



Oceanic Engineering Society Newsletter

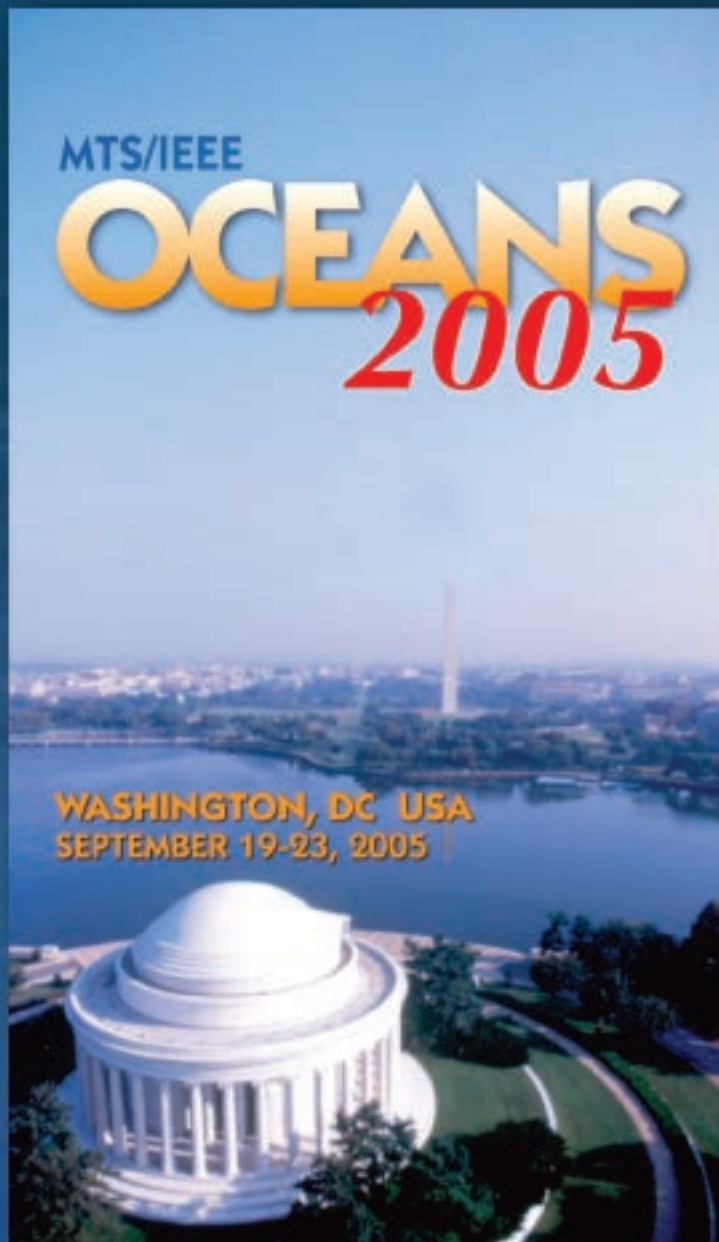
VOLUME XXXIX

NUMBER 2

EDITOR: FREDERICK H. MALTZ

SPRING 2005

(USPS 420-910) ISSN 0746-7834



***Final
Call***
for Papers
and Tutorials

extended to
***APRIL 15,
2005***

See pages 20-22

IEEE OCEANIC ENGINEERING SOCIETY

President

JAMES T. BARBERA
13513 Crispin Way
Rockville, MD 20853
+1 301 460-4347
+1 301 871 3907 (FAX)
j.barbera@ieeec.org

Newsletter Editor

FREDERICK H. MALTZ
821 Runningwood Circle
Mountain View, CA 94040
+1 650 967 5092
+1 650 969 9390 (FAX)
f.maltz@ieeec.org

Assoc. Newsletter Editor

JOHN W. IRZA
Sygnus Technology Inc.
Arlington, MA
781 648 2144
781 641 9974 (FAX)
jirza@sygnus.com

Vice President

Technical Activities
STANLEY G. CHAMBERLAIN
22 Heritage Road
Barrington, RI 02806
(401) 245-8914
s.chamberlain@ieeec.org

IEEE Newsletters

PAUL DOTO
445 Hoes Lane
Piscataway, NJ 08855-1331
+1 732 562 3945
+1 732 981 1855 (FAX)
p.doto@ieeec.org

Vice President

International Activities
JOSEPH R. VADUS
Global Ocean Inc.
8500 Timber Hill
Potomac, Maryland 20854
+1 301 299 5477
+1 301 983 4825 (FAX)
jvadus@erols.com

Vice President,

Professional Activities
JAMES S. COLLINS.
Dept. of Elec. & Comp. Engineering
University of Victoria
P.O. Box 3055
Victoria, B.C. CANADA V8W 3P6
+1 250 595 6928
+1 250 595 6908 (FAX)
j.s.collins@ieeec.org

Journal of Oceanic

Engineering Editor
CHRISTIAN DE MOUSTIER
Center for Coastal and
Ocean Mapping
Chase Ocean Engineering Lab
University of New Hampshire
24 Colovos Road
Durham, NH 03824-3525
Phone: 603-862-3434
FAX: 603-862-0839
email: cpm@ieeec.org

Treasurer

JERRY C. CARROL
411 Country Club Drive
Picayune, MS 39466
jerrycortez@charter.net

Secretary

STEPHEN M. HOLT
11950 Grey Squirrel Lane
Reston, VA 20194
+1 703 610 2000
+1 703 610 1767 (FAX)
sholt@mitretek.org

Web Coordinator & Publicity

ARCHIE TODD MORRISON III
Nobska Development
Corporation
Falmouth, MA 02540 USA
+1 508 360 2393
+1 508 539 0808 (FAX)
atmorrison@ieeec.org

EX-OFFICIO

Jr. Past President

THOMAS F. WIENER
2403 Lisbon Lane
Alexandria, VA 22306-2516
+1 703 768 9522
t.wiener@ieeec.org

Sr. Past President

GLEN N. WILLIAMS
Engineering Program Office
Texas A&M University
College Station, TX 77843-3112
979 845 5485
g.williams@ieeec.org

Membership Development

KENNETH FERER

Nominations

CLAUDE P. BRANCART

Chapters

JAMES S. COLLINS

Journal Editor

CHRISTIAN DE MOUSTIER

Awards and Fellows

DAVID WEISSMAN
Dept. of Engineering
104 Weed Hall
Hofstra University
Hempstead, N.Y. 11549
516 463 5546
516 463 4939 (Fax)
eggdew@hofstra.edu

Publications Review Board

GLEN N. WILLIAMS

Newsletter Editor

FREDERICK H. MALTZ

Pace

JAMES S. COLLINS

TAB Engineering Research and Development Policy Committee

JOSEPH R. VADUS

Student Activities Coordinator

NORMAN D. MILLER
2644 NW Esplanade Drive
Seattle, WA 98117-2527
206-784-7154, fax 206-784-0478
colmiller@comcast.net

ELECTED ADMINISTRATIVE COMMITTEE

JAMES T. BARBERA
(see President)

ROBERT T. BANNON, President
Bannon International Consulting
301 Willow Run
East Stroudsburg, PA 18301-8591
rtbannon@ieeec.org
570 619 5430
570 619 5107 (Fax)

JERRY C. CARROL
411 Country Club Drive
Picayune, MS 39466
jerrycortez@charter.net

STANLEY G. CHAMBERLAIN
(see Vice President, Technical Activities)

DR. ENSON CHANG
Dynamics Technology, Inc.
21311 Hawthorne Blvd. Suite 300
Torrance, CA. 90503-5602
Tele : (310)543-5433 (x229)
Fax: 543-2117
echang@dynatec.com

ELIZABETH CREED
Institute of Marine & Coastal Sciences
Rutgers University
71 Dudley Road
New Brunswick, NJ 08901-8521
Tele: (732)932-6555 (x531)
Fax: (732)932-8578
creed@marine.rutgers.edu

RENE GARELLO
(see Chapter Chairman, France)

PAMELA J. HURST
Lockheed Martin Maritime Systems &
Sensors
17 Danielle Avenue
Westerly, RI 02891
Cell 401-481-3828
pamela.hurst@lmco.com

WILLIAM M. CAREY
(see Journal Associate Editor)

PROF. DIANE E. DIMASSA
Massachusetts Maritime Academy
Engineering Dept. Harrington 215A
101 Academy Drive
Buzzards Bay, MA, 02532
508-830-5000 x1212
ddimassa@maritime.edu

FERIAL EL-HAWARY
(see Chapter Chairmen)

DR. ROBERT C. SPINDEL
Director Applied Physics Laboratory
University of Washington
1013 NE 40th Street
Seattle, WA 98105
Tele: (206) 543 1310
(Home) (425) 641 9928
spindel@ieeec.org

DANIEL D. STERNLICHT
SAS Business Director
Dynamics Technology Inc.
21311 Hawthorne Blvd., Suite 300
Torrance, CA 90503-5602
Tele: (310)543-5433
Fax: (310)543-2117
dsternlicht@dynatec.com

ARCHIE TODD MORRISON III
(See Web Coordinator & Publicity)

TAMAKI URA
Underwater Technology Research Center
Institute of Industrial Science
University of Tokyo
4-6-1, Komaba
Meguro, Tokyo 153-8505 Japan
+81-3-5452-6487
ura@iis.u-tokyo.ac.jp

JOSEPH R. VADUS
(see Vice President International Activities)

ROBERT L. WERNLI
11775 La Colina Road
San Diego, CA 92131-1413
Tele: (619)553-1948
Fax: (619)553-1915
rwernli@san.rr.com

IEEE Oceanic Engineering Society Newsletter (ISSN 0746-7834) is published quarterly by the Oceanic Engineering Society of the Institute of Electrical and Electronics Engineers, Inc. Headquarters: 3 Park Avenue, 17th Floor, NY 10017-2394. \$1.00 per member per year (included in Society fee) for each member of the Oceanic Engineering Society. Printed in U.S.A. Periodicals postage paid at New York, NY and at additional mailing offices. Postmaster: Send address changes to IEEE OCEANIC ENGINEERING SOCIETY NEWSLETTER, IEEE, 445 Hoes Lane, Piscataway, NJ 08854
©2004 IEEE

Permission to copy without fee all or part of any material without a copyright notice is granted provided that the copies are not made or distributed for direct commercial advantage, and the title of the publication and its date appear on each copy. To copy material with a copyright notice requires specific permission. Please direct all inquiries or requests to IEEE Copyrights and Permissions Office.

Table of Contents

<i>The President's Corner</i>	4
<i>Vice President's Message</i>	5
<i>IEEE Oceanic Engineering Society Proposed Revised Constitution</i>	6
<i>Meet the New IEEE OES AdCom 2005-07</i>	8
<i>Who's Who in the OES</i>	10
<i>MTS/IEEE OCEANS'2008</i>	11
<i>Soundings</i>	12
<i>Upcoming Conferences</i>	13
<i>Obituary</i>	14
<i>JOCARA</i>	15
<i>Oceans '05 Europe</i>	18
<i>Oceans '05 D.C.</i>	20
<i>Underwater Acoustics Signal Processing Workshop</i>	23
<i>Chapter Chairmen</i>	24

Celebrating the Vitality of Technology

PROCEEDINGS OF THE IEEE



No other publication keeps you in touch with the evolving world of technology better than the *Proceedings of the IEEE*.



