



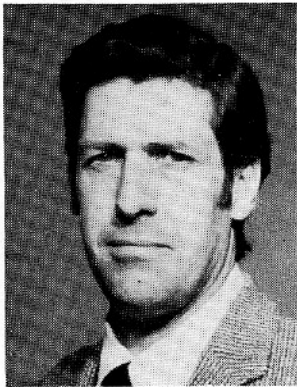
**IEEE Council on**

# **OCEANIC ENGINEERING**

**NEWSLETTER** 

EDITOR: HAROLD SABBAGH

JUNE 1981 (USPS 420-910)



## **President's Comments**

The IEEE Council on Oceanic Engineering met in Houston in early May during the Offshore Technology Conference. The setting for our meeting was impressive. After having missed this occasion for the past three years, the size, vigor, and colorfulness of this conference was quite overpowering. It is evident that the energy and resources which are being poured into this aspect of engineering and technology will only be dwarfed by the energy and mineral gains to be obtained from these regions of the globe. Overall, it does appear that amidst the sophisticated attack on the many problems which beset attempts to exploit these natural resources there is yet ample room and much need for the use of sophisticated instrumentation. Data handling, and communications techniques, as well as signal processing, pattern recognition and scene analysis methods, are but a select few of the bailiwicks where IEEE members can play a sustaining role in this exciting field. In many cases opportunities are being

lost when monitoring of the offshore platforms and their environment is absent or incomplete. Solid data bases need to be built if we are to better understand the behavior of such structures under tremendously varying conditions. Particularly so if we are to extend our explorations to ever deeper waters as will undoubtedly need to be the case. We must attain a better understanding, not only of the direct engineering problems which are generally all too visible, but also the more subtle effects of our penetration into an environment which, though immeasurably powerful in one sense, is all too fragile.

Our Council meeting in Houston dealt with numerous issues as well as the necessary housekeeping chores. The Oceans '81 meeting in Boston is shaping up very nicely and will prove to be one of our biggest and best. The quality of the program and the excellence of its setting will nicely complement one another. I hope to meet many of you in this most fascinating of cities. Stan Chamberlain and his

committee are doing a marvelous and highly professional job in assuring us all of a very worthwhile meeting. Our next conference will be held in Washington D.C. in 1982, while further sites for future Ocean's Conferences are rapidly being reserved. We are planning ahead to 1985 and beyond!

Discussion, led by our Editor-in-Chief, Dave Weissman, centered on further expanding and improving our Journal. We plan to start a sequence of special issues, with the help of guest editors, which will focus on particular aspects of our fields. An example would be an issue on expendable instrumentation. Starting in 1982 each issue, in addition to contributed papers and communications, will feature a

special section under a guest editor dealing with a timely topic. The archival value of our Journal will undoubtedly be further enhanced by such efforts. Special issue topics and the guest editors, as well as requests for topical papers, will be announced through the offices of this newsletter.

Other items discussed at the meeting I will write about in a future issue. It remains for me to thank the members of the Council for their help and energetic participation. It made this first meeting I chaired a rewarding one for me.

See you in Boston at Oceans '81, September 16th through 18th at the Sheraton Boston Hotel.

Don Bolle



**System** — T. Nakanishi, S. Takagawa, T. Tsuchiya, and Y. Amintani, Japan Marine Science and Technology Center, Yokosuka, Japan

**3. The Development and Application of Underwater Vehicle Design Techniques** — D.C. Summy and N.S. Smith, Naval Coastal Systems Center, Panama City, Fla.

