILIENCE IN ANDEAN LAKES
10:00 Barby, C.; Fadum, J.; Hall, E.: CHANGING NUTRIENT DYNAMICS OF A LARGE TROPICAL WATERSHED
10:15 Fadum, J.; Barby, C.; Hall, E.: INVESTIGATING CHANGING NUTRIENT LIMITATION IN LARGE TROPICAL LAKES: A CASE STUDY OF LAKE YOJOA, HONDURAS
14:00 Saltarelli, W.; Finkel, N.; Cunha, D.: RESTORATION OF RIPARIAN FOREST IN TROPICAL STREAMS: EFFECTS ON AQUATIC METABOLISM AND MACRONUTRIENTS’ RETENTION
14:45 Cano-Castellanos, J.; Locke, S.: COMPARISON OF FISH COMMUNITIES PRIOR TO REMOVAL OR MODIFICATION OF DAMS IN TROPICAL STREAMS
15:00 Chappell, J.; McKay, S.; Freeman, M.; Pringle, C.: LONG-TERM (37 YEARS) IMPACTS OF LOW-HEAD DAMS ON HABITAT CONNECTIVITY IN NORTHEASTERN PUERTO RICO: IMPLICATIONS FOR ISLAND-WIDE METAPOPULATION DYNAMICS FOR MIGRATORY SHRIMP

SS036 ECOLOGICAL APPLICATIONS OF EARTH SYSTEM MODELS AND REGIONAL CLIMATE MODELS
Chair(s): Rebecca Asch, East Carolina University (aschr16@ecu.edu)
Darren Pilcher, NOAA Pacific Marine Environmental Laboratory (darren.pilcher@noaa.gov)
Sara Rivero-Calle, University of North Carolina - Wilmington (riverocalles@uncw.edu)
Location: Room 101 A/B
09:00 Dunkiewicz, J.: MODELLING THE RESPONSES OF DIVERSE PHYTOPLANKTON COMMUNITIES TO CLIMATE CHANGE
09:30 Xue, P.; Ye, X.; Huang, C.: IMPACT OF CLIMATE CHANGE ON THERMAL VARIABILITY AND ECOSYSTEM VULNERABILITY OF THE GREAT LAKES
09:45 Chien, C.; Pahlow, M.; Ochsies, A.: IMPROVED REPRESENTATION OF BIOGEOCHEMICAL TRACER DISTRIBUTIONS BY AN OPTIMALITY-BASED NON-REDFIELD ECOSYSTEM MODEL IN THE UVIC-ESCM
14:00 Asch, R.; Stock, C.; Sarmiento, J.: DO INCREASES IN TEMPERATURE AND SALINITY EXTREMES LEAD TO MORE FREQUENT AND LARGER MISMATCHES BETWEEN THE PHENOLOGY OF FISH SPawning AND PLANKTON BLOOMS?
14:15 Petrik, C.; Stock, C.; Andersen, K.: DRIVERS OF FISHERIES PRODUCTION BY FUNCTIONAL TYPE AND THE EFFECTS OF CLIMATE CHANGE
15:00 Kearney, K.; Hermann, A.; Aydin, K.: A SKILL ASSESSMENT OF BEING SEA OLD POOL SEASONAL PROJECTIONS FOR FISHERIES MANAGEMENT

SS037 TERRESTRIAL MATERIALS IN PLANET WATER: TRACKING INFLUENCES ALONG THE LAND-OCEAN CONTINUUM
Chair(s): Anne Deininger, University of Agder (anne.deininger@niva.no) Allison Myers-Pigg, Memorial University of Newfoundland (amyerspigg@mun.ca) Rachel Sipler, Memorial University of Newfoundland (resipler@mun.ca) Amanda Poste, Norwegian Institute for Water Research (amanda.poste@niva.no)

Location: Room 103 A
14:00 Liess, A.; Rankinen, J.; Barnes, T.; Nõlvak, O.; Lannère, J.; Parkefelt, L.: BROWNING OF BOREAL LAKES CHANGES PHYTOPLANKTON PIGMENT COMPOSITION – CONCLUSIONS FROM A 6-WEEK MECOSOM EXPERIMENT IN LAKE BOLMEN, SWEDEN
14:45 Deininger, A.; Kaste, O.; Austnes, K.: RECENT CHANGES IN NUTRIENT STOICHIOMETRY IN NORWEGIAN RIVERS – Shifts FROM INORGANIC TO ORGANIC FRACTIONS
15:00 Opdal, A.; Lindemann, C.; Akunes, D.: COULD LONG-TERM SHIFT IN COD PHENOLOGY BE LINKED TO TERRESTRIAL GREENING AND COASTAL BROWNING?
16:00 Waters, M.; Metz, A.; Smoak, J.: ALTERATIONS TO NUTRIENT DEPOSITION, SEDIMENT STOICHIOMETRY, AND PHYTOPLANKTON COMMUNITIES IN TWO SUBTROPICAL LAKES FROM REPEATED PRESCRIBED BURNING
16:15 Xu, X.; Wei, H.; Moffet, K.; McClelland, J.; Hardison, A.: TIDAL FRESHWATER ZONES AS HOTSPOTS FOR NITROGEN AND ORGANIC MATTER CYCLING IN TWO TEXAS RIVERS
16:30 Polenska, P.; Lannuzel, R.; Le Meine, O.; Soletchnik, P.: SPATIO-TEMPORAL VARIABILITY OF CARBON AND NUTRIENT CONCENTRATIONS AND FLUXES OVER A TEMPERATE TERRESTRIAL-AQUATIC CONTINUUM (FRENCH ATLANTIC COAST)
16:45 Erratt, K.; Creed, I.; Trick, C.: CONTEMPORARY UREA-BASED AGRICULTURAL FERTILIZERS ARE THE PREFERRED NITROGEN SOURCE FOR CYANOBACTERIA IN FRESHWATERS
17:00 Brown, C.; Zimmer-Faust, A.; Kaldy, J.; Moshon Collura, T.; Pacella, S.; Rugh, W.; Stecher, H.; Wise, D.: TRACKING LAND-BASED NUTRIENT AND BACTERIA INPUTS TO TILLAMOOK ESTUARY, OREGON (USA)

17:15 Jiang, Y.; Li, M.: AN INSIGHT INTO THE MECHANISMS OF TiO2 NANOPEARL TOXICITY ON PHOTOSYSTEM II (PS II) ACTIVITIES IN DUNALIELLA SALINA

SS039 EFFECTS OF STORM EVENTS ON AQUATIC, COASTAL, AND OCEANIC ENvironments and ECOSYSTEMS: FROM PHYSICAL PROCESSES TO FOOD WEBS
Chair(s): Beth Stauffer, University of Louisiana at Lafayette (stauffer@louisiana.edu) Michael Martinez-Colon, Florida A&M University (michael.martinez@famu.edu) Patricia Chardon-Maldonado, University of Puerto Rico at Mayaguez (patricia.chardon@upr.edu)

Location: Room 104
09:30 Davis, K.; Leichter, J.; Monismith, S.: TROPICAL CYCLONES INDUCE DEPTH-DEPENDENT TEMPERATURE CHANGES ON MARINE ECOSYSTEMS
10:00 Casillas, P.; Chardón Maldonado, P.; Canals, M.; Rodríguez, S.: NUMERICAL SIMULATIONS OF STORM-INDUCED NEARSHORE MORPHOLOGY CHANGE IN RINCON, PUERTO RICO
10:15 Grafalu Soto, R.: SPATIAL CHARACTERISTICS OF CARIBBEAN COASTAL DUNES: A PUERTO RICO CASE STUDY IN THE CONTEXT OF HURRICANE MARIA
14:00 James, M.; O’Donnell, J.: IMPROVING DRAG COEFFICIENTS IN SALT MARSH MODELS
14:45 Zhou, Q.; Wymore, A.; McDowell, W.: COMPARING THE IMPACTS OF TWO SIMULATED HURRICANES ON SOIL NITRATE CONCENTRATIONS: A MULTIPLE QUANTITATIVE APPROACH
15:00 Fitzsimmons, J.; Jensen, L.: TOXIC AND MICRONUTRIENT METALS IN WATERS OF GALVESTON BAY FOLLOWING HURRICANE HARVEY

*REPRESENTS TUTORIAL PRESENTATIONS*
15:45 Quigg, A.; Windham, R.; McAmis, A.; Steichen, J.: EXTREME WEATHER EFFECTS ON PHYTOPLANKTON COMMUNITY COMPOSITION IN GALVESTON BAY, TEXAS: VISUALIZING Ecosystem RESPONSEs

16:00 Hampel, J.; McCarthy, M.; East, T.; Reed, M.; Newell, S.: THE EFFECTS OF HURRICANE IRMA ON NITRIFICATION AND HARMFUL ALGAL BLOOMS IN LAKE OKEECHOBEE AND THE ST. LUCI ERISURV (FLORIDA, USA)


16:30 Stauffer, B.; Kurrajt G.; Pathare, M.; Schrezen, A.: ENHANCED MICROZOOPLANKTON GRAZING IN SURFACE WATERS OF THE NORTHERN GULF OF MEXICO FOLLOWING HURRICANE HARVEY

16:45 Topor, Z.; Stauffer, B.; Robinson, K.: NEAR-TO-OFFSHORE ZOOPLANKTON COMMUNITY STRUCTURE OF THE NORTHERN GULF OF MEXICO AFTER HURRICANE HARVEY

17:00 Liu, H.; Gilmarin, J.; Li, C.; Dziewik, M.: NEAR-TERM RESPONSES OF ESTUARINE ZOOPLANKTON TO EXTREME FLOODING AFTER A CATASTROPHIC HURRICANE

SS040 RADIONUCLIDES IN AQUEOUS SYSTEMS

Chair(s): Christopher G. Smith, U.S. Geological Survey (csmith@usgs.gov)
Ken Bueseler, Woods Hole Oceanographic Institution (kbueseler@whoi.edu)
Mark Baskaran, Wayne State University (baskaran@wayne.edu)
Sylvia Sander, IAEA Environment Laboratories (s.sander@iaea.org)
Peter Swarzenski, IAEA Environment Laboratories (p.swarzenski@iaea.org)
Kanchan Maiti, Louisiana State University (kmaiti@lsu.edu)
James Waples, University of Wisconsin-Milwaukee (jwaples@wisc.edu)

Location: Room 208 A/B

09:00 Bam, W.; Maiti, K.; Baskaran, M.; Krupp, K.: INFLUENCE OF PARTICLE CONCENTRATION AND COMPOSITION ON THE DISTRIBUTION OF 210-PO AND 210-PB ALONG US GEOTRACES ARCTIC TRANSACT


09:45 Savatier, M.; Rocha, C.: SPATIAL AND SEASONAL CHANGES OF WATER AGE ALONG A FJORD IN IRELAND STUDIED WITH RA ISOTOPE RATIO IN WATER TO GAIN FURTHER INSIGHT ON MIXING PROCESSES IN COASTAL SYSTEMS.

10:00 McKenzie, T.; Dula, H.; Chang, J.: LINKING BASEFLOW AND SUBMARINE GROUNDWATER DISCHARGE: IMPACTS ON WATER QUALITY ALONG THE STREAM-COASTAL CONTINUUM IN KANEHOE BAY AND WATERSHED, HAWAII

10:15 Douglas, A.; Murgueta, D.; Peterson, R.: SPATIAL AND TEMPORAL VARIABILITY OF SUBMARINE GROUNDWATER DISCHARGE TO A DISTURBED SEMI-ARID ESTUARY

SS050 IMPROVING CORAL REEF RESILIENCE WITH TRANSFORMATIONAL SCIENCE

Chair(s): Emily Twigg, National Academies (etwigg@nas.edu)
Susan Roberts, National Academies (sroberts@nas.edu)
Stephen Palumbi, Stanford University (spalumbi@stanford.edu)
Tall Vardi, NOAA Fisheries (on contract from ECS) (tallvardi@nasa.gov)

Location: Room 103 B


16:00 Williams, S.: THE RESTOCKING DIADEMA ANTILLARUM POPULATIONS TO CONTROL THE ABUNDANCE OF RAMICRUSTA SPP. AND ALGAL COVER IN PUERTO RICO

16:15 Martell, H.; Hancock, H.; Zimmerman, R.: PREDICTING DYSBIOSIS FROM TEMPERATURE-DERIVED METABOLIC BUDGET MODELS

16:30 Jaffe, M.; Rodrigues, L.; Padilla-Gamino, J.: CARBON AND NITROGEN ACQUISITION AND TRANSLLOCATION TO DEVELOPING EGGS IN NON-BLEACHED AND BLEACHED ADULT CORALS

16:45 Vardi, T.: THE CORAL RESTORATION CONSORTIUM: EFFORTS TO FUND, COORDINATE, AND TRANSFORM REEF CONSERVATION


SS051 NEW VIEWS ON THE BIOLOGICAL TRANSFORMATION OF METALS IN THE MARINE ENVIRONMENT

Chair(s): Randelle Bundy, University of Washington (rbundy@uw.edu)
Shane Hogle, Massachusetts Institute of Technology (shogle@mit.edu)
Katherine Heal, University of Washington (kheal@uw.edu)
Kristen Buck, University of South Florida (kristenbuck@usf.edu)
P. Dreux Chappell, Old Dominion University (pdcchappe@odu.edu)

Location: Room 208 A/B

14:00 Burns, S.; Abdala, Z.; Sterling, A.; Bundy, R.; Chappell, P.; Jenkins, B.; Buck, K.: INVESTIGATING BIOGEOCHEMICAL FEEDBACKS BETWEEN TRACE METALS AND DIATOM GROWTH: INSIGHTS FROM SOUTHERN OCEAN PHYTOPLANKTON INCUBATION EXPERIMENTS


14:30 Foerst, K.; Fulton, K.; Manck, L.; Barbee, K.: IRON LIMITATION OF A COASTAL FILAMENT IN THE SOUTHERN CALIFORNIA CURRENT ECOSYSTEM


15:00 Manck, L.; Dupont, C.; Barbee, K.: FUNCTIONAL ROLE OF SIDEROPHORE BIOSYNTHESIS IN IRON ACQUISITION IN MARINE SYSTEMS

15:15 Coale, T.; Allen, A.: ASSIMILATION OF ORGANICALLY COMPLEXED IRON IN A MODEL PENNATE DIATOM

15:45 Richon, C.; Tagliabue, A.: DRIVERS OF THE COPPER DISTRIBUTION AND BIOGEOCHEMICAL CYCLING IN THE OCEAN

* REPRESENTS INVITED PRESENTATIONS
14:00 Lilly, L.; Ohman, M.; EL NIÑO -RELATED SPATIAL DISPLACEMENTS OF SUBTROPICAL AND COOL-WATER EUPHAEUSIDS IN THE SOUTHERN CALIFORNIA CURRENT SYSTEM

14:15 Tapia, F.; Sobarzo, M.; Moffat, C.; Gallardo-Escarate, C.; A MOSAIC OF LOCAL HYPOXIA REGIMES ON THE CENTRAL CHILE INNER SHELF – PHYSICAL FORCING AND IMPLICATIONS FOR BENTHIC ORGANISMS

14:30 Castelo, R.; Luo, H.: UPWELLING JET SEPARATION IN THE CALIFORNIA CURRENT SYSTEM


15:00 von Appen, W.; Strass, V.; Bracher, A.; Mathieu, L.; HIGH-RESOLUTION PHYSICAL-BIOGEOCHEMICAL STRUCTURE OF AN UPWELLING FILAMENT OFF NORTHWEST AFRICA

15:15 Hill Cruz, M.; Kriest, I.; Jose, Y.; Oschlies, A.: ZOOPLANKTON MORTALITY EFFECTS ON THE PLANKTONIC ECOSYSTEM OF THE UPWELLING SYSTEM OFF PERU: A REGIONAL BIOGEOCHEMICAL MODELLING APPROACH

SS063 OCEAN, COASTAL, AND FRESHWATER ACIDIFICATION: RESEARCH AND EDUCATION

Chair(s): Robert Chen, University of Massachusetts Boston (bob.chen@umb.edu) Shannon Davis, University of Massachusetts Boston (Shannon.Davis002@umb.edu)

Location: Room 103 A

09:00 Seelmann, K.; Aßmann, S.; Steinhoff, T.; Körtzinger, A.; PERFORMANCE EVALUATION OF THE FIRST COMMERCIAL AUTONOMOUS ANALYZER FOR TOTAL ALKALINITY (TA) IN SEAWATER

09:15 Kulinski, K.; Szmyczyna, B.; Winogradow, A.; Stokowski, M.; Schneider, B.; PECULIARITIES OF THE ACID-BASE SYSTEM IN THE BALTIC SEA

09:30 McCutcheon, M.; Yao, H.; Staryk, C.; Hu, X.; TEMPORAL VARIABILITY AND DRIVING FACTORS OF THE CARBONATE SYSTEM IN THE TIDAL INLET OF A SEMIARID ESTUARY

09:45 Tomassetti, S.; Doull, M.; Goble, C.; CRASSOSTREA CONTROL: CHARACTERIZATION OF THE TEMPORAL VARIABILITY IN DISSOLVED OXYGEN AND PH OF NEWLY CONSTRUCTED OYSTER REEFS.


213 papers
TUESDAY ORALS

CS006 TRACE METALS
Chair(s): Michael Twiss, Clarkson University (mtwiss@clarkson.edu)
Location: Room 102 A/B/C
15:45 De Bonville, J; Amyot, M; del Giorgios P; Tremblay, A.; Bilodeau, F; Ponston, D; Lapierre, J: MOBILIZATION AND TRANSFORMATION OF MERCURY AND DISSOLVED ORGANIC MATTER ACROSS A DAMMED WATERSHED
16:00 Brehmstedt, E; Zhou, H; Eggelston, E; Holsen, T; Waller, M; Windle, M; Kidal, J; Twiss, M: SPATIAL VARIATION OF MERCURY UNDER CHANGING WATER LEVELS IN UPPER ST. LAWRENCE RIVER RIPARIAN WETLANDS
16:15 Ayala Crespo, C: Brehmstedt, E; Holsen, T; Twiss, M: MERCURY STORAGE IN HYDRIC SOILS AND BIOMASS OF A ST. LAWRENCE RIVER WETLAND
16:30 Martinez-Colon, M: Alegría, H; Huber, A; Kurt, P; Birgul, A: BIOACCUMULATION AND BIOMAGNIFICATION OF HEAVY METALS IN BLACK MANGROVE AND FIDDLER CRABS FROM JOBOS BAY, PUERTO RICO
17:00 Liu, Y; Liu, G; Wu, Z; Ge, M; Liu, H; Lam, P: THE ACCUMULATION OF TRACE METALS IN AQUATIC ORGANISMS FROM A TYPICAL ESTUARINE-COASTAL ECOSYSTEM IN CHINA
17:15 Mazzotta, M: CHARACTERIZATION OF THE METALLOCENTROPE OF THE MARINE BACTERIA, ALTEROMONAS

CS007 HYPOXIA
Chair(s): Steve DiMarco, Texas A&M University (sdimarco@tamu.edu)
Cory McDonald, Michigan Tech University (cpmcdonma@mtu.edu)
Location: Room 201
09:00 Seidel, L; Broman, E; Stähle, M; Hylander, S; Forsman, A; Dopsøn, M: TRACING BIOGEOCHEMICAL CHANGES IN AN ANOXIC BALTIC SEA COASTAL SEDIMENT DURING A TRANSITION TO OXIC CONDITIONS
09:15 Meyer, D; Prien, R; Naumann, M; Krüger, S; Waniek, J; Schulz-Bull, D: SULFIDE OXIDATION EXPERIMENTS IN THE WORLD’S LARGEST HYPOXIC ZONE (BALTIC SEA) – IN SITU OBSERVATIONS WITH AN AUTOMATIC FLUID INJECTION SAMPLER
09:30 LaBone, E; Justis, D; Rose, K; Wang, L; Huang, H; Modeling Fish Movement in 3-D in the Gulf of Mexico Hypoxic Zone
09:45 DiMarco, S; Knap, A; Chapman, P; Porter, H; Whilden, K: DISSOLVED OXYGEN DYNAMICS OF THE TEXAS SHELF IN SUMMER 2017: RESPONSE TO SEASONAL UPWELLING AND HURRICANE HARVEY
10:00 McDonald, C; Naziri-Saeed, M; Robertson, D; Prellwitz, S; Siebers, B: FORMATION OF A METALIMNETIC OXYGEN MINIMUM IN A DEEP LAKE
10:15 Lorda, J; Dara, B; Renteria, M; Molina, O: INTER-ANNUAL DIFFERENCES IN THE VERTICAL DISTRIBUTION OF ZOOPLANKTON IN OMZ OF THE EASTERN TROPICAL MEXICAN PACIFIC

CS010 NITROGEN BIOGEOCHEMISTRY AND CYCLING
Chair(s): Julie Granger, University of Connecticut (julie.granger@uconn.edu)
Location: Room 101 A/B
09:00 Montoya, J; Lee-Patterson, D; Subramaniam, A; Peterson, R; Lock-Wilde, N; Voss, M: NITROGEN FIXATION AND NITROGEN DYNAMICS IN TROPICAL RIVER PLUMES
09:15 Hallstrom, S; Benavides, M; Aristegui, J; Riemann, L: NITROGEN FIXATION AND DIATOMOPH COMMUNITIES AT THE UPWELLING ECOSYSTEM OFF CAPE VERDE
09:30 Marshall, T; Casciotti, K; McIlvin, M; Emeis, K; Daenke, K: Fawcett, S: THE ANGOLA GYRE, A HOTSPOT FOR N2 FIXATION IN THE TROPICAL SOUTH ATLANTIC OCEAN
09:45 Pedersen, J; Bombard, D; Paerl, R; Riemann, L: PARTICLE-ASSOCIATED N2-FIXATION AND DIATOMOPH SUCCION ON ARTIFICIAL SURFACES IN COASTAL ESTUARINE WATERS
10:15 Papageorgiou, J; Philipp, E; Lasi, M; Strauss, S; Inglea, P: BIOLGY NITROGEN FIXATION AS A POTENTIAL SOURCE OF NITROGEN FOR HARMFUL ALGAL BLOOMS IN A SUBTROPICAL, FLORIDA ESTUARY
11:00 Trimmer, M; Fussell, J; Hemsley, V; Duret, M; Lam, P: PARTICLE ASSOCIATED ORGANIC NITROGEN ESCAPES THE MARTIN CURVE IN THE SOUTH ATLANTIC
11:15 Letscher, R; Villar, T: SEASONAL FORMATION RATES OF PREFORMED NITRATE ANOMALIES AT STATION ALOHA AND BATS: THE CASE FOR VERTICALLY MIGRATING PHYTOPLANKTON
12:00 Shen, Y; Gouldston, T; McCarthy, M: DECRIPHERING EXPORTED NITROGEN DYNAMICS IN THE CALIFORNIA MARGIN USING COMPOUND-SPECIFIC AMINO ACID D15N
13:00 Fortin, S; Song, B; Anderson, L: SPATIAL AND TEMPORAL TRENDS OF MICROBIALLY MEDIATED REMOVAL AND RECYCLING OF FIXED NITROGEN IN THE YORK RIVER ESTRUARY OF CHESAPEAKE BAY
13:15 Zilius, M; Bartoli, M; Bonaglia, S; Griniene, L; Liskow, I; Overlinge, D; Petkuvienė, J; Sanuiuvienė, A; Stanislauskiene, R; Veyberne-Laibene, I; Voss, M; Zemlys, P; Bukaveckas, P: THE INFLUENCE OF CYANOACTOBACILLUS BLOOMS ON THE ATTENUATION OF NITROGEN THROUGHPUTS IN A BALTIC COASTAL LAGOON

CS013 DISSOLVED ORGANIC MATTER - DOC, DON, DOP, FDOM, CDOM
Chair(s): Rainer Amon, Texas A&M University at Galveston (amonr@tamu.edu)
Location: Room 202
09:00 Chanton, J; Spencer, R; Drake, T; Wilson, R; Thal, M; Cooper, W; Griffthfs, N; Sebestyen, S; Oleheiser, K; Hanson, P: TUTORIAL LECTURE ON DISSOLVED ORGANIC MATTER
09:30 Myers-Pigg, A; Bowering, K; Prestegaard, K; Skinner, A; Spehn, N; Ziegler, S: SEASONALLY DISTINCT SOIL-STREAM FLOW PATHWAYS AND TERRESTRIAL ORGANIC MATTER (OM) SOURCES REGULATE DISSOLVED OM COMPOSITION IN A BOREAL FOREST HEADWATER STREAM
09:45 Bowering, K; Myers-Pigg, A; Edwards, K; Ziegler, S: SEASONAL VARIABILITY IN THE COMPOSITION OF MOBILIZED SOIL DISSOLVED ORGANIC MATTER IS SIMILAR IN TWO CONTRASTING BOREAL FOREST STAND TYPES
10:00 Bhattacharya, R: Flores, K; Petty, E; North, R: DISSOLVED ORGANIC MATTER CYCLING IN MID-WEST RESERVOIRS, USA

*REPRESENTS INVITED PRESENTATIONS*

14:00 McKnight, D.; Rue, G.: ELECTRON-SHUTTLING BY HUMIC DISSOLVED ORGANIC MATTER IN A PERENNIALLY ICE-COVERED ANTARCTIC LAKE

14:15 Lau, M.; del Giorgio, P.: REACTIVITY AND FUNCTIONAL ROLES OF DISSOLVED ORGANIC MATTER IN THE ANOXIC HYPOXIMNION OF NORTH TEMPERATE LAKES


14:45 Miller, W.; Powers, L.: PROBING THE ROLE OF CDOM/DOC SOURCE IN PHOTOCHEMICAL REDOX REACTIONS

15:00 Stephens, B.; Carlson, C.; Halewood, E.; Opalka, K.: MICROBIAL REMINERALIZATION OF DISSOLVED ORGANIC MATTER AT OCEAN STATION PAPA

15:15 Calleja, M.; Al-Otaibi, N.; Morán, X.: DISSOLVED ORGANIC CARBON TRANSPORT TO THE OCEAN INTERIOR: SEASONAL AND DIEL PROCESSES IN THE CENTRAL RED SEA

15:45 Lechtenfeld, O.; Koch, B.: ULTRA-HIGH RESOLUTION MASS SPECTROMETRY IN ORGANIC MATTER RESEARCH: ACTUAL AND PUTATIVE LIMITATIONS

16:00 Leefmann, T.; Frichenhaus, S.; Koch, B.: ULTRAMASSEXPLORER – A NEW TOOL FOR THE EXPLORATION OF HIGH MASS RESOLUTION DATA IN DISSOLVED ORGANIC MATTER RESEARCH


16:30 Li, Y.; Benk, S.; Dittrich, T.; Gleixner, G.: MOLECULAR CHARACTERIZATION OF GROUNDWATER DISSOLVED ORGANIC MATTER IN THR CRITICAL ZONE


17:00 Ianiri, H.; Broek, T.; Bour, A.; McCarthy, M.: NEW D AMINO ACIDS PROVIDE INSIGHT TO MICROBIAL PRODUCTION OF REFRACTORY DISSOLVED ORGANIC NITROGEN IN THE OCEAN.


