

2015 UNOLS COUNCIL SLATE

UNOLS Elections will be held to fill Council member terms that will expire this year. UNOLS Nominating Committee members Deborah Steinberg (Chair), Chris Measures, and Tammi Richardson have assembled a slate of candidates for the UNOLS Council positions to be filled. This election will be held in accordance with the UNOLS Charter as readopted 20 December 2013.

The slate and information about the candidates is available on the following pages.

OPERATOR REPRESENTATIVE (3 year term) – Individual affiliated with any designated UNOLS Operator Member Institution

- ❖ **Dr. Craig Lee, University of Washington**
- ❖ **Dr. Spahr Webb, Lamont-Doherty Earth Observatory**

NON-OPERATOR REPRESENTATIVE (3 year term) – Individual affiliated with any designated UNOLS Non-Operator Member Institution

- ❖ **Dr. Mark Brzezinski, University of California, Santa Barbara**
- ❖ **Dr. Zackary Johnson, Duke University**
- ❖ **Dr. James Moffett, University of Southern California**

AT-LARGE REPRESENTATIVE (3 year term) – Individual affiliated with any UNOLS Member Institution

- ❖ **Dr. Bruce Appelgate, Scripps Institution of Oceanography**
- ❖ **Mr. Robert Winokur, Michigan Technological University**

AT-LARGE REPRESENTATIVE (3 year term) – Individual affiliated with any UNOLS Member Institution

- ❖ **Dr. Masako Tominaga, Texas A&M University**
- ❖ **Dr. Rhian Waller, University of Maine**

CANDIDATES FOR COUNCIL OPERATOR POSITION

Dr. Craig Lee, University of Washington

Statement of Interest:

The recent ‘Sea Change’ report expresses strong support for the US Academic research fleet, pointing to clear alignment between the infrastructure required to address high priority research questions and capabilities offered by research vessels. This creates both opportunities and challenges as UNOLS guides the fleet through the coming years. Resounding support for seagoing science, and the ships required to support it, provides a mandate for planning and steady, thoughtful upgrading of the fleet. This will likely unfold within the constraints of a difficult budgetary environment. UNOLS will need to energetically advocate for the resources required to maintain seagoing capability, while also seeking efficiencies and ensuring that optimal use is made of the resources made available. Actions taken in recent years have provided efficiencies that go far toward meeting the reductions suggested for the fleet in ‘Sea Change’. Equally important are planning for fleet renewal. Although carefully developed science mission requirements and existing plans call for the construction of three highly capable Regional Class research vessels (RCRV), ‘Sea Change’ recommends reevaluating both size and number against anticipated use. UNOLS responded with a thoughtful summary of the rationale behind the RCRV plans, defending the community’s decision. More troubling is the retirement of *Knorr* and *Melville*, and the resulting loss in Global vessel capability, without corresponding plans for replacement. These ships are the mainstay of US seagoing science, and I feel that we should invest effort toward maintaining the capabilities they offer. Initially this might involve a careful survey of the various options (e.g. build, lease, borrow...), but should also include advocating for timely action on this important issue. Human capital remains critical, and we must foster a new generation of ocean scientists by providing training and mentorship, and by encouraging more proposals for seagoing research. I remain enthusiastic about continuing to work on these problems, and thus seek reappointment for a second term of service with the UNOLS Council.

My extensive experience with seagoing science and ship operations provides a good basis for UNOLS service. I’ve participated in 44 research cruises, 32 as chief scientist, along with an Antarctic Deployment and an Arctic ice camp. The majority of these have been aboard global class ships operating from foreign ports, though I also have experience with intermediates, regionals, icebreakers, foreign vessels and helicopter operations. I’ve led large, multi-PI science parties, multi-ship operations and autonomous campaigns, conducted logistically and politically complex field programs and often lead or sit on the steering committees of ONR, NSF and NASA supported science programs. I currently chair the Observing Panel for the Study of Environmental Arctic Change (SEARCH), which provides guidance for climate scale measurements in the Arctic. At the Applied Physics Laboratory, I lead a team that conducts both science and instrument development, and am conversant in modern oceanographic technologies.

Biographical Sketch:

Professional Appointments:

2007-2008	Chair, Ocean Physics Department, Applied Physics Laboratory, University of Washington (UW)
2001-2002	Chair, Ocean Physics Department, Applied Physics Laboratory, UW
2007-present	Applied Physics Laboratory, UW: Senior Principal Oceanographer
2001-2007	Applied Physics Laboratory, UW: Principal Oceanographer
1997-2001	Applied Physics Laboratory, UW: Senior Oceanographer
1998-2004	School of Oceanography, UW: Affiliate Assistant Professor
2004-2010	School of Oceanography, UW: Affiliate Associate Professor
2010-present	School of Oceanography, UW: Associate Professor
1995-1997	Postdoctoral Investigator, Department of Physical Oceanography, Woods Hole Oceanographic Institution

Education:

B.S., 1987, Electrical Engineering and Computer Science, University of California, Berkeley

Ph.D., 1995, Physical Oceanography, School of Oceanography, University of Washington

Research Interests: Craig Lee is a physical oceanographer specializing in observations and instrument development. His primary scientific interests include: (1) upper ocean dynamics, especially mesoscale and submesoscale fronts and eddies, (2) interactions between biology, biogeochemistry and ocean physics and (3) high-latitude oceanography. With Dr. Jason Gobat, Lee founded and leads a team of scientists and technologists that pursues a wide range of oceanographic field programs, including intensive studies of the Kuroshio Current, coupled physical-biogeochemical studies such as the recent patchscale investigation of the North Atlantic spring phytoplankton bloom and studies aimed at quantifying and understanding Arctic change. An important component of this work involves identifying advances that could be achieved through novel measurements and developing new instruments to meet these needs. The teams' accomplishments include autonomous gliders capable of extended operation in ice-covered waters, high performance towed vehicles and light-weight, inexpensive mooring technologies. The team also pursues K-12 educational outreach and routinely employs undergraduate research assistants.

Field Experience: 45 major research cruises, 1 Antarctic deployment, 1 Arctic ice camp, 33 as chief scientist.

Four cruises on foreign vessels (one icebreaker with extensive aircraft operations). Numerous short test cruises and small boat operations.