**4. SCORP, A System Designed In-Spection Vehicle** — R. Hess, Ametek, Arlington, Va.

**5. Hydraulic Self-Propelled Undersea Cable Burial System** T. Sekine, and K. Watanabe, N.I.T. Submarine Cabi Tokyo, Japan

**SESSION H2**  
Thursday, 17 September, 1530-1700  
**Current Measurements - II**  
Chairman:  
Richard I. Scariel, EG&G

**1. An Analysis of the Neil Brown Instrument Systems - Acoustic Current Meter in a Dynamic Environment** — G.F. Appell and Thomas N. Merz, NOAA, Rockville, Md., J.R. McCullough, Woods Hole Oceanographic Institution, Woods Hole, Mass., and B.A. Magnell, EG&G, Waltham, Mass.

**2. Sea Trials of a 3-Axis Current/CTD Profiler** — H.T. Perkins, K.D. Saunders, and L.A. Banero, Naval Ocean Research and Development, NRTL Station, Miss., and J.J. Vega, Computer Sciences Corporation, Bay St. Louis, Miss.

**3. Frequency Response Characterization of Current Meters** — T.L. Dibble and C.K. Sillitoe, Oregon State University, Corvallis

**4. A New Glass Deep Sea Acoustically Tracked Current Profiler** — Derek Cole, Benhos Incorporated, North Falmouth, Mass., and Donald Dorson, University of Rhode Island, Kingston

**SESSION H3**  
Thursday, 17 September, 1530-1700  
**Geology and Geophysics**  
Chairman:  
Charles Hollister, Woods Hole, Mass.; Oceanographic Institution

**1. Space Technology and the Benthic Boundary Layer: Project HEBBLE** — D.J. Collins, California Institute of Technology, Pasadena, Calif.

**2. An Investigation of the Correlation Between Geophysical and Dynamic Properties of Sand** — P. Strachan, University of Newcastle Upon Tyne, Newcastle Upon Tyne, England

**3. High Resolution Acoustic Stratigraphy: Appearance and Reality** — L.A. Mayer, University of Rhode Island, Kingston

**4. Geologic Implications of Abyssal Bed Form along the East Coast Continental Margin** — A. Shor and R. Flood, Lamont-Doherty Geological Observatory of Columbia University, Palisades, N.Y.

**SESSION H4**  
Thursday, 17 September, 1530-1700  
**Outer Continental Shelf Petroleum Operations - Primer**

**SESSION H5**  
Thursday, 17 September, 1530-1700  
**Marine Penetrators and Seafloor Engineering**  
Chairman:  
Robert L. McNeill, Sandia National Laboratories

**1. Development of the Free-Fall Penetrometer** — T.R. Chan, Memorial University of Newfoundland, St. John's, Canada

**2. Analysis of Free-Fall Penetrometer Data** — U. Dayal, Indian Institute of Technology, Kanpur, India

**3. An Approximate Solution for Estimating the Strength of Clays from Penetrator Decelerations** — R.L. McNeill, Sandia National Laboratories, Albuquerque

**4. Evaluating the Hazard Potential of Pockmarks** — A.G. Judd, University of Newcastle Upon Tyne, Newcastle Upon Tyne, England

**5. Geospatial Applications in Ocean and Coastal Engineering** — W.G. McDougal and C.K. Solitt, Oregon State University, Corvallis

**6. On the Risk of Erosion of Continuous Seafloor: A Stochastic Approach to Scour Control** — B.A. Christensen, Hydraulic Laboratory, University of Florida, Gainesville

**SESSIONS H1-H8, J1-J8, K1, L1**  
Friday, 18 September, 0830-1000  
**Outer Continental Shelf Petroleum Operations - Primer**

**SESSION H6**  
Wednesday, 16 September, 1530-1700  
**Marine Materials - II**  
Chairman:  
Herbert Herman, State University of New York

**1. Corrosion Problems in Ocean Engineering** — R.H. Heiderbach, University of Rhode Island, Kingston

**2. Thermal Spray Metallization for Marine Applications** — H. Herman, State University of New York, Stony Brook

**3. The Effects of Chloride Ion on the Crevice Corrosion of Stainless Steels** — M. Hubbell, University of Rhode Island, Kingston