CS020 FISH AND FISHERIES

Chair(s): Brent A. Murry, U.S. Fish and Wildlife Service (brent.murry@gmail.com)

Location: Room 209 C

09:15 Rubalcava, K.; Chigbu, P.: RECRUITMENT AND DENSITY-DEPENDENT GROWTH OF SPOT (LEIOSTOMIES XANTHURUS) IN THE MARYLAND COASTAL BAYS

09:30 Turley, B.; Rykaczewski, R.: INFLUENCE OF WIND EVENTS ON LARVAL FISH MORTALITY RATES IN THE SOUTHERN CALIFORNIA CURRENT ECOSYSTEM

09:45 Jarvis, L.; McMeans, B.; Chu, C.: CONSIDERING THE CUMULATIVE EFFECTS OF ENVIRONMENTAL, BIOLOGICAL AND ANTHROPGENIC STRESSORS ON WALLEYE PRODUCTIVITY

10:00 Holbrook, S.; Passiweiler, A.; Lauer, M.; Lester, S.; Schmitt, R.: LINKING SOCIAL AND ECOLOGICAL DATA TO UNDERSTAND HOW PACIFIC ISLAND FISHERS NAVIGATE CHANGING CORAL REEFS

10:15 Garcia-Bermudez, M.; Engman, A.; Llerandi-Roman, I.; Galindo, A.; Murry, B.; Olmeda, M.: A WATERSCAPE APPROACH TO FRESHWATER ARTISANAL FISHERIES

CS023 COMMUNITY ECOLOGY

Chair(s): Beatrix Beisner, University of Quebec at Montreal (beisner.beatrix@uqam.ca)

Nicolas Fortin-St-Gelais, University of Quebec at Montreal (nicolas.fstgelais@gmail.com)

Location: Room 201

14:00 Winder, M.; Zamora-Terol, S.; Novotny, A.: DRIVERS OF BIOTIC INTERACTIONS IN PLANKTON COMMUNITIES IDENTIFIED BY DNA METABARCODING

14:15 Kunzmann, A.; Yohannes, E.; Straile, D.; Rohhaupt, K.; PREDATOR-PREY INTERACTION IN AN OLIGOTROPHIC LAKE: THE DIETARY SPECTRUM OF A KEYSTONE FRESHWATER COPEPOD

14:30 Brown, A.; Wares, J.; Oenigen, C.: EXTENDED PHENOTYPES ON CORAL REEFS: CRYPTO VARIATION AND SPECIES INTERACTIONS

14:45 Boyd, A.; Zhang, S.; Stillman, B.; Riley, K.: A FOOD-WEB APPROACH TO SEAGRASS CONSERVATION: UTILIZING PINFISH (LAGODON RHOMBOIDES) TO INCREASE SEAGRASS GROWTH AND PRODUCTIVITY

15:15 Herren, C.: EXPECTED DIFFERENCES IN DIVERSITY AND RARITY BETWEEN COMMUNITIES CONTAINING ASEXUALLY VERSUS SEXUALLY REPRODUCING TAXA

15:45 Keller, A.; Cordes, E.: COLD SEEP HABITAT MAPPING OF COSTA RICAS PACIFIC CONTINENTAL MARGIN

16:00 Katkov, E.; Low-Décarie, É.; Fussmann, G.: RESOURCE FLUCTUATIONS IN RELATIVE ABUNDANCE OF NITROGEN, PHOSPHORUS, CO2 UNLIKELY DRIVERS OF SEASONAL PHYTOPLANKTON SUCCESSION IN A TEMPERATE MESOTROPHIC LAKE

16:15 Ares, A.; Sato, K.; Mars Brubin, M.; Diaz, J.; Ripken, C.; Mitarai, S.: PLANKTON COMMUNITY STRUCTURE DYNAMICS UNDER RED SOIL POLLUTION WITHIN CORAL REEF ECOSYSTEMS

16:30 Cohen, R.; Gray, D.: RESPONSES OF MACROINVERTEBRATE COMMUNITIES TO WATER QUALITY VARIABLES IN SMALL ARCTIC LAKES

16:45 Gomez-Carrazquillo, J.; Gomez, J.; Gutiérrez-Fonseca, P.; Ramirez, A.: HURRICANE EFFECTS ON AQUATIC INSECT ASSEMBLAGES

17:00 Matassa, C.; Ewanchuk, P.: DRIVERS OF SALT MARSH DECLINE IN A SOUTHERN NEW ENGLAND ESTUARY

17:15 Gopalakrishnan, K.; Pedersen, A.; Kashian, D.: EFFECT OF TEMPERATURE AND CALCIUM ON QUAGGA MUSSELS’ FILTRATION RATES
CS025 PHYTOPLANKTON ECOLOGY AND PHYSIOLOGY
Chair(s): Michael Behrenfeld, Oregon State University (mjb@science.oregonstate.edu)
Location: Room 101 A/B
14:00 Hopcroft, R.; Smoot, C.: RESPIRATORY RATES OF Copepods IN THE PACIFIC ARCTIC
14:30 Dolan, J.; Ciabaru, M.; Moro, S.; Coppola, L.: THE SURPRISING MICROZOOPLANKTON OF THE MESOPELAGIC MEDITERRANEAN SEA
14:45 Anderson, S.; Harvey, E.: COASTAL COMPLEXITIES: UNRAVELING TEMPORAL PHYTOPLANKTON RATE DYNAMICS IN THE SKIDAWAY RIVER ESTUARY
15:15 Jarzczak, J.; Martin-Creuzburg, D.: NUTRIENTS MATTER MOST: EVOLUTION OF GRAZER RESISTANCE TO CYANOBACTERIA
16:30 Starke, C.; Frost, P.: INTERACTIVE EFFECTS OF TEMPERATURE AND FOOD QUALITY ON THE LIFE-HISTORY OF DAPHNIA PULICARIA

SS005 ASLOMP STUDENT SYMPOSIUM
Chair(s): Benjamin Cuker, Hampton University (benjamin.cuker@hamptonu.edu)
Carolina Bonin, Hampton University (carolina.Lewallen@hamptonu.edu)
Location: Room 102 A/B/C
09:00 Das, N.; Mayor, E.; Chigbu, P.: POPULATION DYNAMICS OF BLUE CRABS IN THE MARYLAND COASTAL BAYS
09:30 Selig, G.; Netburn, A.; Malik, M.: INVESTIGATION OF LATITUINAL AND VERTICAL DISTRIBUTIONS OF PLAGOGHUTHRIA IN THE CENTRAL PACIFIC OCEAN USING NOAA EXPLORATORY DATA
10:00 Murarka, M.; Proskopenko, M.; Robinson, L.; Li, T.; Burke, A.; Chen, T.: AN EXPLORATION OF DEEP-SEA CORALS AS ARCHIVES OF OCEAN RARE EARTH ELEMENT CONCENTRATIONS VIA LASER ABLATION-INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY
14:00 Gade, A.; Volsen, S.; Fisher, C.; Baum, I.: EVOLUTIONARY HISTORY OF APICOMPLEXAN-RELATED SYMBIOTS IN CORALS: COMPARING NUCLEAR AND PLATID PHYLOGENY

CS028 ZOOPLANKTON ECOLOGY AND PHYSIOLOGY
Chair(s): John Dolan, Laboratoire d’Océanographie de Villefranche (dolan@obs-vlfr.fr)
George McManus, University of Connecticut (george.mcmanus@uconn.edu)
Location: Room 208 A/B
09:00 Niemisto, M.; Wahle, R.; Wailer, J.; Clark, F.; Greenwood, S.; Fields, D.: GENETIC REGULATORY RESPONSE TO END-CENTURY TEMPERATURE AND PCO2 IN POST-LARVAL AMERICAN LOBSTER
09:30 Mendoza Islas, H.; Hopcroft, R.: SCYPHOMEDUSA E ABUNDANCE AND DISTRIBUTIONS OF GELATINOUS ZOOPLANKTON IN THE NORTHERN GULF OF ALASKA
10:00 Dubickas, K.; Daly, K.; Ferguson, M.; Zapfe, G.: ZOOPLANKTON COMMUNITY STRUCTURE IN THE NE GULF OF MEXICO BEFORE AND AFTER THE DEEPWATER HORIZON OIL SPILL

* Represents invited presentations.
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<th>Time</th>
<th>Session/Title</th>
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<tr>
<td>09:00</td>
<td>RECONSTRUCTING ADAPTIVE RESPONSES IN AQUATIC ECOSYSTEMS USING ANCIENT DNA AND RESURRECTION ECOLOGY</td>
<td>Raffaële Siano, Iremmer (<a href="mailto:raffaele.siano@ifremer.fr">raffaele.siano@ifremer.fr</a>)</td>
<td>Room 204</td>
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<td>09:15</td>
<td>ADAPTATION OF AQUATIC BIODIVERSITY TO GLOBAL CHANGE</td>
<td>Vincent Fugere, University of Quebec at Montreal (<a href="mailto:vincent.fugere@mail.mcgill.ca">vincent.fugere@mail.mcgill.ca</a>)</td>
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<td>10:00</td>
<td>SEASONAL VARIATION IN DSDNA EUKARYOTIC VIRUSES IN ANTARCTIC ACE LAKE</td>
<td>Beatrix Beisner, University of Quebec at Montreal (<a href="mailto:beisner.beatrix@mcgill.ca">beisner.beatrix@mcgill.ca</a>)</td>
<td>Room 209 A/B</td>
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<td>10:15</td>
<td>DEVELOPING THOUGHTS ON PHYTOPLANKTON BLOOMS IN THE CONTEXT OF ANNUAL BIOMASS CYCLES</td>
<td>Peter Graue, University of Washington - Applied Physics Lab (<a href="mailto:pgraue@apl.washington.edu">pgraue@apl.washington.edu</a>)</td>
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<td>10:30</td>
<td>THE ANNUAL CYCLE</td>
<td>Kay Bidle, Rutgers University (<a href="mailto:kbidle@marine.rutgers.edu">kbidle@marine.rutgers.edu</a>)</td>
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<td>10:45</td>
<td>NATURAL AND TOXIC HEAVY METALS IN SEDIMENTS OF GALVESTON BAY, TEXAS, FOLLOWING HURRICANE HARVEY</td>
<td>Craig Carlson, University of California Santa Barbara (<a href="mailto:craig.carlson@ucsb.edu">craig.carlson@ucsb.edu</a>)</td>
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<td>11:00</td>
<td>ANNUAL DYNAMICS OF NET PLANKTON POPULATION DYNAMICS</td>
<td>Scott Doney, University of Virginia (<a href="mailto:sdoney@virginia.edu">sdoney@virginia.edu</a>)</td>
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<td>11:15</td>
<td>OPEN-OCEAN PHYTOPLANKTON PRODUCTION PATTERNS ASSOCIATED WITH SEA ICE: A GREENLAND SEA ANALYSIS</td>
<td>John Anderson, Loughborough University (<a href="mailto:N.J.Anderson@lboro.ac.uk">N.J.Anderson@lboro.ac.uk</a>)</td>
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<td>11:30</td>
<td>ANNUAL CYCLE</td>
<td>Delphine Latour, University of Clermont-Ferrand (<a href="mailto:delphine.latour@uca.fr">delphine.latour@uca.fr</a>)</td>
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<td>DEVELOPING THOUGHTS ON PHYTOPLANKTON BLOOMS IN THE CONTEXT OF ANNUAL BIOMASS CYCLES</td>
<td>Peter Graue, University of Washington - Applied Physics Lab (<a href="mailto:pgraue@apl.washington.edu">pgraue@apl.washington.edu</a>)</td>
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<td>12:00</td>
<td>THE ANNUAL CYCLE</td>
<td>Kay Bidle, Rutgers University (<a href="mailto:kbidle@marine.rutgers.edu">kbidle@marine.rutgers.edu</a>)</td>
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<td>13:00</td>
<td>ANNUAL CYCLE</td>
<td>Delphine Latour, University of Clermont-Ferrand (<a href="mailto:delphine.latour@uca.fr">delphine.latour@uca.fr</a>)</td>
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SS034 FORECASTING IS THE FUTURE: ADVANCING METHODS AND APPLICATIONS OF FORECASTING IN THE AQUATIC SCIENCES

Chair(s): Cayelan Carey, Virginia Tech (cayelan@vt.edu)
Rafael Marce, Catalan Institute for Water Research (rmarce@icra.cat)
Paul Hanson, University of Wisconsin-Madison (pchanson@wisc.edu)

Location: Room 103 B

09:15 LaDeau, S.; Weathers, K.; Dietze, M.: A FLEXIBLE, STATE-SPACE APPROACH FOR EVALUATING THE SCALE AND SCOPE OF PREDICTABILITY IN NATURE

09:45 Baracchini, T.; Chu, P.; Bouffard, D.; Wüst, A.: 3D HYDRODYNAMIC AND BIO-PHYSICAL LAKE MODELS WITH DATA ASSIMILATION – APPLICATION OF AN OPERATIONAL SYSTEM FOR SWISS LAKES


10:15 Carey, C.; Thomas, R.; Figueiredo, R.; Daneshmand, V.: REAL-TIME ECOLOGICAL FORECASTING ENABLES ADAPTIVE WATER QUALITY MANAGEMENT IN A DRINKING WATER RESERVOIR

14:00 Pomati, F.; Ilea, P.: FORECASTING PHYTOPLANKTON COMMUNITY CHANGE USING IN SITU MONITORING AND MACHINE LEARNING

14:15 Jones, I.: Woolway, I.; Mackay, E.; Maberly, S.; Elliott, A.: PREDICTING FUTURE CHANGES TO PHYTOPLANKTON COMMUNITIES AROUND THE WORLD

14:30 Gronchi, E.; Joehnk, K.; Straile, D.; Peeters, F.: PROXY-BASED MODELLING OF PHYTOPLANKTON SPRING BLOOM

14:45 Slavin, E.; Perkins, R.; Wain, D.; Blenkinsopp, C.: CAN IN-RESERVOIR MONITORING BE USED TO PREDICT TASTE AND ODOR EVENTS IN DRINKING WATER RESERVOIRS?

15:00 Han, Y.; Smithheart, J.; Smyth, R.; Obenour, D.; Azizi, T.: ASSESSING VERTICAL MIXING AS A POTENTIAL CONTROL ON CYANOBACTERIA DOMINANCE IN SHALLOW TURBID RESERVOIRS


16:00 Harvey, J.: FORECASTING THE RESTORATION OF A FREE-FLOWING EVERGLADES BASED ON LARGE-SCALE HIGH-FLOW EXPERIMENTS AND WHOLE-SYSTEM MODELING

16:15 Hanson, P.; Stillman, A.; Carey, C.; Jia, X.; Kumar, V.: IMPROVED UNDERSTANDING AND PREDICTION OF 37 YEARS OF SURFACE WATER PHOSPHORUS DYNAMICS USING THEORY GUIDED MACHINE LEARNING

SS038 REAL WORLD ECOLOGY LANDSCAPES – UPSCALING COMMUNITY ECOLOGY EXPERIMENTS IN AQUATIC SYSTEMS

Chair(s): Maria Stockenreiter, Ludwig-Maximilians-University (LMU)
Munich (stockenreiter@bio.lmu.de)
Patrick Fink, University of Cologne (patrick.fink@uni-koeln.de)
Jens Christian Nejstgaard, Leibniz-Institute of Freshwater Ecology and Inland (nejstgaard@igb-berlin.de)

Location: Room 204

09:00 Meunier, C.; Groß, E.; Köring, M.; Duarte Moreno, H.; Tremblay, N.; Boersma, M.: IMPACT OF GLOBAL CHANGE ON MARINE PLANKTON: A MULTIPLE STRESSOR APPROACH


09:30 Huynh, M.; Gray, D.: DISPERSAL AS A BUFFER AGAINST ZOOPLANKTON COMMUNITY CHANGE IN RESPONSE TO INCREASING SALINITY LEVELS ON THE GREAT PLAINS


10:00 Gollisch, R.; Stockenreiter, M.; Rengefors, K.: ENVIRONMENTAL FACTORS AFFECTING THE EXPANSION OF THE INVASIVE NUISANCE MICROALGA GONYOSTOMUM SEMEN

10:15 Stockenreiter, M.; Jarzak, J.: CYANOBACTERIA DOMINANCE INDUCED BY REDUCED MIXING DEPTH IN A EUTROPHIC LAKE


14:15 Chaguaceda Borjabad, P.; Scharnowbeer, K.; Dalman, E.; Tranvik, L.; Eldén, P.: TOP-DOWN PREDATION DRIVE SHIFTS IN APPARENT COMPETITION ALONG A PRODUCTIVITY GRADIENT CAUSING CROSS-BOUNDARY SUBSIDY EFFECTS

14:30 Benitez-Requena, L.; Titocci, J.; Stockenreiter, M.; Stibor, H.; Fink, P.: LOSS OF FUNCTIONAL TRAITS AFFECTS PHYTOPLANKTON-ZOOPLANKTON DYNAMICS IN A LAKE MESocosm EXPERIMENT

14:45 Ilie, M.; Stockenreiter, M.; Stibor, H.; Fink, P.: EFFECTS OF PHYTOPLANKTON DIVERSITY ON INTRASPECIFIC COMPETITION IN DAPHNIA - A COMMON GARDEN EXPERIMENT

15:00 Fink, P.; Norf, H.; Weitere, M.; Borchardt, D.: MOBILE AQUATIC MESocosms (MOBICOS) - A MODULAR EXPERIMENTAL INFRASTRUCTURE FOR PROCESS BASED HYDRO-ECOLOGICAL RESEARCH

15:15 Waller, T.; Seda, I.; Green, A.; Nejstgaard, J.: DOUBLE-DEEP ZOOPLANKTON ABUNDANCE AND FINE-SCALE MIGRATION PATTERNS QUANTIFIED WITH DEEP-FOCUS IMAGING AND DEEP-LEARNING ALGORITHMS
SS039 EFFECTS OF STORM EVENTS ON AQUATIC, COASTAL, AND OCEANIC ENVIRONMENTS AND ECOSYSTEMS: FROM PHYSICAL PROCESSES TO FOOD WEBs

Chair(s): Beth Stauffer, University of Louisiana at Lafayette (stauffer@louisiana.edu)
Michael Martinez-Colon, Florida A&M University (michael.martinez@famu.edu)
Patricia Chardon-Maldonado, University of Puerto Rico at Mayaguez (patricia.chardon@upr.edu)
Jessica Fitzsimmons, Texas A&M University (jesfitzra@tamu.edu)
Miguel F. Canals Silanet, University of Puerto Rico at Mayaguez (miguel.canals@upr.edu)
Lisa Campbell, Texas A&M University (lisacampbell@tamu.edu)
Simon Geist, Texas A&M University Corpus Christi (simon.geist@tamucc.edu)
Kam-Biu Liu, Louisiana State University (kliu1@lsu.edu)
Thomas Blanchette, University Of Michigan (tbianc@umich.edu)
Marianne Dietz, Louisiana State University (mdietz2@lsu.edu)

Location: Room 104

09:00 Fiorendino, J.; Campbell, L.; Henrichs, D.: SHIFTS IN PLANKTON COMMUNITIES ON THE TEXAS COAST FOLLOWING HURRICANE HARVEY
09:15 Henrichs, D.; Fiorendino, J.; Campbell, L.: PEEKING AT THE PLANKTON: USING METATRANSCRIPTOMICS TO OBSERVE THE PLANKTON COMMUNITY RESPONSE TO HURRICANE HARVEY
09:30 Campbell, L.; Henrichs, D.; Angle, S.: CHANGING CHAINS: IN SITU OBSERVATIONS OF DIATOM CHAIN LENGTH IN RESPONSE TO ENVIRONMENTAL FORCING FROM HURRICANES AND UPWELLING EVENTS
09:45 Smith, T.; Mukherjee, S.; Ennis, R.; Brandnimeris, V.; Brandt, M.; Canals, M.: HURRICANE GENERATED WAVE THRESHOLDS FOR DAMAGE TO CORAL REEFS IN THE US VIRGIN ISLANDS
14:00 Rogers, C.: HURRICANE DAMAGE TO A UNIQUE CORAL/MANGROVE ECOSYSTEM AND POTENTIAL FOR RECOVERY
14:30 McAskill, S.; Zapfe, G.; Geist, S.: EFFECTS OF HURRICANE HARVEY ON LARVAL FISH DISTRIBUTION IN THE GULF OF MEXICO
14:45 Simmons, K.; Eggleston, D.; Bohnenstiehl, D.: ECOLOGICAL IMPACTS OF HURRICANE IRMA ON A CORAL REEF SOUNSCAPE
15:00 Dunlap-Smith, A.: PHOTOGRAPHIC SURVEYS AND COMPUTER VISION TRACK FRESHWATER DECAPOD CRUSTACEAN COMMUNITIES ON ST. JOHN, US VIRGIN ISLANDS.
15:45 Wilson, S.; Furman, B.; Hall, M.; Fourquean, J.: ASSESSMENT OF HURRICANE IRMA IMPACTS ON SOUTH FLORIDA SEAGRASS COMMUNITIES USING LONG-TERM MONITORING PROGRAMS

16:45 Peri, F.: HURRICANE MARIA EFFECTS ON BIODIVERSITY IN PUERTO RICAN FORESTS AS MEASURED BY TERRESTRIAL LIDAR SCANNER
17:00 Kominoski, J.; Kuhn, A.; Charles, S.; Penning, S.; Weaver, C.; Maddox, T.; Armirage, A.: PLANT COMPOSITION AFFECTS ECOSYSTEM CONNECTIVITY DURING A CATASTROPHIC HURRICANE
17:15 Rothenberger, M.; Armstrong, A.; Spitz, M.: SOCIAL-ECOLOGICAL SYSTEM RESPONSES TO HURRICANE SANDY IN THE HUDSON-RARITAN ESTUARY

SS043 BEYOND THE NUMBERS: STRATEGIES FOR INCLUSIVE PRACTICES ACROSS THE AQUATIC SCIENCES

Chair(s): Brandon Jones, National Science Foundation (mjones@nsf.gov)
Lisa Rom, National Science Foundation (elorom@nsf.gov)

Location: Room 208 C

09:00 Jones, B.: IT’S ALL GOOD: THE RECIPROCITY OF DIVERSITY IN STEM DISCIPLINES
09:45 Schiebel, H.: COMBINING CITIZEN SCIENCE AND SERVICE LEARNING IN THE UNDERGRADUATE CLASSROOM
10:00 Aguilar, C.; Cuhel, R.: INTERDISCIPLINARY EXPEDITIONARY RESEARCH SCIENCE EDUCATION PROMOTES ETHNIC, GENDER, SOCIOECONOMIC, AND DISCIPLINARY DIVERSITY IN AQUATIC SCIENCES
14:00 Hernandez Delgado, E.; Soleiman, Ramon, S.: COMMUNITY-BASED CORAL REEF REHABILITATION RESEARCH IN PUERTO RICO: AN ALTERNATIVE PATHWAY INTO PARTICIPATORY SCIENCE FOR TRADITIONALLY UNDERSERVED GROUPS
14:15 Brandon, J.; Peach, C.; Arnold, E.; Paulenich, C.; Sickler, S.: PRICE OUTREACH’S BEACH SCIENCE PROGRAM: BRIDGING THE GAP BETWEEN TRAINING SCIENCE COMMUNICATORS AND ENGAGING HISTORICALLY UNDERSERVED AUDIENCES
14:30 Jones, M.; Jabanoski, K.: LESSONS LEARNED IN ENGAGING UNDERSERVED AUDIENCES IN NOAA EDUCATION PROGRAMS
14:45 Moser, F.; Barberena Arias, M.; Harris, L.; Maldonado, P.; Olivo Delgado, C.; Pfierson, J.: BUILDING MARINE SCIENCE RESEARCH CAPACITY IN EARLY STAGE HISPANIC UNDERGRADUATE STUDENTS
15:15 Webster, A.; Zemenick, A.; Jones, S.: PROJECT BIODIVERSIFY: A REPOSITORY OF TEACHING MATERIALS AND METHODS TO MAKE BIOLOGICAL AND NATURAL SCIENCE CLASSROOMS MORE INCLUSIVE

SS059 SOCIO-ECOLOGICAL RESEARCH FOR ACTIONABLE SUSTAINABLE SOLUTIONS: EXAMPLES, PERSPECTIVES AND CHALLENGES
Chair(s): Nicolas F. St-Gelais, Université de Montréal (nicolas.fstgelais@gmail.com)
Jean-Olivier Goyette, Université de Montréal (jean-olivier.goyette@umontreal.ca)
Julie Talbot, Université de Montréal (julie.talbot@gmail.com)
Michelle McCrackin, Stockholm University (michelle.mccrackin@su.se)

Location: Room 209 C

14:00 McCrackin, M.: HOW CAN NATURAL SCIENTISTS INFORM POLICY: LESSONS FROM A UNIVERSITY-BASED BOUNDARY ORGANIZATION?

14:30 Messager, M.; Davies, I.; Levin, P.: SUFFICIENT AND EFFICIENT SOLUTIONS FOR TOXIC URBAN STORMWATER

14:45 Plante, S.: ADAPTATIONS BASED ON SOCIAL-ECOLOGICAL SYSTEMS: THE ROLE OF GOVERNANCE FOR COASTAL AND RIPARIAN COMMUNITIES.

15:00 Chen, R.; Bosma, K.; Borrelli, M.; Kirshen, P.; Lockwood, L.: EXPLORING THE USE OF DREDGE SPOILS TO ENHANCE THE ECOSYSTEM SERVICES PROVIDED BY THE BOSTON HARBOR ISLANDS

15:45 Salk, K.; Denny, R.; Greif, J.; SOCIAL-ECOLOGICAL INTERACTIONS OF NITROGEN MANAGEMENT IN THE MISSISSIPPI RIVER BASIN AND THE ROLE OF POLICY


16:15 Fortin St Gelais, N.; Lapière, J.; Siron, R.; Maranger, R.: IDENTIFYING THRESHOLDS OF THE EFFECT OF LAND USE AND CLIMATE CHANGE ON AQUATIC ECOSYSTEM SERVICES.

16:30 Atapu, D.: BLUE ECONOMY MECHANISMS FOR ACTIONABLE SUSTAINABLE SOLUTIONS

SS060 THE ADVENT OF SAMPLING BIOLOGICAL PROCESSES IN AQUATIC SYSTEMS USING AUTONOMOUS PLATFORMS
Chair(s): Oscar Schofield, Rutgers University (oscar@marine.rutgers.edu)
Joel Kohut, Rutgers University New Brunswick (kohut@marine.rutgers.edu)
Craig Lee, Applied Physics Laboratory (craig@apl.washington.edu)
Kelly Benoit Bird, MBARI (kbb@mbari.org)
Mark Moline, University of Delaware (mmoline@udel.edu)

Location: Room 209 A/B

15:45 Schofield, O.; Glenn, S.; Kohut, J.; Måles, T.; Saba, G.: PLATFORMS ARE MATURE BUT WHAT SENSORS AND SAMPLING DO WE NEED TO SAMPLE MARINE FOODwebs?


16:30 Villareal, T.; Wilson, C.: LONG-DURATION SAMPLING OF THE PACIFIC GYRE USING HOLOGRAPHY AND ACTIVE FLUORESCENCE ON A WAVE GLIDER SV2


17:00 Shulman, I.; Penta, B.; Moline, M.; Oliver, M.; Anderson, S.; Hudson, K.; Cohen, J.: BIOULUMINESCENCE POTENTIAL DYNAMICS AT FRONTAL STRUCTURES IN THE DELAWARE BAY AREA.

17:15 Birch, J.: AUTONOMOUS TARGETED SAMPLING WITH MOBILE ECOGENOMIC SAMPLERS.