Select Synergistic Activities:

- NASA Export Processes in the Ocean from Remote Sensing (EXPORTS) Science Definition Team, 2015 – present.
- University-National Oceanographic Laboratory System (UNOLS) Council, 2012 – present.
- Chief Scientist for ONR Marginal Ice Zone DRI, 2012 – present.
- Co-chair, science steering group for ONR Northern Arabian Sea Circulation, Autonomous Research program, 2015 – present.
- Co-Chair for the first International Arctic Observing Summit, 2013
- Study of Environmental Arctic Change (SEARCH), Observing Change Panel. 2006 – present, Panel Chair 2009 – present.
- Exec Committee, Arctic Observing Network Design and Implementation Task Force, 2009 - 2013.
- SEARCH Sea Ice Outlook Advisory Group. 2008 – present.
- Scientific Steering Committee for the Arctic-Subarctic Ocean Flux Program, 2000 – present.
- Chief Scientist for the ONR-sponsored Marginal Ice Zone Program, 2011 – present
- Science Steering Committee for large, multi-investigator research programs that include:
 - Quantifying, Predicting and Exploiting Uncertainty (2007 – present)
 - Impact of Typhoons (2008 – present)
 - Lateral Mixing Experiment (2008 – present)
 - Salinity Processes in the Upper Ocean, Regional Study (SPURS) (2010 – present)
 - Joint US-Vietnam Regional Study (2011 – present).
- Organized and led NSF-OPP sponsored workshop on Autonomous and Lagrangian Platforms, 2008.
- Guest editor for the Journal of Geophysical Research, Arctic, Oceanography, Elementa; Reviewer for many oceanographic and Arctic-focused journals

Publications: Author or co-author of over 75 peer-reviewed publications and numerous white papers and reports, including sections of the Autonomous and Lagrangian Platforms (ALPS) Report, Ocean Observations 2009 Proceedings and SEARCH (Study of Environmental Arctic Change) planning and implementation documents.

Website: <http://www.apl.washington.edu/people/profile.php?last=Lee&first=Craig>

Dr. Spahr Webb, Lamont-Doherty Earth Observatory, Columbia University

Statement of Interest:

I write to express my interest in serving on the UNOLS Council. I have sailed on the majority of vessels in the UNOLS fleet both large and small during nearly 100 cruises over the last 36 years. I have a good understanding of the issues currently affecting the research fleet. My research has been focused on the development of instrumentation for oceanography and geophysics (marine EM, geodesy and seismology). I have worked at three of the major oceanographic institutions (SIO, LDEO and WHOI). I have used the *Jason* ROV for my work and dove in *Alvin* on several cruises. I expect *ROVs* and *AUVs* to become an increasingly important component of ocean research. While at SIO, I served on its marine operations committee for about a decade. I was on the RIDGE steering committee for several years as well. While I am currently at Columbia and have used the R/V *Marcus Langseth* for a small part of my work, I expect that the majority of my research will be conducted on other institution's vessels. It has been many years now since anyone at Columbia was a member of the UNOLS council.

This is a difficult time for UNOLS as it is evident that the primary concern for the UNOLS in the next decades will be cost control. The diversity of institutions operating ships within the UNOLS's fleet has encouraged the development of a broad range of capabilities. A major concern for me is whether UNOLS will be able to maintain this broad range of capabilities while down sizing the number of ships. Optimization of the use of the fleet will require difficult decisions about the distribution of ships geographically and between institutions. Fortunately, the newer smaller ships have better station keeping abilities and can replace larger ships for many cruises.

Biographical Sketch:

Professional Experience:

Present	Jerome M. Paros/ Lamont Research Professor, Lamont-Doherty Earth Observatory, Columbia University, Palisades, N.Y.
2000-Present	Adjunct Professor, Department of Earth and Environmental Science, Columbia University
1997-2002	Research Oceanographer, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA.
1993-1997	Associate Research Oceanographer, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA
1986-1993	Assistant Research Oceanographer, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, CA.
1984-1986	Postdoctoral Scholar, Woods Hole Oceanographic Institution, Woods Hole, MA.

Education:

B.S., 1978, Massachusetts Institute of Technology, Physics, and Earth and Planetary Science
Ph.D., 1984, University of California, San Diego, Oceanography

Research Interests: Marine instrumentation for geophysical and oceanographic applications. Observations of ocean (infragravity) waves. Broad-band marine seismology. Marine Geodesy. Structure of the oceanic crust and mantle. Recent emphasis has been the structure, deformation, and seismicity of subduction zones with the goal of better understanding seismic and tsunami hazard.

Research Cruises: About 100 research cruises on UNOLS and other vessels. Recent cruises have included research from the following vessels:

- UNOLS Ships: *Revelle* (2015, 2009) *Oceanus* (2005), *Ewing* (2003), *Wecoma* (2004), *Sproul* (2005, 2006), *Atlantis* (2007, 2008, 2009 with DSV *Alvin*, 2011 with ROV *Jason*), *Seward Johnson* (2007), *Langseth* (2007, 2008, 2011), *Kilo Moana* (2010), *Thompson* (2014, with ROV *Jason*).

- Non-UNOLS Ships: *Kaiyo*, (2003), *Universtatis* (2004, 2005), *Hesperides* (2005), *Las Palmas* (2005), *Seawolf* (2008, 2009, 2010), *Tangaroa* (2014), *Connecticut* (2014, 2015)

Professional Societies:

- American Geophysical Union
- Seismological Society of America.

Synergistic Activities:

- The development of broad band seismometer systems (OBSs) by Dr. Webb's lab makes it possible to conduct research into the structure of the upper mantle and crust beneath the oceans. Dr. Webb started the NSF OBS Pool at LDEO that now provides OBSs for use by any NSF supported researcher.
- RIDGE 2000 Steering Committee (2008-2011).