Every issue of the *Proceedings of the IEEE* examines new ideas and innovative technologies to keep you up to date with developments within your field and beyond. Our unique multidisciplinary approach puts today's technologies in context, and our guest editors bring you the expert perspective you need to understand the impact of new discoveries on your world and your work.

Enrich your career and broaden your horizons. Subscribe today and find out why the *Proceedings of the IEEE* is consistently the most highly cited general-interest journal in electrical and computer engineering in the world!*

*Source: ISI Journal Citation Report (2002)

Call: +1 800 678 4333
or +1 732 981 0060
Fax: +1 732 981 9667
Email: customer-service@ieee.org
www.ieee.org/proceedings

The President's Corner



There has been a lot of activity in the past few months that impacts our society in various manners. For example, I have been active with a group of societies from TAB in the development of a systems engineering council. We have presented our field of interest to TAB where it was accepted and are in the process of developing a constitution and bylaws. Please

forward any pertinent inputs to me so that they can be considered for inclusion

In early January a meeting of representatives of OES was held with the director of the Smithsonian National Museum of Natural History to discuss our possible involvement in their Ocean Science Initiative. We were well received and our participation was welcomed. The object of the project is to increase the understanding of available ocean resources and the overall impact that the oceans have on everyday life. The initiative has three thrust areas—Ocean Hall, Ocean Web Portal, and Center for Ocean Science—designed to support the education of the public relative to oceanic activities, assist in ocean research and expand the scholarly pursuit of ocean science. A detailed explanation of the project can be found on the web. (Ocean Science Initiative) The society encourages anyone with an interest in helping with the development of our input to contact Tom Wiener as he is our point of contact with the museum.

Bob Bannon and I attended a homeland security conference in Moscow, Russia in early February at the request of Congressman Curt Weldon. We were part of an American delegation that included several technology oriented firms that are developing systems for maritime security e.g. a sensor to be embedded in cargo containers that can track the container and identify any untoward event associated with it during its travels. There were several devices that the American delegation presented that would be appropriate for our December meeting. As an aside two days before we arrived Moscow had the worst one day snowfall in its history. There was snow on the runway when we landed.

During the week of 14 February a meeting relative to the GEOSS was held in Brussels. The IEEE representatives included Rene Garello from OES along with three other IEEE members (one being Mike Lightner the president elect). The society is in on the ground floor along with GRSS to provide technological services to the worldwide committee that is overseeing the design and development of this ambitious project. The details of the GEOSS can be found on their web site. Anyone interested in assisting in this global effort contact Rene Garello, Tom Wiener or Stan Chamberlain

In early March Joe Vadus and I attended the NOAA stakeholders meeting in Washington DC. There were approximately 200 attendees and NOAA solicited from the group via breakout group's areas where they could better satisfy the consumers of their products

We have been in discussions with ASNE and FURE relative to assuming joint control over the International Submarine Races. The submarines are human powered. They are designed and built mainly by college and high school students. The event will be held this year at the David Taylor Model Basin the week of 28 June. Anyone wishing to help or attend should contact Claude Brancart c.brancart@ieee.org— as the Navy base requires prior notification for entry.

Jim Collins and his group are in the process of updating the society constitution and bylaws. The purpose of this effort was to make the documents more reflective of the present day organization as well as incorporating changes brought about by technological advances as the constitution had not been revised in many years. In the late summer the membership will be asked to vote on the revised documents. Please take the time to record your vote. Remember you will only get benefit from your membership in proportion to your input to the society. One significant change will be the addition of a new vice president as the single vice president handling conferences will be divided into one promoting venues and one handling the operation of all conferences as we have instituted two major conferences each year. This essentially means that there are six conferences at different stages in any one year. This is an area that could use the addition of many volunteers to spread out the work load. Anyone interested in assisting in this effort should contact Rene Garello our chair for the Joint Oceans Advisory Board. He can be reached at rene.garello@enst-bretagne.fr.

We have joined with several IEEE societies, IMarEST and ASNE to hold a symposium with the electric ship as its focus. The meeting is to be held 25-27 July 2005 in Philadelphia, Pennsylvania at the Renaissance Hotel a venue that is close to the airport. The particulars are on the meeting web site ests05.org.

A reminder that OCEANS 05 Europe is rapidly approaching and for all that are to attend it is not too early to make your hotel and plane reservations.

It is timely to submit your abstracts to OCEANS 05 MTS/IEEE. The venue is a popular site for many events and it would be prudent to make your reservations early.

I would encourage all that are eligible to become Senior Members. The whole process can be done on the IEEE web site. There are many senior members in the society that will be glad to serve as your references. If you have any questions about the process contact Ken Ferer— kferer@earthlink.net.

Jim Barbera
IEEE/OES President

Vice President's Message

OES Drafts New Governing Documents

Jim Collins,
Vice-President for Professional Activities



OES Administrative Committee (Adcom) members are acting on a need for new governing documents for the Society. These documents include a revised Constitution, revised Bylaws and a new Policy and Procedure Manual. At its meeting in Houston in May 2004, then President Tom Wiener focused the attention of Adcom on the task and an adhoc subcommittee of ten members was formed to start work on the new documents. An interim draft of the revised Constitution is included with this article for your information and comment. A final draft will be sent to OES members for approval later this year.

The first OES Constitution and Bylaws were adopted on January 1st, 1983 when the IEEE Council on Ocean Engineering became the IEEE Oceanic Engineering Society. A major change occurred in 1993 when the number and responsibilities of the Vice-Presidents changed from two Vice-Presidents, VP East and VP West to three Vice-Presidents, VP Technical Activities, VP Professional Activities and VP International.

The OES Constitution and Bylaws were relatively unchanged from 1993 until in 2004 the Adcom broadened the OES Field of Interest statement given in the Constitution. In addition to the Field of Interest change there have been changes

of importance to the OES not reflected in the governing documents. The Society has initiated new periodic conference events in the recent years that have created the need for better conference representation on Adcom at the Vice-Presidential level. The internet has created new publicity opportunities resulting in a website and an e-newsletter. Voting responsibilities on Adcom needed to be simplified and focused more on the elected members and Officers of Adcom. In order to better define responsibilities and operational details of the OES, a Policy and Procedures Manual is required to augment the Constitution and Bylaws. Another major change sees the most critical and fundamental governance matters placed in the Constitution where they may be amended only by a vote of the OES membership. Less critical governance matters are being placed in the Bylaws where they may be amended more easily by a vote of the OES Adcom .

The volunteer members of the Constitution and Bylaws Subcommittee have spent many hours on this work. They are Steve Anderson, Stan Chamberlain, Chris deMoustier, Pam Hurst, Norman Miller, Joe Vadus, Tom Wiener, Todd Morrison,

Glen Williams and Jim Collins, Chair. OES Members who have any questions/comments should contact Jim Collins at j.s.collins@ieee.org. The current Constitution and Bylaws may be viewed on the web at www.oceanicengineering.org or www.ieeeoes.org and then selecting "Charter Documents" from the left side column that appears.



**Subcommittee meeting December 5/6 ,2004
at Valley Forge before Homeland Security Technology Workshop**

IEEE Oceanic Engineering Society Proposed Revised Constitution

1 ARTICLE I Name and Objectives

1.1 Section 1. Name:

This organization shall be known as the IEEE Oceanic Engineering Society, also known as the IEEE OES.

1.2 Section 2. Objectives:

Its objectives shall be scientific, literary, and educational in character. The Society shall strive for the advancement of the theory and practice of electrotechnology applied to all bodies of water, allied branches of engineering, related arts and sciences, and the maintenance of a high professional standard among its members and affiliates.

1.3 Section 3. Purpose:

The Society shall promote close cooperation and exchange of technical information among its members through publications and meetings. The Society shall foster the technical and professional growth of its members.

1.4 Section 4. Consonance with IEEE:

All provisions of the Society's Constitution, Bylaws, and Policies and Procedures documents shall be in consonance with the Constitution, Bylaws, and Policies and Procedures documents of the IEEE.

2 ARTICLE II Field of Interest

2.1 Section 1. Field of Interest:

The Field of Interest of the Society includes all aspects of science, engineering and technology that address research, development, and operations pertaining to all bodies of water. This includes the creation of new capabilities and technologies from concept design through prototypes, testing and operational systems to sense, explore, understand, develop, use and responsibly manage natural resources.

2.2 Section 2. Cooperation with Other Groups:

The Society shall aid in promoting close cooperation and exchange of information with other IEEE Groups and Societies in the form of joint publications and sponsorship of meetings. Appropriate cooper-

ative efforts can also be undertaken with non-IEEE Societies.

2.3 Section 3. Changing Field of Interest Statement:

The Field of Interest of the Society may be moderately revised as needed, with the provision that such revisions shall meet with the approval of the IEEE Technical Activities Board and be published in one of the Society's publications. Any substantial revisions shall be processed as an amendment to this Constitution.

3 ARTICLE III Membership

3.1 Section 1. Eligibility:

IEEE members in any grade having a professional interest in any phase of the Field of Interest of the Society may become members of the Society upon application and payment of dues.

3.2 Section 2. Affiliates:

Any person having a professional interest in any phase of the Field of Interest of the Society and who is not a member of the IEEE may join the Society as an Affiliate upon application and payment of dues.

4 ARTICLE IV Finances

4.1 Section 1. Annual Dues:

The Society shall collect annual dues from its members. Special categories of IEEE membership may have pro-rated dues.

4.2 Section 2. Meeting Registration Fees:

The Society may charge registration fees at its symposia, conferences, conventions, and other meetings. Registration fees for IEEE members and Society Affiliates may be less than the general registration fees.

4.3 Section 3. Additional Sources of Revenue:

The Society may derive income from its publications and raise revenues by other means.

4.4 Section 4. Limitation on Financial Authority:

Neither the Society nor any officer or representative thereof shall have any authority

to contract debts for, pledge the credit of, or in any way bind the IEEE or the Society, except within prior IEEE-approved Society budgets or plans and in accordance with the Bylaws of the Society.

5 ARTICLE V Administration

5.1 Section 1. Administrative Committee Responsibilities:

The Society shall be managed by an Administrative Committee. The Administrative Committee shall set policies for the Society, direct the affairs and activities of the Society, evaluate proposals presented to the Society, elect the Officers of the Society, and establish Standing and Ad Hoc Committees of the Society. The Administrative Committee shall approve or reject appointments made by the President of the Society, such appointments having been made in accordance with the Bylaws of the Society. The Administrative Committee shall authorize meetings, publications, and activities consistent with the Objectives, Purpose, and Field of Interest of the Society. The Administrative Committee shall approve or reject the disbursement of funds, such disbursements having been made in accordance with the Bylaws of the Society and within prior approved Society budgets or plans.

5.2 Section 2. Administrative Committee Membership:

The Administrative Committee shall comprise a number of Members of the Society, of IEEE Member grade or higher, elected by the membership at large (Elected Members), the Officers of the Society, and such Members ex-officio as are specified in the Bylaws. The number of Elected Members shall be as specified in the Bylaws. Nomination, Election, and Appointment Procedures shall be as specified in the Bylaws. All Elected Members of the Administrative Committee and Officers of the Society must be Members of the Society at the time of election or appointment and throughout their terms of office. Society Membership requirements for Members ex-officio shall be as specified in the Bylaws.