**4. Morphology of Calcareous Deposits Produced on Cathodically Protected Steel in the Deep Ocean** — H. Englund and R. Heiderbach, University of Rhode Island, Kingston

**SESSION H7**  
Thursday, 17 September, 1530-1700  
**Marine Penetrators and Seafloor Engineering**  
Chairman:  
John S. Canada

**1. Development of the Free-Fall Penetrometer** — T.R. Chan, Memorial University of Newfoundland, St. John's, Canada

**2. Analysis of Free-Fall Penetrometer Data** — U. Dayal, Indian Institute of Technology, Kanpur, India

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**6. On the Risk of Erosion of Continuous Seafloor: A Stochastic Approach to Scour Control** — B.A. Christensen, Hydraulic Laboratory, University of Florida, Gainesville

**7. Pipeline and Marine Transportation Systems**  
**8. Marketing of OCS Crude and Natural Gas Reserves**

**SESSION K2**  
Friday, 18 September, 1330-1500  
**Numerical Modelling of Estuarine & Nearshore Circulation Dynamics**  
Chairman:  
Malcolm L. Spaulding, University of Rhode Island

**1. Residual Currents in the Penobscot Estuary** — B. Pearce and A. Humphrey, III, University of Maine, Orono

**2. Comparison of Spectral and Time-Stepping Approaches for Finite Element Circulation Models** — D. Lynch, Dartmouth College, Hanover, N.H.

**3. A Finite Element Model of Storm Surge and Circulation for Chesapeake Bay and Its Atlantic Nearshore** — H.S. Chen, Virginia Institute of Marine Science, Gloucester Point, Va.

**4. An Analytical Model for Gravitational Circulation in Straits and Estuaries** — D. Fornazin, University of Connecticut, Storton, Conn.

**SESSION K3**  
Friday, 18 September, 1330-1500  
**Marine Biology - I**  
Chairman:  
William Queen, Institute for Coastal and Marine Resources

**1. An In Situ Plankton Camera** — H. Edgerton, Massachusetts Institute of Technology, Cambridge, Mass.; P. Ortrier, NOAA, Miami, Florida; and W. McElroy, G. Hayward, and D. Jones, Benhos Incorporated, North Falmouth, Mass.

**2. Characterization of a Granular Bottom Using Sediment Profile Photography: A New Method of Surveying Estuarine Benthic Systems** — D.C. Rhoads, L.F. Boyer, and J.D. Germano, Yale University, New Haven

**3. Interpretations of Biological Communities Based on Submersible Records** — A.L. Lissner, Interstate Electronics Corporation, Anaheim, Calif.

**4. Trace Metal Passage Through Marine Food Webs of Southern California** — D.R. Young, Darnes & Moore, Los Angeles, A.J. Meeraus, NOAA, Seattle, T.K. Jan, Los Angeles County Sanitation District, R.P. and R.P. Eganhouse, University of California, Los Angeles

**SESSION K4**  
Friday, 18 September, 1330-1500  
**Marine Biota**  
Chairman:  
Bryan Field, EG&G

**1. The Function of Microorganisms in Marine Food-Boring Processes** — P. Boye and R. Mitchell, Harvard University, Cambridge, Mass.

**2. The Accumulation of High**

**SESSION L2**  
Friday, 18 September, 1530-1700  
**Ocean and Coastal Processes Modelling**  
Chairman:  
Malcolm L. Spaulding, University of Rhode Island

**1. The Studies of the Cool Air Actions on the Tropical Storm with Hydrodynamic Model Experiments in Laboratory** — W. Ding-Wen, Institute of Atmosphere Physics, Academia Sinica, People's Republic of China

**2. Non-Planar Beaches: Wave-Induced Setup/Setdown and Longshore Current** — W.G. McDougal and R.T. Hudspeth, Oregon State University, Corvallis

**3. Non-Planar Beaches: Wave-Induced Longshore Transport** — W.G. McDougal and R.T. Hudspeth, Oregon State University, Corvallis

**4. New Aspects of Climatology of Typhoons over the West Pacific Ocean** — D. Yi-Hui, Institute of Atmospheric Physics, Academia Sinica, People's Republic of China

**5. A Baroclinic Regional Open Ocean Forecast Model** — R.N. Miller and A.R. Robinson, Harvard University, Cambridge, Mass.