Publications: Over 80 peer reviewed publications. Authored or coauthored research papers in publications including *Nature*, *Rev. of Geophysics*, *Bull. Soc. Seism. Amer*, *J. Atm. Oceanic Tech.*, *J. Geophys. Int.*, and *Science*. *J. Geophys. Res.*

Website: <http://www.ldeo.columbia.edu/user/scw>

CANDIDATES FOR COUNCIL NON-OPERATOR POSITION

Dr. Mark Brzezinski, University of California, Santa Barbara

Statement of Interest:

I am writing to express my interest in serving on the UNOLS Council. As a seagoing oceanographer my career has relied on access to a modern capable UNOLS fleet. With my involvement in both large interdisciplinary programs and in single investigator coastal studies I've grown to appreciate the need for a diverse set of ship capabilities. Current needs extend those capabilities to serving new observing systems and an ever increasing diverse array of over-the-side autonomous and semi-autonomous technologies. Years ago I served on the UNOLS Fleet Improvement Committee (FIC) and I am glad to see that some challenges regarding ship replacement have come to pass. Many new challenges have arisen with flat research budgets and the rising costs of ship operations leading to current efforts to right-size the fleet.

The UNOLS fleet of the future needs to be more capable and more efficient than the fleet of today. The continuing process of fleet renewal is made even more challenging by limited resources at the funding agencies that support UNOLS and the scientists using the fleet. Trends of apparent diminishing demand for ship days and the increasing costs of ship operation squeeze UNOLS resources as never before requiring a more informed and engaged science community if we are to create the fleet of the future. The UNOLS Council will have to work closely with the science community and funding agencies to make the most effective use of current resources while not losing sight of future needs. It is all too easy to let current challenges drive short sighted decisions. For example, given the long time horizon for replacing the two remaining ocean-class vessels the time is now to plan for the future of this class of vessel to avoid a critical gap in science capability in future years.

I look forward to serving on the Council and learning more about current right-sizing efforts. I am surprised when I learn of apparent lower demand for ships as I know of many unfunded proposals with high demand for ship time. I want to learn how much of the decline in the demand for ships is a self-fulfilling prophecy of scientist feeling that proposals that include requests for ship days are less likely to be funded. I understand that the UNOLS Council has been involved in formal surveys to diagnose these trends and I look forward to aiding in the Council's effort to promote policy decisions that use the fleet to its fullest potential.

Biographical Sketch:

Professional Appointments:

July 2015-present	Distinguished Professor, UCSB
2010 – present	Director Marine Science Institute, UCSB
2004 – 2009	Chair, Interdepartmental Graduate Program in Marine Science, UCSB
2001 – 2010	Deputy Director of the Marine Science Institute UCSB
Aug 1999–present	Professor, Ecology Evolution and Marine Biology
July 1995–July 1999	Associate Professor, Ecology Evolution and Marine Biology
1989-1995	Assistant Professor, Biological Sciences, UCSB
1989	Guest Investigator, Woods Hole Oceanographic Institution
1988	Postdoctoral Associate, Massachusetts Institute of Technology
1987	Postdoctoral Scholar, Biology Department, Woods Hole Oceanographic Institution

Education:

B.S., 1979, Southampton College of Long Island University, Biology/Marine Science
Ph.D., 1987, Oregon State University, Biological Oceanography

Research Interests: Phytoplankton Ecology/Physiology, Oceanic Silicon Cycle, Diatom Silicon Metabolism

Seagoing Experience: Over the past 25 years conducted a wide range of research on UNOLS vessels including the R/V *Weatherbird*, R/V *Weatherbird II*, R/V *Wecoma*, R/V *Point Sur*, R/V *Oceanus*, R/V *Kilo Moana*, R/V *Knorr*, R/V *Melville*, R/V *Revelle*, R/V *Ka`imikai-O-Kanaloa*, and the R/V *Columbus Iselin*. Served as Chief Scientist on over 20 cruises aboard UNOLS ships and participated in over 20 additional cruises.

Professional Membership and Selected Service:

- UOLS Council Member, 2015
- UNOLS Fleet Improvement Committee (1996-2001)
- American Geophysical Union
- American Society of Limnology and Oceanography
- The Oceanography Society

Honors/Awards:

2015 Distinguished Professor University of California Santa Barbara

2010 Fellow American Geophysical Union

2010 Fellow American Society for the Advancement of Science

2007 Editors' Citation for Excellence in Refereeing for the journal: *Paleoceanography*

Publications: Author or co-author of 130 peer-reviewed publications.

Website: <https://www.eemb.ucsb.edu/people/faculty/brzezinski>

Dr. Zackary Johnson, Duke University

Statement of Interest:

I have been using UNOLS research vessels for about 20 years, initially as an undergraduate researcher and more recently as chief scientist. Both from a personal and community perspective, the UNOLS fleet provides essential research and educational infrastructure to the oceanographic community. My interest in serving on the council is to ensure that these needs continue to be met in the future, while balancing these needs with changing funding landscapes and future research requirements. Our research group has used and will continue to use a variety of classes of ships (including smaller boats not affiliated with UNOLS) operated by several different institutions. These past cruises have been in all major oceans, used a variety of domestic and foreign ports and have been focused on a broad range of scientific objectives. I have also recently held faculty positions at both the University of Hawaii and now Duke University. These combined experiences provide me with a broad range of user and operator perspectives on the UNOLS fleet. I hope to be able to draw on these experiences, as well as those of others in the broader oceanographic community, to ensure that UNOLS and the academic fleet continue to support infrastructure and associated support to advance ocean sciences research, education and outreach.

Biographical Sketch:

Professional Appointments:

2012 - present Arthur P. Kaupe Assistant Professor of Molecular Biology, Duke University
2009 - present Assistant Professor, Duke University, Division of Marine Science & Conservation
2007-2011 Scientific Consultant, PhycoSciences LLC
2005-2009 Assistant Professor, University of Hawaii Department of Oceanography
2000-2004 Postdoctoral Fellow, Massachusetts Institute of Technology, (Sallie W. Chisholm, advisor)
1997 Visiting Scientist, Fall Semester, Brookhaven National Labs (P. Falkowski Lab)

Education:

B.S., 1994, Massachusetts Institute of Technology, Civil and Environmental Engineering
Ph.D., 2000, Duke University, Botany

Research Interests: Marine microbes (focusing on cyanobacteria/*Prochlorococcus*), biogeochemistry (carbon fluxes focusing on photosynthesis), biological oceanography, marine biotechnology.