5.2.1 Section 2a. Elected Members:

Elected Members must be Members of the Society of IEEE Member grade or higher. Elected members shall serve terms of three years. No more than two terms may be served consecutively. Eligibility is restored after a lapse of one year. One-third of the Elected Members shall be elected each year.

5.2.2 Section 2b. Administrative Committee Member Responsibilities:

Members of the Administrative Committee shall actively participate in the proceedings of the Committee and the activities of the Society. Elected Members and Officers of the Society may vote on all matters before the Administrative Committee. Members ex-officio may not vote on matters before the Administrative Committee except as specified in the Bylaws of the Society.

5.3 Section 3. Executive Committee:

The Executive Committee shall comprise the Officers of the Society.

5.3.1 Section 3a. Officers Named:

The Officers of the Society shall be the President, the Senior Past President, the Junior Past President, the Vice President for Technical Activities, the Vice President for Professional Activities, the Vice President for Conference Development, the Vice President for Conference Operations, the Editor-in-Chief of the Journal of Oceanic Engineering, the Secretary, and the Treasurer.

5.3.2 Section 3b. Qualifications, Terms of Office, and Powers and Duties of Officers:

The Qualifications, Terms of Office, and Powers and Duties of the officers are defined in the Bylaws.

5.3.3 Section 3c. Election of Officers:

Officers shall be elected as provided in the Bylaws at the last regular meeting of the Administrative Committee each calendar year, and shall take office on the following January 1. Only two consecutive full terms in each elected office are permitted, but eligibility is restored after being out of office for one year.

5.4 Section 4. Removal Provision:

A Member of the Administrative Committee who materially violates the Con-

stitution, Bylaws, or Policies and Procedures of the Society or the Constitution, Bylaws, or Code of Ethics of the IEEE, or who engages in other conduct that is seriously prejudicial to the Society or the IEEE, may be removed from his or her position as provided in the Bylaws.

6 ARTICLE VI Chapters

6.1 Section 1. Chapters Authorized and Defined :

A Chapter is a subgroup of Society Members from a Section or Sections of the IEEE focusing on some aspect of the Field of Interest of the Society. A Chapter is formed in accordance with the Bylaws of the Society and of the IEEE. A Chapter may be formed in conjunction with other Societies of the IEEE.

7 ARTICLE VII Meetings

7.1 Section 1. Technical Meetings :

The Society may organize and sponsor or co-sponsor meetings, conferences, symposia, workshops, or conventions either alone or in cooperation with other Societies, Sections, Regions, or Committees of the IEEE or with other professional or technical organizations, subject to the IEEE Conference Guidelines. The Society shall organize and sponsor or co-sponsor at least one technical conference each year.

7.2 Section 2. Administrative Meetings:

The Administrative Committee shall hold at least two meetings each calendar year; one of these meetings may be replaced by a meeting of the Executive Committee. Such meetings require at least 30 days notice to all Administrative Committee members.

8 ARTICLE VIII Publications

8.1 Section 1. Publications :

The Society shall publish at least one peer reviewed journal. Other publications may include paper and electronic newsletters or magazines, proceedings, and web sites. Publications of the Society shall conform to IEEE and Society publication policies. The Society shall be responsible for the financial aspects of its publication program.

9 ARTICLE IX Bylaws

9.1 Section 1. Bylaws Authorized:

Bylaws shall be established as hereinafter set forth, for the purposes of governing the operations and administration of the Society.

9.2 Section 2. Amendment

Procedure:

Notice of proposed changes to the Bylaws shall be sent to the Elected Members of the Administrative Committee and Officers of the Society at least 30 days before a meeting at which the proposed changes are to be considered. Such changes to the Bylaws require an affirmative vote by at least two-thirds of the Elected Members of the Administrative Committee and Officers of the Society present in a face-to-face meeting provided that a majority of the Elected Members of the Administrative Committee and Officers of the Society cast affirmative votes.

10 ARTICLE X Amendments

10.1 Section 1. Amendment

Procedure:

Amendments to this Constitution may be initiated by the Administrative Committee or by petition submitted to the Administrative Committee by five percent or more of the Members of the Society. In either case, the proposed amendment shall be submitted to the IEEE Technical Activities Board for approval. After such approval, the proposed amendment shall be publicized in at least one of the Society's publications or by direct communication to the membership. The proposed amendment shall be distributed by a ballot to all members of the Society at least 60 days before the date specified for the return of the ballots. The ballots shall carry a statement of the time limit for their return to the IEEE office. Approval of the amendment by at least two-thirds of the ballots returned shall be necessary for its enactment.

10.2 Section 2. Effective Date:

All amendments to the Constitution shall become effective 30 days after all necessary approvals and notification unless a later date had been specified at the time the vote was taken.

Meet the New IEEE OES AdCom 2005-07



William M. Carey

(M'85-SM'91-F'96) received a B.S. in Mechanical Engineering, a M.S. in Physics, and a Ph.D. in Nuclear Science from The Catholic University of America, Washington, DC, in 1965, 1968, and 1974, respectively.

Presently, he is a Professor of Mechanical Engineering at Boston University and Editor Emeritus of the Journal of Oceanic Engineering. He also has Adjunct appointments as Professor of Applied Mathematics at the Rensselaer Polytechnic Institute, as a Scientist at the Woods Hole Oceanographic Institution, and as a Research Physicist with the Naval Undersea Warfare Center. Previously he was a Physicist with the Advanced Research Projects Agency and was assigned under the IPA to the MIT Department of Ocean Engineering. He has also been a Research Physicist and Engineer at the Naval Underwater Systems Center, The Naval Oceanographic Research and Development Activity, and the Naval Research Laboratory. At the University of Chicago's Argonne National Laboratory, he was a Scientist and Section Manager of acoustic surveillance of reactors. He has been a consultant to both industry and government in the areas of nondestructive testing, nuclear science/environmental measurements, and applied ocean acoustics.

Dr. Carey is a member of the IEEE-OES ADCOM, a fellow of the Acoustical Society of America, a full member of Sigma Xi, a member of the Connecticut Academy of Science and Engineering, a Cosmos Club Member, a recipient of the IEEE/OES Distinguished Technical Award, and a recipient of an IEEE/OES Millennium Medal.



Diane D. DiMassa

Dr. Diane D. DiMassa is an Assistant Professor of Marine Engineering at the Massachusetts Maritime Academy (MMA). She earned her Ph.D. in 1997 in Oceanographic Engineering from the Joint Program between MIT and the Woods Hole Oceanographic Institution (WHOI). Her doctoral research was in the field of terrain-relative navigation for autonomous under-

water vehicles (AUVs). She earned her graduate-level Mechanical Engineer Degree from MIT for development of a hyperbolic navigation system for AUVs. Her BS and MS degrees are also from MIT in Mechanical Engineering. While a graduate student she was awarded a student research assistantship at the NATO SACLANT Undersea Research Center in La Spezia, Italy. There, her research was in the field of fibrous cables for marine applications.

Prior to joining the faculty of MMA, she taught Mechanical Engineering at the University of Massachusetts Dartmouth and

was an engineer/scientist at the Woods Hole Group, a marine environmental consulting firm. She has been a Guest Investigator at WHOI in the Applied Ocean Physics and Engineering Department since 1997 and is on the WHOI Scientific Diving Team.

Dr. DiMassa has served as an OES Administrative Committee member for the last 3 years and is currently the Editor of the Electronic Newsletter, a member of the OES Publicity Committee, and is the Oceans Conference Tutorials Coordinator. She has supported OES technical activities through being a member of the Current Measurement Technology Committee assisting with the CMTC Conference in 2003 and the upcoming workshop in 2005. She has also served as a member of the Technical Program Committee of the Homeland Security Workshop 2003. In addition to presenting papers at several Oceans Conferences, she has also served as a session chair.



Ferial El-Hawary

Dr. El-Hawary is President, BH Engineering System Ltd., Halifax, Nova Scotia, Canada. She received her Ph.D. in Electrical Engineering (Oceans Engineering), from Memorial University of Newfoundland, St. John's, Newfoundland, Canada and M. Sc. Electrical Engineering, University of Alberta, Edmonton., Canada. She served as a member of the Faculty of Engineering at Dalhousie University and she was the founder of the Modeling & Signal Analysis Research Laboratory at Dalhousie University, Halifax, N.S., Canada. Her research funded by NSERC and Oil companies, involved applications in oceans engineering such as marine dynamics, information theory, control, marine seismic, passive and active sonar signal processing. She published widely in the area of (Oceans Engineering) and Editor-in-Chief: The OCEAN Engineering Handbook CRC Press. She serves as Associate Editor for the IEEE/Oceanic Engineering Journal. Served as Vice President International of the IEEE/OES and Membership Development Committee Chair. Ferial is recognized for her leadership in establishing OES Chapters in France and Norway and recently a new joint OES Chapter in Quebec City, Canada.

Currently she is the IEEE Canada (Region-7). Chapters Coordinator Chair, Region-7 Liaison for IEEE/Section Congress'2008, and Member Organizing Committee IEEE/MTS OCEANS'2008 Conference, Quebec City, IEEE/Eastern Canada Council Past Chair, IEEE/OES Canadian Atlantic Chapter Chair and the Marine Technology Society Section Chair.

Dr. El-Hawary is a Fellow of IEEE, Fellow of the Engineering Institute of Canada (EIC), and Fellow of the Marine Technology Society (MTS). She received awards such as Oceanic Engineering Society Distinguished Service Award, IEEE Third Millennium Medal, and Regional Activity Board (IEEE/RAB) Achievement Award, Wally Read Service Award for Outstanding Service and Contributions to IEEE Canada, and the J.J. Archambault Eastern Canada Council Merit Award.



A.T. Morrison

Archie Todd Morrison III earned his BA degree in Electrical Engineering from Harvard University in 1981. MS and OE degrees were received from MIT and WHOI in 1994 for work on system identification and state reconstruction of underwater vehicles for control and navigation in an acoustic net. His PhD, from MIT and WHOI in 1997, was awarded

for work developing acoustic differential travel time instrumentation to study the velocity structure of the continental shelf wave bottom boundary layer. He has also studied mathematics at Yale University (1986/87) and underwater archaeology at Cornell University (1987).

Todd worked as a Senior Field Engineer for Raytheon (1981-86), was a lecturer in mathematics at MIT (1992), and continues a series of appointments as a Visiting and Guest Investigator at WHOI (1997-Present). From 1998 to 2003 he was the Senior Engineer for Electronic Systems at McLane Research. Long term consulting work for Nobska led to the position of Senior Engineer in 2000. Todd is currently Nobska's Vice President of Engineering. He continues to work as a consultant, developing oceanographic, fisheries, and medical software and instrumentation. Outside of work, Todd takes an active role in educating the public about ocean science, giving frequent public talks and demonstrations and working with students. He was named the Massachusetts Informal Teacher of the Year for 2000 by the Massachusetts Marine Educators.

Todd has participated in the annual OES OCEANS Conference since 1992 and been a member of IEEE/OES since 1995. He was elected to the AdCom in 2000 and has served as the OES Web Coordinator and Chair of the OES Publicity Committee since 2001. He has been involved in the OES Current Measurement Technology Conference since 1995 and has been the CMTC Financial Chair since 2001. "I have thoroughly enjoyed my work on the AdCom and I look forward to continuing that work as an active member of the oceanic engineering community."