**SESSION L3**  
Friday, 18 September, 1530-1700  
**Marine Biology - II**  
Chairman:  
William Queen, Institute for Coastal & Marine Resources

**1. Marine Food-Boring Processes** — P. Boye and R. Mitchell, Harvard University, Cambridge, Mass.

**2. The Accumulation of High**

**SESSION L5**  
Friday, 18 September, 1530-1700  
**Coastal Zone Management - II**  
Chairman:  
Robert Klier, NOAA

**1. The Boca Raton Wet Experiment** — T.J. Campbell, P.H. Spadoni, and N.H. Buemel, Arthur V. Stock and Associates, Inc., Deerfield Beach, Fla.

**SESSION L6**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

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**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

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**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L8**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L9**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L10**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L11**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L12**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L13**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L14**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L15**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

**SESSION L16**  
Friday, 18 September, 1530-1700  
**Marine Fisheries**  
Chairman:  
Robert L. Edwards, NOAA, Northeast Fisheries Center

**1. Artificial Reefs in South Florida and Their Potential** — J.C. Price, DE Brit Associates, Inc., Miami, Fla.

**2. Coastal Seaback Lines - Conclusions Drawn from A Review of Current State Practices** — M. Murday and D. Asherman, Florida Institute of Technology, Melbourne, Fla.

**3. Coastal Resource Management at The Florida Institute of Technology Integrated Oceanography/Management Curricula** — N.W. O'Hara and M. Murday, Florida Institute of Technology, Melbourne, Fla.

**4. A Transgressive Deltaic Barrier Island and Beach Model** — S. Penland and R. Boyd, Louisiana State University, Baton Rouge

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Center for Oceans Law & Policy  
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National Association of Corrosion Engineers  
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National Estuarine Federation  
National Ocean Industries Association  
New England Estuarine Research Society  
Newfoundland/Labrador Section MTS  
Oceanic Society  
Providence Section IEEE  
Sea Grant Association  
Society of Naval Architects & Marine Engineers

**Conference Associates**

**Conference Associates**

Chairman:  
Bryan Field, EG&G

**1. Marine Biota**  
Woods Hole Engineering Associates, Inc., Woods Hole, Mass., and F.J. Annuli, Wayland, Mass.

**2. Biological and Engineering Parameters for Macrofouling Growth on Platforms Offshore Louisiana in the Gulf of Mexico** — R.Y. George, University of North Carolina, Wilmington, and J.C. Heidemann, Exxon Production Research Company, Houston

**3. High Resolution Directional Wave Spectra** — L.R. LeBlanc and F.H. Middleton, University of Rhode Island, Kingston, and L. Baer, NOAA, Rockville, Md.

**4. Several Years Experience with Wave Directional and Amplitude Measuring Buoy: Wadbury** — J.P. Hansslein, Nereides, Houston

**5. Design for a Small Descus Buoy Directional Wave Measurement System** — F.J. Willem, W.D. Jackson, and K.E. Steele, Triton Systems, Inc., Bay St. Louis, Miss.

**6. Residual Currents in the Penobscot Estuary** — B. Pearce and A. Humphrey, III, University of Maine, Orono

**7. Comparison of Spectral and Time-Stepping Approaches for Finite Element Circulation Models** — D. Lynch, Dartmouth College, Hanover, N.H.

**8. A Finite Element Model of Storm Surge and Circulation for Chesapeake Bay and Its Atlantic Nearshore** — H.S. Chen, Virginia Institute of Marine Science, Gloucester Point, Va.