Selected Research Cruises:

- 2013 - 58 days at sea on 2 cruises – Eastern North Pacific, R/V *Kilo-Moana* (Chief Scientist)
- 2012 - 10 days at sea - Eastern Pacific, R/V *Thompson* (Chief scientist)
- 2007 - 62 days at sea on 2 cruises - Eastern Pacific, R/V *New Horizon* and Western Pacific, R/V *Kilo Moana* (Chief Scientist)
- 2006 (57 days at sea on 4 cruises)– Hawaiian Islands, R/V *Kilo Moana* (one cruise as Chief scientist) and Hawaii to Papua New Guinea, R/V *Kilo Moana*

Professional Membership and Selected Service:

- Applied and Environmental Microbiology, 2013 - present

Awards / Honors

- Alexander von Humboldt Research Fellow (Germany)
- Arthur P. Kaupe Assistant Professor of Molecular Biology
- German-American Kavli Fellow, National Academy of Sciences
- NOAA Postdoctoral Fellowship in Climate and Global Change
- Dissertations Initiative for the Advancement of Limnology and Oceanography

- Harvey W. Smith Fellowship in Biological Oceanography

Publications: 44 peer reviewed journals and book chapters.

Website: <https://nicholas.duke.edu/people/faculty/johnsonzackary>

Dr. James Moffett, University of Southern California

Statement of Interest:

I am a Professor at the University of Southern California with joint appointments in Biological and Earth Sciences. Previously, I was at WHOI from 1986 to 2006. While at WHOI I was a member of the Marine Operations Committee and was chair of that committee from 2002 until my departure to USC. I have been on approximately 40 research cruises since 1982, primarily on UNOLS vessels. Most recently, I was Chief Scientist on the Eastern Tropical Pacific GEOTRACES section, on the RV *Thompson*, a 59 day cruise involving over 30 Principal Investigators.

I have a lot of experience with UNOLS vessels. I am familiar with the complex logistics of sampling at sea, carrying out involved laboratory operations and gaining clearances to work in EEZs of foreign nations. I am also very familiar with the costs of staging cruises from the perspective of scientist and operator – the latter while serving on the marine operations committee at WHOI. I had some great teachers on that committee, including Sus Honjo (my predecessor as chair), Al Suchy, Dick Pittenger and Bob Detrick. More recently, I have gained a perspective on the challenges facing folks at non-operator institutions.

If appointed to the council, I will be interested in developing innovative ways to use the ships in a more cost-effective manner. As an example, my recent experience with GEOTRACES showed me that more science can be accomplished on global and ocean class vessels, but only if funds are available for crew overtime. I am also keen to address the increasingly complicated regulatory environment faced by operators and practicing scientists, especially chemists. My career was made on UNOLS vessels and I am keen to maintain UNOLS as a leader in oceanographic research.

Biographical Sketch:

Professional Appointments:

Jan 2007 – present	Professor, Department of Biological Sciences and Department of Earth Sciences, University of Southern California
Dec 2001-Dec 2006	Senior Scientist Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution
Jan 1993-Dec 2001	Associate Scientist, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution
Dec 1988-Jan 1993	Assistant Scientist, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution
Dec 1987-Dec 1988	Postdoctoral Investigator, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution
1986 – Dec 1987	Postdoctoral Scholar, Department of Marine Chemistry and Geochemistry, Woods Hole Oceanographic Institution
1981 – 1986	Research Assistant and Teaching Assistant, University of Miami
1980	Teaching Assistant (Chemistry Laboratory), University of Otago

Education:

B.S. (Hons.), 1981, University of Otago, Dunedin, New Zealand, Chemistry
Ph.D., 1986, University of Miami, Chemical Oceanography

Research Interests:

- Photochemistry of natural waters
- Speciation and redox chemistry of trace elements in natural waters, with emphasis on transport processes and catalytic processes.

- Metal-phytoplankton interactions; characterization of biologically produced chelators
- Effects of protozoans on chemical fate
- Bacterially mediated metal precipitation reactions

Seagoing Experience: Approximately 40 research cruises since 1982, primarily on UNOLS vessels.

Synergistic Activities and Professional Memberships:

- Participant/leader in GEOTRACES Program.
- Oceanographic infrastructure development in developing countries – esp. Chile and India.
- Taught a short course in marine biogeochemistry, University of San Marcos, Peru, 2009.
- Chair, OCB Workshop “Molecular Biology and Biogeochemistry” Los Angeles, Nov 2010.
- Chair, Chemical Oceanography Gordon Conference, 2013
- Associate Editor, Marine Chemistry, 2010-2011
- American Geophysical Union
- American Society of Limnology and Oceanography

Awards:

- Woods Hole Oceanographic Institution Postdoctoral Award (1986)
- University of Miami Smith Prize (1987)
- Office of Naval Research Young Investigator Award (1989)
- Mary Sears Chair in Oceanography, WHOI (2004-2006)

Publications: 78 peer reviewed publications

Website: <https://dornsife.usc.edu/cf/faculty-and-staff/faculty.cfm?pid=1015541>

CANDIDATES FOR COUNCIL AT-LARGE POSITION

Dr. Bruce Appelgate, Scripps Institution of Oceanography

Statement of Interest:

As I approach the end of my first Council term, I very much wish to continue the work in which we are engaged during this very important period for the ocean sciences. I therefore request that I be considered for a second term.

My basic desire to serve has not changed from three years ago: I strongly believe that the best interests of the oceanographic community are served by broad, fair, transparent and coordinated access to federally-supported oceanographic facilities. The role that UNOLS fulfills is important to me personally because I believe that

- federally-supported facilities should be used as efficiently as possible;
- fair and transparent access to oceanographic facilities is fundamental to enabling the kind of vigorous and robust inquiry that effective science requires;
- shipboard research remains vital to our understanding of globally-significant processes on which human well-being may ultimately depend.

UNOLS is organized to address these goals, and I can think of no better opportunity to promote these ideals than continuing my service as a member of the UNOLS council.