Tamaki Ura

Tamaki Ura (M'91, SM'02), Director, Professor of Underwater Technology Research Center at the Institute of Industrial Science (IIS) of the University of Tokyo, is one of the leaders of development of Autonomous Underwater Vehicles in Japan. He was appointed Deputy Director of IIS in April, 2004.

Dedicating himself to establishing the IEEE/OES Japan Chapter, he served it as its first chair from 1995 to 2000. Internationally he organized four symposia of underwater technology: UT'98, UT2000, UT'02 in Tokyo, and UT'04 in Taipei, which were jointly sponsored by the IEEE/OES Japan Chapter or Taipei Chapter, IIS and ORN.

At present he is the conference chairman of OCEANS/Techno-Ocean 2004, held in Kobe in November 2004, which is the first OCEANS symposium in Asia. In addition, he has been an OES Journal associate editor of IEEE/OES for four years.

As a research professor, he has constructed more than ten models of AUVs so far. The R-One Robot, one of them, recorded 12-hours continuous operation in 1998, and full autonomous exploration over Teisi Knoll in 2000. The latest one is the "r2D4" designed for survey of a hydro-thermal vent area. Operation of this vehicle was successfully performed at NW 1 Rota Underwater Volcano in May 2004.

Awards received because of his research are:

1979: Prize for Paper from the Society of Naval Architects of Japan

1982: Houkou Prize for significant contribution to safety of moored ships

1995 and 1997: Prizes of Invention from the Society of Naval Architects of Japan

1998: Prize of High Automation Technology Association

1999: Prize of Technology from the Japan Society of Mechanical Engineers

He graduated from Faculty of Engineering of the University of Tokyo in 1972, proceeded to the Post Graduate School of the University of Tokyo, and received the degree of Doctor of Engineering from the University of Tokyo in 1977.



Joseph R. Vadus

Vice President, International Activities, IEEE Oceanic Engineering Society. Responsible for organizing out year and offshore conferences and symposia. B.S.E.E., Penn State University; M.S. in Ocean Engineering from Long Island University (1967); then served as Adjunct Professor of Ocean Engineering (1967-72).

IEEE Life-Fellow; Member of OES for 30 yrs.; Served on AdCom periodically. IEEE Centennial Medal (1984) & IEEE Millennium Medal (2000). IEEE/OES Distinguished Service Award (1985). Contributing author in the IEEE special centennial book "Engineering Tomorrow". General Chairman for Oceans '76 in Washington during The Bicentennial. Chaired three OES Underwater Technology Symposia (98-00-02) in Tokyo.

Retired from Government service from NOAA in 1996 as Senior Technology Advisor; management positions in the Office of Manned Undersea S & T, Office of Coastal Environment, Office of Ocean Engineering, and Ocean Energy Program Office.

Sperry Rand Corporation: engineering management positions in major ocean R & D programs; headed Program Management Office for the U.S. Navy's NR-1 (1969).

Has 10 patents (6 awarded, 4 pending); over 80 publications; major keynote addresses.

U.S.Chair (15 yrs.) for Marine Technology with the U.S.-Japan Bilateral (1980-1995). Reviewed 200 facilities and Exchanged 500 papers; Japan Awards for Leadership

(1986,1992); State Department Distinguished Service Award (1992).

U.S.Chair (15yrs.) for Marine Technology for the U.S.-France Cooperation in Oceanography (1980-1995); Awarded the French Order Of Merit (2000); appointed as Chevalier. U.S.-France Project in 1985 resulted in finding the "TITANIC".

Senior Staff Associate at NSF (1988-91); Program Director for Ocean Engineering.

MTS Fellow and Vice President for Technical Activities (1979-1989); Received the Compass Distinguished Technical Achievement Award and Rolex (1990). Fellow in the UK Society for Underwater Technology, London. Mexican Academy of Science's Distinguished Achievement Award (1991). Served in the US Marine Corps & Member of the First Marine Division Association.

Who's Who in the OES



Biographical Sketch for Robert Wernli

Robert L. Wernli received his B.S. degree in mechanical engineering from the University of California Santa Barbara in 1973 and an M.S. degree in engineering design from San Diego State University, San Diego, CA in 1985.

Bob has worked in the field of underwater robotics research and development at the Space and Naval Warfare Systems Center (SSC) San Diego (formerly the Naval Ocean Systems Center) since 1973. His work there has focused on the development and testing of advanced undersea work systems, manipulators and tools for use to full ocean depths by both manned and unmanned vehicles. A Navy qualified diver, he is presently focusing on the applications of Autonomous Underwater Vehicles for Navy applications and has been part of the team that produced the U.S. Navy's Unmanned Underwater Vehicle (UUV) Master Plan.

He has been actively engaged in promoting the oceans, including the use of remotely operated vehicles, by creating and chairing the first 10 Remotely Operated Vehicle conferences (ROV '83-ROV '92), co-chairing OCEANS MTS/IEEE

'95, OCEANS MTS/IEEE '03 and the Underwater Technology '04 (Taiwan) conferences. He has nearly 30 technical publications and was editor and co-author of the book Operational Effectiveness of Unmanned Underwater Systems, published on CD-ROM in 1999.

Bob is a member of the American Society of Mechanical Engineers, the Institute of Electrical and Electronics Engineers' Oceanic Engineering Society, and a fellow of the Marine Technology Society (MTS). Within OES, he is applying his expertise in conference planning and management as a member of the ADCOM and RECON committees.

He is a recipient of the MTS Special Commendation and Award, the SSC San Diego Exemplary Service Award and the Navy Meritorious Civilian Service Award. In 2002 he received the prestigious Lauritsen-Bennet award for Excellence in Engineering from SSC San Diego.

Bob has been planning his retirement from the government next October by transitioning his writing from non-fiction to fiction. He recently published his first novel, the underwater techno-thriller *Second Sunrise*, which won first place in an international competition for genre fiction, and hopes to have the sequel available later this year. He lives in San Diego, Ca, with his wife, Beverley, and travels to his mountain cabin in nearby Idyllwild where he enjoys hiking and working on his novels.

Request for Nominations to the Administrative Committee, Class of 2006

The IEEE Oceanic Engineering Society is governed by an Administrative Committee of 18 members. Six are elected each year to serve three-year terms. Members are limited to two consecutive terms, although they may be reelected after a lapse of one year.

The Nomination and Appointments Committee is Chaired by the Junior Past President, with the Senior Past President and the most recently retired Senior Past President completing the Committee. We are charged with proposing a slate of nominees and with conducting the elections, which is done by mail to the entire membership.

Qualifications for Administrative Committee membership are membership in the IEEE and OES, and a willingness to serve the oceanic engineering profession. We wish to have the Administrative Committee characteristics reflect characteristics of the IEEE membership. We are particularly interested in increasing the Asian and European membership of the Committee.

I request that you identify and nominate qualified candidates for the Administrative Committee. Self-nomination is encouraged.

The Nomination Packet should include a Letter of Nomination accompanied by a one page biographical sketch of the proposed candidate and a one-page statement from the proposed candidate giving his or her views of the opportunities and challenges facing the Society and steps to be taken to advance the IEEE Oceanographic Engineering Society.

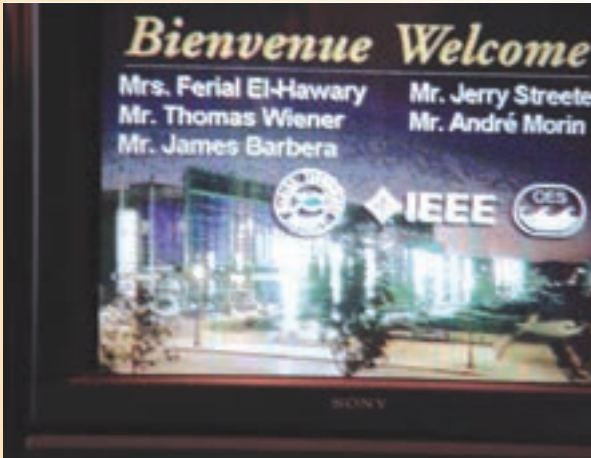
Nominations will be accepted through 31 May 2005 and should be submitted to:

Thomas Freud Wiener, Sc.D., LSMIEEE
Chair, IEEE/OES N&A Committee
2403 Lisbon Lane
Alexandria VA 22306 USA
+1 703 768 9533
t.wiener@ieee.org

MTS/IEEE OCEANS' 2008

Quebec City, Canada

Celebrating 400 Years of Evolution in Quebec City
Some Images of the Quebec City Site Visit,
on August 20 - 22, 2004



Computer Monitor set up in many places at the WTCC presenting OES and MTS members Site Visitors Names.



During an invited Dinner at WTCC, L. to R. : Claude Pinault, President & CEO — WTCC, Ferial El-Hawary, André Morin , Louise Wiener, Tom Wiener, Xavier Maldague, Jim Barbera, Peggy Barbera, Kathleen Streeter, Jerry Streeter



In Front of Chateau Laurier after the visit, L. To R.: Peggy Barbera, Jim Barbera, Ferial El-Hawary, Louise Wiener, Philippe Dupont, Tom Wiener, André Morin, Jerry Streeter



During tour of the WTCC Facilities,
First Row L. to R.: Ferial El-Hawary, Kathleen Streeter
Peggy Barbera, Louise Wiener
Second Row L. to R.: Jerry Streeter, Xavier Maldague, A WTCC representative, André Morin, Jim Barbera, Philippe Dupont, Tom Wiener

Soundings

by John Irza



Welcome to the latest installment of “*Soundings*”, a column that reports on a broad spectrum of news items from the mainstream media as they relate to Ocean Engineering technologies. The purpose of this column is to inform the ocean engineering community of our industry’s visibility in the media and how the general public perceives our efforts.

UK Navy Releases Tsunami Seafloor Images

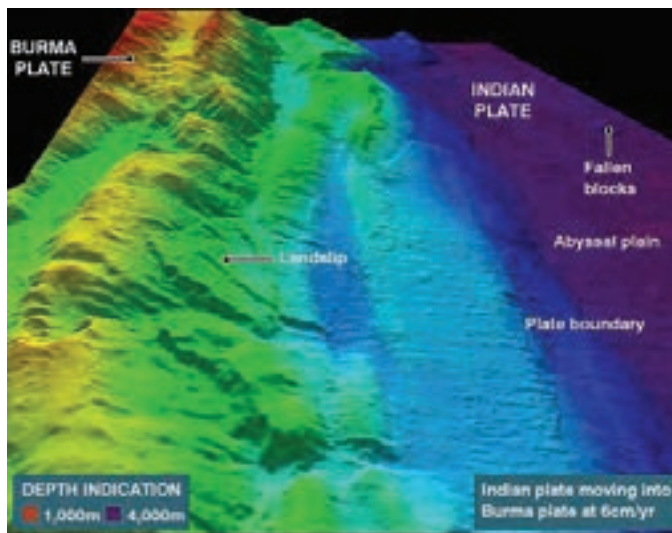
Without question the Asian tsunami has been the ocean-related subject that dominated the mainstream media in the past few months. The loss of life and devastation has far exceeded any previous natural disaster in recent history.

For the first time, the ocean community is witnessing the seafloor images from the Tsunami’s epicenter, courtesy of the Royal Navy’s hydrographic survey ship *HMS Scott*.