**9. An Analytical Model for Gravitational Circulation in Straits and Estuaries** — D. Fornazin, University of Connecticut, Storton, Conn.

**10. Impact of Law of the Sea: The Caribbean and Central America** — Francisco Villagrán, Inter-American Development Bank, Washington, D.C.

**11. Ocean Law Considerations Affecting Deep Sea Bed Mining** — Felipe Padilla, Committee on Deep Sea Bed Mining, United Nations, New York

**12. The Studies of the Cool Air Actions on the Tropical Storm with Hydrodynamic Model Experiments in Laboratory** — W. Ding-Wen, Institute of Atmosphere Physics, Academia Sinica, People's Republic of China

**13. Non-Planar Beaches: Wave-Induced Setup/Setdown and Longshore Current** — W.G. McDougal and R.T. Hudspeth, Oregon State University, Corvallis

**14. Trace Metal Passage Through Marine Food Webs of Southern California** — D.R. Young, Darnes & Moore, Los Angeles, A.J. Meeraus, NOAA, Seattle, T.K. Jan, Los Angeles County Sanitation District, R.P. and R.P. Eganhouse, University of California, Los Angeles

**15. A Baroclinic Regional Open Ocean Forecast Model** — R.N. Miller and A.R. Robinson, Harvard University, Cambridge, Mass.

**16. The Function of Microorganisms in Marine Food-Boring Processes** — P. Boye and R. Mitchell, Harvard University, Cambridge, Mass.

**17. The Accumulation of High**





# ADVANCE PROGRAM - REGISTRATION

Conference and Exhibition, Boston, Massachusetts  
September 16-18 1981, Sponsored by IEEE and MTS

## More than 300 presentations to be made

More than 300 technical presentations in lecture and poster formats will be given at OCEANS '81, the marine technology conference and exhibition that will be held in Boston Sept. 16-18.

Presentations will be organized into sessions covering such topics as acoustics, coastal zone management, instruments, marine biology and fisheries, ocean energy, research vessels, seafloor engineering, and wave measurement.

The conference also will feature a primer on Outer Continental Shelf (OCS) Petroleum Operations. The one-day sessions will cover the technology and constraints of exploration, selection, development, and production of OCS petroleum resources.

A geographical breakdown of authors highlights the international flavor of the conference. More than 17 percent of session authors are from foreign countries. Each region of the U.S. also is solidly represented. A breakdown by authors and their affiliations, reveal that 42 percent are from academic and re-



## Variety of social events, tours are scheduled

While in Boston for the sign-up. Another attraction Wednesday evening will be an underwater slide/film symposium at 8. Admission will be free.

### Tour of Deer Island Plant

On Thursday, Sept. 17, you may

## Ocean as a workplace theme of OCEANS '81

It is with great pleasure that I invite you to participate in the OCEANS '81 Conference and Exhibition at the Sheraton Boston on Sept. 16-18, 1981. This year's conference, sponsored by the IEEE Council of Oceanic Engineering and the Marine Technology Society, promises to be another outstanding marine conference in one of America's most historic cities.

OCEANS '81 will be an international forum for presentation and discussion of the technologies — especially the new technologies — utilized by those at work in the ocean. The conference, whose theme is "The Ocean — An International Workplace", presents a full and varied program, with 300 technical papers grouped into 60 sessions and 85 exhibit booths. A new feature is the addition of poster sessions to complement the usual lecture-style sessions. Another feature is the Outer Continental Shelf (OCS) Petroleum Operations Primer, a tutorial session emphasizing the technologies used in developing oil and gas resources off the coast.

OCEANS '81 is, in part, the annual meeting of the Marine Technology Society and of the IEEE Council of Oceanic Engineering. As



STANLEY G. CHAMBERLAIN

thing and is especially delightful in September!

...for an experience you will long remember, come to OCEANS '81, the marine high-technology conference of the year.