SS063 OCEAN, COASTAL, AND FRESHWATER ACIDIFICATION: RESEARCH AND EDUCATION
Chair(s): Robert Chen, University of Massachusetts Boston (bob.chen@umb.edu)
Shannon Davis, University of Massachusetts Boston (Shannon.davis002@umb.edu)
Joseph Salisbury, University of New Hampshire, Ocean Processes Analyses Lab (joe.salisbury@unh.edu)

Location: Room 103 A


14:30 Falkenberg, L.: USING ACADEMIC WRITING TO FACILITATE OUTREACH AND EDUCATION REGARDING OCEAN ACIDIFICATION RESEARCH ACROSS TRADITIONAL DISCIPLINARY LINES


15:00 Gao, Y.; Svec, R.: CLIMATE CHANGE AND OCEAN ACIDIFICATION REVEALED FROM ISOTOPIC SIGNATURES OF CARBONATE SHELLS


16:00 Wyatt, S.; Varela, D.; Grundle, D.: OCEAN ACIDIFICATION EFFECTS ON SILICEOUS PHYTOPLANKTON FROM THE SUBARCTIC NORTHEAST PACIFIC AND SUBTROPICAL NORTH ATLANTIC OCEANS


17:00 Fitz, K.; Habelke, E.; Boyce, D.; Chambers, R.: INTER FEMALE DIFFERENCES IN OFFSPRING QUALITY IN ATLANTIC SILVERSIDE (MENIDIA MENIDIA) AND THEIR SCOPE OF RESPONSE TO ELEVATED CO2

*REPRESENTS INVITED PRESENTATIONS*
SS070 ENGAGING UNDERREPRESENTED STUDENTS IN OCEAN SCIENCE TO PROMOTE A DIVERSE INCLUSIVE WORKFORCE

Chair(s): Andrea Johnson, National Science Foundation (andjohns@nsf.gov)
          Todd Christenson, NOAA Office of Education (todd.christenson@noaa.gov)
          Corey Garza, California State University, Monterey Bay (cogarza@csumb.edu)

Location: Room 208 C

15:45 Garza, C.: PATHWAYS TO DIVERSITY AND INCLUSION IN 21ST CENTURY OCEAN SCIENCE

16:00 Burgos Rodriguez, J.: CREATING OUR OWN REVOLVING DOOR: BUILDING INFLUENCE TO AFFECT CHANGE (CREANDO NUESTRA PROPIA PUERTA GIRATORIA: CONSTRUYENDO INFLUENCIA PARA CREAR CAMBIO)

16:15 Gibson, D.: UNDERREPRESENTED BUT NOT FORGOTTEN: THE MAKING OF A MARSHALL SCHOLAR


17:00 Guannel, M.; Monroe, N.; Phyley, C.: PROFESSIONAL LEARNING COMMUNITIES IN THE UNITED STATES VIRGIN ISLANDS PROVIDE SUPPORT THROUGH TEACHER TRAINING AND PROJECT-BASED LEARNING IN AQUATIC SCIENCES

196 papers
TUESDAY POSTERS

All poster sessions are held in Exhibit Hall B.

CS004 URBAN ECOSYSTEMS

141 Maldonado-Benitez, N.; Ramirez, A.: EFFECT OF URBANIZATION ON TROPICAL STREAM HABITATS AND THEIR ASSOCIATED DRAGONFLY FAUNA IN PUERTO RICO

142 Dearden, E.; Marisak, S.: EVALUATION OF POLLUTANT REMOVAL AND RUNOFF REDUCTION OF A STORMWATER BIOFILTERATION SYSTEM

143 Duval, T.: TRACE METALS IN URBANIZING HEADWATER STREAMS: DIFFERENT RESPONSES FOR DIFFERENT METALS

144 Walters, J.; Ramirez, A.: URBAN STREAM IN LATIN AMERICA: AN ASSESSMENT OF CURRENT CONDITIONS AND RESEARCH NEEDS

CS005 ACIDIFICATION

71 Bockmon, E.; Dickson, A.: A REPEATED INTER-LABORATORY COMPARISON OF CARBON DIOXIDE MEASUREMENTS: AN ASSESSMENT OF UNCERTAINTY

73 Boisen, O.; Goertz, J.: IN SITU PH MEASUREMENTS USING SELF-CALIBRATING IROX ELECTRODES


76 Hide, A.; Takeno, S.: SEASONAL CHANGE IN THE RELATIONSHIP BETWEEN PH AND AOU IN COASTAL WATERS OFF WESTERN KYUSHU, JAPAN

77 Schockman, K.; Byrne, R.: SPECTROPHOTOMETRIC DETERMINATION OF CARBONATE DISSOCIATION CONSTANT, K2, IN SEA WATER

78 Tran, T.: AMELIORATING OCEAN ACIDIFICATION: TOWARDS A MODEL RELATING PCO2, IRRADIANCE AND LEAF AREA INDEX OF ZOSTERA MARINA (EELGRASS) IN PADILLA BAY, WA

CS006 TRACE METALS

79 Passoa, I.; Gerais, M.: LEAD ISOTOPE COMPOSITION IN BIVALVE SHELLS FROM ILHA GRANDE BAY (RIO DE JANEIRO, BRAZIL)

81 Wei, Y.; Liu, G.; Wang, R.; Fu, B.: EMISSION CHARACTERISTICS AND ENVIRONMENT INFLUENCE OF SIZE-CLASSED PARTICULATE Pb FROM A COAL-FIRED POWER PLANT EQUIPPED WITH CIRCULATING FLUIDIZED BED (CFB) BOILER

82 Serrano, A.; Richardson, C.: ASSESSING THE EFFECT OF A CARBON AMENDMENT ON TRACE METAL LEACHING FROM SEDIMENT CORES

CS007 HYPOXIA

57 Weinstock, J.; Collin, R.: EFFECT OF SEASONAL HYPOXIA ON MEROPLANKTON IN A CARIBBEAN ESTUARY

58 Liu, C.; Liu, X.; Wang, S.; Li, B.; Du, Y.: EFFECTS OF PERTURBATIONS BY DIFFERENT DISTURBANCE METHODS ON MITIGATION OF ANOXIC HYPOLIMNETIC IN THERMAL STRATIFIED RESERVOIRS


60 Okada, T.; Imamura, M.; Nakamura, Y.: SULFUR PEAK MODELING AT THE MIDDLE LAYER OF DEAD ZONE IN TOKYO BAY

CS009 GAS FLUXES


91 Dornblaser, M.; Butman, D.; Bogard, M.; Streig, R.: INTERIOR ALASKA LAKES – NET SOURCES OR SINKS OF CARBON GASES?

CS010 NITROGEN BIOGEOCHEMISTRY AND CYCLING


93 Chang, B.; Sonnerup, R.; Bullister, J.: EQUATORIAL TRANSPORT OF NITROUS OXIDE FROM THE EASTERN TROPICAL PACIFIC OCEAN


96 Hansen, A.; Kraus, T.; Downing, B.; Gelber, A.; Ahmed, Q.; Bergamaschi, B.: MAPPING NITROGEN CONCENTRATIONS IN THE SAN FRANCISCO-SAN JOAQUIN DELTA (CALIFORNIA, USA): RESULTS FROM A NEWLY DEVELOPED CONTINUOUS FLOW-THROUGH AMMONIUM ANALYZER

97 Mathur, M.; Granger, J.; Bushers, D.: NITROGEN ISOTOPE FRACTIONATION DURING AMMONIUM ASSIMILATION BY MARINE PHYTOPLANKTON ISOLATES


CS012 CARBON FLUXES IN FW AND MARINE ENVIRONMENT

32 Beraldo Bittar, T.; Pasow, U.; Harvey, E.: AN UPDATED METHOD FOR THE CALIBRATION OF TRANSPARENT EXOPOLYMER PARTICLE MEASUREMENTS

CS013 DISSOLVED ORGANIC MATTER - DOC, DON, DOP, FDOM, CDOM

105 Govender, Y.: “RESILIENCE OF LAGUNA GRANDE AT FAJARDO TO “BLACKOUTS AND HURRICANES”: LONG-TERM MONITORING METHODS FOR BIOLUMINESCENCE IN PUERTO RICO”

106 D’Andrilli, J.: CHALLENGES OF FLUORESCENT DISSOLVED ORGANIC MATTER CHEMICAL INTERPRETATIONS: A CASE STUDY OF POLAR ICE CORES
ASLO ASLO 2019 AQUATIC SCIENCES MEETING

TUESDAY

9 CS020 FISH AND FISHERIES

107 Gao, L.; Gao, Y.; Zong, H.; Guo, L.: ELUCIDATING THE HIDDEN NON-CONSERVATIVE BEHAVIOR OF DOM IN LARGE-RIVER ESTUARIES


111 Fiss, M.; Osburn, C.; Pard, R.: THE IMPACTS OF URBAN DOM ON COASTAL CHEMISTRY AND BACTERIOPLANKTON COMPOSITION


CS014 SEDIMENT DYNAMICS

396 Ramirez-Irazarry, N.; Sherman, C.: ASSESSMENT OF GEOLOGICAL AND GEOCHEMICAL PROXIES OF SOURCES OF TERRIGEOUS SEDIMENT REACHING REEFS ADJACENT TO THE GUANICA BAY WATERSHED, SOUTHWEST PUERTO RICO

397 Kuhl, M.; Stuhrenburg, J.; Broder, T.; Olefeldt, D.; Knorr, K.: GROUNDWATER CONNECTIVITY, SEDIMENT REDOX CONDITIONS, AND METHANE EMISSIONS FROM WESTERN CANADIAN PEATLAND LAKES


399 Boyko, V.; Torfstein, A.: OXYGEN CONSUMPTION IN PERMEABLE AND COHESIVE SEDIMENTS OF THE OLIGOTROPHIC MARINE SYSTEM AFFECTED BY AEOLIAN DRY DEPOSITION

400 Cortez, D.; Ferrier, M.: RELATIONSHIP BETWEEN TURBIDITY AND TOTAL SUSPENDED SOLIDS ACROSS A SALINITY GRADIENT IN THE SAN FRANCISCO ESTUARY

401 Martinez, L.; Santos Mercado, H.: USING PETROGRAPHIC ANALYSIS OF SANSTONES FROM OLIGOCENE AND MIOCENE AGE AND SANDS OF THE HOLOCENE FOR ISLAND ARC SEDIMENTATION EVOLUTION IN THE NORTH COAST TERTIARY BASIN OF PUERTO RICO

CS023 COMMUNITY ECOLOGY

156 Espanar-Escalera, H.; Santos-Flores, C.; Sotomayor-Ramirez, D.: TAXONOMIC ASSESSMENT AND PERiphyton biomass in presence of two invasive thiaridae snails, contrasting with external morphological traits, on fresh-water artificial systems

157 Gonzalez Hernandez, N.; Padilla Maldonado, B.; Colon Molina, D.: MATING BEHAVIOR OF PHYSA ACUTA (GASTROPODA: PHYSISIDA) ACCORDING TO BODY SIZE

158 Lisboa, J.; Padilla Maldonado, B.; Santos, C.: ASSOCIATION BETWEEN AUTOTROPH PERiphyton biomass and fresh-water snail community in streams of the rio abajo state forest, puerto rico

159 Santiago-Vera, J.; Wilson, J.; Ramirez, A.: HURRICANE EFFECTS ON TROPICAL STREAM MEIOFAUNA: AN EXPERIMENTAL SIMULATION OF MAJOR ABIOTIC IMPACTS


161 Hazlett, M.; Walker, C.; Guo, C.: EXAMINING FISH SPECIES DIVERSITY IN NEARSHORE RIVER MOUTH HABITATS OF KACHEMAK BAY, ALASKA

162 Gonzalez Colmenares, G.; Harms-Tuohy, C.; Schizas, N.: INVESTIGATING THE USE OF EDNA SAMPLING TO LOCATE FISH SPAWNING AGGREGATIONS

163 Sabal, M.; Merz, J.; Workman, M.; Palkovacs, E.: PREY TRAITS AND HABITAT MODIFIED DECISIONS IN MIGRATING JUVENILE SALMON

164 Usman, A.; Adeola, U.: STUDIES OF GENETIC VARIATIONS ON WILD AND CULTURED CICHLID POPULATIONS (SAROTHERDON MELANOTHERON) IN LAGOS STATE.

165 Franqui Rivera, G.; Schizas, N.: USING DNA BARCODING TO CHARACTERIZE THE DIVERSITY OF SHARKS IN PUERTO RICO

CS022 BIODIVERSITY

149 Hashem, S.; Kawai, K.: GENETIC RELATIONSHIPS OF CICHLID FISHES FROM LAKE MALAWI BASED ON MITOCHONDRIAL DNA SEQUENCES

150 Mariani-Rios, A.; Ramirez, A.: ENVIRONMENTAL FACTORS ASSOCIATED WITH DRAGONFLY ASSEMBLAGES AT EL YUNQUE NATIONAL FOREST

151 Contreras, P.; Ríos, C.; Rivera, M.; Rodríguez, C.: ABUNDANCE OF DIFFERENT SPECIES OF LAND CRAB LARVAE FOUND IN PUERTO RICO: MEGALOP STAGE

152 Fidalgo De Souza, L.: IDENTIFYING CATTLE EGRET (BUBULCUS IBIS) COLONIES IN MANGROVE ECOSYSTEMS THROUGH GUANO SPECTRAL SIGNATURE

153 Leon Zapas, R.; Yousey, B.; Dixson, D.; Biddle, J.: UNCOVERING GENES ASSOCIATED WITH SECONDARY METABOLITE FROM MARINE SPONGES AND SEDIMENTS USING METAGENOMICS


156 Espanar-Escalera, H.; Santos-Flores, C.; Sotomayor-Ramirez, D.: TAXONOMIC ASSESSMENT AND PERiphyton biomass in presence of two invasive thiaridae snails, contrasting with external morphological traits, on fresh-water artificial systems

157 Gonzalez Hernandez, N.; Padilla Maldonado, B.; Colon Molina, D.: MATING BEHAVIOR OF PHYSA ACUTA (GASTROPODA: PHYSISIDA) ACCORDING TO BODY SIZE

160 Lisboa, J.; Padilla Maldonado, B.; Santos, C.: ASSOCIATION BETWEEN AUTOTROPH PERiphyton biomass and fresh-water snail community in streams of the rio abajo state forest, puerto rico

159 Santiago-Vera, J.; Wilson, J.; Ramirez, A.: HURRICANE EFFECTS ON TROPICAL STREAM MEIOFAUNA: AN EXPERIMENTAL SIMULATION OF MAJOR ABIOTIC IMPACTS


T REPRESENTS TUTORIAL PRESENTATIONS
CS027 VIRUSES

20 Aleman, M.; Ignacio Espinoza, J.; Long, A.; Fuhrman, J.: DYNAMICS OF VIRUSES ANALYZED METAGENOMICALLY IN RELATION TO OTHER PLANKTON DURING AN ALGAL BLOOM

CS028 ZOOPLANKTON ECOLOGY AND PHYSIOLOGY

21 Duret, J.; Wasmund, N.; Huwer, B.; Dierking, J.: LONG-TERM INCREASE IN ZOOPLANKTON STOCKS AND INTERANNUAL VARIABILITY IN THE BALTIC SEA: DOES PHENOLOGY MATTER?
22 Rusley, S.; Niemato, M.; Fields, D.: FEEDING RATES OF HOMARUS AMERICANUS (AMERICAN LOBSTER) LARVAE AT DIFFERENT FOOD CONCENTRATIONS.
23 Blanco Bercial, L.: ANNUAL CYCLE OF THE MESOZOOPLANKTON COMMUNITY IN THE SARGASSO SEA
24 Gray, D.; Vucic, J.: WHICH PHYSICO-CHEMICAL VARIABLES SHOULD ZOOPLANKTON ECOLOGISTS MEASURE WHEN THEY VISIT A LAKE?
26 Fies, J.; Wagner, Z.; Colos, S.; Costello, J.: DETERMINING PREY SELECTIVITY IN CASSEOPEA
27 Wagner, Z.; Costello, J.; Colin, S.: SCYPHOMEDUSA FEEDING MECHANICS ON COPEPOD PREY: HIGH RESOLUTION PREY TRACKING THROUGH THE FEEDING PROCESS
28 Maas, A.; Cope, J.; Miccoli, A.; Stammerszkin, K.; Steinberg, D.: CHARACTERIZATION OF ZOOPLANKTON ACTIVE FLUX IN THE N.E. PACIFIC OCEAN
29 Brown, P.; Walsh, E.: LIFESTYLE, GENOME SIZE, AND BERGMANN’S RULE IN AN UNDERSTUDIED INVERTEBRATE CLADE
31 Sommer, K.; Ohman, M.: A TRAIT-BASED APPROACH TO TEST TOP-DOWN CONTROL OF ZOOPLANKTON COMMUNITIES IN THE SOUTHERN CALIFORNIA CURRENT ECOSYSTEM

SS004 UNDERGRADUATE RESEARCH IN AQUATIC SCIENCES POSTERS

235 Luo, Z.: EXAMINING CHALLENGES OF EFFECTIVE ACCOUNTABILITY MEASURES IN REGIONAL FISHERY MANAGEMENT
236 Althoen, C.: IMPACTS OF PHYTOPLANKTON BLOOMS ON SEA SPRAY AEROSOL
237 Ma, S.; Gonsior, M.; Powers, L.; Robey, N.; Townsend, T.; Cooper, W.: PHOTO-DEGRADATION AND AMMONIFICATION OF DISSOLVED ORGANIC MATTER IN LANDFILL LEACHATES COMPARED TO FRESHWATER
238 Pardis, W.; Colson, B.; Michel, A.; Nicholson, D.: A MINIATURE DISSOLVED MULTI-GAS SENSOR FOR AQUATIC IN-SITU MEASUREMENT
239 Dawdylick, W.; Lubecky, L.; Archer, S.; Postman, K.; Poulton, N.: A PREY SATURATION APPROACH AS AN IMPROVED METHOD FOR ESTIMATING MICROZOOPLANKTON GRAZING RATES
240 Cosca-Bares, A.; Wall, C.: ACOUSTICAL ANALYSIS OF TWO SHALLOW WATER OCEAN NOISE REFERENCE STATION NETWORK SITES: AMERICAN SAMOA AND BUCK ISLAND

241 Tossas Deida, T.: ALTERED HAIR CELL DEVELOPMENT AND REGENERATION IN A ZEBRAFISH MUTANT LINE LACKING THE CANNABINOID RECEPTOR (CB2)
242 Hauke, A.; Wu, J.; Rogers, S.: ANAEROBIC CO-DIGESTION OF SEAWEEDS WITH ORGANIC WASTE STREAMS
243 Sabate, K.; Yozza, B.: ANALYSIS OF THE MICROBIAL COMMUNITIES ASSOCIATED WITH THE DEGRADATION OF INVASIVE ALGAE
244 Parry, D.; Davis, G.; Baumgartner, M.; Van Parijs, S.: ANALYZING SEI WHALE DISTRIBUTION IN THE WESTERN NORTH ATLANTIC USING PASSIVE ACOUSTICS
245 Wong, M.; Chapman, J.; Kaup, T.; Bobo-Shider, C.; Dunnald, B.: ARE THE LARGE MUD SHRIMP, UPOLGBIA PUGETENSIS, LUCKY OR SMART?
246 Conner, K.; Rheuban, J.; McCorkle, D.; Long, M.: ASSESSING BENTHIC ECOSYSTEM CALCIFICATION AND PRODUCTION IN KEY LARGE REEF ENVIRONMENTS USING GRADIENT EXCHANGE SYSTEMS
247 DeLaert, Z.; Roberson, L.: ASSESSING CALCIFICATION OF ASTRANGIA UNDER DIFFERENT TEMPERATURE AND PHYSIOLOGICAL CONDITIONS USING SCANNING ELECTRON MICROSCOPY
248 Keyes, P.; Beirne, E.; Apel, C.: CAN PHOTO-OXIDIZED OIL BE BIODEGRATED BY MARINE MICROORGANISMS?
249 Sebourn, W.; Parker, A.; Sakuma, K.: CHARACTERIZATION OF OCEAN CONDITIONS IN MONTEREY BAY, CA TO SUPPORT FISHERIES ECOSYSTEM RESEARCH
250 Perron, S.; White, W.: COMPARING ALTERNATIVE METRICS OF METAPOPULATION PATCH VALUE TO IDENTIFY EFFECTIVE MARINE PROTECTED AREA DESIGN STRATEGIES
251 MacFarland, A.; Schielb, H.: COMPARING CHROMOPHORIC DISSOLVED ORGANIC MATTER METHODOLOGIES: IS BIGGER ALWAYS BETTER?
253 Fedborg, S.; Richardson, K.; Sasaki, M.; Damm, H.: COMPLEX INTERACTIONS BETWEEN LOCAL ADAPTATION, PLASTICITY, AND SEX AFFECT VULNERABILITY TO WARMING IN A WIDESPREAD MARINE COPEPOD
255 Greenlee, S.; Matrai, P.; Courtway, P.: DMSP INFLUENCES FUNCTIONAL GENE ABUNDANCE IN ANTARCTIC BACTERIAL COMMUNITIES
256 Kaup, T.; Chapman, J.; Wong, M.; Bobo-Shider, C.; Dunnald, B.: DO UPOLGBIA PUGETENSIS FARM THE LINING OF THEIR BURROWS?
257 Batterbee, C.; Batterbee, C.; Null, K.; Balmagia, J.; Clark, R.: EFFECTS OF A WETLAND-BIOREACTOR TREATMENT SYSTEM ON NUTRIENT LOADING IN A CENTRAL CALIFORNIA COAST WATERSHED
258 Johnson, G.; McManus, G.: EFFECTS OF HYPOXIA ON GROWTH AND MORTALITY OF LONG ISLAND SOUND CILIATES
259 Ward, A.; Franczé, G.; Barron, A.; Menden-Deuer, S.: EFFECTS OF TURBULENCE ON MICROZOOPLANKTON GROWTH AND GRAZING
260 Kaplan, E.; Sanford, L.: EXAMINING THE EFFECTS OF 3-D REEF STRUCTURES ON THE MIXING AND REAERATION OF HYPOXIC WATERS

1* REPRESENTS INVITED PRESENTATIONS
SS01 ANATOMY OF A BLOOM: UNRAVELING DRIVERS OF BIOMASS CHANGE AND CARBON DYNAMICS OVER THE ANNUAL CYCLE

Eberhard, E.; D’souza, N.; Passow, U.: THERMAL TOLERANCE AND PHOTOACTION CLIMATE OF THE DIATOM THALASSIOSIRA PSEUDONANA AT HIGH PCO2 LEVELS

SS03 ADAPTATION OF AQUATIC BIODIVERSITY TO GLOBAL CHANGE

Elmasry, M.; Gray, D.: WILL ZOOPLANKTON ON THE GREAT PLAINS BE ABLE TO KEEP UP WITH CLIMATE CHANGE?

SS04 RECONSTRUCTING ADAPTIVE RESPONSES IN AQUATIC ECOSYSTEMS USING ANCIENT DNA AND RESURRECTION ECOLOGY

Chacon, L.; Schroeder, B.; Beveridge, W.: LONG-TERM PHYTOPLANKTON SEEDBANKS AND THEIR ROLE IN Ecosystem FUNCTION AND RESILIENCE

Legrand, B.; Miras, Y.; Latour, D.: POTENTIAL OF CYANOBACTERIAL AKINETES REVIVISCENCE THROUGH A 6700 YEARS CORE IN A EUTROPHIC LAKE

SS05 ECOLOGICAL APPLICATIONS OF EARTH SYSTEM MODELS AND REGIONAL CLIMATE MODELS

Cordero Quiros, N.; Miller, A.; Subramanian, A.; Luo, J.: CALIFORNIA CURRENT SYSTEM RESPONSE TO EL NIÑO: A PERSPECTIVE FROM OCEAN MODELS

Barlett, B.; Ask, R.; Erisman, B.: PROJECTIONS OF CHANGES IN THE DISTRIBUTION OF NASSAU GROUPER SPAWNING HABITAT USING AN ENSEMBLE OF EARTH SYSTEM MODELS

SS06 TERRESTRIAL MATERIALS IN PLANET WATER: TRACKING INFLUENCES ALONG THE LAND-OCEAN CONTINUUM

Riese, G.; Xiao, Y.: COUPLING BETWEEN INCREASED LAKE COLOR AND IRON


Xiao, Y.; Rohleder, T.; Riese, G.: UNRAVELING THE OPTICAL PROPERTIES OF SEDIMENT ORGANIC MATTER IN SHAPING HISTORICAL CHANGE OF LAKE WATER COLOR

Burns, W.; Stockwell, J.; Wilkes, A.; Marti de Ocampo, C.; Herdman, L.; Schroth, A.: USING BOTH LONG-TERM MONITORING DATA AND HIGH-FREQUENCY BUOY DATA TO BETTER UNDERSTAND HOW TWO SHALLOW, EUTROPHIC BAYS IN LAKE CHAMPLAIN RESPOND TO PHENOLOGICAL AND EPISODIC EVENTS

SS07 REAL WORLD ECOSYSTEM LANDSCAPES – UP-SCALING COMMUNITY ECOLOGY EXPERIMENTS IN AQUATIC SYSTEMS


SS08 EFFECTS OF STORM EVENTS ON AQUATIC, COASTAL, AND OCEAN ENVIRONMENTS AND ECOSYSTEMS: FROM PHYSICAL PROCESSES TO FOOD WEBS

Li, Y.; Kelly, D.; Zhang, K.; Robertson, C.: A NEW INTEGRATED STORM SURGE AND FRESHWATER OVERLAND FLOODING MODEL WITH VERIFICATIONS AT SOUTH FLORIDA

Endo, Y.: CHANGE IN MESOZOOPLAGKTON COMPOSITION IN A BAY BEFORE AND AFTER THE 2011 TOHOKU EARTHQUAKE TSUNAMI

Lopez-Lloreda, C.; McDowell, W.; Potter, J.: DISSOLVED GREENHOUSE GASES IN STREAMS AND THEIR RESPONSE TO HURRICANES IRMA AND MARIA IN A TROPICAL FOREST IN PUERTO RICO

Geist, S.; McAaskill, S.: DOES VERTICAL DISTRIBUTION OF FISH LARVAE SUGGEST AVOIDANCE OF A FRESHWATER PLUME IN THE GULF OF MEXICO CAUSED BY HURRICANE HARVEY?