The *Scott* had been on a mapping mission in the Western portion of the Indian Ocean near the coast of Madagascar when the magnitude nine earthquake occurred. The UK’s Ministry of Defense decided to re-route the vessel and, after receiving permission from the Indonesian government, the *HMS Scott* sailed for the earthquake epicentre.

Using the vessel’s multi-beam sonar, a comprehensive mapping of epicenter’s seafloor was achieved (see photo). The *Scott*’s sonar - called SASS IV for Sonar Array Sounding System – uses two large arrays along and across her hull and is capable of mapping a strip of seabed several kilometers wide, effectively giving the vessel a mapping rate of 150 square kilometers per hour.

The sonar data is being further analyzed at the Southampton Oceanography Centre.



Looking south, the purple area marks where the ocean floor, which sits on the Indian tectonic plate, is pushing into, and moving under, the Burma plate. The Indonesian landmass sits atop the Burma plate. A rupture 30km below this area produced violent shaking, triggering the tsunami.

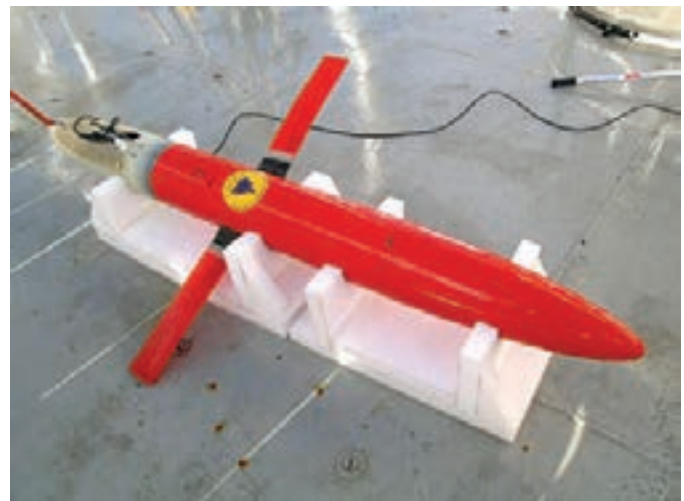
Underwater Glider Makes Gulf Stream Crossing

An “underwater glider” caught the attention of the general public last November when the Spray Glider successfully executed a Cape Cod to Bermuda transit. The two-meter (6-foot) long orange glider has a four-foot wingspan looks something akin to a model airplane. Indeed, its method of propulsion is similar in some ways to its airborne cousins.

By using a variable buoyancy mechanism (bladder), the vehicle becomes positively buoyant, glides to the surface, and then becomes negatively buoyant for a glide descent to a depth of 1000 meters (3300 feet). The seesaw profile gives the vehicle a forward velocity of approximately a half mile per hour or 12 miles per day.

As the vehicle traverses various layers of the ocean, it samples the surrounding environment by measuring parameters such as temperature, salinity and pressure. Every seven hours *Spray* spends about 15 minutes on the surface to relay its position and information back to Woods Hole, Massachusetts, and San Diego, California via satellite.

The glider’s next mission will be in early 2005, when it makes a round trip between Woods Hole and Bermuda. Future gliders will be equipped with additional sensors to measure dissolved oxygen, carbon dioxide, alkalinity and nutrients in the water.



Spray Glider

Atlantic’s Lost City Offers Up Surprises

In the March 2005 issue of the journal *Science* University of Washington oceanographer Deborah Kelley and colleagues reported the results from the 2003 “Lost City” expedition. (See <http://www.lostcity.washington.edu> on the web). The Lost City is a hydrothermal vent system perched on a plateau on the Atlantis massif - an underwater mountain located in the mid-Atlantic many miles from the nearest volcanic rift.

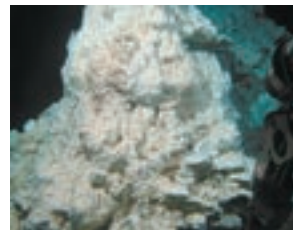
CREDIT: BBC NEWS & ROYAL NAVY

From the Lost City web site:

“The Lost City hydrothermal system is dramatically different from those that form black smokers in almost every way. The chimneys are hosted on mantle rocks that are >1.5-2 million years in age, not young volcanic rocks like basalt. They are made out of calcium carbonate minerals, not iron sulfides, and they have fluids that are basic, not acidic. The distinct nature of these chimneys results from the fact that the Atlantis mountain is made out of magnesium-rich rocks formed deep within the Earth.”

The vent system is populated by more than 65 types of tiny creatures, including transparent worms, water fleas and mats of bacteria that waft in the currents like kelp. Incredibly, the animals and microbes thrive in scalding hot water that is as caustic as the drain cleaner you might use in your kitchen sink. The standard “diet” of this bizarre environment is mostly natural gas (methane) and hydrogen.

The heat that drives the vent system originates from a chemical reaction between sea water and ancient oceanic bedrock. With temperatures between 100 to 200 degrees, the hot water bubbles up and hits the icy sea, and dissolved carbonate minerals precipitate out, forming white and gray towers that rise like giant limestone stalagmites.



An actively venting carbonate pinnacle on the top of a 60-meter-high undersea structure. Photo courtesy of the University of Washington.

Upcoming Conferences

OTC '05

May 2-5, 2005
Houston, Texas
www.otcnet.org

Oceans '05 Europe

June 20-23, 2005
Brest, France
www.Oceans05Europe.org

IEEE/OES Eighth Current Measurement Technology Conference

June 28--29, 2005
Southampton, England
www.whoiedu/science/AOPE/cmtc/2005

Underwater Acoustic Measurements

June 28-July 1, 2005
Crete, Greece
<http://uameasurements2005.iacm.forth.gr>

International Geoscience and Remote Sensing Symposium

July 25-29, 2005
Seoul, Korea
ieeegrss@adelphia.net

14th International Symposium on Unmanned Untethered Submersible Technology

August 21-24, 2005
Durham, New Hampshire
www.ausi.org/uust/uust.html

Oceans 2005 MTS/IEEE

September 19-23, 2005
Washington, D.C.
www.oceans2005.org

2005 IEEE Underwater Acoustic Signal Processing Workshop

October 5-7, 2005
West Greenwich, Rhode Island
www.uasp.org

Fifth International Symposium on Ocean Wave Measurement and Analysis

July 3-7, 2005
Madrid, Spain
www.cedex.es

Lloyd Z. Maudlin Passed Away January 20, 2005

I am saddened by the passing of Lloyd Maudlin, a staunch IEEE Senior Member and a very good friend. He was a very dedicated President of the original Council of Oceanic Engineering (COE), with a very personable manner in dealing with everyone. Lloyd managed to handle all important issues in a fair and thorough manner. There were a few times when the AdCom meeting would adjourn after midnight. This was possible, because his enthusiasm and friendly spirit kept us interested and involved. He and his wife Lauralee attended most meetings and Oceans Conferences. They were a happy couple in the center of COE social activities. Lloyd has contributed much to the advancement of oceanic engineering. We will miss his big smile and his genuine camaraderie. Condolences to Lauralee and his family.

Joseph Vadus

Sally and I were saddened to hear of Lloyd's passing. We have such pleasant memories of both Lloyd and his wife Lauralee. I can still remember having a conversation with Lloyd on the steps of the Sheraton Park Hotel in Washington DC back at OCEANS'78. This was a conversation in which I expressed my desire to become more involved in what then was the Council of Oceanic Engineering. He was very encouraging as he always was. The conversation led to me becoming a member of the Council. Things went quickly after that, with me becoming involved as General Chair of OCEANS'81 in Boston and then President of the newly emergent Society of Oceanic Engineering in 1983. This was all very new territory for me and how I so much appreciated Lloyd's encouragement. His positive, happy disposition was such a testimony to the inner peace that he possessed.

Stan Chamberlain



L. to R.: Mo El-Hawary, (Late) Ed Early, Theodore Heindsmann, Lauralee Maudlin, Van Early, (Late) Lloyd Maudlin, Ferial El-Hawary



L. To R.: Stan Chamberlain, Mrs. Chamberlain, Van Czika, Joe Czika, Lauralee Maudlin, (Late) Lloyd Maudlin



Mission (John Potter and Family)

"Our mission is to take a year to explore, as a family, remote corners of the Indian Ocean, by sailboat, working with local and international researchers on coral reef systems, marine mammals and fish to promote awareness of the plight of the oceans, create interactive educational opportunities for students and to better understand the delicate wonders of our precious coral habitats and oceans."

Jocara Newsletter Jan 1, 2005

Well, we were praying for more wind, and I guess our gods are both powerful and took us seriously, because we got some serious wind! Unfortunately, most of it has been on the nose so we've been beating into high seas and winds gusting up to 39 knots for the past 6 days. The seas today sometimes reached over 6m high. We've broken the main halyard, Genoa halyard, starboard railing, port Genoa winch, oven gimbals, generator, windscoop, oh, lots of other small stuff. The boat is a mess below, with a mix of food, papers, soft furnishings and books strewn about where things have crashed out of cupboards and off shelves. We are in no state to clean any of it up; indeed, it's a battle even to cook a bowl of pasta. Nevertheless, all on board are in good spirits and healthy!

Well, we have had a couple of sense-of-humour failure moments, but nothing too serious. On the plus side, we've been visited by porpoising dolphins and careening boobies, diving into the waves and skimming the surface catching flying fish. We caught a good-sized Dorado, but have so far been unable to cook it! Caroline's parents have had to celebrate New Year on their own, waiting for us to arrive in Zanzibar. We are now at 7 deg. 08.1'S, 40 deg. 05.2'E, just 75 n.m. from Zanzibar and hoping to reach anchorage midday tomorrow. So have a great New Year everybody, and check out our New Year Card to be posted on the Jocara website at <http://www.jocara.net> when our good friend Mandar receives our update CD mailed from Mayotte.

P.S. Don't forget to check out our website at <http://www.jocara.net> for updates, pics and short movies, also archived

newsletters. Anyone can join the list or unsubscribe by sending an email to mandar@arl.nus.edu.sg with the subject line 'subscribe jocara newsletter' or 'unsubscribe Jocara newsletter' as appropriate.

On Jan 5, 2005 Mandar wrote:

I don't think he felt any effect of the Tsunami. He (John Potter) said:

"We hear there's been an earthquake and tidal wave in the Indian Ocean, but we don't know where or when, exactly!"