For the Planning Committee,

*Stanley G. Chamberlain*

Stanley G. Chamberlain,  
General Chairman  
Oceans '81

## Underwater symposium

On Sept. 16 at 8 p.m., OCEANS '81 will present an underwater symposium featuring slide/film presentations by Dr. Richard Cooper, National Marine Fisheries Service, Woods Hole, Mass., and Dr. Robert Ballard, Woods Hole Oceanographic Institution, and Emory Kristoff, National Geographic Society. Admission will be free.

more of the many MTS professional group meetings. Similarly, those interested are invited to attend the IEEE committee meetings. The luncheons on Wednesday and Friday will be hosted, respectively, by the IEEE/COE and MTS presidents. While of particular interest to IEEE and MTS members, these luncheons are open to all attendees, and all are strongly encouraged to attend them.

To complement the technical program, an extensive set of social activities has been planned. Besides the luncheons and banquet, activities include exhibitors' cocktail hour, student-industry mixer, Boston Harbor cruise and clambake, and special spouses' tours to historic and cultural points of interest. Boston is well-known as a showcase of American history, and as an area with a high concentration of outstanding colleges and universities. In short, Boston has every-

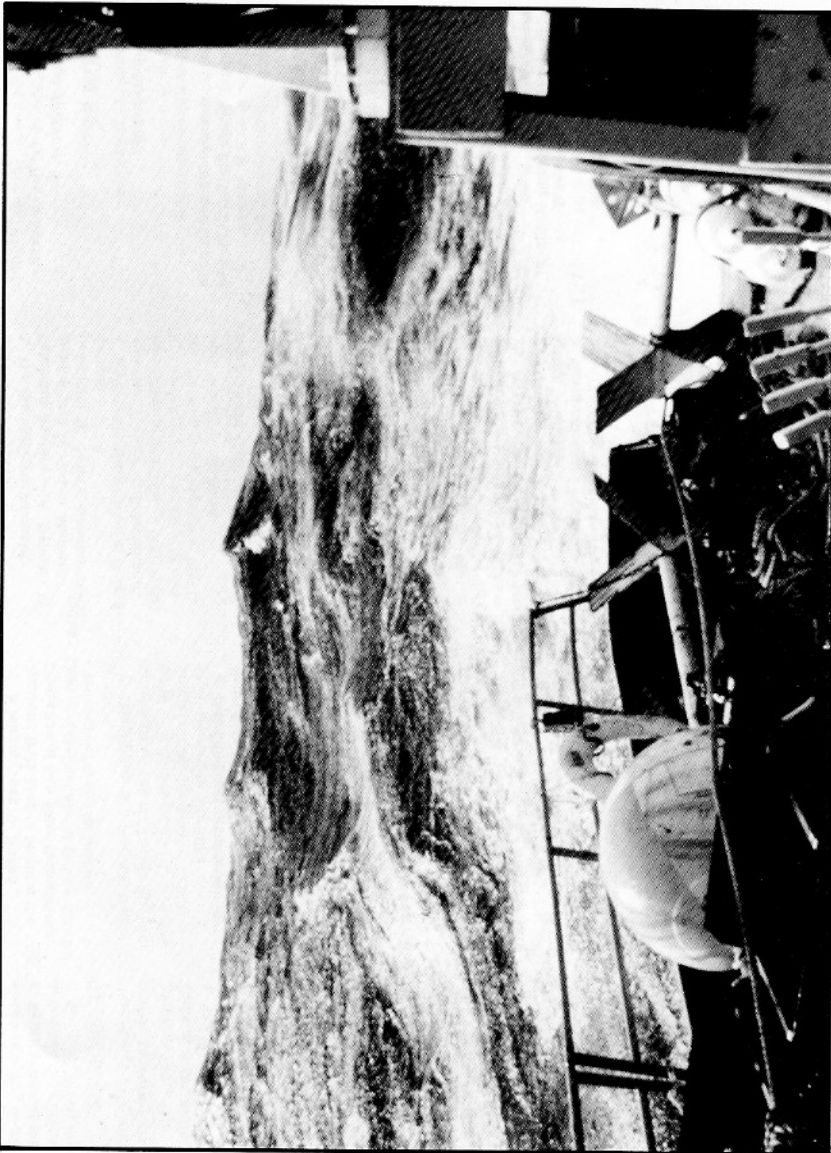
is a model sludge disposal plant utilizing energized electrons. Tour cost is \$7.50 and includes transportation and box lunch. Again, use the registration form for sign-up.