Walker, L.; Montague, P.: IMPACT OF HURRICANE HARVEY ON THE WATER QUALITY OF TEXAS ESTUARIES


Viggiano, M.; Jensen, B.; Harrison, N.; Parker, S.; Goodman, K.: MEASURING ECOLOGICAL RESPONSES TO HURRICANE MARIA AT NEON SUBTROPICAL STREAM SITES

Garcia, E.; Rivera Casillas, P.; Chardon Maldonado, P.: MEASURING THE TIME-VARYING FREE SURFACE WITHIN THE INNER SURF AND SWASH ZONES USING A LIDAR


Ogurcak, D.; Price, R.: SALINIZATION OF A FRESHWATER LAKE FOLLOWING HURRICANE IRMA STORM SURGE IN THE FLORIDA KEYS

Robinson, K.; Torop, Z.; Tarcz, A.: SPATIAL VARIABILITY IN GELATINOUS PLANKTON IN THE WAKE OF HURRICANE HARVEY

Kurtay, G.; Parhade, M.; Stasfield, B.: THE IMPACTS OF HURRICANE HARVEY ON PHYTOPLANKTON FUNCTIONAL GROUPS IN NORTHERN GULF OF MEXICO

SS040 RADIONUCLIDES IN AQUEOUS SYSTEMS
121 Waples, J.: MEASURING BISMUTH-210 ACTIVITY IN AQUEOUS SYSTEMS

SS043 BEYOND THE NUMBERS: STRATEGIES FOR INCLUSIVE PRACTICES ACROSS THE AQUATIC SCIENCES
346 Ortiz, G.; Ramirez, A.: INVOLVING COMMUNITIES LIVING ON SAN JUAN BAY ESTUARINE BASIN IN MACROINVERTEBRATE BIOMONITORING FOR AQUATIC ECOSYSTEMS CONSERVATION AND SUSTAINABILITY

SS050 IMPROVING CORAL REEF RESILIENCE WITH TRANSFORMATIONAL SCIENCE
138 Combs, L.; Voss, J.; Beal, J.: CHARACTERIZING THE IMPACTS OF SCLERACTINIAN TISSUE LOSS DISEASE ON CORALS IN SOUTHEAST FLORIDA
139 Mizrahi, D.; Lopes, R.: DESICCATION TOLERANCE OF SUN CORAL, TUBASTREA SPP
140 Shilling, E.; Voss, J.; Beal, J.: IMPLEMENTING DISEASE INTERVENTION STRATEGIES ON CORALS IN THE SOUTHEAST FLORIDA REEF TRACT AND ASSESSING THEIR POTENTIAL IMPACT ON MUCUS MICROBIAL COMMUNITIES

SS051 NEW VIEWS ON THE BIOLOGICAL TRANSFORMATION OF METALS IN THE MARINE ENVIRONMENT
123 Ruacho, A.; Barbeau, K.; Bundy, R.: A NOVEL METHOD FOR THE PROCESSING OF MULTIPLE ANALYTICAL WINDOW ELECTROCHEMICAL TITRATION METAL SPECIATION DATA
124 Barbeau, K.; Manck, L.; Dupont, C.: CHARACTERIZATION OF ORGANIC IRON TRANSPORTERS IN A COPYTOPHIC MARINE BACTERIUM
126 Wallace, Z.; Spritz, Y.; Combs, V.: INSIGHTS INTO THE ROLE OF THE MICROBIAL LOOP ON THE IRON CYCLE IN PATAGONIAN SHELF AND ADJACENT SOUTHERN OCEAN WATERS
127 Mori, C.; Siebel, M.; Schneer, B.; Pahukke, K.; Brumsack, H.: NON-CONSERVATIVE BEHAVIOR OF MOLYBDENUM AND THALLIUM INDUCED BY A PHYTOPLANKTON SUMMER BLOOM?
128 Babcock-Adams, L.; Follett, C.; Bundy, R.; Repeta, D.: SIDEROPHORE PRODUCTION IN ASSOCIATION WITH LARGE-CELL FRACTION DIAZOTROPHS
130 Li, J.; Babcock-Adams, L.; Boireau, R.; McIvin, M.; Repeta, D.: TOWARDS A MORE QUANTITATIVE DETERMINATION OF FE BINDING LIGANDS IN SEAWATER

SS057 EASTERN BOUNDARY UPWELLING SYSTEMS IN A CHANGING OCEAN: RECENT INSIGHTS AND FUTURE PERSPECTIVES
443 Fumo, J.; Carter, M.; Flick, R.: DESCRIPTION AND CONTEXT OF THE SUMMER 2018 SOUTHERN CALIFORNIA MARINE HEAT WAVE

SS060 THE ADVENT OF SAMPLING BIOLOGICAL PROCESSES IN AQUATIC SYSTEMS USING AUTONOMOUS PLATFORMS

SS063 OCEAN, COASTAL, AND FRESHWATER ACIDIFICATION: RESEARCH AND EDUCATION
134 Xu, Y.; Cai, W.: NORTHWEST ATLANTIC COASTAL ACIDIFICATION UNDER CLIMATE CHANGE
135 Hudson-Heck, E.; Byrne, R.: PURIFICATION AND CHARACTERIZATION OF THYMOL BLUE FOR SPECTROPHOTOMETRIC PH MEASUREMENTS IN RIVERS, ESTUARIES, AND SEAWATER

Awad, M.; Shaltout, N.; Madkour, F.; Abuel-Regal, M.; El-Wazzan, E.: SENSITIVITY OF THE GROOVED CARPET SHELL CLAM (RUDITAPES DECUSATUS) TO OCEAN ACIDIFICATION

231 papers
**WEDNESDAY ORALS**

**CS005 ACIDIFICATION**

Chair(s): Chris Langdon, University of Miami (clangdon@rsmas.miami.edu)  
George Waldbusser, Oregon State University (waldbus@coas.oregonstate.edu)

Location: Room 102 A/B/C

**09:00**  
Waldbusser, G.; Smith, S.; Hales, B.: EFFECTS OF SEAGRASS AND TIDES ON CARBONATE CHEMISTRY EXPOSURE IN JUVENILE OYSTERS

**09:15**  

**09:30**  

**09:45**  

**10:00**  

**10:15**  
Zayas-Santiago, C.; Rivas-Ubach, A.; Ward, N.; Kuo, L.; Zimmerman, R.: METABOLOMICS REVEAL BIOCHEMICAL PATHWAYS RESPONSIBLE FOR EELGRASS RESPONSE TO CLIMATE CHANGE

**14:00**  
Langdon, C.: FACTORIAL EXPERIMENT LOOKING AT THE EFFECTS OF TEMPERATURE AND CO2 ON THE CORAL-ALGAL SYMBIOSIS IN ACROPORA CERVICORNIS

**14:15**  

**14:30**  
Schroeder, H.; Hintz, C.: NOVEL LONG-TERM ACCLIMATION APPROACH TO INVESTIGATING OCEAN ACIDIFICATION IN TROPICAL CORAL CULTURE

**14:45**  
Monroe, A.; Jarrold, M.; Munday, P.; Ravai, T.: COMBINED EFFECTS OF ELEVATED TEMPERATURES AND PCO2 ON THE TRANSCRIPTOMIC RESPONSE OF A CORAL REEF FISH

**15:00**  

**15:15**  
Doo, S.; Edmunds, P.; Carpenter, R.: RAPID NIGHT-TIME COMMUNITY READJUSTMENT ATTENUATES EFFECTS OF OCEAN ACIDIFICATION ON A CORAL REEF

**15:45**  
Gobler, C.; Young, C.: THE ABILITY OF COASTAL ACIDIFICATION TO ESTABLISH TOP-DOWN AND BOTTOM-UP CONTROLS ON MACROALGAE POPULATIONS

**16:00**  
Sharp, J.; Byrne, R.: CARBONATE ION DETERMINATIONS IN SEAWATER: A DECADE OF METHODOLOGICAL DEVELOPMENT

**16:15**  
Bushnell, M.: QARTOD STATUS AND PLANS TO DEVELOP A MANUAL FOR THE REAL-TIME QUALITY CONTROL OF PH DATA

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**16:30**  

**16:45**  

**17:00**  

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**CS009 GAS FLUXES**

Chair(s): Marco Aurelio Santos, Energy Planning Program/COPE/UFRRJ (aurelio@ppe.ufrj.br)  
Jorge Machado Damazio, CEPEL (damazio@cepel.br)  
Toonya Delsontro, University of Geneva, Switzerland (tdelsontro@gmail.com)

Location: Room 201

**09:00**  

**09:15**  

**09:30**  
Weber, T.; Wiseman, N.: GLOBAL OCEANIC METHANE EMISSIONS ESTIMATED FROM STATISTICAL MAPPING

**09:45**  
Grinham, A.; Dunbabin, M.; Deering, N.; Sturm, K.; Albert, S.: RAPID, LARGE-SCALE ASSESSMENT OF METHANE EMISSIONS FROM DrySlopes USING High Resolution AERIAL DRONE IMAGERY

**10:00**  

**10:15**  
Keller, P.: DRYFLUX: A GLOBAL SURVEY OF CO2 EMISSIONS FROM DRY SEDIMENTS

**14:00**  

**14:15**  

**14:30**  

**14:45**  

**15:00**  
Whitfield, C.: THE IMPORTANCE OF EBSULUTION IN SMALL, SHALLOW AGRICULTURAL RESERVOIRS

**15:15**  

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**CS010 NITROGEN BIOGEOCHEMISTRY AND CYCLING**

Chair(s): Julie Granger, University of Connecticut (julie.granger@uconn.edu)

Location: Room 208 A/B

**09:00**  
Eberhard, E.; Marcarel, A.; Baxter, C.; Teichmann, S.: PATCH DYNAMICS OF NITROGEN FIXATION AND DENITRIFICATION IN STREAMS

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*1* REPRESENTS INVITED PRESENTATIONS
09:15 Nevorski, K.; Marcarell, A.: VARIATION IN DENITRIFICATION, NITROGEN FIXATION, AND NITRIFICATION OVER DAILY TO SEASONAL TIME SCALES IN A FORESTED STREAM

09:30 Haas, S.; LaRoche, J.; Desai, D.; Pawlowicz, R.; Wallace, D.: EVIDENCE FOR UNUSUAL NITROGEN CYCLING IN A LONG-TERM STRATIFIED LAKE FROM COMBINED MOLECULAR AND STABLE ISOTOPE APPROACHES


10:00 Boedecker, A.; McCarthy, M.; Niewinski, D.; Chaffin, J.; Newell, S.: EVALUATING SEDIMENTS AS AN ECOSYSTEM SERVICE IN WESTERN LAKE ERIE THROUGH QUANTIFICATION OF NITROGEN CYCLING PATHWAYS

10:15 Boedecker, A.; Scott, T.: SATURATION LEVELS OF DINITROGEN GAS IN THE WATER COLUMNS OF MULTIPLE THERMALLY STRATIFIED RESERVOIRS

10:45 Wilson, S.; Song, B.; Anderson, I.: COMPARISON OF NITRIFYING COMMUNITIES ALONG THE VERTICAL GRADIENTS OF AMMONIUM, OXYGEN, AND SALINITY IN A SUBTERRANEAN ESTUARY


11:45 Wu, J.; Rogers, S.: SEAWEED CULTIVATION AS AN ALTERNATIVE NUTRIENT MANAGEMENT STRATEGY FOR WASTEWATER TREATMENT AND RECOVERY FACILITIES: A CASE STUDY IN BOOTHBAY HARBOR, MAINE

15:00 Cornwell, J.; Owens, M.; Jackson, M.; Kellogg, L.: BIVALVES AND NUTRIENT ECOSYSTEM SERVICES: THE CENTRAL ROLE OF BIODEPOSITS

15:15 Ji, Q.; Grundel, D.: LASER-BASED NITROGEN ISOTOPIC ANALYSIS AT NANO-MOLAR LEVEL

CS020 FISH AND FISHERIES
Chair(s): Brent A. Murry, U.S. Fish and Wildlife Service (brent.murry@gmail.com)
Location: Room 202

09:00 Herbig, J.; Keller, J.; Morley, D.; Walter, K.; Barbera, P.; Acosta, A.: MOVEMENT PAT PATTERNS AND HABITAT USE OF YELLOW TAIL SNAPPER IN THE DRY TORTUGAS, FLORIDA


09:30 Sancho, G.; Frazier, B.; Edman, R.; Shaw, A.; Bubley, W.: TIGER SHARK HABITAT UTILIZATION IN COASTAL ENVIRONMENTS OFF SOUTH CAROLINA, USA


10:00 Galvez, B.; Smith, S.; Townsend, H.: TROPHIC ECOLOGY OF WEAKFISH (CYNOSCION REGALIS) FROM THE DELAWARE BAY USING STABLE ISOTOPE AND STOMACH CONTENT ANALYSES

10:15 Duran, A.; Trexler, J.: SPATIOTEMPORAL DYNAMICS OF WETLAND FISHES OF SOUTH FLORIDA

CS022 BIODIVERSITY
Chair(s): Robert Pracnik, WasserCluster Lunz (robert.pracnik@wcl.ac.at)
Location: Room 103 B

09:00 Arocho Hernández, N.; Santos, C.: AQUATIC INVERTEBRATE COMMUNITIES IN A PUERTO RICAN MANGROVE FOREST: EFFECTS OF PRESENCE OF FLOATING FERNS (SALVINIA SPP.) AND SAMPLING GEAR-TYPE


10:00 Shapiro, S.: IDENTIFICATION OF MORPHOLOGICAL CHARACTERISTICS OF DEEP-SEA CORALS


10:45 Pracnik, R.; Vad, C.; Bengtsson, M.; Abonyi, A.; Eggers, L.; Preller, C.; ON THE RELEVANCE OF DISPERSAL LIMITATION IN PHYTOPLANKTON – LESSONS FROM MESOSOCM EXPERIMENTS

11:00 Bengtsson, M.; Eggers, L.; Lumpy, T.; Horvath, Z.; Preller, C.; Pracnik, R.: CONNECTIVITY BOOSTS BIODIVERSITY AND ALTERS ECOSYSTEM FUNCTION THROUGH MICROBIAL INTERACTIONS IN FRESHWATER METACOMUNITIES

11:15 Morales-Williams, A.; Sheik, C.; Keller, A.; Corner, J.: SEASONAL SYNCHRONY OF CHEMICAL AND MICROBIAL DIVERSITY ACROSS LAKE TROPHIC GRADIENTS

11:30 Marroquín, A.; Perry, R.; Mathes, C.; Valente, R.: ENVIRONMENTAL BASELINE SURVEY DATA IN PERDIDO AND BAY OF CAMPECHE (SOUTHERN GULF OF MEXICO)

11:45 Valente, R.; Marroquín, A.; Perry, R.; Mathes, C.: BASELINE CHARACTERIZATION OF SOFT-BOTTOM BENTHIC COMMUNITIES IN SUPPORT OF REGULATORY PERMITTING FOR DRILLING IN THE DEEPWATER MEXICAN GULF OF MEXICO

CS024 MICROBIAL ECOLOGY AND PHYSIOLOGY
Chair(s): Barbara Campbell, Clemson University (bcampb7@clemson.edu)
Location: Room 101 A/B


09:30 Pontillier, B.; Lundin, D.; Martínez García, S.; Pinhassi, J.: DISTINCT RESPONSES IN BACTERIOPLANKTON COMMUNITY STRUCTURE, ACTIVITY, AND GENE EXPRESSION TO LABILE DISSOLVED ORGANIC MATTER COMPOUNDS OF DIFFERENT COMPLEXITY

09:45 Campbell, B.; Lim, S.; Kirchman, D.: SAR11 ABUNDANCE, POTENTIAL FUNCTION AND ACTIVITY IN TWO CONTRASTING ESTUARIES*

10:00 Noell, S.; Giovannoni, S.: SAR11 CELLS HAVE A MULTIFUNCTIONAL AND EXTRAORDINARILY HIGH AFFINITY GLYCINE BETAINE TRANSPORTER


14:00 Tully, B.: METABOLIC DIVERSITY WITHIN THE GLOBALLY ABUNDANT MARINE GROUP II EURYARCHAEAE OFFERS INSIGHT INTO ECOLOGICAL PATTERNS

14:15 Vollmer, S.: USING SPATIAL AND TEMPORAL VARIATION IN STAGHORN CORAL MICROBIOME TO IDENTIFY CORAL PATHOGENS


14:45 Cobleigh, K.; Macknight, N.; Medina, M.; Mydlarz, L.; Brandt, M.: EVALUATING DIFFERENCES IN MICROBIAL COMMUNITIES OF WHITE PLAGUE DISEASED AND HEALTHY COLONIES OF MAJOR REEF BUILDING CARIBBEAN CORALS

15:00 Miller, N.; Meyer, J.; Frazier, T.; Manesal, P.: MICROBIOME STRUCTURE OF NURSERY-READED ACROPORA CERVICORNIS


15:45 Da Silva, L.; Osai, S.; Chigbu, P.; Parveen, S.: CHARACTERIZATION OF VIBRIO VULNIFICUS ISOLATED FROM ENVIRONMENTAL AND BLUE CRAB SAMPLES COLLECTED FROM MARYLAND COASTAL BAYS

16:00 Varg, J.; Svamb, R.; Boughman, J.: PARASITES AND THE MICROBIOME OF THRÉESPINE FISH GASTEROSTEUS ACULEATUS


16:30 Erazo, N.; Giddings, S.; Bowman, J.: MANGROVES AND MICROBES, COORDINATED ECOSYSTEM ENGINEERS IN COASTAL ECUADOR


17:00 Hall, E.: THE EFFECT OF HEAVY METALS ON THE BACTERIAL BIOGEOGRAPHY OF A LARGE, TROPICAL WATERSHED


CS026 PRIMARY PRODUCTION

Chair(s): Euan Reavie, University of Minnesota (ereavie@d.umn.edu)

Location: Room 208 A/B

15:45 Lopez Sandoval, D.; Delgado-Huertas, A.; Duarte, C.; Agustí, S.: THE USE OF 13C TO MEASURE PRIMARY PRODUCTION IN OLIGOTROPHIC MARINE SYSTEMS

16:00 Morelle, J.; Richard, A.; Maire, O.; Slimani, A.; Orvain, F.: BIOTURBATION AND DENSITY INFLUENCE ON BENTHIC MACROFAUNA ON MICROPHYTOBENTHIC PRIMARY PRODUCTION IN THE SEINE ESTUARY: STUDY OF MICROSCALE PROCESSES


16:30 Phillips, J.: TIME-VARYING RESPONSES OF ECOSYSTEM METABOLISM TO LIGHT AND TEMPERATURE

16:45 Krishna, S.: COUPLED ID PHYSICAL-BIOGEOCHEMICAL MODEL SYSTEM TO SIMULATE PRIMARY PRODUCTION IN LAKE GENEVA

17:00 Reavie, E.; Cai, M.; Meyer-Jacob, C.; Smol, J.; Werne, J: PALEOLIMNOLOGY OF PRODUCTIVITY IN THE LAURENTIAN GREAT LAKES: A COMPARISON OF GEOCHEMICAL METHODS*

CS037 COASTAL ECOSYSTEMS

Chair(s): Helene Frigstad, Norwegian Institute for Water Research (helene.frigstad@niva.no)

Andrew King, Norwegian Institute for Water Research (andrew.king@niva.no)

Location: Room 104

09:00 Oczkowski, A.; Santos, E.; Martin, R.; Hanson, A.; Huertas, E.; Watson, E.; Wigand, C.: NUTRIENT DYNAMICS IN A TROPICAL URBAN ESTUARY INDICT UNANTICIPATED NITROGEN SOURCES AS CONTRIBUTING TO ENVIRONMENTAL HEALTH PROBLEMS—A CASE STUDY FROM SAN JUAN, PUERTO RICO*


09:45 Frigstad, H.; Naustvoll, I.; Andersen, G.; Trannum, H.; Kaste, Ø.; Deninger, A.; Hjerrmann, D.: COASTAL ECOSYSTEM RESPONSE TO OIL SPILL CONTAMINATION AND CHANGING RIVER LOADS—A NORWEGIAN CASE-STUDY

10:00 Moore, T.; Feng, P.: ANTHROPOGENIC DISTURBANCES ENHANCE NUTRIENT-DRIVEN ACIDIFICATION IN TWO CALIFORNIA ESTUARIES

10:15 Szmyczyska, B.; Borecka, M.; Balak-Bielistska, A.: CAN SUBMARINE GROUNDWATER DISCHARGE BE A SOURCE OF PHARMACEUTICALS TO THE MARINE ENVIRONMENT?

14:00 Arula, T.: Woodland, R.; Houde, E.: DEFINING THE TROPHIC ROLE OF A KEY FORAGE SPECIES IN A LARGE COASTAL ECOSYSTEM

14:15 Volacic, M.: OYSTER REEF ACTIVITY INVESTIGATED USING A NOVEL COMBINATION OF BIOACOUSTICS AND AQUATIC EDDY COVARIANCE FLUX MEASUREMENTS

14:30 Wenker, R.; Stevens, B.: SEA WHIP CORAL (LEPTOGORGIA VIRGULATA) IN THE MID-ATLANTIC BIGHT: AGE, COLONY COMPLEXITY, AND DISTRIBUTION

* REPRESENTS INVITED PRESENTATIONS

CS045 PHYSICAL DYNAMICS
Chair(s): Katherine Fitzhenry, University of Maryland Eastern Shore
Location: Room 104
15:45 Walter, R.; Rainville, E.; O'Leary, J.: HYDRODYNAMICS IN A SHALLOW SEASONALLY LOW-INFLOW ESTUARY FOLLOWING EELGRASS COLLAPSE
16:00 Amador, A.; Pawlak, G.; Giddings, S.; Feddersen, F.; Merrifield, M.: TURBULENT REYNOLDS STRESSES IN A TIDALLY DRIVEN ALONGSHORE FLOW
16:15 Fitzhenry, K.: SURFACE CIRCULATION PATTERNS AND CURRENT VELOCITIES DERIVED FROM DRIFTERS IN COASTAL WATERS OF MARYLAND AND VIRGINIA
16:30 Haak, C.; Cowles, G.; Danylychuk, A.: WAVE AND TIDE-DRIVEN FLOW SHAPE THE DISTRIBUTION OF A JUVENILE FISH
16:45 Ladah, I.: HOW DO INTERNAL WAVES CONTROL COASTAL PRODUCTIVITY?
17:00 Fujimura, A.; Reniers, A.; Paris, C.; Shankla, A.; MacMahan, J.; Morgan, S.: BIOLOGICAL-PHYSICAL INTERACTIONS OF COASTAL PLANKTON DYNAMICS

SS007 HALOPHILA STIPULACEA: ECOLOGY AND MANAGEMENT OF THE GLOBALLY INVASIVE SEagrASS
Chair(s): Demian Willette, Loyola Marymount University
Location: Room 209 C
09:00 Willette, D.; Muthukrishnan, R.; Chiappulo, K.; Cross, C.; Fong, P.; Kelly, T.; Toline, P.: RESILIENCE TO DISTURBANCE AND RAPID GROWTH OF FRAGMENTS DEMONSTRATE INDO-PACIFIC SEAGRASS'S CAPACITY TO SPREAD AS AN INVASIVE SPECIES
09:15 Muthukrishnan, R.; Willette, D.; Chiappulo, K.; Cross, C.; Fong, P.; Toline, P.: SHIFT IN FOUNDATION SPECIES AS A RESULT OF INVASION ALTERS ECOSYSTEM FUNCTIONING IN A TROPICAL SEAGRASS COMMUNITY
09:30 Chiappulo, K.; Fong, P.; Willette, D.; Cruz-Rivera, E.; Barber, P.: LÉAGUE OF SEAGRASSES: THE OUTCOME OF INTERSPECIFIC INTERACTIONS BETWEEN NATIVE VERSUS INVASIVE SEAGRASSES SHOWS A POSITIVE EFFECT ON THE INVASIVE, HALOPHILA STIPULACEA
09:45 Cassell, J.; Cruz-Rivera, E.; Jobsis, P.: SEASONAL NUTRIENT PATTERNS OF THREE SEAGRASS SPECIES IN A SMALL BAY ON ST. THOMAS, USVI

10:15 Cross, C.; Willette, D.: EVALUATING THE CARBON SEQUESTRING CAPACITY OF SEAGRASS HALOPHILA STIPULACEA IN ITS INVASIVE CARIBBEAN RANGE

SS012 TRACING THE NATURAL AND ANTHROPOGENIC CARBON CYCLE ACROSS AQUATIC ENVIRONMENTS
Chair(s): Andrew Margolin, Virginia Institute of Marine Science
Location: Room 209 A/B
14:00 Margolin, A.: ENVIRONMENTAL IMPACTS ON CARBON BIOGEOCHEMISTRY IN MARGINAL SEAS
16:30 Kaddy, J.; Brown, C.; Pacella, S.; Young, M.; Mochon Collura, T.; Stecher, J.: SPATIAL AND TEMPORAL PATTERNS OF DISSOLVED ORGANIC AND INORGANIC CARBON DELIVERY TO TILLAMOOK ESTUARY, OREGON (USA)
**SS014 ECOSYSTEM BASED MANAGEMENT: HOLISTIC APPROACHES TO EFFECTIVE MANAGEMENT OF REGIONAL ECOSYSTEM**

Chair(s): Michael Roman, Univ. of Maryland Center for Environmental Science (roman@umces.edu)  
Felix Martinez, NOS/NCCOS/NOAA (Felix.Martinez@noaa.gov)  
Amie West, Univ. of Maryland Center for Environmental Science (awest@umces.edu)

Location: Room 209 C

**16:00**  
Marshak, T.; Link, J.: CHARACTERIZING AND COMPARING MARINE FISHERIES ECOSYSTEMS IN THE UNITED STATES – SUCCESSFUL FACTORS IN MOVING TOWARD ECOSYSTEM-BASED FISHERIES MANAGEMENT

**16:15**  
Strand, E.: Goodbody-Gringley, G.: CHARACTERIZING BERMUDA'S BAITFISH POPULATIONS TO IMPROVE MANAGEMENT AND FISHERY SUSTAINABILITY

**16:30**  
Williams, N.; Rose, K.: TOWARDS ECOSYSTEM-BASED MANAGEMENT FOR COASTAL LOUISIANA: EVALUATION OF DATA AVAILABILITY AND CONSTRAINTS

**16:45**  
Martin Bras, M.; Cabral Guadalupe, A.; Fernandez Porto, J.; Latz, M.; Carter, M.: SUPPORTING LOCAL EDUCATION AND CONSERVATION BY INTEGRATING RESEARCHERS ON SCIENCE EDUCATION AND TRAINING LOCAL RESEARCHERS TO BUILD TRANSFERABLE CAPACITY

**17:00**  
Dennison, W.; Orth, R.; Lefcheck, J.; Landry, B.: CREATING AND COMMUNICATING ENVIRONMENTAL INTELLIGENCE FOR CHESAPEAKE BAY RESEARCH AND MANAGEMENT

**17:15**  
West, A.; Roman, M.; Martinez, F.; Dennison, W.; Miller, T.; Moser, F.; Rose, K.; Wängler, L.: PERCEPTIONS OF ECOSYSTEM-BASED MANAGEMENT: TALES FROM THE FIELD

**SS022 PHYTOPLANKTON-BACTERIA INTERACTIONS: MOLECULAR INSIGHTS, CHEMICAL DRIVERS, AND BEHAVIORAL DYNAMICS**

Chair(s): Kristen Whalen, Haverford College (kwhalen1@haverford.edu)  
Elizabeth Harvey, Skidaway Institute of Oceanography (elizabeth.harvey@skio.uga.edu)  
David Rowley, University of Rhode Island (drowley@mail.uri.edu)

Location: Room 209 A/B

**09:00**  
Lofus, S.; Johnson, Z.: DYNAMICS OF DISSOLVED ORGANIC CARBON AND PHYTOPLANKTON GROWTH IN SPENT MEDIA

**09:30**  

**09:45**  

**10:00**  

**10:15**  
Shibl, A.; Ohsenekühn, M.; Cardenas, A.; Fei, C.; Voolstra, C.; Amin, S.: ROSEOBACTER GROUP BACTERIA DOMINATE INTERACTIONS BETWEEN A COSMOPOLITAN DIATOM AND ITS MICROBIOME

**SS023 CARBON CYCLING ACROSS GRADIENTS IN THE LAND-OCEAN-CONTINUUM**

Chair(s): Michael Seidel, University of Oldenburg, Germany (m.seidel@uni-oldenburg.de)  
Nicholas D. Ward, Pacific Northwest National Laboratory, USA (nwickward@gmail.com)  
Sairah Y. Malkin, University of Maryland, USA (smalkin@umces.edu)  
Patricia M. Medeiros, University of Georgia, USA (medeiros@uga.edu)

Location: Room 208 C

**09:00**  
Kujawiński, E.: DISSOLVED AND PARTICULATE MICROBIAL METABOLITES REFLECT DISTINCT METABOLIC PROCESSES ACROSS SPATIAL AND TEMPORAL OCEAN GRADIENTS

**09:30**  
Hawkes, J.; van Andel, J.: QUALITY CONTROL IN DISSOLVED ORGANIC MATTER COMPOSITION ASSESSMENT BY HIGH RESOLUTION MASS SPECTROMETRY, AN INTERNATIONAL LABORATORY COMPARISON

**09:45**  

**10:00**  
Marcé, R.; Liigt, T.; Catalan, N.; Obrador, B.; Koschorreck, M.; Montes-Pérez, J.; Barbosa, L.; Moreno-Osato, E.: CARBON EMISSIONS FROM EXPOSED SEDIMENTS IN DRYING HARDWATER LAKES ARE DECOUPLED FROM ORGANIC MATTER LOSS

**10:15**  
Nydahl, A.; Wallin, M.; Weyhenmeyer, G.: REASONS BEHIND A LONG-TERM PCO2 INCREASE IN BOREAL LAKES AND STREAM

**14:00**  
Herness, P.; Eckard, R.: OVERPRINTING RIVERINE DOM WITH NON-POINT SOURCES

**14:15**  

**14:30**  

**14:45**  

**15:00**  
Kadjeski, M.; Fashiing, C.; Xenopoulou, M.: SEASONALITY AND LANDSCAPE FACTORS DRIVE ORGANIC MATTER EXPORT IN STREAMS OF VARYING LAND USE

**15:15**  
Benk, S.; Li, Y.; Roth, V.; Gleixner, G.: CHASING SURFACE INPUTS OF YOUNG DISSOLVED ORGANIC MATTER THROUGH A KARSTIC AQUIFER SYSTEM

*REPRESENTS INVITED PRESENTATIONS*
SS041 THE NEXT GENERATION: UNDERGRADUATE RESEARCH IN PUERTO RICO AND THE US VIRGIN ISLANDS

Chair(s): Maria Barberena-Arias, Universidad del Turabo (mbarberena1@uagm.edu)
Pedro Maldonado, Universidad Metropolitana (um_pmaldonado@uagm.edu)
Lora Harris, U of MD Center for Environmental Science (harris@umces.edu)
James Pierson, U of MD Center for Environmental Science (jpierson@umces.edu)