We have noticed neither here (in deep open water) just north of the Comoros (11 deg. 09.3'S, 43 deg. 19.2'E)."

regards, Mandar

Jocara Newsletter Jan 10, 2005

We arrived in Zanzibar on 2 January, battling headwinds even until the last moments into the wave-tossed anchorage where we saw Caroline's parents waving to us from ashore. Stone-town turned out to be a fascinating place, full of exotic new sights and colour. We eagerly took up opportunities to eat ashore and catch up on sleep while organizing reprovisioning and essential repairs. Checking in and out turned out to be a somewhat lengthy affair, traipsing around a variety of offices in the busy little port with an unanticipated \$50/person visa cost. Still, the people are friendly, happy cries of 'Jambo' (hello in Swahili) greeting us everywhere and the funny-sounding 'Akuna Matata' (don't worry) made famous by Disney's Lion King, but in genuine use here. We employed a local 'scary' (a young man called Morocco whose job it was to guard our dinghy on the beach and Jocara at anchor from opportunistic locals who might think we could do without some of our more portable items, like outboard motors) for US\$10/day and had no problems. We also met with our contact in the Institute of Marine Sciences in Zanzibar and received promising support to work with them later in the month. On the evening of 5 Jan. we set off for Pemba Island, 60 n.m. north and just offshore,

to explore this supposedly pristine marine environment. We met up with Caroline's parents again there on the 6th (who'd taken the fast ferry) and moved on to Misali Island, a small islet that is now a marine park. For the next few days we explored Misali and north Pemba, finding that the famed marine life now seems heavily exploited and that less colourful coral and sizeable fish are to be found than we had hoped. The Misali park authorities were very helpful and gave us full support to explore and photograph their beautiful park. We will provide them with images and video to promote the park and its aims and to create more public awareness by featuring Misali on our webpages. The area is filled with traditional lat-tine-rigged sailing dhows and dugouts. Their lights, probably fishing for herring or sardines, dot the horizon like a town at night. By day, they paddle furiously around schools of fish, paying out nets, while others spearfish using masks and fins and still more patrol the exposed reef at low tide, probably looking for octopus and shellfish. We did make a couple of dives and saw three huge Napoleon Wrasse, but the visibility was not great. Nor have we been without boat equipment failures, yesterday standing out as a 'day from hell' as John spent most of it up to his armpits in sh*t fixing our blocked toilet... Now we are gently drifting along on our way west to the mainland, to Tanga, where we plan to keep the boat while we go inland to explore Arusha and take a short Safari. Our position as I write is 4 deg. 59.8'S, 39 deg. 29.8'E, heading west at a leisurely 1.5 kts.

*All the best from
the Crew of Jocara.*

Jocara Newsletter Jan 25, 2005

At last! More news from Jocara, we are indeed still alive and kicking!

We arrived in Tanga late on 10th and anchored off the delightful and friendly little yacht club in calm water, much appreciative of a meal ashore and a good night's sleep. We were able to organize someone to take care of our cats and boat for US\$2.50/day and booked tickets to Arusha, 400 km away, from where we would take our Safari. On 14th we took the local bus, \$7 each, for an 8-hour ride to Arusha. Quite an experience and full of local colour! Arusha is at 1500 m altitude among hills and close to the mountains of Meru and Kilimanjaro. We stayed at a little guest house (US\$8 a night for a double room with shower and toilet! OK, so what if the toilet didn't flush...). Next day (15th) we set off with Crown Eagle (one of the 200 travel companies in Arusha, recommended to us by good friends who passed through here a year ago) for Tarangire Park. Immediately inside the park boundary, marked by no more than a gate, we began to see elephants and giraffes up close, so many of them! It was really fantastic, and unreal. Families of elephants; young ones, matriarchs, mud-bathing, just like you see on a wildlife documentary, only right in front of our eyes. The huge Baobab trees, impossibly, made the elephants and giraffes look small. After a night in a nearby camp-

site we toured the park again the next morning, then moved on to a panoramic campsite on the edge of the famous rift valley, looking down onto the plains. The next day (17th) Caroline was sick with a stomach bug, but managed to enjoy the drive down into the Ngorongoro crater, a 20 km diameter crater with a flat interior of grasslands and lakes, stuffed with thousands of elephant, zebra, wildebeest, hippos, some rhinos, lions and cheetas and many, many birds, all of which we were lucky to see in the one day we had there. Totally different from Tarangire, and equally spectacular, if not more so. Back to Arusha and there we split up, Alex and Ria (Caroline's mum) taking up residence in a nice hotel (where the toilets flushed) while Caroline, Piet (Caroline's dad), Casper and John set off on 18th on a walking safari to climb Mount Meru, 4500m. The first day we climbed 1000m through grasslands and forest, staying in Miriakamba hut at 2500m altitude. On 19th we climbed a further 1000m through trees and then scrubland to reach Saddle hut at 3500m altitude, nestled between little Meru mountain on one side and a broad hump called Rhino point on the other. At 0200 the following morning we staggered out into the cold and dark with little lamps on our heads to make the final ascent. After reaching Rhino point (1.5 hrs) we dropped down some 150m to follow the jagged ridge of the crater that forms Mount Meru, a remnant volcano rim. After 6 hours in increasingly thin air, we gasped to the summit at 4500m just after 08:00. The views were fabulous, with cloud far below us, Kilimanjaro resplendent in the distance and the new volcanic ash cone lying within the arc of the old crater rim at our feet. It felt like the top of the world, though Everest is twice as high! Making our way down to Saddle hut took less time, of course, where we had lunch and a nap. Then we crawled another 1000m further down to Miriakamba hut, the last hour pushing us to the limit. The following day, the 21st, we descended the final 1000m and crawled into the hotel where Ria and Alex were staying, barely able to walk for the muscle pain in our legs. Piet and Ria left the next day, with hugs and tears, while Casper, Alex, Caroline and John took the bus back to Tanga, taking 9.5 hours this time in an even colourful trip than on the way up. The 23rd, a Sunday, was spent recovering and making new Dutch Friends, also with young kids, who have lived in Tanga 12 years. Our colleague Oliver Wurl arrived on 24th to work with us taking water and air samples for nutrient and pollution analysis, bearing numerous begged-for items from Singapore organised by our good friend Matthias. Today Caroline, Casper, Oliver and John are out on the reefs taking samples, while Alex enjoys time with his new-found girlfriend Nina, daughter of our new Dutch friends Luuk and Birgit, and goes to the local international school with her for a couple of days.

Jocara is currently at 5 deg. 05.04'S, 39 deg. 10.73'E

*The Jocara crew
has also sent a new year card
to all readers. The delivery of the card
(on a CD) was delayed,
but it is now uploaded to the
Jocara website. Please see http://www.jocara.net/Home/2005_card.jpg*

Jocara Newsletter Feb 9, 2005

The last two weeks have been crazy with all the great people and stuff going on for us in Tanga. We extended our stay until yesterday, we've enjoyed the place so much. Oliver came out with us for two days to take water samples, anchored overnight among the reefs. Then there were more repairs (generator again) then off for a Sunday dive with Simon, the principal of the local international school that has taken Alex under its wing, and our new friends Luuk and Birgit, plus a motley assortment of kids. Caroline spent Monday filming 'a day in the life of' Nina, Luuk and Birgit's daughter. This is really for the Ministry of Education in Singapore and included a lot of time at the Tanga International School (<http://www.tistanzania.com>), a wonderful school with just 32 pupils and three classes. Tuesday we hosted a boat visit from the kids; just like we did for the classes in Singapore. John finally worked up the courage to attack the main engine overheating problem, and has maybe got it licked. Wednesday we visited the Tanga Coastal Zone Conservation and Development Programme office to talk to them about their fisheries management and protection programme, and also about the amazing 19 Coelacanths that have been caught in the Tanga area in recent months. The Coelacanth is a 'living fossil'; extremely rare, weird and a protected species. We saw one in their freezer, it was immediately apparent that this is a truly strange fish, completely different from anything else we have ever seen. We worked with the programme officers to set up a webpage on their amazing findings and are going to get that put up as soon as we are able to help get the news out and spur efforts to protect the newly-discovered habitat. Refueling was a nightmare experience (as always in remote places) but we got 1000 litres of diesel on board that will have to last us until... who knows? Caro and John spent many happy hours running about town picking up all sorts of provisions, and we now (once again) have a freezer full of frozen meat of various sorts. The stay was rounded off with a trip up-country to the hills, tea plantations and tropical rainforest of Amani and Eastern Usambara mountains, where we also visited small dairy farms who work in a collective of such farms; a long-term project of Luuk and Birgit (who are vets). Finally, we pulled ourselves away from this delightful town and its people, all of whom have been so friendly and supportive. The 50m motor vessel 'Lamu' (an ex-Norwegian whaler and North Sea oilrig rescue boat, now privately owned as a pleasure yacht) were very generous in taking us alongside on our way out to give us 1200 litres of fresh water, swap some DVD films, books, magazines, stories... so that we eventually cleared the point around 13:00 and finally set sail for Zanzibar. Today, 9 Feb. finds us at 5 deg. 37.2'S, 39 deg. 07.3'E making 4.5 kts southwards in 10 kts of wind towards our next appointment with the Institute of Marine Sciences to work with them on their Menai conservation area and Dolphin tourism.

The Crew of Jocara.

Jocara Newsletter Feb 18, 2005

This newsletter comes from the south of Zanzibar, in Menai Bay where we are working with local operators and the Menai Bay Conservation organisation to document tourist interactions with the local dolphin population. Menai Bay has 'swim with wild dolphins' safari tourism that provides income to two shoreside villages. There are also three Swedish post-graduate students working on the dolphins and tourist impact and they are helping us by taking us out in their research boat. We have been fortunate to get some good still photos and some video of dolphins underwater. Menai Bay is a beautiful spot, with white beaches and picturesque villages. The coral and fish life is excellent, compared to many places we've seen. The kids are getting into squid fishing in a big way, so calamari rings and squid pasta are the current order of the day. The locals bring in tuna and huge groupers, caught in 50-60m not far from here. We plan to continue working on this project for another 5-6 days before heading back to StoneTown, Zanzibar to collect a couple of packages that should have arrived (DHL willing) before striking out back east for the Seychelles.

Jocara Newsletter March 10, 2005

This newsletter comes to you from an historic World Heritage Site, the Arab trading centre of StoneTown, Zanzibar. Yes, we're here again, having completed work on the dolphins of Menai Bay. It seems incredible that we've been in Tanzania for over two months! We made a short video of our dolphin work and presentations to the Menai Bay Conservation and Institute of Marine Sciences that were well-received. We are now assembling a lot of updated material for the MoE and our website to send back on CD. After herculean efforts we have also managed to extract our packages from the clutches of DHL and local customs, thanks to our local friends for their patient help! Caroline has some kind of blood infection that started in her fingers; we're treating it with antibiotics and it seems to be getting better but we don't want to set off for the Seychelles with any lingering problems that might flare up. We also have the usual collection of engine and other troubles, but no show-stoppers. The kids are getting restless and bored... time to move on. The most daunting aspect is that instead of the predicted and seasonal NW to NE variable winds we have been getting a steady ENE; right where we need to head to get to the Seychelles. With wind on the nose, it could take a very long time to cross those thousand miles. Is it our imagination or is the weather turning funny just about everywhere? It could be our longest crossing yet! So, if you have some fair winds and following seas, send them our way!

The Crew of Jocara.

IEEE Conference & Exhibition

OCEANS'05 EUROPE

www.Oceans05Europe.org



picture Eric Legnet "AUV Redermor courtesy GESMA Brest" - design Isabelle Berné

"Today's technology for a sustainable future"

June 20-23 2005

BREST, FRANCE



Oceanic Engineering in Europe

In June 2005, the Oceanic Engineering community will gather in Brest for Oceans'05 Europe. This wide term of Oceanic Engineering covers in fact all EE (Electrical Engineering) activities related to the probing, measuring and understanding of the ocean. These domains encompass a very large field, which goes beyond the traditional underwater acoustics, instrumentation and processing. This year 2005 is at the same time the International **Year of Physics** and the centenary of Jules Verne death¹. Oceans'05 Europe will try to match the greatness of these two major events through its Technical and Exhibit Program as well as by being associated with the Jules Verne Exhibition displayed at Oceanopolis throughout the conference. On the theme "Today's technology for a sustainable future", the Conference will offer an outstanding technical program, tutorials and an exhibition show in the cozy conference center, Le Quartz. Social events will bring you all over Brest from the City Hall reception room to the now famous Oceanopolis greatest display of fish in France.