Important decisions are imminent within the US ocean science community, the outcome of which will define the fate of academic ocean science for decades to come. Most notably the sweeping changes proposed by the 2015 Sea Change report. UNOLS has already had the opportunity to provide NSF with important information and feedback, through the work of Council and our various subcommittees. As NSF continues to develop long-range plans guided by the Sea Change recommendations, UNOLS will continue to have an important role in providing community-based guidance to the agency.

The community is faced with other pressing issues as well. For instance gender equity and the need for shipboard work environments in which all persons can work together in an atmosphere free of all forms of harassment, exploitation, or intimidation. The need for community-wide recognition of US export control issues, and management practices enabling easier compliance. Growing regulatory pressure from a variety of sources, national and international, that is best addressed by the combined efforts of individuals, institutions, and federal agencies. Broad education and outreach, ranging from K-12 to the education of legislators, on the societally-relevant nature of science conducted in, on and above the sea. The need to secure congressional funding for major infrastructure (RCRVs and AGOR23-Class SLEPs).

My position at Scripps keeps me deeply involved with finding solutions to these and other problems that are common throughout our fleet, for instance how best to evaluate and promote safe working practices at sea, how to attract and retain highly-qualified and motivated mariners and technicians, how to efficiently maintain and share general-use instrumentation, and how to develop new and better ways for our seagoing and shoreside personnel to support scientists. Solutions to problems like these are important to our entire community, and I remain committed to working collaboratively within UNOLS Council to address these and other issues.

In summary: If selected for a second term, I will continue to apply my knowledge, skills and abilities to promote the UNOLS mission, collaborate in the resolution of Council issues, and enthusiastically execute the business of the Council.

Biographical Sketch:

Professional Appointments:

2007 - present Associate Director, Scripps Institution of Oceanography
2005 - 2007 Director, SOEST Ocean Technology Group, University of Hawai'i
2005 - 2007 Associate Research Specialist, Hawai'i Institute of Geophysics & Planetology, UH
1997 - 2007 Graduate Faculty, Department of Geology and Geophysics, University of Hawai'i
1996 - 2005 Director of Field Operations, Hawai'i Mapping Research Group, University of Hawai'i
1996 - 2005 Assistant Researcher, Hawai'i Institute of Geophysics and Planetology, Univ. Hawai'i
1995 - 1996 Director of Research and Technical Development, Seabed Mapping New Zealand Ltd.
1990 - 1995 Graduate Research Assistant, University of Hawai'i, Hawai'i Mapping Research Group
1988 - 1990 Research Assistant, Oregon State University Hatfield Marine Science Center
1985 - 1988 Graduate Research Assistant, Oregon State University, College of Oceanography

Education:

B.A. 1985, Humboldt State University, Geology
M.S. 1988, Oregon State University, Oceanography
Ph.D. 1995, University of Hawai'i, Marine Geology and Geophysics

Research Interests: Marine geology and geophysics, seafloor mapping

Seagoing Experience: 88 marine geophysical research surveys as Principal Investigator, Chief Scientist, Co- Chief Scientist, HMRG Survey Chief, DSL Expedition Leader, Geophysicist, or Marine Technician aboard Research Vessels *Roger Revelle*, *New Horizon*, *Melville*, *Robert Gordon Sproul*, *Kilo Moana*, *Ka'imikai-O-Kanaloa*, *Klaus Wyrkke*, *Thomas G. Thompson*, *Onnuri* (Korea), *Atlantis*, *Moana Wave*, *Maurice Ewing*, *Odin Finder* (Norway), *Akademik Mstislav Keldysh* (Russia), *Atlantis II*, *Wecoma*; DSV *Alvin*, DSV *Mir*; Motor Vessels *Seabulk Ross Seal*, *Cheung Shing*, *Slice*, *Orient Explorer*, *Laney Chouest*, *Na'ina*, *Pacific Rapier*, *Wira Kiris*, *Arrow*; NOAA Ships *Hi'ialakai*, *Oscar Elton Sette*, *Ahi*, *Discoverer*; US Naval Ships *Pathfinder*, *Sumner*, *Mary Sears*, *Kane*; US Coast Guard Cutter *Healy*, USS *Hawkbill*, and Research Platform *FLIP*.

Professional Memberships and Synergist Activities:

- University-National Oceanographic Laboratory System (UNOLS) Council, 2012 - present
- UNOLS Representative for Scripps Institution of Oceanography
- In the Footsteps of Roger Revelle - Principal Investigator of an innovative ONR-funded middle-school science education program developed in collaboration between Scripps and San Marcos Middle School that uses ongoing oceanographic research cruises as springboards to teach physical science to seventh- and eighth-grade students in coherence with national science standards.
- University of California Ship Funds Program - Administrator of Scripps' program that awards more than \$1 million per year to graduate and undergraduate students, postdoctoral researchers and early career faculty to pursue mentored independent research and instruction at sea aboard research vessels operated by Scripps.
- Pacific Islands Benthic Habitat Mapping Center - Principal Investigator from 2004-2007, this \$2.3M joint NOAA - University of Hawai'i program focused on mapping the benthic habitats of coral reef ecosystems throughout the U.S. Pacific Islands (Hawaiian and Mariana archipelagos, American Samoa, Johnston and Palmyra Atolls) and shared data products to citizens, governments and scientists and stakeholders in the U.S. and throughout the Pacific.
- Development of Shared-Use Seafloor Mapping Tools - With colleagues at the Hawai'i Mapping Research Group, designed, built and operated a suite of portable towed sonars for shared-use seafloor mapping aboard UNOLS, including hardware, software and training programs that were provided freely to UNOLS scientists for data acquisition, processing and analysis.
- Member American Geophysical Union, Geological Society of America

Publications: Author or coauthor of 70+ peer-reviewed publications or professional presentations in publications including *Geology*, *Journal of Geophysical Research*, *Eos*, *Tectonics*, *Sea Technology*, and *Marine Geology*.