Location: Room 204
14:00 Luyando-Fluza, S.; Ocasio Torres, M.; Crowl, T.: EFFECTS OF ENVIRONMENTAL VARIABLES ON SHRIMP REPRODUCTION IN A FRESHWATER SYSTEM IN PUERTO RICO
14:15 Barberena, K.; Rivera, R.; Díaz, K.; Barberena-Arias, M.: ABUNDANCE OF DIFFERENT SIZE CLASSES OF PLASTICS IN HIGH AND LOW ENERGY BEACHES
14:30 Sanchez, J.; Ruiz, C.; Toledo, C.: COULD RISES IN WATER TEMPERATURE PREDICTED BY CLIMATE CHANGE DECREASE CORAL REEF COMPLEXITY BY REDUCING BRANCHING CAPACITY OF ACROPORA CERVICORNIS?
14:45 Valdés, D.; Maldonado, P.: SMALL-SCALE LOW-COST PORTABLE SENSOR PLATFORM GEO-LOCATED
15:00 Torres Rivera, A.; Barberena-Arias, M.: ARTHROPOD DIVERSITY VARIATION DURING RED MANGROVE (RHIZOPHORA MANGI) LEAVES DECOMPOSITION IN DRY AND WET SEASONS
15:15 Del Valle, T.; Barberena-Arias, M.; ABUNDANCE OF PLASTIC DEBRIS ON SEA TURTLE NESTING BEACHES ON THE NORTHERN REGION OF PUERTO RICO
15:45 Medero, L.; Schott, E.; Zhao, M.: GENETIC VARIATION OF A BLUE CRAB VIRUS AS A TOOL TO UNDERSTAND CRAB MOVEMENT
15:59 Vidal Geraldino, P.; Gomez Arias, S.; López, G.; Allen, M.: HYDROGRAPHY AT LAGUNA GRANDE COMPARED TO THE RED MANGROVE LAGOON
16:15 Betancourt Gomez, N.; Aquino-Pereira, A.; Torres Rivera, A.; Perez-Cruz, L.: ARTHROPODS AND ODOM ASSOCIATED TO MANGROVES IN LAGUNA GRANDE, FAJARDO, PR
16:30 Mercado, A.; Vicente Ramos, K.; Alvarez-Rosario, J.; Rivera-Carrasquillo, Y.: PRIMARY PRODUCTIVITY AND COLOR DISSOLVED ORGANIC MATTER IN, LAGUNA GRANDE, A TROPICAL COASTAL LAGOON.
16:45 Rivas Rivera, Y.; Colón, F.; Rios Morales, A.; Torres-Figueroa, A.; Piersson, J.: ZOOPLANKTON GRAZING ON PHYTOPLANKTON IN THE BIOLUMINESCENT LAGOON AT LAGUNA GRANDE, FAJARDO, PR.
17:00 Irizarry, Y.; del Valle, C.; Harris, L.: INVESTIGATING THE RELATIONSHIP BETWEEN COLORED DISSOLVED ORGANIC MATTER AND PYRODINIUM BAHAMENSE USING A BIOASSAY APPROACH
17:15 Torres-Perez, J.: US VIRGIN ISLANDS ECOLOGICAL FORECASTING AND WATER RESOURCES: A DEMONSTRATION OF COLLABORATIVE OPPORTUNITIES FOR CAPACITY-BUILDING OF CARIBBEAN-BASED STUDENTS

SS055 THE 2017 HURRICANE SEASON: CHALLENGES, INNOVATIONS, AND RESILIENCY IN FORMAL AND INFORMAL EDU

Chair(s): Michele Guannel, University of the Virgin Islands (michele.guannel@uvi.edu)
Howard Forbes, University of the Virgin Islands (howard.forbes@uvi.edu)
Jarvon Stout, University of the Virgin Islands (jarvon.stout@uvi.edu)

Location: Room 201
15:45 Edwards, K.; Forbes, Jr. H.: THROUGH THE MAGNIFYING GLASS: USING NATURAL DISASTERS TO EDUCATE ON WASTE IN THE UNITED STATES VIRGIN ISLANDS (USVI)
16:00 Skerritt, C.; White, T.; Monrose Mills, N.: RECOVERY WITH RENEWABLE ENERGY: PROJECT BASED LEARNING IN A MATHEMATICS CLASSROOM
16:15 Salem Jalwan, Y.; Callwood, V.: CLASSROOM TEACHERS’ PERCEPTION OF THE IMPACT OF HURRICANES IRMA AND MARIA ON STUDENT BEHAVIOR IN HIGH SCHOOL CLASSROOMS IN ST. THOMAS, UNITED STATES VIRGIN ISLANDS
16:30 Charles, M.: NORMALCY IN EDUCATION: HURRICANE RECOVERY AT A SCHOOL IN THE UNITED STATES VIRGIN ISLANDS
16:45 Guannel, M.; Daniel, L.: TRANSFORMATION OF A FRESHMAN-LEVEL UNIVERSITY SCIENCE COURSE TO INCORPORATE REAL-TIME HURRICANE RESPONSE, RECOVERY, AND RESILIENCY
17:00 Brown, L.; Francis, G.: THE IMPACTS OF HURRICANES IRMA AND MARIA IN THE VIRGIN ISLANDS AND THE RECOVERY PROCESS THROUGH ACTION IN SCIENCE
17:15 Jobsis, P.: VIERS BEFORE AND AFTER IRMA AND MARIA: PAST, PRESENT & FUTURE OF RESEARCH, EDUCATION AND ENGAGEMENT AT THE VIRGIN ISLANDS ENVIRONMENTAL RESOURCE STATION

SS062 MIXOTROPHIC PROTISTS: AN UNDERRATED MAJORITY IN MARINE AND FRESHWATER ECOSYSTEMS?

Chair(s): Mia Bengtsson, University of Greifswald (mia.bengtsson@uni-greifswald.de)
Robert Fischer, WasserCluster Lunz (robert.fischer@wcl.ac.at)
Robert Ptacnik, WasserCluster Lunz (robert.ptacnik@wcl.ac.at)
Jens Nejstgaard, IGB Berlin (nejstgaard@igb-berlin.de)
Susanne Wilken, University of Amsterdam (s.wilken@uva.nl)

Location: Room 103 B

T: REPRESENTS TUTORIAL PRESENTATIONS
16:45 Ross, B.; Hallock, P.: DORMANCY, SURVIVAL, AND RECOVERY OF THE PHOTOSYMBIOTIC FORAMINIFERA AMPHISTEGINA GIBBOSA FOLLOWING LONG-TERM APHOTIC INCUBATION

17:00 Sommaruga, R.: MORE MIXOTROPHS IN OLIGOTRrophic CLEAR MOUNTAIN LAKES, DURING THE ICE-COVERED PERIOD BUT ALSO IN GLACIATED TURBID LAKES


SS065 TURNING THE LIGHTS ON FOR DEEP-SEA ECOSYSTEMS IN THE CARIBBEAN, GULF OF MEXICO, AND US SE ATLANTIC

Chair(s): Amanda Netburn, NOAA Office of Ocean Exploration and Research (amanda.netburn@noaa.gov)
Peter Etnoyer, NOAA Center for Coastal Monitoring and Assessment (peter.etnoyer@noaa.gov)
Caitlin Adams, NOAA Office of Ocean Exploration and Research (caitlin.adams@noaa.gov)
Kasey Cantwell, NOAA Office of Ocean Exploration and Research (kasey.cantwell@noaa.gov)

Location: Room 103 A

09:00 Schwing, P.; O’Malley, B.; Machain-Castillo, M.; Armenteros, M.; Martínez-Colón, M.; Hollander, D.: BENTIC FORAMINIFERA BASELINE MEASUREMENTS AND INTER REGIONAL COMPARISONS FOR THE DEEP GULF OF MEXICO


09:30 Demopoulos, A.; Bourque, J.; Durkin, A.; Cordes, E.: THE INFLUENCE OF SEEP HABITATS ON SEDIMENT MACROFAUNAL BIODIVERSITY AND FUNCTIONAL TRAITS


14:00 Auschitch, S.; Lunden, J.; Demopoulos, A.; Quattromini, A.; Cordes, E.: DISTRIBUTION PATTERNS OF DEEP-WATER CORALS ON SEAMOUNTS IN THE ANEGADA PASSAGE: TOWARD A BETTER UNDERSTANDING OF DEEP-SEA CORAL BIOGEOGRAPHY IN THE CARIBBEAN


14:45 Messing, C.; Syverson, V.; Veitch, M.; Baumiller, T.: ADVANCES IN UNDERSTANDING THE DEEP TROPICAL WESTERN ATLANTIC CRINOID FAUNA (ECHINODERMATA)

15:00 Ford, M.: OBSERVATIONS OF AN UNDETECTED CTENOFORAL FROM A 3,910 M DEPTH OFF PUERTO RICO


15:45 Cordes, E.; Gasbarro, R.; Davies, A.: DISCOVERY OF AN EXTENSIVE CORAL REEF ECOSYSTEM OFF OF THE US SOUTHEAST ATLANTIC COAST

16:00 Morrison, C.: PUTTING AN EXTENSIVE AND PREVIOUSLY UNDETECTED LOPHELIA REEF INTO CONTEXT: GENETIC CONNECTIVITY AMONG NORTHWESTERN ATLANTIC LOPHELIA POPULATIONS


16:45 Vokshoori, N.; McCarthy, M.; Close, H.; Demopoulos, A.; Prouy, N.: DETERMINING VARIABILITY OF FOOD RESOURCES TO CHEMOSYMBIOTIC MUSSELS ALONG ENVIRONMENTAL GRADIENTS AT METHANE SEEPS USING AMINO ACID NITROGEN ISOTOPES

17:00 Close, H.; Vokshoori, N.; Doherty, S.; Demopoulos, A.; McCarthy, M.; Prouy, N.: NOVEL COMPOUND-SPECIFIC ISOOTPIC FINGERPRINTS OF METHANE METABOLISM AND DIETARY RELATIONSHIPS IN BATHYMÖDIOUS AT SEAFLOOR COLD SEEPS

17:15 Jiang, M.; Pan, C.; Barbero, I.; Reed, J.; Salisbury, J.; Van Zwieten, J.; Wanninkhof, R.: MOVING AND OBSERVATIONS OF ENVIRONMENTAL CONDITIONS OVER DEEP CORAL REEFS IN THE FLORIDA STRAITS

SS066 LARGE RIVERS OF THE WORLD AS PIPES, CHIMNEYS AND REACTORS

Chair(s): François Guilmoutte, Université du Québec à Trois-Rivières (francois.guilmotte63@uqtr.ca)
Jean-François Lapierre, University of Quebec at Montreal (jean-francois.lapierre.1@umontreal.ca)
Thomas Bianchi, University of Florida (tbianchi@ufl.edu)
Suzanne Tank, University of Alberta (suzanne.tank@ualberta.ca)

Location: Room 202

14:00 Striegel, R.; Foks, S.; Allen, G.: CARBON DIOXIDE AND METHANE EXCHANGE WITH RIVERS AND STREAMS IN THE UPPER MISSISSIPPI RIVER NETWORK


1  REPRESENTS INVITED PRESENTATIONS
15:00  Guillemette, F.; Grater, E.; Lapierre, J.; Maisonneuve, P.; del Giorgio, P.; Cabana, G.: SQUEEZING THE PIPE: ARCHIPELAGOS AS ACTIVE SITES OF CARBON PROCESSING ALONG A LARGE RIVER CONTINUUM

15:15  Gerardin, M.; del Giorgio, P.: FACTORS INFLUENCING THE BALANCE BETWEEN C EMISSION AND C TRANSPORT TO THE OCEAN BY LARGE BOREAL RIVERS IN NORTHERN QUEBEC

15:45  Stubbins, A.; Wagner, S.; Codden, C.; Martinez, J.; Raymond, P.; Payer, J.; Grump, B.: MOLECULAR INSIGHTS INTO THE PLASTICITY OF MICROBIAL ORGANIC MATTER UTILIZATION

16:00  Guillemette, F.; Grater, E.; del Giorgio, P.: A BACTERIAL METABOLIC JOURNEY THROUGH THE ST. LAWRENCE RIVERSCAPE


16:30  Rose, V.; Rollwagen-Bollens, G.; Bollens, S.; Zimmerman, J.: DECADAL-SCALE CHANGES IN LOWER COLUMBIA RIVER PHYTOPLANKTON


17:00  Iannino, A.; Vosshall, A.; Weitere, M.; Fink, P.: HIGH NUTRIENT AVAILABILITY LEADS TO WEAKER TOP DOWN CONTROL OF STREAM PERiphyton: COMPENSATORY FEEDING IN ACYCLUS FLUVIATILIS

17:15  Yoshimura, M.: CHANGE OF RADIOACTIVE CS CONCENTRATION IN FRESHWATER BIOTA IMPACTED BY THE FUKUSHIMA NUCLEAR POWER PLANT ACCIDENT

SS070 ENGAGING UNDERREPRESENTED STUDENTS IN OCEAN SCIENCE TO PROMOTE A DIVERSE INCLUSIVE WORKFORCE

Chair(s): Andrea Johnson, National Science Foundation (andjohns@nsf.gov)  
Todd Christenson, NOAA Office of Education (todd.christenson@noaa.gov)  
Corey Garza, California State University, Monterey Bay (cogarza@csumb.edu)

Location: Room 204

09:00  Barral, A.; Simmons, R.; Bowman, J.; DeForce, E.: ENGAGING NONTRADITIONAL STUDENTS BY CURE-ING MICROBES ON OCEAN PLASTICS


09:45  Schmidt, W.; Jimenez, M.: BUILD IT AND THEY WILL COME: INTRODUCING ENGINEERING STUDENTS TO OCEANOGRAPHY, PART 2

10:00  Muller-Parker, G.: FEDERAL FELLOWSHIPS AND GRADUATE EDUCATION: A FOCUS ON NSF PROGRAMS

SS073 THE CHALLENGE OF CORAL REEF REHABILITATION IN THE CONTEXT OF CLIMATE CHANGE

Chair(s): Edwin Hernandez-Delgado, Sociedad Ambiente Marino (edwin.hernandezdelgado@gmail.com)  
Samuel E. Suleiman-Ramos, Sociedad Ambiente Marino (samuelsuleiman@gmail.com)  
Michael Nemeth, NOAA Restoration Center (michael.nemeth@noaa.gov)  
Nilda Jimenez, Department of Natural Environmental Resources (njimenez@drna.pr.gov)

Location: Room 208 C

15:45  Hernandez Delgado, E.; Canals-Silander, M.; Suleiman Ramos, S.; Cuevas, E.: DEMOGRAPHIC AND OCEANOGRAPHIC MODELING TOOLS IN SUPPORT CORAL REEF REHABILITATION IN THE ANTHROPOCENE

16:00  Canals Silander, M.; Hernandez Delgado, E.: GEOMETRIC AND HYDRODYNAMIC OPTIMIZATION OF CORAL REEF RESTORATION PROJECTS TO ENHANCE WAVE POWER REDUCTION IN FRINGING REEFS

16:15  Hsieh, Y.; Sutraro, N.; Wang, P.; Denia, V.: CORAL TROPHIC PLASTICITY ACROSS CONTRASTED HABITATS

16:30  Weinnig, A.; Hallaj, A.; Cordes, E.: INFLUENCE OF TEMPERATURE AND PH ON THE PHENOTYPIC AND TRANSCRIPTOMIC RESPONSE OF A COLD-WATER CORAL (LOPHELIA PERTUSA) TO OIL AND DISPERSANT EXPOSURE

17:00  Gomez-Andujar, N.; Hernandez Delgado, E.: PARTICIPATORY MAPPING OF CORAL REEF VULNERABILITY: A TOOL TO SUPPORT ECOSYSTEM-BASED MANAGEMENT IN A TOURISM-IMPACTED CARIBBEAN ISLAND

17:15  Suleiman Ramos, S.; Hernandez Delgado, E.: CORAL REEF REHABILITATION IN THE ANTHROPOCENE: MOVING FROM CORAL TO LANDSCAPE AND ECOLOGICAL PROCESSES

212 papers
THURSDAY ORALS

AS001 SUCCESS THROUGH SCIENCE: USING LIMNOLOGY AND OCEANOGRAPHY TO TACKLE DIFFICULT MANAGEMENT QUESTIONS
Chair(s): Lisa Campbell, Texas A&M University (lisa.campbell@tamu.edu) Bill McDowell, University of New Hampshire (bill.mcgowell@unh.edu)
Location: Room 204
09:45 Owca, T.; Kay, M.; Faber, J.; Wilkund, J.; Wolfe, B.; Hall, R.; USE OF PRE-INDUSTRIAL BASELINES TO MONITOR FOR SOURCES AND PATHWAYS OF METALS IN SURFACE SEDIMENT OF FLOODPLAIN LAKES IN THE PEACE-ATHABASCA DELTA (ALBERTA, CANADA)
10:00 Stow, C.; Evans, M.; Gibbons, K.; SCIENCE - MANAGEMENT ENGAGEMENT FOR LAKE ERIE NUTRIENT TARGETS
14:00 Bednarsek, N.; Feely, R.; Hunt, B.; Kessouri, F.; McLaughlin, K.; SYNTHESIS OF THRESHOLDS OF OCEAN ACIDIFICATION EFFECTS ON PELAGIC MOLLUSCKS
14:15 Meunier, C.; Groß, E.; Köring, M.; Duarte Moreno, H.; Tremblay, S.; Boersma, M.; GLOBAL CHANGE VULNERABILITY OF NORTH SEA PLANKTON AND ASSOCIATED ECOSYSTEM SERVICES: TOWARDS OPTIMIZED MANAGEMENT
14:30 Gordon, R.; Santana, N.; ASSESSING THE IMPACT OF THE LIONFISH THROUGH EDUCATION AND OUTREACH ACTIVITIES IN THE UNITED STATES VIRGIN ISLANDS
15:00 Balser, A.; Gaja, S.; Suczone, D.; Murdoch, W.; SYSTEM-ORIENTED OCEAN SCIENTISTS IN THE GULF OF MEXICO: ADAPTING TO ENERGY POLICY REFORM

AS005 EXTREME EVENTS
Chair(s): Elizabeth Minor, University of Minnesota Duluth (eminor@d.umn.edu) Carmen Aguilar, University of Wisconsin Madison (aguilar@uw.edu) Bill McDowell, University of New Hampshire (bill.mcgowell@unh.edu)
Location: Room 209 A/B
14:00 McDowell, W.; DISTURBANCE AND RESPONSE: UNDERSTANDING THE EFFECTS OF EXTREME EVENTS ON AQUATIC BIOGEOCHEMISTRY T

14:30 Corman, J.; Ramos, J.; Elser, J.; SPATIAL AND TEMPORAL VARIABILITY OF PHYTOCHEMICAL CHARACTERISTICS IN THE HARDWATER AQUATIC ECOSYSTEMS OF CUATRO CINENGAS, MEXICO
14:45 Cahel, R.; Scheib, A.; Aguilar, C.; Evans, C.; MATCH-MISMATCH: EL NIÑO AND A COINCIDENT DERECHO STIMULATE YELLOW PERCH RECRUITMENT IN A PREVIOUSLY DECIMATED LAKE MICHIGAN FISHERY
15:00 Cooney, E.; Minor, E.; RAIN EVENT EFFECTS ON THE BIOGEOCHEMISTRY OF WESTERN LAKE SUPERIOR
16:00 Pearson, R.; Jinks, K.; Brown, C.; Schlacher, T.; Olds, A.; Connolly, R.; FUNCTIONAL MARINE RESPONSES TO CLIMATE STRESSORS ALONG A CONNECTIVITY GRADIENT
16:30 Jerris, K.; Turner, T.; THE EFFECT OF HURRICANES IRMA AND MARIA ON THE INVASION OF HALOPHILA STIPULACEA
17:00 Richards, R.; IS THE SPECIFIC CONDUCTANCE OF GROUNDWATER IN PUERTO RICO RISING?

CS008 STABLE ISOTOPES
Chair(s): Patrick Fink, University of Cologne (patrick.fink@uni-koeln.de) Björn Wissel, University of Regina (bjoern.wissel@uregina.ca)
Location: Room 209 C
16:00 Yohannes, E.; Kleiber, R.; Rothhaupt, K.; TEMPORAL CHANGES IN THE CONTRIBUTION OF METHANE-OXIDIZING BACTERIA (MOB) TO CONSUMER BIOMASS DETERMINED USING 13C-LABELLED METHANE, STABLE ISOTOPE AND DNA
16:15 Bramburger, A.; Reavie, E.; Sheik, C.; METAGENOMIC AND STABLE ISOTOPE CHARACTERIZATION OF GREAT LAKES PHYTOPLANKTON COMMUNITIES
16:30 Smith, S.; Sasai, Y.; Yoshikawa, C.; MODELING SEASONAL AND INTER-ANNUAL VARIABILITY OF TROPHIC TRANSFER AND 15N STABLE ISOTOPE ENRICHMENT WITHIN THE PLANKTIC FOOD CHAIN
16:45 Gugelo, S.; Yohannes, E.; Brinker, A.; TROPHIC CLASSIFICATION OF INVASIVE STICKLEBACKS IN LAKE CONSTANCE USING STABLE ISOTOPE
17:00 Remmer, C.; Owca, T.; Neary, L.; Wilkund, J.; Kay, M.; Wolfe, B.; Hall, R.; DELINEATING EXTENT AND MAGNITUDE OF RIVER FLOODING IN A NORTHERN FLOODPLAIN LANDSCAPE USING WATER ISOTOPE TRACERS
17:15 Fackrell, J.; Fackrell, J.; Richardson, C.; Paytan, A.; Kendall, C.; Kraus, T.; STABLE ISOTOPE VALUES OF C, N, P, AND S COMPOUNDS IN TREATED WASTEWATER EFFLUENT FROM FACILITIES OF VARYING CAPACITIES AND TREATMENT PRACTICES

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CS01 PHOSPHORUS BIOGEOCHEMISTRY AND CYCLING

Chair(s): Dennis Swaney, Cornell University (dps1@cornell.edu)
Michelle McCrackin, Stockholm University (michelle.mccrackin@su.se)

Location: Room 103 A

15:45 Sharples, A.: AGRICULTURE, PHOSPHORUS, & FOOD-ENERGY-WATER SECURITY NEXUS: A CONUNDRUM OF DEFICIENCY & EXCESS

16:15 Basu, N.; Van Meter, K.: BEYOND THE MASS BALANCE: A PROCESS BASED APPROACH TO MODELLING LEGACY PHOSPHORUS DYNAMICS

16:30 Van Meter, K.; Tenkouano, L.; Gopalakrishnan, K.; Johnson, N.; Zhou, P.: IMPACTS OF A CHANGING GLOBAL PHOSPHORUS CYCLE ON COASTAL OCEAN DEOXGENATION

17:00 Albright, E.; Fleck, S.; Shingai, Q.; Wilkinson, G.: IDENTIFYING POTENTIAL HOTSPOTS OF INTERNAL PHOSPHORUS LOADING IN SHALLOW LAKES

17:15 Muller-Karulis, B.; McCrackin, M.; Swaney, D.; Howarth, R.: LEGACY PHOSPHORUS IN THE ATLANTIC SEA DRAINAGE BASIN — HOW LONG WILL PAST INPUTS AFFECT NUTRIENT LOADS?

CS017 HARMFUL BLOOMS

Chair(s): Ted Harris, Kansas Biological Survey (ted.daniel.harris@gmail.com)

Location: Room 102 A/B/C

09:00 Harris, T.: GLOBAL MICROCRYSTIN AGGREGATION (GMA) GLEON PROJECT

09:15 Crawford, J.: FROM HIGHLY EUTROPHIC TO MESOTROPHIC: THE SUCCESS STORY OF DEER CREEK RESERVOIR

09:30 Burnet, S.: VERTICAL DISTRIBUTION OF CYANOBACTERIA TOXINS IN WILLOW CREEK RESERVOIR, OR.

09:45 Lange, J.; Demir, F.; Huesgen, P.; Baumann, U.; von Elert, E.; Pichls, C.: CHARACTERIZATION OF A DIGESTIVE PROTEASE FROM DAPHNIA: A POSSIBLE ROLE IN SUSCEPTIBILITY TO TOXIC CYANOBACTERIA

10:00 Kasian, D.; Boegelholm, A.; Gopalakrishnan, K.; Johnson, N.: CAN HARMFUL ALGAE BLOOMS INHIBIT QUAGGA MUSSEL REPRODUCTION?