As usual, a large part of the conference is devoted to underwater acoustics processing and systems (AUVs, ROVs, ...). But, the conference is not restricted to these classical domains of instrumentation and offers lots of openings for the environmental concerns - oil spill monitoring, biotechnology, living resources - or the societal impacts of marine policies - coastal zone management, marine safety and security, ... Another field linking the instrumentation approach and the policy makers deals with data, data connections and management. The IEEE, as a major international organization, is a member of the GEOSS² (Global Earth Observation System of Systems) and has been examining the technical issues and challenges of integrating diverse measurement systems, models and communication structures to provide information to decision makers on a global scale. In the ocean segment of GEOSS, many specific issues need to be addressed. There are extensive measurement gaps in both the northern and southern hemispheres (including the combination of remote sensing and in situ systems). In addition to measurements, the propagation of standards for GOOS (Global Ocean Observing Systems) needs to be broader. This includes agreement on measurement approaches and how to train for routine



system operations, the introduction of metadata standards and the integration of deep-ocean and near-shore measurements into a single unified data set.

The rough numbers that we can read here and there about human beings is that about 3/4 of humanity lives - on the average - within 30 km of the oceans (or seas). On the other hand, it is well known that more than 70% of the Earth surface is water. Another fact is that we are daily facing a stream of data pouring from space. We are all familiar with the words "Mega" (10^6) or "Giga" (10^9): here we are talking "Terabytes" (10^{12}) or "Petabytes" (10^{15}) of data to download, analyze, understand, transform in an accessible way to the end-user.



There are a couple of efforts presently in the early stages of design development and implementation in both the environmental data collection arena and computer storage and processing realm that could have a profound effect on both the timeliness and accuracy of the test and evaluation process in the near future. The most promising one - as stated above - is the ongoing multinational GEOSS project that will, when implemented, provide a comprehensive worldwide environmental database available to researchers on demand. This will enable a more judicious selection of testing environments for emerging ocean technologies. The computer storage technique will enable the development of more sophisticated evaluation models both for test planning and performance prediction and the



important post test system evaluation to determine feasibility.

So as a conclusion - and if all these programs are for real - I can say that a vision for the near future passes through a better use of the resources, not from an energy point of view but from an information and knowledge one. I hope that the technology and its by-product, the information, will be dedicated "to serve the Man".

¹ <http://www.jules-verne.net/>

² <http://www.epa.gov/geoss/>



CALL FOR PAPERS, TUTORIALS, AND STUDENT POSTERS and CALL FOR EXHIBITS AND SPONSORS

PAPER KEY DATES:

Abstract Deadline:

15 April 2005

Notification of Acceptance:

1 May 2005

Full Paper Deadline:

1 June 2005

TUTORIAL KEY DATES:

Proposal/Bio Deadline:

15 April 2005

Notification of Acceptance:

1 May 2005

STUDENT KEY DATES:

Abstract Deadline:

15 April 2005

Notification of Acceptance:

1 May 2005

Full Paper Deadline:

1 June 2005

WWW.OCEANS2005.ORG

“We have **ONE OCEAN** shared by the world’s community”

We invite all of you throughout the world who want to make a difference in the future of our “**One Ocean**” - ocean professional societies, ocean governing organizations, government, industry, academia, researchers, educators, the public, and others - to meet with us in **Washington, D.C., USA** during **OCEANS 2005 MTS/IEEE**.

Supporting “**One Ocean**” are these **Plenary Themes** that will be the focus for Plenary Sessions and other associated events:

- Homeland Maritime Security
- Global Observation and Exploration
- Emerging Ocean Science, Technology and Engineering
- Ocean Education and Outreach
- Proactive Global Cooperation and Engagement

PAPERS

Submit **Abstract** to www.oceans2005.org/papers.htm in an **Area of Interest**. (If other areas should be included, let us know.) Acceptance will be based on quality, originality, and relevance to the “**One Ocean**” and **Plenary Themes**. Papers must be submitted in advance for publication in the *Conference Proceedings* and oral presentation during the conference.

TUTORIALS

We invite proposals for **Half-Day** and **Full-Day Tutorials** in an **Area of Interest** at www.oceans2005.org/tutorials.htm. Submit proposed course description and instructor biography. Instructors will be compensated based on number of tutorial registrations. If you are **Interested In Attending** a tutorial about a specific **Area of Interest**, let us know.

STUDENT POSTER PROGRAM

We will sponsor a **Student Poster Competition** to encourage student participation. **Undergraduate** and **Graduate Students** are invited to present their papers in a special poster session. Selected students will be **Financially Supported** to attend the conference. See www.oceans2005.org/student.htm for more information. We are planning many opportunities for college and high school students, along with their teachers and professors – we welcome your **Recommendations**.

EXHIBITION

OCEANS 2005 MTS/IEEE will provide the ocean community's premier **Ocean Exhibition** in the most prestigious hotel convention center in **Washington, D.C.** The **Marriott Wardman Park** has long been regarded as "the place" for exhibitors to showcase, and that venue coupled with our "**One Ocean**" theme provides an unmatched opportunity for you to present your work. We expect exhibits across the entire spectrum of ocean business, national and state governments, education, research, and public interests from nations throughout the world. Anticipation about this Exhibition has been building, so **Make Your Reservation Now** before all booths are reserved. See www.oceans2005.org/exhibition.htm for more information.

SPONSOR OPPORTUNITIES

OCEANS 2005 MTS/IEEE will provide the ocean community's premier **Ocean Exhibition** in the most prestigious hotel convention center in **Washington, D.C.** The **Marriott Wardman Park** has long been regarded as "the place" for exhibitors to showcase, and that venue coupled with our "**One Ocean**" theme provides an unmatched opportunity for you to present your work. We expect exhibits across the entire spectrum of ocean business, national and state governments, education, research, and public interests from nations throughout the world. Anticipation about this Exhibition has been building, so **Make Your Reservation Now** before all booths are reserved. See www.oceans2005.org/exhibition.htm for more information.

OCEANS 2005 MTS/IEEE

"**One Ocean**" emphasizes the vital need for global cooperation and engagement to protect our internationally connected waters, as well as the critical role that the ocean plays in global commerce, weather, food supply, recreation, national defense, and mineral and energy resources. "**One Ocean**" also reinforces the many interrelationships among the scientific and engineering disciplines, and this conference provides an unequalled opportunity to network with colleagues from across the entire spectrum of oceanic and marine interests.

The **OCEANS Conference**, sponsored by the **Marine Technology Society** and the **IEEE Oceanic Engineering Society**, is a major forum for ocean scientists, engineers, industry end users and suppliers, technologists, educators and researchers, policymakers, and the public throughout the world to present their latest research results, state-of-the-art technologies, future concepts, and innovative ideas to their peers and many others who are involved in the future of our global ocean. The conference will feature **Plenary Sessions** with many of our world's ocean leaders, hundreds of **Technical Paper Presentations, Tutorials, Student Posters**, and the ocean community's premier **Technology Exhibition**.

Executive Co-Chairs:

Barry Stamey	703-610-1652	barry.stamey@mitretek.org
Fred Klein	703-610-1596	fred.klein@mitretek.org
Steve Holt	703-610-1709	sholt@mitretek.org

Send your recommendations to info@oceans2005.org and visit the website at www.oceans2005.org for the latest news!



AREAS OF INTEREST

Marine Environment

- Physical Oceanography and Meteorology
- Marine Geodesy
- Environmental Technology
- Oil Spills
- Ocean and Coastal Water Pollution
- Water Quality Monitoring
- Marine Debris
- Oceans and Human Health
- Mapping Sediments and Shorelines
- Conserving and Restoring Coastal Habitat
- Watersheds

Ocean, Air and Space Remote Sensing

- Ocean-based Sensors
- Airborne Ocean Sensing
- Satellite Systems

Underwater Acoustics: Sensing and Processing

- Underwater Acoustics
- Sonar Signal and Image Processing
- Underwater Propagation
- Synthetic Aperture Sonar
- Inverse Problems
- Acoustic Tomography
- Subsea Acoustic Communication
- Calibration

Ocean and Off-Shore Energy

- Ocean Energy
- Offshore Drilling
- Marine Minerals

Ocean Policy and Economics

- Marine Law and Policy
- Merchant Marine
- Ocean Economic Potential
- Coastal Zone Management
- Ocean Engineering and Technology Policy
- Law of the Sea
- International Ocean Policy and Science
- Federal Agency Ocean Governance
- Regional Ecosystem Approaches and Governance

Marine Education, Recreation, and Public Awareness

- Marine Recreation
- Marine and Ocean Education
- Public Outreach and Awareness

Underwater Vehicles

- Autonomous Underwater Vehicles
- Remotely Operated Vehicles
- Manned Underwater Vehicles

Information Processing, Modeling and Simulation

- Modeling, Simulation and Visualization
- Information Processing
- Modernizing Ocean Data and Information Systems
- Applied Ocean Science and Technology

Marine Communication, Navigation and Safety

- Dynamic Positioning
- Marine Communication
- Navigation
- Maritime Safety

Oceanographic Instrumentation and Processing

- Oceanographic Instrumentation
- Systems Processing
- Ocean Current Measurement

Cable, Connector, and Buoy Technology

- Buoy Technology
- Cables and Connectors
- Ropes and Tension Members
- Submarine Cable Technology

Marine Security

- Maritime Homeland Security
- Global Marine Security
- Homeland Security Technology
- Guarding People and Property Against Natural Hazards

Non-Acoustics: Sensing and Processing

- Underwater Imaging
- Non-Acoustic Image Processing

Underwater Engineering and Operations

- Seafloor Engineering
- Diving
- Marine Materials
- Mooring
- Offshore Structures
- Subsea Positioning

Ocean Exploration and Archeology

- Ocean Exploration
- Marine Archeology
- Deep Exploration Technology
- Bioprospecting
- Biotechnology

Ocean Industries

- Ships and Vessels
- Minerals Resources
- Aquaculture
- Marine Commerce and Transportation
- Offshore Energy
- Gas Hydrates
- Vessel Safety

Living Marine Resources

- Achieving Sustainable Fisheries
- Invasive Species
- Protecting Marine Mammals and Endangered Species
- Coral Reefs
- Deep Corals, Seamounts, Vent and Seep Communities

Achieving a Sustained Integrated Ocean

Observing System

- Climate Change
- Marine Ecosystem Forecasting
- Meteorological Impacts on Oceans
- Global Earth Observing System
- Global Ocean Observing Systems
- Regional Ocean Observing Systems

Global Cooperation and Engagement

- Intergovernmental Programs
- Cooperative Agency Opportunities
- Industry and Agency Partnerships
- Global Community Education and Outreach

Have we forgotten any areas? Send recommendations to info@oceans2005.org.