Website: <https://scripps.ucsd.edu/ships>

Mr. Robert Winokur, Michigan Technological University

Statement of Interest:

I have extensive interest and experience in national ocean science policy and programs. In particular, I am very familiar with UNOLS and the areas of particular interest to the UNOLS community; fleet modernization and composition, capacity, and budgetary realities. As a former long-time co-chair of the Interagency Working Group on Facilities and its predecessor organization, the Federal Oceanographic Fleet Coordination Council, I have devoted a significant amount of time to federal oceanographic fleet policy and funding issues. As such, I was directly involved in the preparation of the two recent publications on the Status of the Federal Oceanographic Fleet. In addition, in the mid 1980s I had the lead working with a Navy team that developed and implemented the Navy's oceanographic fleet modernization plan that ultimately led to the current Navy fleet of survey ships and AGORs 23, 24 and 25. I was also involved as the Navy's budget sponsor for AGORs 27 and 28 supporting ONR in their leadership and efforts to ensure the construction of the latest ships to enter the academic fleet. I am particularly proud of the fact that my initials are welded into the ceremonial keel of AGOR 28 and my name in the ceremonial keel of the Navy survey vessel USNS Bowditch.

I would like to bring my experience and interest in oceanographic facilities and ships to bear and make a contribution on the activities and issues facing UNOLS and the oceanographic community at large.

Biographical Sketch:

Professional Appointments:

Current: Senior advisor, Michigan Tech University for ocean and remote sensing programs for the Michigan Tech Research Institute and Great Lakes Research Center, and special advisor satellite programs, NOAA National Environmental Satellite and Data and Information Services (NESDIS)

Senior Executive Service: Entered the Senior Executive Service in April 1980 and had over 47 years of federal service, along with almost 5 years in the private sector. Served in a variety of executive positions in the government and private sector. Directed programs with an annual budget of over \$700 million, formulated major environmental and weather satellite programs, directed the nation's weather service, and formulated a major oceanographic ship construction program to recapitalize the Navy's oceanographic fleet.

- April 2011-May 2013, Deputy and Technical Director for Oceanography, Space and Maritime Domain Awareness, Office of the Chief of Naval Operations
- Dec 2003-May 2013, Deputy Oceanographer of the Navy
- Aug 1985-Oct 1993, Deputy Oceanographer of the Navy
- Twice served as acting Oceanographer of the Navy, most recently for seven months during 2012
- Oct 2000-Nov 2003, President and Chief Operating Officer of the Earth Satellite Corporation
- May 1999-Oct 2000, Vice President of the Consortium for Oceanographic Research and Education
- Nov 1993-Apr 1999, Assistant Administrator for Satellite and Information Services at the National Oceanic and Atmospheric Administration (NOAA)
- June 1997-Feb 1998, Interim Assistant Administrator for Weather Services (Director, National Weather Service)
- March 1989 and January 1991, Deputy Director, Anti-submarine Warfare Development, Office of the Assistant Secretary of the Navy
- April 1980-July 1985, Assistant Technical Director for Ocean Science and International Programs, Office of Naval Research
- 1978 – 1980, Special assistant for acoustic programs to the Director, Undersea Surveillance and Anti-Submarine Warfare, Office of the Chief of Naval Operations.
- Aug 1961-1978, served in a various positions including junior oceanographer, branch head, division director, and Director, Undersea Surveillance Oceanography Center, Naval Oceanographic Office.

Education:

- B.S., Rensselaer Polytechnic Institute, Geology
- M.S. American University, Technology of Management in Marine Affairs

Research Interests/Expertise:

- Underwater acoustics and acoustical oceanography research and development in support of anti-submarine warfare
- Oceanographic ship policy and management
- Ocean observing systems
- National ocean policy formulation and implementation
- Submarine security
- Satellite remote sensing of the ocean and atmosphere and policy
- Satellite system architecture
- Management of research and development programs
- Oceanographic facilities
- Environmental information for disaster management
- Undersea technology

Professional Membership and Synergistic Activities:

- Vice President of the Marine Technology Society and President of the Alliance for Marine Remote Sensing. Member of the Acoustical Society of America, the American Geophysical Union and the American Meteorological Society.
- Served on and chaired numerous national and international committees on undersea technology, antisubmarine warfare, submarine security, ocean and satellite remote sensing observing systems, Arctic research, oceanographic ship management and operations, disaster information technology and management, remote sensing policy, national ocean policy and oceanographic facilities.
- Chaired independent study teams on future weather satellite architectures for NOAA (2012) and on maritime research vessel capabilities for NATO, 2013
- Chaired the Navy's Ocean Observing System Security Group, co-chaired the Interagency Committee on Facilities and Infrastructure and served on the President's National Ocean Policy Task Force.
- Member, NASA Joint Polar Satellite System Standing Review Board (present)
- Member, NOAA Science Advisory Board (present)
- Testified on a number of occasions for the Navy and NOAA on oceanographic ships, climate services, satellite and space programs, ocean observing systems and environmental data services to Senate and House subcommittees.

Honors and Awards:

- Three Department of the Navy Meritorious Civilian Service Awards;
- Department of the Navy Superior Civilian Service Award; Department of the Navy Distinguished Civilian Service Award;
- Two Presidential Meritorious Executive Rank Awards;
- Presidential Distinguished Executive Rank Award;
- Department of Commerce Gold Medal;
- Two Vice President's Hammer Awards for Reinventing Government;
- National Public Service Award, National Academy of Public Administration;
- Roger Jones Public Service Award, The American University;
- Fellow, Acoustical Society of America;
- Fellow, The Marine Technology Society;
- Fellow, American Meteorological Society;
- Distinguished Achievement Award, Compass Publications, Marine Technology Society

CANDIDATES FOR COUNCIL AT-LARGE POSITION

Dr. Masako Tominaga, Texas A&M University

Statement of Interest:

I am writing to express my desire to serve on the University-National Oceanographic Laboratory System (UNOLS) as a council member. Since 2002, I have sailed on UNOLS vessels as a participant, co-chief scientist, and chief scientist. My research is interdisciplinary in marine geology, geophysics, and (geo/astro) microbiology programs that often engage deep submergence vehicles (*Sentry* AUV and *Jason* ROV), multichannel seismic reflection, and other geophysical measurements onboard. Through this experience, I have a clear understanding of the challenges in ship operations and facility management that are limited by time and resources as well as the need for continuous communication and collaboration amongst all operations offices and users to maximize scientific outcomes.