10:15 Younan, L.: CHARACTERIZING ALGAL BLOOMS USING REAL-TIME FLUORESCENCE MONITORING

14:00 Sterner, R.; Lafrancois, B.; Reiland, K.; Brovold, S.: CYANOBACTERIA BLOOMS TURN LAKE SUPERIOR GREEN

14:15 Heathcote, A.; Edlund, M.; Engstrom, D.: LAKE PHYSICS AND HABs: INTERNAL NUTRIENT LOADING DELIVERS TOXIC BLOOMS

14:30 Reiland, K.; Sterner, R.; Lafrancois, B.: POTENTIAL SOURCES OF CYANOBACTERIA BLOOMS TO THE APOSTLE ISLANDS

14:45 Wagner, N.; Osburn, F.; Wang, J.; Boeckelke, A.; Herrera, M.; Scott, T.: ECOPHYSIOLOGY OF NITROGEN LIMITATION IN A DIATOMOTROPHIC CYANOBACTERIA

15:00 Leung, T.; Swanner, E.: MULTI-WAVELENGTH FLUORESCENCE: A RAPID METHOD TO TRACK HARMFUL ALGAL BLOOMS IN IOWA AGRICULTURALLY IMPACTED LAKES


15:45 Greenfield, D.; Coyne, K.: SYNTHESIZING A MULTI-YEAR COMPARISON OF SANDWICH HYBRIDIZATION ASSAY AND QUANTITATIVE PCR FOR HETEROSIGMA AKASHIWO: IMPLICATIONS FOR BLOOM MANAGEMENT


16:15 Harley, J.; Langhir, K.; Kennedy, E.; Whitehead, C.; Billock, A.: MACHINE LEARNING APPROACHES TO PREDICT PARALYTIC SHELLFISH TOXIN EVENTS IN SOUTHEAST ALASKA USING ENVIRONMENTAL VARIABLES


17:00 Tominack, S.; Coffey, K.; Wetz, M.: TRENDS IN THE FREQUENCY AND DURATION OF RED TIDE BLOOMS IN SOUTH TEXAS ESTUARIES

17:15 Cira, E.; Wetz, M.: SPATIAL-TEMPORAL VARIABILITY IN AUREOMBA LAGUNENSIS (“BROWN TIDE”) BIOMASS IN BAYFEN BAY, TEXAS: RELATIONSHIPS WITH ENVIRONMENTAL DRIVERS

CS019 REGIME SHIFTS

Chair(s): Grace Wilkinson, Iowa State University (wilkinson@iastate.edu)

Location: Room 204

15:45 Hansen, C.; Wilkinson, G.; Burian, S.: DEVELOPING AND IMPLEMENTING AN EARLY WARNING SYSTEM FOR HABS IN UTAH LAKE

16:00 Ortiz, D.; Wilkinson, G.: DETECTING EARLY WARNINGS OF HARMFUL ALGAL BLOOMS IN SHALLOW LAKES

16:15 Buelo, C.; Paci, M.; Carpenter, S.: TIME VS. SPACE: COMPARING EARLY WARNING INDICATORS OF ALGAL BLOOMS

16:30 Wachnicka, A.; Browder, J.; Frankovich, T.; Wingard, L.; Luda, W.: RESILIENCE OF SOUTH FLORIDA ESTUARINE SYSTEMS TO CLIMATIC AND ANTHROPOGENIC DISTURBANCES

16:45 Gao, Y.; Svec, R.: STABLE ISOTOPIC RECORDS OF PACIFIC HALIBUT OTOLITHS IN DETECTION OF REGIME SHIFTS

17:00 Silva, L.; Calleja, M.; Ivetic, S.; Roth, F.; Carvalho, S.; G. Mortin, X.: EFFECT OF THE SHIFT FROM CORAL- TO ALGAL-DOMINATED DIVERSIFIED ORGANIC MATTER ON TROPICAL HETEROPTROPHIC BACTERIOPHANKTON IN THE CENTRAL RED SEA

CS033 CORAL REEF ECOSYSTEMS
Chair(s): Justin Baumann, University of North Carolina at Chapel Hill (baumannj@live.unc.edu)
Travis Courtney, Scripps Institution of Oceanography (traviscourtney@gmail.com)
Location: Room 104
16:15  Tierney, C.; Sudek, M.: ANTHROPOGENIC INFLUENCE ON CORAL REEF HEALTH IN AMERICAN SAMOA WATERSHEDS
16:45  Savall, Y.; Miller, A.; Smith, K.; Flesher, D.; Hochberg, E.: LIGHT-USE-EFFICIENCY OF REEF CORALS AND ALGAE AND ITS IMPLICATION FOR REMOTE SENSING
17:00  Peltier, S.; Hochberg, E.: CHARACTERIZING DIFFUSE ATTENUATION OF REEF AND ADJACENT WATERS IN BERMUDA AND HAWAII
17:15  Hochberg, E.: A NEW PERSPECTIVE ON CORAL REEFS: CORAL REEF AIRBORNE LABORATORY

SS018 METABOLIC DIVERSITY IN MARINE BIOGEOCHEMICAL CYCLES IN PRESENT AND FUTURE OCEAN
Chair(s): Gerhard J. Herndl, University of Vienna, Austria and NIOZ (gerhard.herndl@univie.ac.at)
Eva Sintes, Instituto Español de Oceanografía (eva.sintes@ieo.es)
Federico Baltar, University of Vienna (federico.baltar@univie.ac.at)
Thomas Reinthaler, University of Vienna (thomas.reinthaler@univie.ac.at)
Location: Room 201
09:00  Sav, J.; Nunoura, T.; Stepanauskas, R.; Longnecker, K.; Kujawinski, E.; Landry Z.; Carlson, C.; Giovannoni, S.: Pangenomics REVEAL DIVERSIFICATION OF ENZYME FAMILIES AND NICHE SPECIALIZATION IN GLOBALLY ABUNDANT DEEP-OCEAN BACTERIA
09:15  Mena, C.; Reglero, P.; Balbin, R.; Martin, M.; Sintes, E.: SPATIAL AND TEMPORAL DYNAMICS OF TOTAL AND ACTIVELY GROWING PROKARYOTIC COMMUNITIES IN THE WESTERN MEDITERRANEAN SEA
10:00  Frank, A.; Kidou Soule, M.; Longnecker, K.; Kujawinski, E.: THE MODE OF MORTALITY DETERMINES THE COMPOSITION OF PHYTOPLANKTON-DERIVED DOM
14:00  Longnecker, K.; Becker, J.; Brezakman, R.; Dooley, K.; Kidou Soule, M.; Chisholm, S.; Kujawinski, E.: PROCHLOROCOCUS IMPACT ON MARINE BIOGEOCHEMICAL CYCLES FROM METABOLICS AND GENOMIC PREDICTIONS
14:30  Van Oostende, N.; Carroll, J.; Ward, B.: APPLICATION OF GENOME-BASED METHODS FOR GROWTH RATE ESTIMATION TO IN SITU CYANOBACTERIAL POPULATIONS
14:45  Laurenceau, R.; Bliem, C.; Chisholm, S.: MOBILIZATION OF GENOMIC ISLANDS IN THE MARINE CYANOBACTERIUM PROCHLOROCOCCUS
15:00  Wang, J.; Coles, V.; Kelly, T.; Mason, O.; Shropshire, T.; Stukel, M.: OIL-MICROBE INTERACTIONS IN THE GULF OF MEXICO (GOM) MODELED WITH THE GENOME-BASED EMERGENT OCEAN MICROBIAL ECOSYSTEM MODEL
15:45  Granzow, B.; Sosa, O.; Cahan, C.; Karl, D.; Repeta, D.: A FLUORESCENT CHEMICAL ASSAY FOR C-P LYASE ACTIVITY ANALYSIS
16:00  Heal, K.; Carlson, L.; Durham, B.; Groussman, R.; Armbrust, E.; Ingalls, A.: ENVIRONMENTAL METABOLOMICS ACROSS NATURAL OCEANOGRAPHIC GRADIENTS EXPOSE UNDERAPPRECIATED COMPOUNDS ENGAGED IN THE MULTIPLE ELEMENTAL CYCLES
16:15  Lantpin, K.; Popendorf, K.: DEPTH DEPENDENT TRENDS IN ENVIRONMENTAL METABOLIC ENERGY POTENTIAL
16:30  Balmonte, J.; Simson, M.; Giebel, H.; Arnosti, C.: LATITUDINAL AND DEPTH GRADIENTS OF MICROBIAL ENZYME ACTIVITIES FROM THE SOUTH PACIFIC TO THE BERING SEA
16:45  Kessler, A.; Cook, P.; Greeneing, C.: FERMENTATION DOMINATES MICROBIAL METABOLISM IN COASTAL PERMEABLE SANDS
17:00  Yin, H.; Zhu, Q.; Aller, J.; Aller, R.: CABLE BACTERIA ACTIVITY IN MANGANESE AND IRON-DEPLETED CARBONATE DEPOSITS

SS020 LARGE LAKES OF THE WORLD: DETECTING CHANGES USING LONG-TERM MONITORING
Chair(s): Lyubov Burlakova, SUNY College at Buffalo (burlakloe@buffalostate.edu)
Alexander Karatayev, SUNY College at Buffalo (karatay@buffalostate.edu)
Lars Rudstam, Cornell University (lgr1@cornell.edu)
Elizabeth Hinchee Molloy, US EPA, Great Lakes National Program Office (hinchee.elizabeth@epa.gov)
Location: Room 208 C
09:30  Aguilar, C.; Cuhel, R.: TIME SERIES OF BENTHIC NITROGEN EXCRETION BY THE INVASIVE QUAGGA MUSSEL (DREISSENA BUGESIS) IN NEARSHORE-OFFSHORE GRADIENTS IN LAKE MICHIGAN 2006-2018

10:00 Xenopoulos, M.; Young, J.; Lee, K.: DETECTING ECOLOGICAL CHANGES IN LAKE SIMCOE USING LONG-TERM MONITORING

10:15 Collingsworth, P.; Winter, C.; Osatowski, E.; Kocovsky, P.; Peterson, P.; Song, Q.: TRENDS IN TOTAL PHOSPHORUS AND CHLOROPHYLL IN LAKE ERIE: INSIGHTS FROM TWO MONITORING PROGRAMS

SS021 TRANSITIONING SCIENTIFIC RESEARCH INTO MEANINGFUL APPLICATIONS

Chair(s): Michael Allen, Maryland Sea Grant (mallen@mdag.umd.edu)
Rebecca Briggs, NOAA National Sea Grant Office (rebecca.briggs@noaa.gov)

Location: Room 202

14:00 Charlebois, P.; Foley, C.; Nigrelli, C.; Salazar, K.; Hook, T.: FROM RESEARCH TO APPLICATION: CASE STUDIES FROM ILLINOIS-INDIANA SEA GRANT


14:30 Simmons, M.; Belmyer-Fraser, G.; Stalker, J.: MONITORING AND EVALUATION OF ANTHROPIC GENIC IMPACTS ON THE LOWER ST. JOHNS RIVER

14:45 Rosengard, S.; Tortell, P.; Dowd, M.; Freshwater, C.: OPTICALLY DERIVED TIME-SERIES OF PHYTOPLANKTON COMMUNITY COMPOSITION FOR MANAGEMENT OF WILD SALMON FISHERIES IN THE NORTHEAST PACIFIC OCEAN

15:00 Anderson, C.; Newton, J.; Buhl, H.; MacCready, P.; Siedlecki, S.: CONNECTING STAKEHOLDERS TO ECOSYSTEM CHANGE WITH ECOLOGICAL FORECAST MODELS IN THE CALIFORNIA CURRENT SYSTEM


16:00 Lasiter, M.; Felker-Quinn, E.; Greaver, T.: KEY ELEMENTS OF AQUATIC RESEARCH SUPPORTING THE REVIEW OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY NATIONAL AMBIENT AIR QUALITY STANDARDS

16:15 Turner, R.; Swarzenski, C.; Bodker, E.: SOIL STRENGTH LOSSES IN FRESH MARSHES WITH INCREASED N AND P LOADING

16:45 Fiori, E.: CHALLENGES OF MICROBIAL WATER QUALITY MONITORING AT MONTEREY BAY AQUARIUM

17:00 Chardon-Maldonado, P.; Morell, J.; Rodriguez, S.; Canals, M.; Capella, J.: WHO NEEDS COASTAL OCEAN OBSERVATIONS IN THE US CARIBBEAN?


SS023 CARBON CYCLING ACROSS GRADIENTS IN THE LAND-OCEAN-CONTINENT

Chair(s): Michael Seidel, University of Oldenburg, Germany (m.seidel@uni-oldenburg.de)
Nicholas D. Ward, Pacific Northwest National Laboratory, USA (nwickward@gmail.com)
Sarah Y. Malkin, University of Maryland, USA (smallkin@ umces.edu)
Patrícia M. Medeiros, University of Georgia, USA (medeiros@uga.edu)

Location: Room 104

09:00 Wagner, S.; Harvey, E.; Huynh, N.; McNair, H.; Arrington, E.; Stubbins, A.: SMOKE ON THE WATER: WILDFIRE AEROSOLS CONTRIBUTE TO MARINE DISSOLVED BLACK CARBON

09:15 Twilley, R.; Edmonds, D.; Rovai, A.: CARBON SEQUESTRATION BY DELTAS WORLDWIDE


09:45 Dai, M.; Cao, Z.; Yang, W.; Guo, X.; Yin, Z.; Zhao, Y.: DIAGNOSIS OF CO2 FLUXES IN THE COASTAL OCEAN

10:00 Canning, A.; Kittinger, A.; Fietzek, P.; Maier, M.; Weibli, B.: BREAKING THE CARBON BOUNDARIES WITH THE USE OF MEMBRANE TECHNOLOGY – FROM OCEAN TO LAND

10:15 Bridgham, S.; Schulz, M.; Sadofsky, E.; Blount, K.; Fitch, A.: CARBON CYCLING AND TRACE GAS DYNAMICS IN DISTURBED, RESTORED, AND REFERENCE WETLANDS ALONG A SALINITY GRADIENT IN OREGON, USA

14:00 Rutherford, K.; Fennel, K.; Laurent, A.; Brickman, D.; John, J.: SHIFTING CIRCULATION UNDER A CHANGING CLIMATE: BIOGEOCHEMICAL IMPACTS IN THE NORTHWEST NORTH ATLANTIC

14:15 Schlesinger, D.; Myneni, S.: ORGANOCHEMICAL DEGRADATION IN COASTAL WETLANDS IMPACTED BY SEA-LEVEL RISE


14:45 Morrisette, H.; Pinsonneault, A.; Hood, R.: DISSOLVED ORGANIC CARBON SORPTION RATE KINETIC EXPERIMENTS TO VALIDATE A SEDIMENT FLUX MODEL

15:00 Kazimirk, Z.; Kuzyk, Z.; Papakyriakou, T.; Rysgaard, S.; Guiouen, C.; Wang, P.: MICROBIAL DEGRADATION OF DISSOLVED ORGANIC CARBON IN RIVERINE AND COASTAL HUDSON BAY WATERS UNDER LANDFAST ICE AS INFERRED FROM INCUBATION EXPERIMENTS

15:15 Yoshimura, C.; Natsuiki, M.; Fujiji, M.; Endo, Y.; Allam, A.: ROLE OF RIVER BASINS IN IRON SUPPLY TO COASTAL ECOSYSTEM IN NORTHEAST JAPAN

SS027 SMALL SCALE SPATIAL AND TEMPORAL PATTERNS IN PARTICLES, PLANKTON, AND OTHER ORGANISMS

Chair(s): Aditya Nayak, Florida Atlantic University (anayak@fau.edu)
David Murphy, University of South Florida (davidmurphy@usf.edu)
Malcolm McFarland, Florida Atlantic University (mmcfarland@fau.edu)

Location: Room 103 B

09:00 James, A.; English, C.; Carlson, C.; Willbanks, E.: THE KELP MICROBIOME – WHOSE THERE AND WHAT ARE THEY CAPABLE OF?

09:15 Yang, Y.: ENVIRONMENTAL IMPROVEMENT AND PLANKTON ECOSOCIOLOGICAL SUCCESSION EFFECTS OF CULTIVATION OF SEAWEED GRACILARIA LEMANEIFORMIS – A CASE STUDY IN NINANO COASTAL WATERS, SOUTH CHINA

70

09:45 Pfreundt, U.; Sengupta, A.; Ackermann, M.; Stocker, R.: RAPID ACTIVE AGGREGATE RE-SHAPING IN TRICHODIUM

10:00 Nayak, A.; McFarland, M.; Sullivan, J.; Moore, T.; Twardowski, M.; Stockley, N.: CHARACTERIZING VERTICAL DISTRIBUTIONS OF TWO CYANOBACTERIAL SPECIES DURING BLOOM CONDITIONS IN LAKE ERIE USING DIGITAL HOLOGRAPHIC IMAGING


14:00 True, A.; Webster, D.; Weisburg, M.; Yen, J.: COPEPOD AVOIDANCE OF THIN LAYERS OF HARMFUL ALGAL COMPONDS


15:00 Whitmore, B.; Ohman, M.: USING THE ZOOGLIDER TO ADDRESS THE COVARIABILITY OF MESOZOOPLANKTON AND CHLOROPHYLL-A VERTICAL MICROSTRUCTURE WITH WATER COLUMN STABILITY

15:15 Ellen, J.: WHERE, WHEN, AND WATER CONDITIONS - PLANKTON IMAGE CLASSIFICATION WITH CONTEXT METADATA

15:45 Besterman, A.: Pace, M.: GEOMORPHOLOGY EXERTS BOTTOM-UP CONTROL ON INTEITIAL FLAT BIOMASS

16:00 Rakotomalala, C.; Thouvenin, B.; Guizien, K.; Le Hir, P.; Orvain, F.: A ONE-DIMENSIONAL MODEL OF INTEITIAL MICROPHYTOBENTHOS FUNCTIONING

16:15 Lofton, M.; Leach, T.; Beisner, B.; Carey, C.: SEASONAL VARIATION IN TOP-DOWN versus BOTTOM-UP CONTROL OF PHYTOPLANKTON VERTICAL DISTRIBUTION IN NORTH TEMPERATE LAKES


16:45 Papiol Nieves, V.; Enriquez, C.; Aragon-Gonzalez, J.; Díezola, Y.; Cabrera, J.; Chiappa, X.: THE ROLE OF HYDRODYNAMICS AS DRIVER OF CHANGES IN PARTICULATE MATTER AND BIOTIC COMPOSITION IN A TROPICAL LAGOON


17:15 Dursun, F.; Tüysüz, S.; Ediger, D.: THE USE OF PIGMENT SIGNATURES TO ASSESS PHYTOPLANKTON ASSEMBLAGE STRUCTURE IN THE SEA OF MARMARA, TURKEY

**THURSDAY**

**SS035 EXPLORING MICROBIAL INTERACTIONS AND ORGANIC MATTER TRANSFORMATIONS WITHIN OXYGEN MINIMUM ZONES**

Chair(s): Brett Walker, University of Ottawa (brett.walker@uottawa.ca)

Karl Kaiser, Texas A&M University Galveston Campus (kaiserk@tamu.edu)

Hussain Abdulla, Texas A&M University Corpus Christi (Hussain.Abdulla@tamu.edu)

Andrew Babbin, Massachusetts Institute of Technology (babbin@mit.edu)

Frank Stewart, Georgia Institute of Technology (frank.stewart@biology.gatech.edu)

Clara Fuchsman, University of Maryland Horn Point Laboratory (cfuchsim@umces.edu)

Location: Room 208 A/B

09:00 Algar, C.; Rakshit, S.: A COUPLED BENTHIC-PELAGIC BIOGEOCHEMICAL MODEL FOR ASSESSING CARBON AND NUTRIENT DYNAMICS IN LOW OXYGEN WATERS


09:30 Suter, E.; Pachiadaki, M.; Taylor, G.; Edgcomb, V.: KEY MICROBIAL TAXA LINK CHEMIOAUTOTROPHIC CARBON FIXATION TO HIGHER TROPHIC LEVELS IN THE CARIACO BASIN FOOD WEB


14:15 Beman, J.: FINELY-TUNED AND TIGHTLY-COUPLED MICROBIAL CARBON AND NITROGEN CYCLING IN THE EASTERN TROPICAL NORTH PACIFIC OCEAN OXYGEN MINIMUM ZONE


14:45 Kaiser, K.; Abdullah, H.; Walker, B.: DYNAMIC CYCLING OF DISSOLVED ORGANIC MATTER IN OXYGEN MINIMUM ZONES REVEALED BY SPECTROSCOPIC AND MOLECULAR-LEVEL ANALYSES

15:00 Ruiz, P.; Ramirez-Flandes, S.; Rodriguez-Léon, E.; Ulloa, O.: PARTITIONING OF AUTOTROPHIC CARBON FIXATION PATHWAYS ALONG THE REDOX GRADIENT IN ANOXIC MARINE ZONES

### SS042 Long-term Ecological Studies of Freshwater Ecosystems in the Greater Caribbean Biogeographic Region

**Chair(s):** Omar Perez-Reyes, University of Puerto Rico (omar.perez15@upr.edu)  
Tamara Hearstull-Scalley, International Institute of Tropical Forestry (theartsill@fs.fed.us)  
Jesus Gómez-Carrasquillo, University of Puerto Rico (jesuslobo06@gmail.com)

**Location:** Room 103 A

**14:00**  

**14:15**  

**14:30**  
Gutierrez-Fonscera, P.; Ramirez, A.; Pringle, C.; Torres, P.; Covich, A.; Crowl, T.; McDowell, W.; Ballantyne, P.; Perez-Reyes, O.: **Ecosystemic Response of Stream Ecosystems to Extreme Climate Events in Puerto Rico**

**14:45**  
Ramirez, A.; Gutierrez-Fonscera, P.: **Extreme Climatic Events and Urban Streams in Puerto Rico: Effects on Macriinvertebrates and Fish Assemblages**

**15:00**  
Trexler, J.: **Intra-Community Diversity of Invasive Species Impacts in Space and Time: Scaling Up to Ecosystem Function**

### SS044 Connecting Watershed Characteristics to Fluvial Exports and In-Stream Biogeochemical Processes

**Chair(s):** Adam Wymore, University of New Hampshire (adam.wymore@unh.edu)  
William McDowell, University of New Hampshire (bill.mcdownell@unh.edu)

**Location:** Room 208 C

**14:00**  
Brookshire, J.: **Examining the Role of Tree Diversity on Hydrologic Nutrient Exports from Lowland Tropical Watersheds**

**14:15**  
Shattuck, M.; McDowell, W.: **Human Impacts on Stream Nitrogen Chemistry and Watershed N Retention Across a Wide Range of Rural to Urban Catchments**

**14:30**  
Skerlep, M.; Kritzberg, E.: **Afforestation a Major Factor Behind Long Term Water Color Trends in Southern Sweden**

**15:00**  
Pugh, E.; Devito, K.; Olefeldt, D.: **Landscape Characteristics Influencing Spatio-temporal Variability of Water Availability and Quality of Boreal Plains Shallow Lakes**

**15:15**  
Hutley, N.; Albert, S.; Grinham, A.; Gibbes, B.: **Coupled Catchment-Coastal Hydrodynamic Model Provides Insight into Pulsed Sediment Loading from Unmodified Tropical Island**

**15:45**  
Marcarello, A.; Neverski, K.; Eberhard, E.: **Watershed to Reach-Scale Controls of N Fixation and Denitrification in a Cross-Ecoregion Comparison of US Streams**

**16:00**  

### SS045 Drone Remote Sensing for Aquatic Sciences: Challenges and Successes

**Chair(s):** Roy Armstrong, University of Puerto Rico (roy.armstrong@upr.edu)  
William Hernandez, City University of New York - NOAA CESSRST Center (william.hernandez@upr.edu)

**Location:** Room 209 A/B

**09:00**  

**09:15**  

**09:30**  
Hernandez, W.; Torres-Perez, J.; Viqueira, R.; Armstrong, R.; Lopez, O.: **Combination of Very High Resolution (VHR) Satellite and Drone Imagery for Benthic Habitat Mapping: A Case Study for Guánica, Manatí and Vega Baja in Puerto Rico**

**09:45**  
Ruiz, H.; Scharet, M.; Llerandi-roman, I.; Prada, M.; Jackson, C.; Pacheco, C.: **The Use of Drones for Habitat Mapping and Vulnerability Assessments in Cays of Puerto Rico and U.S. Virgin Islands**

**10:00**  
Chan, E.; Breier, J.: **Toward Synoptic and Coordinated Autonomous Aerial and Surface Drone Observations of Estuarine Biogeochemistry**

**10:15**  
Kislik, C.; Dronova, I.; Kelly, M.: **UAVs in Support of ALGAL BLOOM RESEARCH: A REVIEW OF CURRENT APPLICATIONS AND FUTURE OPPORTUNITIES**

### SS048 Basic and Applied Research for Resource Management and Environmental Compliance

**Chair(s):** Ernesto Otero-Morales, Department of Marine Sciences-UPRM (ernesto.otermo3@upr.edu)  
Jorge Baeza-Ortega, San Juan Bay Estuary Program (oceanus.baeza@gmail.com)

**Location:** Room 202

**09:00**  
Straight, B.; McKnight, D.: **A Comparative Study of Deep-Water Sampling with an Unmanned Aerial Water Sampling System (UAWSS) to Traditional Sampling Methods: A Case Study from Dillon Reservoir, Summit County, Colorado**

**09:15**  
Otero Morales, E.; Rodriguez, L.: **Detailed Mapping of Seagrass Habitat Distribution Associated with Coastal Industrial Facilities**

## Thursday

*T* represents tutorial presentations.
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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<tr>
<td>09:30</td>
<td>Soler-Figueroa, B.; Fontaine, D.; Carney, K.; Ruiz, G.; Tamburri, M.</td>
<td>CHARACTERISTICS OF GLOBAL PORT PHYTOPLANKTON AND IMPLICATIONS FOR BALLAST WATER REGULATIONS</td>
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<td>09:45</td>
<td>Myers, E.; Juhl, A.</td>
<td>COMPARISON OF THE EFFECT OF PARTICLE ASSOCIATION ON THE PERSISTENCE OF EXOGENOUS FECAL INDICATOR BACTERIA AND SEWAGE-DERIVED PATHOGENS</td>
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<tr>
<td>10:00</td>
<td>Rosa-Marin, A.; Martinez-Colon, M.; Jajoe, C.; Woodley, C.</td>
<td>ENVIRONMENTAL ASSESSMENT IN CORAL REEFS AT JOBOS BAY, PUERTO RICO</td>
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<tr>
<td>10:15</td>
<td>Szafraniec, M.; Waters, M.; Kenney, W.; Whitmore, T.</td>
<td>RECONSTRUCTING CARBON CYCLING WITHIN COASTAL WETLANDS USING AN ARRAY OF PALEOLIMNOLOGICAL VARIABLES</td>
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<tr>
<td>10:30</td>
<td></td>
<td>\begin{itemize} \item \textbf{SS052} CARBON CYCLING WITHIN COASTAL WETLANDS AND WATER BODIES \item \textbf{SS067} MICROBIAL PHOTOTROPHY: INTERACTIONS AND IMPACTS ON NUTRIENT CYCLING \item \textbf{SS069} CLIMATE ADAPTATION IN AQUATIC AND HUMAN SYSTEMS \end{itemize}</td>
</tr>
<tr>
<td>11:00</td>
<td>Osborne, T.; Simpson, L.; Schafer, T.</td>
<td>CARBON BIOGEOCHEMICAL PROCESSES ALONG A MANGROVE-SALTMARSH ECOTONE</td>
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<td>11:30</td>
<td>Weisend, R.; McGuire, S.; Denney, B.; Zhang, L.; Reese, B.</td>
<td>SEASONAL AND DIURNAL VARIATION OF METHANE FLUX IN MANGROVE ECOSYSTEMS</td>
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<td>12:30</td>
<td>Raut, Y.; Morando, M.; Capone, D.</td>
<td>SHIFTS IN MICROBIAL COMMUNITY COMPOSITION ASSOCIATED WITH DECOMPOSING MACROALGAE AND THE ROLE OF NITROGEN FIXATION IN THESE DETRITAL COASTAL SYSTEMS</td>
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<tr>
<td>13:00</td>
<td>Schoplin, L.; Cannady, A.; Leon-Zaya, R.; Biddle, J.</td>
<td>ENRICHMENTS OF ARCHAEA AND BACTERIA FROM DELAWARE'S INLAND BAYS</td>
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<tr>
<td>13:30</td>
<td>van Grinsven, S.; Villanueva, L.; Harrison, J.; Sinnighing-Damoto, J.</td>
<td>METHANE OXIDATION IN ANOXIC LAKE WATERS MEDIATED BY NOVEL FACULTATIVE ANAEROBIC METHANOOTROPHS</td>
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<td>14:00</td>
<td>Freyria, N.; Joli, N.; Potvin, M.; Lovejoy, C.</td>
<td>SEASONAL AND MULTI-ANNUAL CHANGES IN ARCTIC MICROBIAL EUKARYOTIC COMMUNITIES IN NORTHERN BAFFIN BAY</td>
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<td>14:15</td>
<td>Biddanda, B.; Duff, R.; Weiner, T.</td>
<td>THE FIRST TANGO: DAY-NIGHT SHIFT BETWEEN PHOTOSYNTHESIS AND CHEMOSYNTHESIS DRIVEN BY DIEL VERTICAL MIGRATION OF MICROBIAL MAT COMMUNITIES IN LAKE HURON'S SUBMERGED SINKHOLES</td>
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<tr>
<td>14:30</td>
<td>Wilson, J.; Wilson, J.</td>
<td>MICROBIAL ECOSYSTEM INSIGHTS FROM CONTINUOUS MEMBRANE INLET MASS SPECTROMETRY (MIMS) IN THE COASTAL OCEAN</td>
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<td>14:45</td>
<td>Mayali, X.; Gomez-Consarnau, L.</td>
<td>PHOTOHETEROTROPHIC SCAVENGERS AND LIFE ON THE EDGE OF STARVATION</td>
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<td>15:00</td>
<td>Graham, E.; Heidelberg, J.</td>
<td>ENRICHMENT AND ISOLATION OF A NOVEL PHOTOBACTERIUM IDENTIFIED THROUGH METAGENOMICS</td>
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<td>16:00</td>
<td>Pinto Pacheco, S.; Hernandez Figueroa, E.</td>
<td>DOES SPATIAL AND TEMPORAL VARIABILITY MATTERS ON SALINITY, CONDUCTIVITY, TDS AND PH IN A COSTAL URBAN WETLAND?</td>
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<tr>
<td>16:15</td>
<td>Pershing, A.; Franklin, K.; Kennedy, B.; Mills, K.; Thomas, A.</td>
<td>INCREASES IN SURPRISING OCEAN TEMPERATURES WILL CHALLENGE THE LIMITS OF ECOSYSTEMS AND PEOPLE TO ADAPT</td>
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<td>16:30</td>
<td>Peura, S.; Garcia, S.; Szekely, A.; Bergvall, C.; Schartenhofer, M.</td>
<td>DECREASED SNOW COVER STIMULATES UNDER ICE PRIMARY PRODUCERS, BUT IMPAIRS METHANOOTROPHIC CAPACITY</td>
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<tr>
<td>17:00</td>
<td>Lacharite, M.; Brown, C.; Church, I.; Keith, D.; Samoreto, J.</td>
<td>MAPPING THE CHANGING OCEAN TO CHARACTERIZE RISK FOR BENTHOS IN THE BAY OF FUNDY, CANADA</td>
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*1* REPRESENTS INVITED PRESENTATIONS

**Location:** Room 103 A

**Location:** Room 208 A/B

**Location:** Room 209 C

SS072 METHODS IN AQUATIC SCIENCE EDUCATION

Chair(s): Paul Kemp, ASLO (lomethods-editor@aslo.org)
Robert Chen, University of Massachusetts Boston (bob.chen@umb.edu)
Cayelan Carey, Virginia Polytechnical Institute and State University (cayelan@vt.edu)
Nicole Poulton, Bigelow Lab for Ocean Sciences (npoulton@bigelow.org)