ANNOUNCING the 2005

UNDERWATER ACOUSTIC SIGNAL PROCESSING WORKSHOP

<http://www.uasp.org>

Sponsored by the IEEE Providence Section in cooperation with the IEEE Signal Processing Society and partially underwritten by the Office of Naval Research and the IEEE Oceanic Engineering Society

October 5–7, 2005

Alton Jones Campus, University of Rhode Island
West Greenwich, RI, USA

Chairman

Douglas A. Abraham
Pennsylvania State University
c/o Mandex Suite 106
4001 North 9th Street
Arlington, VA 22203
abraham@psu.edu
(703) 243-1160 (voice)
(703) 243-1162 (fax)

Technical Program

Georey S. Edelson
BAE SYSTEMS
Advanced Systems &
Technology, MER15-2651
P.O. Box 868
Nashua, NH 03061 USA
georey.s.edelson
@baesystems.com
(603) 885-5104

Donald W. Tufts
Electrical Engineering
University of Rhode Island
Kingston, RI 02881 USA
tufts@ele.uri.edu
(401) 874-5812

Local Arrangements

Richard J. Vaccaro
Electrical Engineering
University of Rhode Island
Kingston, RI 02881 USA
vaccaro@ele.uri.edu
(401) 874-5816

The objective of this workshop is to provide an informal atmosphere for discussions of original research on signal processing techniques with underwater acoustic applications. The intent is to review theoretical and experimental research at an early stage of development. Particular areas of interest are:

- Adaptive processing in non-stationary interference
- Detection, localization or tracking, and classification
- Marine mammal related acoustic signal processing
- Multistatic sonar signal processing
- Performance limits for passive sonar
- Physics-based signal processing algorithm design and analysis
- Signal processing for AUVs or deployed autonomous systems
- Synthetic aperture sonar
- Underwater acoustic communications

Research on other topics in Underwater Acoustic Signal Processing will also be considered. **There will be a special session on Homeland Defense Applications of Underwater Acoustic Signal Processing.**

Facilities limit attendance to 50 persons. Preference will be given to those presenting research results. Abstract submission and registration directions may be found at <http://www.uasp.org>

Important dates:

July 8, 2005 - Deadline for abstract submission

July 29, 2005 - Deadline for those wishing to attend but not present

Aug. 12, 2005 - Notification of accepted abstracts and attendees

Sep. 2, 2005 - Room block at Whispering Pines Conf. Center released

Oct. 5–7, 2005 - Workshop

CHAPTER CHAIRMEN

Boston

John W. Irza
Sygnus Technology Inc.
Arlington, MA
781 648 2144
781 641 9974 (Fax)
jirza@sygnus.com

Canadian Atlantic

FERIAL EL-HAWARY
61 Bay View Road
Halifax Nova Scotia
Canada B3M 1N8
902 443 2400
902 445 5110 (Fax)
f.el-hawary@iee.org

France

RENE M. GARELLO
GET - ENST Bretagne
CNRS FRE 2658 TAMCIC - Equipe TIME
Dept Image et Traitement de l'Information
Technopôle Brest Iroise - CS 83818
29238 BREST Cedex - FRANCE
(33) 98 00 13 71
(33) 98 00 10 98 (Fax)
rene.garello@enst-bretagne.fr

Hawaii

Mark ROGNSTAD
University of Hawaii at Manoa
School of Ocean and Earth Sciences and
Technology
Hawaii Institute of Geophysics and Planetology
1680 East-West Road Post 816B
Honolulu, HI 96822
808 956 8712
808 956 6530 (Fax)
markr@soest.hawaii.edu

Japan

JUNZO KASAHARA
Earthquake Research Institute
University of Tokyo
1-1-1, Yayoi, Bunkyo
Tokyo 113-0032 Japan
+81 3 5841 5713
+81 3 5689 7234 (Fax)
kasa2@eri.u-tokyo.ac.jp

Norway

DR. OLAV EGELAND
Dept. of Engineering Cybernetics, NTNU
O.S. Bragstad plass 2D
N-7491 Trondheim, Norway
47 73 59 43 59
47 73 59 43 99 (Fax)
Olav.Egeland@itk.ntnu.no

Ottawa

SKAWOMIR B. WESOLOWSKI
+1 613 761 9782
s.wesolowski@iee.org

San Diego

ARTHUR M. TERANISHI
858 455 5530
art.t@cox.net

Seattle

SHERI L. REES
Engenuity Development Networks, Inc.
116 NW 130th
Seattle, WA 98177
206 440 1455
206 440 1438 (Fax)
s.l.rees@iee.org

Singapore

ARJUNA T. BALASURIYA
+65 679 06863
Fax: +65 67910 341
earjuna@ntu.edu.sg

Spain

DR. ROQUE J. SALTAREN PAZMINO
Universidad Politecnica de Madrid
ETSII-DISAM
Calle Jose Gutierrez Abascal, 2
Madrid, 28006, Spain
rsaltaren@etsii.upm.es

Taipei, Taiwan

DR. SHENG-WEN CHENG
Professor
Dept. of Engineering Science & Ocean
Engineering
National Taiwan University
No. 1, Sec. 4, Roosevelt Road, Taipei, TAI-
WAN
886 2 23625470 Ext. 260 (Office)
886 937 049982 (Mobile)
886 2 23929885 (Fax)
niccheng@ccms.ntu.edu.tw

Toronto

SRIDHAR KRISHNAN
+416 979 5000
Fax: +416 979 5280
krishnan@ee.ryerson.ca

United Kingdom & Republic of Ireland

DR. YONG XUE
The Retreat
125B Cambridge Road
Great Sherford
Cambridge, England, CB2 5JJ
United Kingdom
y.xue@unl.ac.uk

Victoria

JAMES S. COLLINS
Dept. of Elec. &
Comp. Engineering
University of Victoria
P.O. Box 3055
Victoria, B.C. CANADA V8W 3P6
(604) 721-8610; (604) 721-6052 (FAX)
j.s.collins@iee.org

Washington D.C./No. Virginia

JAMES BARBERA
13513 Crispin Way
Rockville, MD 20853
301 460 4347
301 871 3907 (Fax)

OES Journal Associate Editors

ARTHUR B. BAGGEROER

Dept. Ocean Eng.-Rm. 5-204
Mass. Inst. Technol.
Cambridge, MA 02139
+1 617 253 4336
abb@arctic.mit.edu

D. RICHARD BLIDBERG

Autonomous Undersea
Systems Institute
86 Old Concord Turnpike
Lee, NH 03924
+1 603 868 3221
Fax: +1 603 868 3283
blidberg@ausi.org

BRIAN CALDER

Center for Coastal and Ocean Mapping
University of New Hampshire
24 Colovos Road
Durham NH 03824 USA
Tel: (603) 862-0526
Fax: (603) 862-0893
email: brc@com.unh.edu

WILLIAM M. CAREY

The Kerry Group LLC
79 Whippoorwill Rd.,
Old Lyme, CT 06371
+1 860 434 6394
kerrygtp@ctol.net

CHRISTIAN DE MOUSTIER

Center for Coastal and Ocean Mapping
Chase Ocean Engineering Lab
University of New Hampshire
24 Colovos Road
Durham, NH 03824-3525
Phone: 603-862-3434
FAX: 603-862-0839
email: cpm@iee.org

JOHN E. EHRENBERG

Boeing Phantom Works
P. O. Box 3999
MC 84-41
Seattle, WA 98124-2499
+1 253 773 1332
john.e.ehrenberg@boeing.com

FERIAL EL-HAWARY

B.H. Engineering Systems Ltd.
61 Bayview Road
Halifax, Nova Scotia B3M 1N8
Canada
tel: 902-443-2400
fax: 902-445-5110
email: F.El-harwary@iee.org

DAVID M. FARMER

Institute of Ocean Sciences
P. O. Box 6000, 9860 West Saanich Rd.
Sidney, BC V8L 4B2 Canada
+1 250 363 6591
Fax: +1 250 363 6798
dmf@ios.bc.ca

RENE GARELLO

Telecom Bretagne
Dpt. ITI BP 832
29285 Brest Cedex France
33 2 98 00 13 71
Fax: 33 2 98 00 10 98
rene.garello@enst-bretagne.fr

MALCOLM L. HERON

Physics Dept.
James Cook Univ.
Townsville, Queensland 4811
Australia
61 77 81 4127

JOHN J. LEONARD

Ocean Engineering Department
Room 5-422
Mass. Inst. Technol.
77 Massachusetts Ave.
Cambridge, MA 02139
+1 617 253 5305
Fax: +1 617 253 8125
jleonard@mit.edu

TAMAKI URA

Underwater Technology Research Center
Institute of Industrial Science
University of Tokyo
4-6-1, Komaba
Meguro, Tokyo 153-8505 Japan
+81-3-5452-6487
ura@iis.u-tokyo.ac.jp

HISAAKI MAEDA

Institute of Industrial Science
University of Tokyo
7-22-1, Roppongi, Minatoku
Tokyo 106, Japan
81 3 3402 6231 X2255
Fax: 81 3 3402 5349
maedah@iis.u-tokyo.ac.jp

ARYE NEHORAI

Dept. Elect. Eng. and Computer Sci.
Univ. of Illinois at Chicago
851 S. Morgan St.,
Rm. 1120 SEO
Chicago, IL 60607-7053
+1 312 996 2778
Fax: +1 312 413 0024
nehorai@eecs.uic.edu

JOHN D. PENROSE

Centre for Marine Science and
Technology
Curtin Univ, Kent SL Bentley,
Western Australia 6102
Australia 61 9351 7380
tpenrosej@cc.curtin.edu.au

JOHN POTTER

Head, Acoustic Research Laboratory
TMSI and Elect. Eng. Dept.
National Univ. of Singapore
10 Kent Ridge Crescent
Singapore 117596
Fax: 65 874 2129
Fax: 65 874 8325
johnp@arl.nus.edu.sg

ROBERT C. SPINDEL

Applied Physics Lab.
Univ. of Washington
1013 N.E. 40th St.
Seattle, WA 98105
+1 206 543 1310
spindel@apl.washington.edu

RICHARD STERN

Applied Research Lab.
Penn State Univ.
P. O. Box 30
State College, PA 16804
+1 814 865 6344
rs@arl.vax.arl.psu.edu

DR. DAJUN (DJ) TANG

Applied Physics Laboratory,
University of Washington
1013 NE 40th Street,
Seattle, WA 98105
(206) 543-1290

IEEE OCEANIC ENGINEERING SOCIETY TECHNOLOGY COMMITTEE CHAIRS

Modeling, Simulation & Visualization, DR. WARREN L. J. FOX
Marine Communication Navigation & Positioning, DAVID CHADWELL
Oceanographic Instrumentation, MICHAEL HARRIS
Current Measurements, STEVEN ANDERSON

Underwater Acoustics, DR. KENNETH G. FOOTE, PROF. MASAHIKO FURUSAWA, &
PROF. MANELL E. ZAKJARIA

Unmanned Underwater Vehicles, CLAUDE P. BRANCART
Air/Space Remote Ocean Sensing, DR. DAVID E. WEISSMAN
Ocean Policy Technology, DR. JOSEPH CZIKA, JR.

Sonar Signal & Image Processing, DR. JAMES CANDY
Non-Acoustic Image Processing, DR. FRANK M. CAIMI & PROF. JOHN WATSON
Neural Networks and Information Processing, V. WILLIAM (BILL) PORTO
Environmental Technology, TBD

Environmental Acoustics Technology, KENNETH G. DIAL
Submarine Cable Technology, ROBERT T. BANNON & PAMELA J. HURST
Homeland Security, PAMELA J. HURST & ROBERT T. BANNON
Technology Committees Coordinator, DR. STANLEY G. CHAMBERLAIN