Service on UNOLS council became a particularly intriguing interest for me after participating on R/V *Sikulialq's* two first science and vehicle operation trial legs in Fall 2014, and subsequent science cruise (SKQ2014S02) as a PI/chief scientist. My involvement with the *Sikulialq* started when the ship was first funded for construction and continued actively through January 2015. I have witnessed or overseen how NSF, UNOLS, NDSF, the *Sikulialq's* ship operator Univ. Alaska Fairbanks (both the operations office and the university's oversight committee), MISO-Woods Hole Oceanographic Institution, AND science users had to work together to make things happen from deck to office. It was indeed my honor to be a part in the initiation process of *Sikulialq's* life as an academic research fleet, and I strongly believe that the learning experience and perspective that I developed will be useful for the oceanographic community.

In addition to managing field programs, I am committed to promoting the benefits of UNOLS, including data management and outreach initiatives. My research lab has actively utilized archived data from past expeditions through shore-based efforts such as NGDC, NDSF and Rolling deck to Repository (R2R) data management systems, for which I have served as a member of evaluation panels. From the field programs, I have worked closely with ship technicians to make sure the acquisition, processing, and archiving of the shipboard data is a seamless process from the ship to shore because in most cases, maintenance of high data quality and proper documentation is best addressed during data acquisition.

I am aware of the significance of outreach initiatives not only to provide hands-on training in science but also to expand the future oceanographic community. As a PI, I always strive to maximize the number of students who sail with me. In the past 4 years, I have brought a total of 16 students on 2 cruises (both were > 1-month duration), including recruiting from UNOLS' "opportunity to sail" website and from non-oceanographic institutions (Kutztown Univ., Purdue Univ., Michigan State Univ., Boston College, Bryn Marr College). After those expeditions, two of them participated in UNOLS' MATE program, and many of them have actively participated in post-cruise research and presented at AGU. I have also promoted the Chief Scientist Training Cruise hosted by University of Minnesota, Duluth (R/V *Blue Heron*) to multiple postdoctoral researchers nation wide, and one from Michigan State University was selected as a participant. My commitment in outreach initiatives stems from how I was "raised" by many oceanographers who provided precious seagoing opportunities for me— and I believe it is the time for me to contribute to the community at large.

Modern data management and outreach initiatives often involve real time ship-to-shore connectivity. From my recent experience with a "telepresence" cruise on the E/V *Nautilus* in fall 2014, (and in preparation for an upcoming cruise on Schmidt Foundation R/V *Falkor*), I am evaluating the pros and cons of establishing onshore-offshore high bandwidth communications, real-time data transformation, and outreach activities, all of which are discussion topics in the modernization of academic ships in the future. I feel my experience can be useful to UNOLS council as well as the oceanographic community.

In addition to experience on UNOLS vessels, I also have extensive experience on cruises as a senior participant on international research vessels, including *JOIDES Resolution*, HMRS *James Cook* using ROV *Isis* and AUV *Autosub* (Jan.-Feb. 2016) [National Oceanography Centre, UK] and Navier Oceanographiq *Pourquoi Pas?* using ROV *Victor* [Ifremer, France] and *Abbyss* AUV [GEOMAR, Germany]. Although there are cultural and linguistic differences in operating modes, I have learned that the differences often enlighten us to better utilize our own systems.

As a member of UNOLS council, I feel that I could make important contributions that would benefit both the ship-user and shore-based community. I have a strong desire to continuously improve, develop, and promote the UNOLS academic fleet for the current and future US oceanographic community by being an advocate of sea going programs within existing users and seeking additional users.

Biographical Sketch:

Professional Appointments:

July 2015- present	Assistant Professor, Dept. Geology and Geophysics (joint Oceanography), Texas A&M University
Dec 2012-present	Adjunct Scientist, Woods Hole Oceanographic Institution
Aug 2012-June 2015	Assistant Professor (reappointed), Dept. Geological Sciences, Mich. State University
Mar 2011-July 2012	Postdoctoral Investigator, Woods Hole Oceanographic Institution
Sep 2009-Feb 2011	Postdoctoral Scholar, Woods Hole Oceanographic Institution
Apr 2009-July 2009	Postdoctoral Research Associate, Texas A&M University
Jan 2003-Feb 2009	Graduate Research Assistant, Texas A&M University

Education:

B.Eng, 2002, Waseda University, Tokyo, Japan
M.S., 2005, Texas A&M University
Ph.D., 2009, Texas A&M University

Research Interests: Dr. Tominaga's research interests include Earth's magmatism and lithosphere evolution, geomagnetism and global carbon cycle. She is an expert on deep submergence geophysics using submarine robotic vehicles. Her research field work on land includes ultramafic complexes in Norway, Italy, northern California, and Canada.

Seagoing Experience: More than 550 days at sea, including sailing on five International Ocean Discovery Program (IODP) expeditions aboard *JOIDES Resolution*. Served as chief scientist on several National Science Foundation funded cruises. UNOLS, non-UNOLS and international platforms have been used in Tominaga's research including R/Vs *Falkor*, *Sikuliaq*, *Langseth*, *Thompson*, *Nautilus*, HMRS *James Cook*, and *Pourquoi Pas?*; ROVs *Jason*, *Hercules*, *Isis*, and *Victor*; and AUVs *Sentry*, *Abbyss*, and *Autosub* (Jan.-Feb. 2016).

Synergistic Activities and Professional Memberships:

- Panel member of IODP Science Technology Panel (2010-2013)
- NSF R2R ("rolling deck to repository") Advisory Panel (2012).
- Serving as extra-institution PhD committee (at Purdue, MIT, Maryland, Michigan State).
- Manuscript reviews for EPSL, Geochem. Geophys. Geosys., GRL, EPSL, JGR, Sci. Drilling
- Proposal reviews for NSF_OCE_MGG, NSF_PLR.

Honors/Awards:

- 2009, Distinguished Graduate Student Award in Research from the Texas A&M Association of Former Students and the Office of Graduate Studies
- 2008, Schlanger Ocean Drilling Fellowship

- 2007 (2008), AGU Outstanding Student Paper Award

Publications: She has more than 25 published journal articles, many as first author and some with her students as first authors, and has contributed to several books and databanks.