Location: Room 101 A/B

09:00 Rosengard, S.; Albuquerque, F.; Moura, J.; Browne, K.; BLENDING SCIENTIFIC AND ARTISTIC TECHNIQUES TO ADVANCE ENVIRONMENTAL LITERACY AND STEWARDSHIP: CASE STUDIES IN BRAZIL AND HONG KONG

09:15 Yazzie, T.; STEAM OUTREACH AND EDUCATION: BRIDGING SCIENCE AND ART WITH INDIGENOUS KNOWLEDGE

09:30 White, T.; Skerrit, C.; Peets-Allamby, O.; Monrose Mills, N.; Guannel, M.; FROM TRASH TO TREASURE TO TURN THE TIDES: PROJECT BASED LEARNING IN A MATHEMATICS CLASSROOM


10:00 Henry, M.; Pompey, A.; Lawrence, S.; Gibbs, A.; King, C.; Gilbert, S.; Williams, J.; A COMPARISON OF THE PRESENCE OF HEAVY METALS IN SOIL AND WATER FROM FRESH AS WELL AS BRACKISH WATER IN ST. CROIX

10:15 Chase, J.; Laverdure, J.; Harris, N.; MAKE NO BONES ABOUT IT: OCEAN LITERACY THROUGH INQUIRY-BASED LEARNING

14:30 Harvey, E.; Maas, A.; COMMUNICATING CLIMATE CHANGE TO THE PUBLIC: EFFECTIVE METAPHORS FROM THE NATIONAL NETWORK FOR OCEAN AND CLIMATE CHANGE INTERPRETATION (NNOCCI)

14:45 Margolin, A.; ARCTIC ANDY’S TALES FROM A FLOE: DEVELOPING A YOUTUBE MINISERIES TO MAKE EDUCATION GO VIRAL

15:00 Hurzeler, I.; COMMUNICATING OUR RELIANCE ON THE EARTH’S OCEANS: A WORKAROUND


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SS045 DRONE REMOTE SENSING FOR AQUATIC SCIENCES: CHALLENGES AND SUCCESSES

457 Lopez, O.: HIGH RESOLUTION DRONE-BASED AERIAL IMAGERY FOR REMOTE SENSING OF TEMPORAL CHANGES ON SEAGRAASS MEADOWS IN CAYO CARACOLS, LA PARGUERA, PUERTO RICO

458 Hau, A.; Lo, E.; Costa, M.; Aburto, O.: MONITORING BAJAS MANGROVES: REMOTE SENSING TECHNIQUES ESTIMATING MANGROVE COVERAGE IN REAL-TIME


460 Montanez, A.; Grafals-Soto, R.; Castro-Jimenez, A.; Barreto, M.: UNMANNED AIRCRAFT SYSTEMS (UAS) AS BEACH AND DUNE MONITORING TOOL FOR COASTAL ZONE MANAGEMENT IN PUERTO RICO

SS048 BASIC AND APPLIED RESEARCH FOR RESOURCE MANAGEMENT AND ENVIRONMENTAL COMPLIANCE

393 Pickling, N.; Strong, A.: THE ROLE OF AREA BASED MANAGEMENT TOOLS AS GENERATORS OF COLUMN CARBON MITIGATION ECOSYSTEM SERVICES

394 Thiff, E.: EVALUATING THE EFFECTS OF MESOPREDATOR SCREENING ON GHOST CRAB PREDATION OF LOGGERHEAD SEA TURTLE NESTS


SS052 CARBON CYCLING WITHIN COASTAL WETLANDS AND WATER BODIES

369 Hamersley, M.; Tan, C.; Kanaoka, K.: CO-INHIBITION OF METHANOGENESIS BY NITRATE AND SULFATE: CONNECTIONS WITH DENITRIFICATION

370 Richardson, C.; Fackrell, J.; Paytan, A.; Glenney, K.: SOURCES AND AMOUNT OF LATERAL C LOSSES FROM DRAINED PEATLANDS


SS053 BRAVE NEW WORLD: THE ECOLOGY OF HIGHLY IMPACTED WATERBODIES

207 King, L.; Brothers, S.: Brantley, J.: A PALEOLIMNOLOGICAL HISTORY OF EUTROPHICATION IN UTAH LAKE


234 Hernandez Figueroa, E.; Pinto Pacheco, S.; Cuevas, E.: DO TIDES MATTER IN WATER TABLE LEVELS AND SPATIAL VARIABILITY OF MESOPELAGIC MIGRATORS IN THREE ATLANTIC LOCALES FROM A DECADE OF WEEKLY SURVEYS

SS062 MIXOTROPHIC PROTISTS: AN UNDERRATED ROLE IN MARINE AND FRESHWATER ECOSYSTEMS?

Location: Exhibit Hall B

50 Mars, B.; Mitra, S.: SEEING IS BELIEVING: PAIRING HIGH-THROUGHPUT SEQUENCING WITH HIGH-THROUGHPUT IMAGING TO EVALUATE ACANTHARID ANCESTRAL ABUNDANCE AND LIFE-HISTORY TRADE-OFFS

51 Luo, H.; Goes, J.; Jiang, X.; Gomes, H.; Meek, K.; Lin, S.: DYNAMICS OF NUTRIENT CYCLING AND PHYTOPLANKTON SPECIES SUCCESSION DURING THE EVOLUTION OF NOCTILUCA BLOOMS ALONG THE COAST OF OMAN

52 Florenza, J.; Dietzel, K.; Bertrilsson, S.: FLUORESCENTLY LABELLED BACTERIA IN COMBINATION WITH FACs TO IDENTIFY MIXOTROPHS IN LAKE WATER SAMPLES

53 Ivanović, M.; Bengtsson, M.; Pranck, R.: PREY SELECTION OF FRISHER MIXOTROPHIC AND HETEROTROPHIC FLAGELLATES

54 Holen, D.: STOMATOCYST MORPHOTYPE AND ENCystMENT RATES IN OCHROMONAS PINGUIS, A MIXOTROPHIC CHRYSO PHYTE.
SS066 LARGE RIVERS OF THE WORLD AS PIPES, CHIMNEYS AND REACTORS

466 Rodríguez-Ortiz, N.; Ramírez, A.: EFFECTS OF STREAM CHANNELIZATION ON HABITAT CONDITION AND MACROINVERTEBRATES IN URBAN STREAMS IN PUERTO RICO


SS069 CLIMATE ADAPTATION IN AQUATIC AND HUMAN SYSTEMS

70 Torres Díaz, M.; Ruiz Díaz, C.; Toledo Hernández, C.; Ramírez Lugo, J.; Díaz Vázquez, L.: IMMUNE RESPONSE OF ACROPORA CERVICORNIS TO SOLAR RADIATION AND SEA SURFACE TEMPERATURES

SS072 METHODS IN AQUATIC SCIENCE EDUCATION


349 Reyes-Maldonado, R.; Ramírez, A.: CHIRONOMUS SP. FLORIDA AS EDUCATIONAL TOOL: POTENTIAL USES OF THE SPECIES IN PUERTO RICO

350 Venn, C.; Hallen, C.: EVOLUTION OF AN UNDERGRADUATE COURSE IN AQUEOUS GEOCHEMISTRY: SUCCESSES AND CHALLENGES

351 Santos, C.: PROMOTING INTEREST IN FRESHWATER BIODIVERSITY THROUGH DRAWING EXPERIENCES: A STUDENT-ASSISTED ILLUSTRATED GUIDE TO PUERTO RICO’S BIOTA


353 Dubickas, K.; Ross, B.; Amerjian, K.: THE OCEANOGRAPHY CAMP FOR GIRLS: 28 YEARS OF EXPERIENTIAL LEARNING TO ENGAGE TEENS IN OCEAN RESEARCH AND CAREERS


220 papers
FRIDAY ORALS

CS012 CARBON FLUXES IN FW AND MARINE ENVIRONMENT

Chair(s): Rob Striegel, US Geological Survey (rstriegel@usgs.gov)
Sarah Ellen Johnston, Florida State University
(sarahellenjohnston@gmail.com)
Kimberly Wickland, USGS (kwickland@usgs.gov)

Location: Room 101 A/B
14:00 Conrad, R.; Klose, M.; Claas, P.; Enrich-Prara, A.: ACETATE TURNOVER AND METHANOCENIC PATHWAYS IN LAKE SEDIMENTS OF AMAZONIA
14:30 DelVecchia, A.; Balkj, J.; Campbell, S.; Wear, D.; Taylor, B.; Wissinger, S.: CARBON DIOXIDE CONCENTRATIONS AND EFFUX FROM PERMANENT, SEMI-PERMANENT, AND TEMPORARY SUBALPINE PONDS
14:45 Torrens, C.; Lyons, W.; Welch, K.; Gooseff, M.: SPATIOTEMPORAL ANALYSIS OF CARBON FLUXES IN GLACIAL MELTWATER STREAMS, ANTARCTICA
15:45 Hall, C.: WINDS OF CHANGE: EFFECTS OF WIND STRESS ON PHYTOPLANKTON PARTICULATE ORGANIC CARBON FLUX IN THE CALIFORNIA CURRENT SYSTEM
16:00 Toullec, J.; Vincent, D.; Frohn, L.; Miner, P.; Le Goff, M.; Devesa, J.; Moriceau, B.: COPEPOD GRAZING ON DIATOM AGGREGATES: INFLUENCES ON PARTICLES SIZE, SINKING VELOCITIES AND CARBON EXPORT
17:00 Carrion Banuchi, C.; Howard, J.; Lopes, C.; Wilson, S.; Fourqurean, J.: SEAGRASS PRESENCE AND SEDIMENT GRAN SIZE CONTROL ORGANIC MATTER BREAKDOWN RATES WITHIN FLORIDA KEYS NATIONAL MARINE SANCTUARY
17:15 Johnson, R.; Gulick, A.; Constant, N.; Bolten, A.; Smulders, F.; Christianen, M.; Nava, M.; Kolasa, K.; Bjorndal, K.: CONSISTENT RESPONSE IN SEAGRASS ECOSYSTEM METABOLIC CARBON FLUX TO GREEN TURTLE GRAZING ACROSS CARIBBEAN MEADOWS

CS015 ENVIRONMENTAL CHANGE

Chair(s): John P. Smol, Queens University (smolj@queensu.ca)

Location: Room 103 A
15:45 Coldsnow, K.; Relvas, R.: AQUATIC MACROPHYTE MITIGATE SOME, BUT NOT ALL, EFFECTS OF VARIOUS ROAD SALTS ON FRESHWATER COMMUNITIES
16:00 Smith, S.; Fox, S.; Plaisted, H.; Lee, K.: CHANGES IN THE THERMAL STRUCTURE OF FRESHWATER LAKES WITHIN CAPE COD NATIONAL SEA SHORE (MASSACHUSETTS, USA) FROM 1996 TO 2014
16:15 Cantwell, H.; Perkins, R.: DIRECT AND INDIRECT IMPLICATIONS OF CLIMATE CHANGE UPTO THE WATER QUALITY OF A SUPPLY-CRITICAL UK RESERVOIR
16:30 Duda, M.; Robertson, G.; Blais, J.; Kimpe, L.; Smol, J.: A NOVEL APPROACH TO CONSERVATION BIOLOGY: USING PALEOLIMNOLOGY TO RECONSTRUCT THE LONG-TERM POPULATION TRENDS OF A VULNERABLE SEABIRD
16:45 Albergaria-Barbosa, A.; Guimarães, L.; Santana, J.; Souza, J.; Francé, E.: TEMPORAL AND SPATIAL EVALUATION CHANGES IN THE ORGANIC MATTER SOURCES DEPOSITED IN A PRISTINE TROPICAL ESTUARY (ESTUARY OF ITAPICURU RIVER, BAHIA, BRAZIL)

CS021 AQUATIC FOOD WEBS

Chair(s): Albert Calbet, Institut de Géciències del Mar-CSIC (acalbet@icm.csic.es)

Location: Room 103 B
09:00 Kinnerer, W.: THE DYNAMICS OF ESTUARINE PLANKTON FOOD WEBS
09:30 Haraguchi, L.; Jakobsen, H.; Carstensen, J.: ANNUAL CYCLES IN PHYTOPLANKTON: SEASONALITY OR SUCCESION?
09:45 Harvey, E.: A MATTER OF TIME: DIEL RATES OF PHYTOPLANKTON GROWTH AND MORTALITY IN THE OCEAN
10:00 Leitao de Oliveira Junior, E.; Ali Ger, K.; de Fátima Panosso, R.: CONTRASTING TOP-DOWN EFFECT OF A CYCLOPOID VS. CALANOID COPEPOD ON FILAMENTOUS CYANOBACTERIA DOMINANCE
10:15 Pierson, J.; Lavrentyev, P.; Bastianini, M.: PLANKTON TROPHIC DYNAMICS DRIVEN BY DIATOM CYTOTOXINS
14:00 Novotny, A.; Zamora-Terol, S.; Winder, M.: KEY TROPHIC LINKS OF MICRO- AND MESOZOOPLANKTON HIGHLIGHTED BY SELECTIVE DNA METABARCODING
14:15 Helenius, L.; Johnson, C.; Budge, S.: LIPIDS AT THE PLANT-ANIMAL INTERFACE: USING A STABLE ISOTOPE LABELING METHOD TO EVALUATE TRANSFER AND ASSIMILATION OF ESSENTIAL FATTY ACIDS IN MARINE PLANKTON
14:45 Parrish, C.; Pizzanini, C.; Connelly, T.; Carron-Palau, L.: TROPHIC TRANSFER OF ESSENTIAL POLYSATURATED FATTY ACIDS IN MARINE FOOD WEBS IN THREE VERY DIFFERENT ENVIRONMENTS

* REPRESENTS INVITED PRESENTATIONS
15:00  Strandberg, U.; Hiltunen, M.; Rissanen, N.; Taipale, S.; Kankaala, P.: IMPAIRED TRANSFER OF ESSENTIAL FATTY ACIDS AT THE ALGAE-ZOOPLANKTON INTERFACE IN HUMIC LAKES


15:45  Dillon, K.: Premo, Z.: FOOD WEB STRUCTURE OF SARGASSUM COMMUNITIES IN THE NORTHERN GULF OF MEXICO.


16:15  Dubois, M.; Grabowski, R.; Gill, A.: FISH COMMUNITY RESPONSES TO FLOW AND PHYSICAL HABITAT RESTORATION IN RIVERS


17:00  Mercado-Molina, A.; Tredar, J.: RESOURCE-CONSUMER RELATIONSHIP ALONG A GRADIENT OF WATER FLOW

17:15  Rihde, K.; Sterner, R.: DIPOREIA SEDIMENT PREFERENCE ALONG A LAKE SUPERIOR TRANSECT

CS025 PHYTOPLANKTON ECOLOGY AND PHYSIOLOGY

Chair(s): Michael Behrenfeld, Oregon State University (mjb@science.oregonstate.edu)

Location: Room 102 A/B/C

09:00  Kellogg, M.; McIlvin, M.; Moran, D.; Marchetti, A.; Moffett, J.: EFFICIENT CO SUBSTITUTION FOR ZN IN THE NORTHEAST PACIFIC OCEAN DIATOMS PSEUDONITTSCHIA DELICATISSIMA AND THALASSIOSIRA SP.


09:45  Berman-Frank, I.; Tzubari, Y.; Magnezi, L.; Be’er, A.: IRON AND PHOSPHORUS DEPRIVATION INDUCE SOCIALITY IN THE MARINE BLOOM-FORMING CYANOBACTERIUM TRICHODESSEMIUM

10:00  Liefer, J.; Fyle, M.; Faulkner, S.; Irwin, A.; Follows, M.; Finkel, Z.: NITROGEN AND PHOSPHORUS STARVATION HAVE DISTINCT EFFECTS ON PROCHLOROCoccus C:N:P AND ITS MACROMOLECULAR BASIS


14:30  Trombeta, T.; Vidussi, F.; Mas, S.; Parin, D.; Simier, M.: WATER TEMPERATURE MAJOR DRIVER OF PHYTOPLANKTON BLOOMS IN COASTAL WATERS

14:45  Wierenga, J.; Jelbring, B.: COLD THERMAL REFUGIUM FOR PLANKTOTHRIX RUBESCENS FROM CHYTRID PARASITES.

15:00  Kärcher, O.; Flistrup, C.; Brandt, M.; Tasevska, O.; Patrceva, S.; Walz, A.; Frank, K.; Markovic, D.: CHLOROPHYLL A – NUTRIENT AND TEMPERATURE RELATIONSHIPS, AND PREDICTIONS FOR LAKES ACROSS MOUNTAIN REGIONS


15:45  Yin, J.; Wilkerson, F.; Blaser, S.; Frantrisch, J.: PHYTOPLANKTON PRODUCTIVITY AND NUTRIENT UPTAKE IN THE NORTHERN SAN FRANCISCO ESTUARY

16:00  Flistrup, C.; Brabarger, A.: DO DIFFERENCES IN STREAM OPTICAL PROPERTIES DETERMINE PHYTOPLANKTON STRUCTURING IN LARGE LAKES?


16:30  Li, X.; Yan, M.: RESPONSES OF TOXIC ALGAE TO ENVIRONMENTAL VARIABLES IN THE PEARL RIVER ESTUARY AND HONG KONG WATERS


17:00  Sprecher, B.; Zhang, H.; Lin, S.: GENETIC TRANSFORMATION EFFORTS IN THE DINOFLAGELLATE OXYRRHIS MARINA

17:15  Zhou, L.; Lin, S.: ESTIMATING PHYTOPLANKTON CARBON BIOMASS USING DNA

CS033 CORAL REEF ECOSYSTEMS

Chair(s): Justin Baumann, University of North Carolina at Chapel Hill (baumannj@live.unc.edu)

Location: Room 104

09:00  Baumann, J.; Boe, C.; Carne, L.; Castillo, K.: ACCLIMATIZATION TO ENVIRONMENTAL HETEROGENEITY LIMITED BY LOCAL ADAPTATION IN SIDERASTREA SIDEREABUT NOT PSEUDODIPOLO STRIGOSA CORALS IN BELIZE


09:30  Townsend, J.; Brandt, M.; Mukherjee, S.; Medina, M.; Smith, T.: LESION RECOVERY OF CORALS ALONG A SHALLOW TO MESOPHOTIC DEPTH GRADIENT
CS035 CHANGING BIOGEOCHEMISTRY AND ECOLOGY ACROSS POLAR AQUATIC SYSTEMS IN THE 21ST CENTURY

Chair(s): Jeff Bowman, University of California at San Diego (jbowman@ucsd.edu)
Jim McClelland, University of Texas (jimmi@utexas.edu)
Peter Hennes, University of California (pjhernes@ucdavis.edu)
Ronnie Glud, University of Southern Denmark (rnegud@biolys.sdu.kk)
Suzanne Tank, University of Alberta (suzanne.tank@ualberta.ca)
Marguirite Xenopoulos, Trent University (mxenopoulos@trentu.ca)
Hyewon Kim, University of Virginia (hk8m@virginia.edu)
Andrew Therber, Oregon State University (atherber@coas.oregonstate.edu)

Location: Room 202

09:00 Kim, H.; Duddlow, H.; Schofield, O.; Steinberg, D.; Doney, S.; DATA ASSIMILATIVE MODELING OF MARINE ECOSYSTEM AND MICROBIAL DYNAMICS IN THE COASTAL WEST ANTARCTIC PENINSULA
09:30 Rao, D.; Saino, M.; DiTullio, G.; Follows, M.: IN SITU UPTAKE RATES OF VITAMIN B12 AND CORAL ALONG AN ANTARCTIC COSTAL WATER TRANSCENT FROM THE AMUNDSEN SEA TO ROSS SEA
10:00 MacMillan, G.; Chetelat, J.; Richardson, M.; Amyot, M.; ENVIRONMENTAL DRIVERS OF MERCURY BIOACCUMULATION IN ARCTIC FRESHWATER ZOOPLANKTON
10:15 Vucic, J.; Gray, D.; ABIOTIC FACTORS INFLUENCING ZOOPLANKTON COMMUNITY STRUCTURE IN SMALL ARCTIC LAKES
11:00 McClelland, J.; Connelly, C.; Rawlins, M.; FLUVIAL NITROGEN EXPORT FROM THE NORTH SLOPE OF ALASKA TO THE BEAUFORT SEA: SPATIAL PATTERNS AND IMPLICATIONS FOR BIOLOGICAL PRODUCTION IN COASTAL WATERS
11:30 Shakil, S.; Tank, S.; Vonk, J.; MINERALIZATION POTENTIAL OF PARTICULATE ORGANIC CARBON MOBILIZED TO STREAMS BY PERMAFROST THAW SLUMPS ON THE PEEL PLATEAU (NT, CANADA)
CS043 GLOBAL OCEANOGRAPHY AND LIMNOLOGY
Chair(s): Adam Heuchete, Science Museum of Minnesota (adam.heuchete@gmail.com)
Jean-Francois Lapierre Université de Montréal (jfrancoislapierre@gmail.com)
Location: Room 208 C
09:00 Downing, J.: THE NEED FOR MORE GLOBAL INFERENCE IN OCEANOGRAPHY AND LIMNOLOGY: WHAT'S DONE, HOW IT'S DONE, AND HOW WE CAN TO DO BETTER


Lapierre, J.; Collins, S.; Oliver, S.; Stanley, E.: INCONSISTENT BROWNING OF NORTHEASTERN US LAKES DESPITE INCREASED PRECIPITATION AND RECOVERY FROM ACIDIFICATION


Shahabinia, A.; Bogard, M.; del Giorgio, P.: PATTERNS AND REGULATION OF ECOSYSTEM METABOLISM IN LAKES ACROSS CANADA


Rivera, J.; Lumpkin, R.; Goni, G.; Rivero, U.; Dollk, S.; Olsacoaga, M.; Covelli, M.; Torres Garcia, M.: COASTAL CURRENT ESTIMATION BY LAGRANGIAN METHODS IN COSTA RICA AND BAHIA DE MOSQUITOS PANAMA IN THE CARIBBEAN SEA


Paquette, C.; Gregory-Eaves, I.; Beisner, B.: ZOOPLANKTON SUBFOSSIL ASSEMBLAGE SHIFTS SINCE PREINDUSTRIAL TIMES ACROSS CANADIAN ECOZONES AND IN RELATION TO HUMAN ACTIVITIES

SPOT001: PUBLICATIONS SPOTLIGHT SESSION
Chair(s): Marguerite A. Xenopoulos, Trent University (mavenopoulos@trentu.ca)
Christopher T. Filstrup, University of Minnesota Duluth (filstrup@d.umn.edu)
Paul Kemp, Editor, Limnology and Oceanography: Methods (lomethods-editor@aslo.org)
Patria A. Soranno, Michigan State University (soranno@msu.edu)
Adrienne J. Sponberg, ASLO Director of Communications and Science (asponberg@aslo.org)
Location: Room 209 A/B
09:00 Hundey, B.; Wood-Charlson, E.; Tolar, B.; Shirvoy, P.; Olker, J.: TIDAL MOMENTUM: SCIENCE COMMUNICATION TRAINING OPPORTUNITIES THAT MEET EARLY-CAREER SCIENTIST RECOMMENDATIONS


Mette, M.: APPLICATIONS OF BIVALVE SCLEROCHRONOLOGY TO ECOLOGICAL AND CLIMATOLOGICAL STUDIES

Tezdik, O.; Curtis, J.: CHEMICAL ARCHIVES IN FISHES BEYOND OTOLITHS: A REVIEW ON THE USE OF OTHER BODY PARTS AS CHRONOLOGICAL RECORDERS OF MICROCHEMICAL CONSTITUENTS FOR EXPANDING INTERPRETATIONS OF ENVIRONMENTAL, ECOLOGICAL, AND LIFE-HISTORY CHANGES

Casas-Ruiz, J.: A TALE OF TIPES AND REACTORS: CONTROLS ON THE IN-STREAM DYNAMICS OF DISSOLVED ORGANIC MATTER IN RIVERS

Kraus, T.; Hansen, A.; Downing, B.; Pellerin, B.; Fleck, J.; Bergamaschi, B.: USING OPTICAL PROPERTIES TO LOOK BACKWARDS AND FORWARDS IN TIME: DISSOLVED ORGANIC MATTER SOURCE, PROCESSING, REACTIVITY AND FATE

Deemer, B.; Hayes, N.; Streok, K.; Cormian, J.; Razavi, R.; Dibble, K.; Yackulis, C.: CATCHMENT AND MANAGEMENT CHARACTERISTICS ARE KEY IN DETERMINING RESERVOIR RESPONSE TO CLIMATE CHANGE

Fasching, C.; Yao, H.; Rusak, J.; Xenopoulos, M.: HYDROLOGICAL EFFECTS ON STREAM-LAKE COUPLING AND DECOUPLING C:N:P STOICHIOMETRY, BUDGETS AND EXPORT FLUXES


Burson, A.; Stemp, M.; Akl, L.; Bruzaard, C.; Huisman, J.: UNBALANCED REDUCTIONS OF NUTRIENT LOADS HAS CREATED AN OFFSHORE GRADIENT FROM PHOSPHORUS TO NITROGEN LIMITATION IN THE NORTH SEA

Darnis, G.; Geoffroy, M.; Daase, M.; Sereide, J.; Swoboda, S.; Cortier, F.; Renaud, P.; Berge, J.: THE KEY ROLE OF ZOOPLANKTON PROCESSES IN THE EXPORT OF BIOGENIC MATTER DURING THE TRANSITION FROM POLAR NIGHT TO SPRING IN A HIGH-ARCTIC MARINE SYSTEM

SS002 ENVIRONMENTAL EPIGENETICS: KEY MECHANISMS OF ACCLIMATIZATION AND ADAPTATION TO GLOBAL OCEAN CHANGE

Chair(s): Jose Eirin-Lopez, Florida International University (joterinlo@fiu.edu)
Hollie Putnam, University Of Rhode Island (hputnam@uri.edu)

Location: Room 103 A

09:00 Rosado Borrero, G.; Schizas, N.; Telomere length variation among endangered Caribbean scleractinian coral Acropora cervicornis
09:15 Cziesielski, M.; Marigappen, K.; Aranda, M.; Histone modifications regulate and maintain cnidarian-algal symbiosis
09:45 Roberts, S.; Comparative analyses of DNA methylation patterns in bivalves

10:00 Nguyen, N.; Dimond, J.; DNA methylation profiling of Anthopleura elegantissima using nanoarray sequencing
10:30 Prasanna, A.; Schmidt-Roach, S.; Liew, Y.; Cziesielski, M.; Zahran, N.; Aranda Lastra, M.; A study on DNA methylation changes in exaptasia pallida in response to long term heat acclimation
10:45 Putnam, H.; Spencer, L.; Roberts, S.; Goetz, F.; The potential for acclimatization to ocean acidification through epigenetic memory in geoduck clams

11:00 Fellous, A.; Shama, L.; DNA methylation during gametogenesis and embryogenesis of threespine stickleback: A source of heritable phenotypic diversity for adaptation to climate change?
11:15 Leach, T.; Strader, M.; Hofmann, G.; Investigating the role of maternal conditioning on offspring performance and DNA methylation patterns in the purple sea urchin


SS006 PLASTICS IN THE AQUATIC ENVIRONMENT

Chair(s): Aron Stubbins, Northeastern University, Boston (aron.stubbins@northeastern.edu)
Cristina Romero-Castillo, Instituto de Ciencias del Mar, CSIC, Barcelona (crista@icm.csic.es)
Kara Lavender Law, Sea Education Association, Woods Hole (klavender@sea.edu)
Duoji Li, East China Normal University, Shanghai (daojili@sklec.ecnu.edu.cn)

Location: Room 201

09:00 Arias, M.; Grossart, H.; Microplastic particles: A newly emerging microbial habitat in aquatic ecosystems with multiple and often unforeseen consequences for ecology and human health
09:30 Koski, M.; Christensen, A.; Nielsen, T.; Effect of car tire and rubber granules on coastal copepods
09:45 Pedersen, A.; Boegholm, A.; Gopalakrishnan, K.; Kashian, D.; Sublethal effects in Dreissena bugensis following exposure to microplastics
10:00 Schmidt, N.; Castro-Jimenez, J.; Oursel, B.; Semperé, R.; Plastic additives in seawater, sediment and zooplankton samples from the Bay of Marseille, Southern France
10:15 Carraquillo-Rosa, G.; Zayas, B.; Cellular events resulting from continuous exposure of aquatic species to the plasticizer dibutyl phthalate, an environmental contaminant
10:30 Urban-Rich, J.; Carilli, J.; Baumann, J.; Rotjan, R.; Are microplastics ingested or incorporated within reef-forming corals?
10:45 Seeley, M.; Song, B.; Hale, R.; Effect of different microplastics on sediment microbial communities, denitrification and nutrient fluxes
11:15 Wiggin, K.; Holland, E.; Microplastic pollution sized 500-3um in aquatic environments near highly urbanized areas
11:30 Lasseigne, D.; Masura, J.; Wilson, K.; Brandt, M.; Microplastic and microfibre abundances in coastal environments of St. Thomas, USVI
11:45 Miller, M.; Steede, C.; Diego, R.; Factors influencing the distribution of microplastics and marine debris on California’s Channel Islands
12:00 Martin, C.; Al Nahdi, R.; Duarte, C.; The history of marine plastic pollution in a handful of sediment

12:15 Crew, A.; Gregory-Eaves, I.; Ricciardi, A.; Assessing the diversity, abundance and distribution of microplastics in the sediments of the St. Lawrence River
12:30 Xiong, X.; Wu, C.; Elser, J.; Microplastics in high-altitude lakes—a comparative study between China and U.S.
12:45 Ward, J.; Zhao, S.; Mladinich, K.; Griffin, T.; Holohan, B.; Shumway, S.; Examining the use of bivalve molluscs as indicators of microplastics in the environment

13:00 Lascelles, N.; Jagoe, C.; Deshpande, A.; Freeman, D.; Drayton, D.; Analysis and chemical characterization of microplastic pollution in coastal waters
13:15 Li, D.; Progress and prospects of marine microplastic research in China

*REPRESENTS INVITED PRESENTATIONS
**SS019 BLUE CARBON: FROM THE ECOSYSTEM TO THE MARKETS**

Chair(s): Miguel-Angel Mateo, Spanish Council for Scientific Research (CSIC) (mateo@ceab.csic.es)
Paul Lavery, Edith Cowan University (p.lavery@ecu.edu.au)
Oscar Serrano, Edith Cowan University (oserranogras@ecu.edu.au)
Martin Skow, Bangor University (mwskow@bangor.ac.uk)

Location: Room 204

**09:00** Chmura, G.: IDENTIFYING PREDICTORS OF BLUE CARBON (SALT MARSH SOIL ORGANIC CARBON) ACCUMULATION RATES - EXAMPLES FROM EASTERN CANADA

**09:15** Schiebel, H.; Lawlor, K.; Templeton, T.: CREATING A NEW ENGLAND SALT MARSH DENSITY PROFILE: METHODS AND IMPLICATIONS FOR CLIMATE CHANGE MITIGATION STRATEGIES

**09:30** Gorham, C.; Lavery, P.; Kelley, J.; Salinas, C.; Serrano, O.: CARBON STORAGE BY TIDAL MARSH ECOSYSTEMS IN WESTERN AUSTRALIA


**10:15** Lopes, C.: TRENDS IN INORGANIC CARBON DYNAMICS OF SEAGRASS THALASSIA TESTUDINUM


**14:00** Costa, M.; Ezcurra, E.; Ezcurra, P.; Salinas-de-León, P.; Turner, B.; Leichter, J.; Aburto-Oropesa, O.; SEDIMENT DEPTH AND ACCUMULATION AGE CONSTRAIN MANGROVE CARBON STOCKS, DEPENDING ON FOREST TYPE

**14:15** Ortega, A.: METAGENOMES REVEAL WORLDWIDE OCCURRENCE OF MACROALGAE IN THE OCEAN

**14:30** Serrano, O.; Lavery, P.; Loeveck, C.: THE POTENTIAL OF AUSTRALIAN BLUE CARBON ECOSYSTEMS FOR CLIMATE CHANGE MITIGATION - A NATIONAL ASSESSMENT.