Website: <http://maplestominagalab.com/>
and <http://geonews.tamu.edu/news/2015/06/geology-and-geophysics-welcomes-new-assistant-professor.php>

Dr. Rhian Waller, University of Maine

Statement of Interest:

Proposing, participating in and leading research cruises has been part of my academic life since starting my Ph.D. in 2000. During this time I have sailed on over 40 research cruises, primarily on Global Class vessels (belonging both to the US and UK) and Antarctic Icebreakers, but also on Intermediate, Regional and Small Research vessels belonging to the UNOLS fleet. This also includes using NDSF vehicles, such as DSV *Alvin*, ROV *Jason* and the AUV *Abe*. During my progression from participant to Chief Scientist I have seen the vast technological changes, and challenges, that have happened over the last 15 years in ocean going science. As (up until very recently) a soft money researcher, I am also keenly aware of the budgetary constraints being placed on such scientific tools, particularly those that are federally supported. This is undoubtedly a challenging time for all UNOLS assets.

My interest in serving on the UNOLS Council comes from my keen desire to be part of the solution and to help in finding creative ways to increase users and improve the shipboard experience for all scientists, but particularly the younger generation of researchers climbing through the ranks. The new Early Career programs (particularly the Chief Scientist Training Cruises) go a long way to increasing the exposure of UNOLS and aid in the transparency of the organization (I wish something like this existed when I first started proposing my own cruises!), however I think there is a long way still to go to reach out to new scientists. Currently there is a lot of chatter on the lack of funding for ship days (and vehicle days) that needs to be countered effectively by UNOLS to show that PIs are being funded with adequate ship days for offshore science. Though improving the fleet during this time of dwindling budgets (and in some case users) I do believe there must be avenues to increase capabilities of those remaining vessels, particularly some of the smaller vessels that may fit better with PIs budgetary constraints from funding organizations. In a time of gaining “free” ship time from private foundations (such as SOI), UNOLS will have to remain competitive, and maintain the fleet to continue to be a cutting edge resource for US scientists.

I feel I have gained an enormous amount of experience having sailed on over a dozen US research vessels (many now retired) that would serve me well sitting on the UNOLS Council. I feel it is now my time to serve and help form new programs and policies to aid in the future of the US fleet.

Biographical Sketch:

Professional Appointments:

2015 - present	Associate Professor, School of Marine Sciences, University of Maine
2013 - 2015	Associate Research Professor, School of Marine Sciences, University of Maine
2011 - 2013	Assistant Research Professor, School of Marine Sciences, University of Maine
2007 - 2010	Assistant Researcher (SOEST Young Investigator), University of Hawaii at Manoa
2011 - present	Adjunct Oceanography Faculty, Sea Education Association, Woods Hole, MA, USA
February 2010	Visiting researcher, Paleo-DNA Laboratory, Lakehead University, Canada
September 2009	Visiting Researcher, Paleo-DNA Laboratory, Lakehead University, Canada
October 2007	Visiting Researcher, Paleo-DNA Laboratory, Lakehead University, Canada
April 2006	Visiting Researcher, Paleo-DNA Laboratory, Lakehead University, Canada
2005	WHOI – USGS Postdoctoral Scholar, Woods Hole Oceanographic Inst.
July 2004	Collaborating Researcher, Dunstaffnage Marine Laboratory, UK
June – Sept 2002	Woods Hole Oceanographic Institution Exchange Program (funded by Southampton Oceanography Centre), USA.

Education:

B.S., 2000, University of Wales, Aberystwyth
Ph.D., 2004, Southampton Oceanography Centre, UK

Research Interests: Research interests center on the reproduction and development of cold-water and deep-sea invertebrates from around the globe, and how these animals are affected by both natural and anthropogenic environmental change. Primarily use microscopy techniques (histology, SEM and TEM), but also use geographic databases and genetic techniques to examine biogeographic patterns of species dispersal and make hypotheses on larval transport mechanisms. Locations of current research programs and cruises include the Western Antarctic Peninsula, the Patagonian Fjords, the Alaskan fjords and Gulf of Alaska, and the Gulf of Maine.

Seagoing Experience: Over 40 research expeditions since 2000 on European and American vessels (UNOLS Global, Intermediate and Regional; NOAA; Polar) including over a dozen as Chief Scientist or Co-PI. Expeditions took place to the NE, NW and Mid-Atlantic Ocean, Pacific Ocean, Galapagos Islands and the Southern Ocean and involve the use of submersibles, ROV's, AUV's and traditional oceanographic equipment such as OTSB, Agassiz and Blake trawls, dredges, box cores and VanVean Grabs. All cruises from 2 weeks to 12 weeks in duration and this does not include numerous undergraduate training cruises onboard small boats and coastal SCUBA expeditions.

Professional Membership and Selected Service:

- 2014 – Present – Subject Editor, Marine Biology Research
- 2014 – Present - School of Marine Sciences (University of Maine) Peer Committee
- 2013 – Present – University of Maine - Dive Safety Board
- 2013 – Fellow National of the Explorers Club
- 2013 – Women Divers Hall of Fame Associate Member
- 2013 – University of Maine – School of Marine Sciences - Field Experiences for Undergraduates Committee
- 2011 - 2012 - Organizing Committee: 5th International Deep Sea Coral Symposium, Amsterdam
- 2005 - 2006 – Postdoctoral Committee – Woods Hole Oceanographic Institution

HONORS/AWARDS

- 2012, National Geographic Explorer (Environment) - <http://www.nationalgeographic.com/explorers/bios/rhian-waller/>
- 2011, National Science Foundation Antarctic Service Medal of the United States of America
- 2002, Outstanding Student Paper Award - AGU Fall Meeting, San Francisco
- 2002, Woods Hole Oceanographic Institution – Southampton Oceanography Centre, Exchange Program
- Daily Telegraph Young Science Writer Award, 2000 (Merit), 2001 (Runner Up), 2002 (Runner Up), 2003 (Finalist)

Publications: Author or co-author of 28 peer-reviewed publications; *Journals: Coral Reefs, Marine Biology, PLoS ONE, JMBA, DSR II, Bulletin of Marine Sciences, Conservation Genetics, Invertebrate Biology, Biodiversity, Biological Bulletin.*

Website: http://www.umaine.edu/marine/people/profile/rhian_waller