**16:00** Rovai, A.; Twilley, R.; Casarandel-Moya, E.; Pagliosa, P.; Fonscara, A.; Rul, P.: ADJUSTING THE CONTRIBUTION OF MANGROVES TO GLOBAL CARBON STOCKS

**16:15** Kumagai, J.; Costa, M.; Alurtto, O.: MANGROVES, MONEY, AND MANAGEMENT: ADDRESSING THE DISCONNECT BETWEEN BLUE CARBON RESEARCH AND GOVERNMENT ACTION

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**SS030 BIOLUMINESCENT BAYS OF THE CARIBBEAN: SCIENCE, MANAGEMENT, OUTREACH, AND RECOVERY**

Chair(s): Michael Latz, Scripps Institution of Oceanography (mlatz@uscd.edu)
Mark Martin Bras, Vieques Conservation and Historical Trust (biobaypatrick@gmail.com)

Location: Room 101 A/B

**09:00** Martin Bras, M.; Cabral Guadalupe, A.; Fernandez Porto, J.: VARIATION IN ABUNDANCE PYRODINIUM BAHAMENSE BEFORE AND AFTER HURRICANE MARIA IN PUERTO MOSQUITO VIEQUES BIOLUMINESCENCE BAY, VIEQUES


**09:45** Reale-Munroe, K.; Castillo, B.; Pinckney, J.; Munroe, M.: INFLUENCES OF WATERSHED INPUTS ON WATER QUALITY AND BIOLUMINESCENT DINOFLAGELLATES IN MANGROVE LAGOON, ST. CROIX, USVI


**10:15** Latz, M.; Carter, M.: FIRST BIOLUMINESCENT MEASUREMENTS OF A NEW BIOLUMINESCENT LAGOON IN SALT RIVER BAY, ST. CROIX, USVI

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**SS031 IMPACTS OF (SUB)MESOSCALE OCEAN DYNAMICS ON MARINE ECOSYSTEMS**

Chair(s): Alice Della Penna, Univ. of Washington - Applied Physics Laboratory (alice.dellapenna@gmail.com)
Peter Gaube, Univ. of Washington - Applied Physics Laboratory (pgaube@apl.washington.edu)

Location: Room 209 C

**09:00** Gaube, P.: THE STRUCTURING OF OPEN-OCEAN ECOSYSTEMS BY (SUB)MESOSCALE DYNAMICS

**09:15** Lehain, Y.; Koren, I.; Sharoni, S.; D’Orsio, F.; Vardi, A.; Boss, E.: ENHANCEMENT AND PROLONGATION OF (SUB)MESOSCALE PHYTOPLANKTON BLOOMS BY HORIZONTAL STIRRING AND MIXING
SS033 GOING DEEPER: LINKAGES ACROSS THE OCEANIC WATER COLUMN

Chair(s): Sergio Morales, University of Otago (sergio.morales@otago.ac.nz)
Federico Baltar, University of Vienna (federico.baltar@otago.ac.nz)

Location: Room 209 C

09:30 Clayton, S.; Palevsky, H.; Thompson, L.; Quay, P.: MULTI-SCALE CONTROLS ON NET COMMUNITY PRODUCTION AND CHLOROPHYLL IN THE KUROSHIO EXTENSION

09:45 Lévy, M.; Dutkiewicz, S.; Jahn, O.; Clayton, S.; Mangolte, L: IMPACT OF SUBMESOSCALE PROCESSES ON PHYTOPLANKTON COMMUNITY STRUCTURE ACROSS OCEANIC FRONTS

10:00 Chase, A.: Della Penna, A.; Gaube, P.: INFLUENCE OF SMALL-SCALE FRONTAL FEATURES ON PHYTOPLANKTON COMMUNITY COMPOSITION IN THE NORTH ATLANTIC OCEAN


10:30 Bear, E.; Carlson, C.; Church, M.: BACTERIOPLANKTON METABOLIC RESPONSE TO PHYTOPLANKTON LYSATE VARIATIONS ACROSS A MESOSCALE EDDY DIPOLE IN THE NORTH PACIFIC SUBTROPICAL GYRE


11:00 Hanz, T.; Rapp, H.; Duineveld, G.; Roberts, E.; Reichart, G.; Mienis, F.: OCEAN DYNAMICS AT AN ARCTIC SEAMOUNT INFLUENCING A DEEP-SEA SPONGE REEF


SS054 REMOTE SENSING OF WATER QUALITY AND QUANTITY

Chair(s): Kiana Zolofghari, University of Waterloo (kzolofgh@uwatwaterloo.ca)
Claude R. Duguay, University of Waterloo (crduaguay@uwatwaterloo.ca)
Daniel Odermatt, EAWAG (daniel.odermatt@eawag.ch)

Location: Room 202

15:45 Yousef, E.: LONG-TERM THERMAL DYNAMICS IN ALPINE LAKES OF WESTERN ROCKY MOUNTAIN

16:00 Zhang, Y.: PERMANENT WATER TRANSPARENT ESTIMATION IN CHINA USING LANDSAT SERIES IMAGES

16:15 Schalles, J.: SATELLITE CLASSIFICATION AND MAPPING OF CENTRAL SOUTH ATLANTIC BIGHT WATERS USING SPECTRAL LIBRARY DERIVED CLUSTER ANALYSIS

16:30 Uudeberg, K.; Arikas, A.; Soomets, T.; Randla, M.; Anzper, A.; Reinard, A.: WATER QUALITY CHANGES IN INLAND AND COASTAL WATERS CAPTURED BY SATELLITES USING OPTICAL WATER TYPE GUIDED APPROACH


17:15 Duguay, C.; Gréaux, J.; Sinis, S.; Merchant, C.; Giardino, C.: DELIVERING THE LAKE ESSENTIAL CLIMATE VARIABLES - AN UPDATE FROM ESA CCI LAKES

SS058 BRAVE NEW WORLD: THE ECOLOGY OF HIGHLY IMPACTED WATERBODIES

Chair(s): Grace Wilkinson, Iowa State University (wilkinso@iastate.edu)
Eric Moody, Iowa State University (ekmoody@iastate.edu)

Location: Room 208 A/B

09:00 Uye, S.: FORMERLY PRODUCTIVE FISHING GROUNDS GET IN TROUBLE WITH JELLYFISH: TEMPORAL CHANGE IN ANTHROPOGENIC IMPACTS IN TWO JAPANESE COASTAL ECOSYSTEMS, THE SETO INLAND SEA AND THE ARIAKE SEA


09:30 Broman, E.; Raymond, C.; Sommer, C.; Gunnarsson, J.; Creer, S.; Nascimento, P.: BALTIC MEIOFAUNAL DIVERSITY AND COMMUNITY COMPOSITION ARE DRIVEN BY SALINITY AND INTERACTIONS WITH MACROFAUNA

10:00 Tolar, B.; Bove, K.; Bobb, C.; Spielman, L.; Bargj, J.: MICROBIAL SIGNALS OF SEASONAL REDOX TRANSITIONS IN A URANIUM-CONTAMINATED FLOODPLAIN

10:15 Herbart, M.; Fugleve, V.; Beiser, B.; Fuussmann, G.; Gonzalez, A.: THE IMPACTS OF RISING Glyphosate USE ON PHOSPHORUS LOADING AND PLANKTON COMMUNITIES IN AGRICULTURAL WATERSHEDS


* REPRESENTS INVITED PRESENTATIONS
14:15 Evans, M.; Nevers, M.: IMPACTS OF MULTIPLE ECOSYSTEM STRESSORS ON NUISANCE CLADOPHORA GROWTH


15:00 Scott, T.: COMMUNITY, IDENTITY, STABILITY – REVISITING THE NITROGEN : PHOSPHORUS RELATIONSHIP IN LAKES

15:15 Stanley, B.; Sigler, R.; Roberts, Q.; Botz, C.; Song, B.; Bronk, D.: ESTUARINE WATER MICROBIOME RESPONSES TO DIFFERENTLY TREATED WASTEWATER EFFLUENTS

15:45 Taylor, J.; Nifong, R.; Moore, M.; Farris, J.: DISCONTINUITY BETWEEN PATTERN AND PROCESS IN SIMULATED AGRICULTURAL DITCHES YIELD ECOLOGICAL AND METHODOLOGICAL QUESTIONS REGARDING DIEL DENITRIFICATION MODELS

16:00 Nick, S.; Grimes, K.: DO YOU REALLY WANT TO SWIM THERE? AN INVESTIGATION OF ENTEROCOCCUS BACTERIA AT BEACHES OF THE UNITED STATES VIRGIN ISLANDS


16:30 Matsuzaki, S.; Shinohara, R.; Uchida, K.; Sasaki, T.: CATCH DIVERSIFICATION PROVIDES MULTIPLE BENEFITS IN INLAND FISHERIES

16:45 Dexter, E.; Bollens, S.; Cordell, J.; Rollwagen-Bollens, G.: INSIGHTS FROM A 20-YEAR ZOOPLANKTON TIME-SERIES ENCOMPASSING A WIDE RANGE OF NORTHEAST PACIFIC ESTUARIES.

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16–21 February 2020
San Diego Convention Center
San Diego, California, USA

2020 ASLO Summer Meeting
A joint meeting with ASLO and SFS
7–12 June 2020
Monona Terrace Community and Convention Center
Madison, Wisconsin, USA

2021 Aquatic Sciences Meeting
28 February–March 5, 2021
Palau de Congresos Palma de Mallorca
Palma de Mallorca, Spain

2022 Ocean Sciences Meeting
A joint meeting with ASLO, AGU and TOS
27 February–4 March 2022
Hawaii Convention Center
Honolulu, Hawaii, USA

2022 Joint Aquatic Sciences Meeting
A joint meeting of societies representing the Consortium of Aquatic Scientific Societies (CASS): American Fisheries Society (AFS), Association for the Sciences of Limnology and Oceanography (ASLO), Coastal and Estuarine Research Federation (CERF), Phycological Society of America (PSA), Society for Freshwater Science (SFS), Society of Wetland Scientists (SWS)
Dates and Location TBD

2024 Ocean Sciences Meeting
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18–23 February 2024
New Orleans, Louisiana, USA

For more information on the 2019 Aquatic Sciences Meeting, please address all correspondence and questions regarding registration, conference logistics, and hotel accommodations to:

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ASLO 2019 AQUATIC SCIENCES MEETING
PROGRAM ADDENDUM

Changes to Printed Scientific Program Schedule as of 2/27/19

Revision to ASLO Board of Directors Officers/Executive Committee listing on Page 2.
Please note correction: Dianne Greenfield, Secretary

MONDAY ORAL SESSIONS

CS013: Dissolved organic matter - DOC, DON, DOP, fDOM, cDOM
Room 202 > 2/25/2019 2:45 PM
DON CYCLING IN THE SURFACE SOUTH CHINA SEA AS INFERRED FROM ISOTOPE SIGNATURES
Oral Presentation Withdrawn: Zhang, Run

SS010: Exploring What Makes Undergraduate Research Experiences Work: Evidence From Students And Mentors
Room 204 > 2/25/2019 9:45:00 AM
INCREASING DIVERSITY IN ENVIRONMENTAL STUDIES AND EVOLUTIONARY DEVELOPMENTAL BIOLOGY
Oral Presentation Withdrawn: Cohen, Sarah

SS010: Exploring what makes undergraduate research experiences work: evidence from students and mentors
Room 204 > 2/25/2019 9:45 AM
CO-OPERATIVE EDUCATION AS A VEHICLE FOR IMMERSIVE RESEARCH EXPERIENCES FOR UNDERGRADUATE STUDENTS – Presenting Author: Watson, Elizabeth B.
Presentation Revised from Poster to Oral; Withdrawn as Poster on Tuesday in Session SS010. Now an Oral on Monday.

SS013 ADAPTATION OF AQUATIC BIODIVERSITY TO GLOBAL CHANGE
Room 102 > 2/25/2019 5:15 PM
Time Slot Revised from 14:00 to 17:15

SS013: ADAPTATION OF AQUATIC BIODIVERSITY TO GLOBAL CHANGE
Room 102 > 2/25/2019 5:15 PM
Time Slot Revised from 14:00 to 17:15

SS040: Radionuclides in Aqueous Systems
Room 208 A/B > 2/25/2019 9:15:00 AM
DETECTION OF SHORT-TERM SEDIMENTATION USING RADIOISOTOPES: FROM THE COAST TO THE DEEP SEA
Oral Presentation Withdrawn: Larson, Rebekka

SS050: Improving Coral Reef Resilience with Transformational Science
Room 103 B > 2/25/2019 4:45:00 PM
THE CORAL RESTORATION CONSORTIUM: EFFORTS TO FUND, COORDINATE, AND TRANSFORM REEF CONSERVATION
Oral Presentation Withdrawn: Vardi, Tali

TUESDAY ORAL SESSIONS

CS006: Trace metals
Room 102 A/B/C > 2/26/2019 5:15:00 PM
Abstract Title Revised; Author List Revised to include Co-Authors
TUESDAY POSTER SESSION

(New 02-27-19)
CS007: Hypoxia
FORMATION OF A METALIMNETIC OXYGEN MINIMUM IN A DEEP LAKE
Room 201 => Tue, Feb 26, 2019 (10:00 AM)
Presentation Withdrawn: Cory McDonald

CS020: Fish and fisheries
Room 209 C => 2/26/2019 10:15:00 AM
A WATERSCAPE APPROACH TO FRESHWATER ARTISANAL FISHERIES
Oral Presentation Withdrawn: Garcia, Miguel

CS023: Community Ecology
Room 201 => 2/26/2019 4:15:00 PM
Ares, A.; Sato, K.; Mars Brisbin, M.; Diaz, J.; Ripken, C.; Iinura, Y.; Mitarai, S.: PLANKTON COMMUNITY STRUCTURE DYNAMICS UNDER RED SOIL POLLUTION WITHIN CORAL REEF ECOSYSTEMS
Author List Revised to include 6th Author

SS043: Beyond the Numbers: Strategies for Inclusive Practices Across the Aquatic Sciences
Room 208 C => 2/26/2019 2:30:00 PM
LESSONS LEARNED IN ENGAGING UNDERSERVED AUDIENCES IN NOAA EDUCATION PROGRAMS
Oral Presentation Withdrawn: Jones, Marissa

SS060: The advent of sampling biological processes in aquatic systems using autonomous platforms
Room 209 A/B => 2/26/2019 4:30:00 PM
LONG-DURATION SAMPLING OF THE PACIFIC GYRE USING HOLOGRAPHY AND ACTIVE FLUORESCENCE ON A WAVE GLIDER SV2
Oral Presentation Withdrawn: Villereal, Tracy

(New 02-27-19)
CS005: Acidification
AMELIORATING OCEAN ACIDIFICATION: TOWARDS A MODEL RELATING PCO2, IRRADIANCE AND LEAF AREA INDEX OF ZOSTERA MARINA (EELGRASS) IN PADILLA BAY, WA
Poster #78 => Tue, Feb 26, 2019 (05:30 PM)
Poster Presentation Withdrawn – Tyler Tran

CS009: Gas Fluxes
Exhibit Hall B => 2/26/2019 5:30:00 PM
Poster #91
INTERIOR ALASKA LAKES – NET SOURCES OR SINKS OF CARBON GASES?
Poster Withdrawn: Dornblaser, Mark

CS013: Dissolved organic matter - DOC, DON, DOP, fDOM, cDOM
Exhibit Hall B => 2/26/2019 5:30:00 PM
Poster #106
CHALLENGES OF FLUORESCENT DISSOLVED ORGANIC MATTER CHEMICAL INTERPRETATIONS: A CASE STUDY OF POLAR ICE CORES
Poster Withdrawn: D'Andrilli, Juliana

SS004: Undergraduate Research in Aquatic Sciences Posters
Exhibit Hall B => 2/26/2019 5:30:00 PM
Poster #240
ACoustical ANALYSIS OF TWO SHALLOW WATER OCEAN NOISE REFERENCE STATION NETWORK SITES: AMERICAN SAMOA AND BUCK ISLAND
Poster Withdrawn: Cosca-Baresh, Allison
**SS004: Undergraduate Research in Aquatic Sciences Posters**
Exhibit Hall B > 2/26/2019 5:30:00 PM
Poster #262
EXAMINING THE EFFECTS OF FLOOD MITIGATION INFRASTRUCTURE ON THERMAL PERFORMANCE OF P. VULGARIS IN THE RUMNEY MARSH (REVERE, MASSACHUSETTS)
Abstract Title Revised

**SS010: Exploring what makes undergraduate research experiences work: evidence from students and mentors**
Exhibit Hall B > 2/26/2019 5:30:00 PM
Poster #340
CO-OPERATIVE EDUCATION AS A VEHICLE FOR IMMERSIVE RESEARCH EXPERIENCES FOR UNDERGRADUATE STUDENTS – Presenting Author: Watson, Elizabeth B.
*Presentation Revised from Poster to Oral; Withdrawn as Poster on Tuesday in Session SS010. Now an Oral on Monday.*

**WEDNESDAY ORAL SESSIONS**

**CS010: Nitrogen biogeochemistry and cycling**
Room 208 A/B => Wed, Feb 27, 2019 10:00 AM
EVALUATING SEDIMENTS AS AN ECOSYSTEM SERVICE IN WESTERN LAKE ERIE THROUGH QUANTIFICATION OF NITROGEN CYCLING PATHWAYS
*Presenting Author Revised: McCarthy, Mark*

**CS022: Biodiversity**
Room 103 B > 2/27/2019 3:00:00 PM
ENVIRONMENTAL BASELINE SURVEY DATA IN PERDIDO AND BAY OF CAMPECHE (SOUTHERN GULF OF MEXICO)
*Oral Presentation Withdrawn: Perry, Ruth*

**CS022: Biodiversity**
Room 103 B > 2/27/2019 3:15:00 PM
BASELINE CHARACTERIZATION OF SOFT-BOTTOM BENTHIC COMMUNITIES IN SUPPORT OF REGULATORY PERMITTING FOR DRILLING IN THE DEEPWATER MEXICAN GULF OF MEXICO
*Oral Presentation Withdrawn: Valente, Raymond*

**SS023: Carbon Cycling Across Gradients in the Land-Ocean-Continuum**
Room 208 C > 2/27/2019 9:30 AM
D’Andrilli, J.; Hawkes, J.; QUALITY CONTROL IN DISSOLVED ORGANIC MATTER COMPOSITION ASSESSMENT BY HIGH RESOLUTION MASS SPECTROMETRY, AN INTERNATIONAL LABORATORY COMPARISON
*Presenting Author Revised*

**SS041 THE NEXT GENERATION:**
UNDERGRADUATE RESEARCH IN PUERTO RICO AND THE US VIRGIN ISLANDS
Room 204 > 2/27/2019 2:15:00 PM
Berberena, K. Rivera, R.; Diaz, K.; Barberena-Arias, M.: ABUNDANCE OF DIFFERENT SIZE CLASSES OF PLASTICS IN HIGH AND LOW ENERGY BEACHES
*First author/presenting author omitted from listing in the program book.*

**SS065: Turning the Lights on for Deep-Sea Ecosystems in the Caribbean, Gulf of Mexico, and US SE Atlantic**
Room 103 A > 2/27/2019 10:00:00 AM
FISH LARVAE DIVERSITY IN THE DEEP WATER REGION OF THE GULF OF MEXICO
*Oral Presentation Withdrawn: Jiménez Rosenberg, S.*
SS065: Turning the Lights on for Deep-Sea Ecosystems in the Caribbean, Gulf of Mexico, and US SE Atl
Room 103 A > 2/27/2019 3:00:00 PM
OBSERVATIONS OF AN UNDESCRIBED CTENOPHORE FROM A 3,910 M DEPTH OFF PUERTO RICO
Oral Presentation Withdrawn: Ford, Mike

SS066: Large rivers of the world as pipes, chimneys and reactors
Room 202 > 2/27/2019 2:00:00 PM
CARBON DIOXIDE AND METHANE EXCHANGE WITH RIVERS AND STREAMS IN THE UPPER MISSISSIPPI RIVER NETWORK
Oral Presentation Withdrawn: Striegl, Robert

THURSDAY ORAL SESSION

AS001 Success Through Science: Using Limnology and Oceanography to Tackle Difficult Management Questions
*Please note revised presentation order for the following:*
Location: Room 204
Presenting author revised

09:30 Barouillet, C.; Meyer-Jacob, C.; Mushet, G.; Hennessy, S.; Bertin, A.; Cumming, B.: DISSOLVED ORGANIC CARBON CONCENTRATIONS EXERT A STRONGER CONTROL ON THE CLADOCERAN COMMUNITY COMPOSITION OF BOREAL LAKES THAN WARMING

AS005: Extreme Events
Room 209 A/B > 2/28/2019 3:15:00 PM
EXTREME WARMING DECREASES CONTINENTAL SHELF NITROGEN REMOVAL CAPACITY
Oral Presentation Withdrawn: Fulweiler, Robinson

CS017: Harmful blooms
Room 102 A/B/C > 2/28/2019 3:15:00 PM
NUTRIENT AND TRACE METAL CO-LIMITATION OF CYANOBACTERIAL BLOOMS IN THE GREAT LAKES
Oral Presentation Withdrawn: Larson, James

SS023: Carbon Cycling Across Gradients in the Land-Ocean-Continuum
Room 104 > 2/28/2019 9:45:00 AM
DIAGNOSIS OF CO2 FLUXES IN THE COASTAL OCEAN
Oral Presentation Withdrawn: Dai, Minhan

SS023: Carbon Cycling Across Gradients in the Land-Ocean-Continuum
Room 104 > 2/28/2019 9:45 AM
THE COUPLED CYCLING OF DISSOLVED IRON AND DISSOLVED ORGANIC MATTER IN THE CONNECTICUT RIVER
Presentation Revised from Poster to Oral; Withdrawn as Poster on Thursday in Session SS023. Now an Oral on Thursday.
Presenting author: Laura Ann Logozzo

(New 2-27-19)

SS023: Carbon Cycling Across Gradients in the Land-Ocean-Continuum
CARBON CYCLING AND TRACE GAS DYNAMICS IN DISTURBED, RESTORED, AND REFERENCE WETLANDS ALONG A SALINITY GRADIENT IN OREGON, USA
Room 104 => Thu, Feb 28, 2019 (10:15 AM)
Presentation Withdrawn: Scott D. Bridgham
SS042: Long-term ecological studies of freshwater ecosystems in the Greater Caribbean Biogeographic Region
INTRA-COMMUNITY DIVERSITY OF INVASIVE SPECIES IMPACTS IN SPACE AND TIME: SCALING UP TO ECOSYSTEM FUNCTION
Room 103 A => Thu, Feb 28, 2019 (03:00 PM)
Presentation Withdrawn: Joel Trexler

FRIDAY ORAL SESSIONS

CS012: Carbon fluxes in FW and marine environment
101 AB > 3/1/2019 2:45 PM
SPATIOTEMPORAL ANALYSIS OF CARBON FLUXES IN GLACIAL MELTWATER STREAMS, ANTARCTICA
Presentation Withdrawn: Christa Torrens

CS033: Coral Reef Ecosystems
Room 104 > 3/1/2019 4:45:00 PM
Author List Revised to include 8th Author

CS043: Global oceanography and limnology
Room 208 C > 3/1/2019 9:30:00 AM
THE OCEAN OBSERVATORIES INITIATIVE (OOI)
Presenting Author Revised: Dever, Ed

SS030: Remote Sensing of Water Quality and Quantity
Room 202 > 3/1/2019 5:00:00 PM
USE OF FERRYBOX SHIPS OF OPPORTUNITY SYSTEMS FOR SATELLITE PRODUCT VALIDATION
Presenting Author Revised: Deininger, Anne

SS058: Brave new world: the ecology of highly impacted waterbodies
Room 208 A/B > 3/1/2019 3:45:00 PM
DISCONTINUITY BETWEEN PATTERN AND PROCESS IN SIMULATED AGRICULTURAL DITCHES YIELD ECOLOGICAL AND METHODOLOGICAL QUESTIONS REGARDING DIEL DENITRIFICATION MODELS
Oral Presentation Withdrawn: Taylor, Jason