A student/industry mixer will be held Thursday from 4:30 to 6 p.m. Sponsored by a variety of industrial and academic groups, the mixer's purpose is to stimulate informal communication between the many marine-oriented students of New England and the "real world" ocean scientists and technologists participating in the conference. The mixer will be near the exhibits area. Beer and snacks will be provided.

### A Taste of New England

"A Taste of New England" will be the theme of the banquet on Thursday evening. A New England style menu will be served while the

(Continued on Page 4)



On Wednesday, Sept. 16, the IEEE Council on Oceanic Engineering will sponsor a president's luncheon from 12:15 to 1:45 p.m. All are invited.

Wednesday evening offers a choice of activities. From 5 to 7, a cocktail party will be hosted by conference exhibitors in the Exhibit Hall for all conferees and guests. In addition, beginning at 7, there will be a traditional lobster clambake aboard the *Nantascot*, which will cruise Boston Harbor. The price of \$30 includes transportation to and from the dock, the cruise, and the clambake. A cash bar will be on-board. See the registration form for

## Speakers drawn from academe, industry, gov't

Featured speakers at OCEANS '81 have been drawn from academe, industry and the Federal Government to present a broad and comprehensive overview of the ocean, our international workplace, in the coming decade.

Kicking off the technical program will be the plenary session Wednesday morning, with Dr. Ira Dyer, professor of ocean engineering at the Massachusetts Institute of Technology, and another speaker of national prominence who has yet to be confirmed.

At the IEEE (COE) President's luncheon, Dr. John Byrne, administrator designate (as we go to press) of NOAA, will address the gathering.

The conference banquet will feature Dr. Harold Edgerton, professor of electrical engineering at MIT, a founder of EG&G, and one of the truly remarkable men of our profession.

Please check registration form for guaranteed seating.

At press time, more than 70 exhibitors, representing a wide range of marine products and services, have retained space for the three-day conference, according to Jack McCarthy, exhibits chairman.

The conference is co-sponsored by the Institute of Electrical and Electronics Engineers (IEEE) and the Marine Technology Society (MTS). Previously, two separate events were held. Formal meetings will be held by these two organizations. Everyone is eligible to take tours of the Woods Hole (Mass.) Laboratories on Cape Cod and the Deer Island electron sewage treatment facility in Boston Harbor.

(See presentations listed on pages 2, 3, 4.)

## Events calendar

- Tuesday, Sept. 15**
    - Early Bird Reception, 5:30 - 7:30 p.m.
  - Wednesday, Sept. 16**
    - IEEE/COE Luncheon, 12:15 - 1:45 p.m.
    - Exhibitors' Cocktail Party, 5-7 p.m.
    - Boston Harbor Cruise and New England Clambake aboard the *Nantascot*, 7-11 p.m. \$30.
    - Underwater Slide/Film Symposium, 8 p.m. Free.
  - Thursday, Sept. 17**
    - Deer Island Electron Sewage Treatment Plant Tour, 12 noon-4 p.m. \$7.50
    - Student/Industry Mixer, 4:30-6 p.m.
    - "A Taste of New England" Banquet, 6:30, cocktails; 7:30, dinner.
    - Featured speaker, Dr. Harold Edgerton.
  - Friday, Sept. 18**
    - MTS Luncheon, 12:15-1:45 p.m.
  - Saturday, Sept. 19**
    - Woods Hole Laboratories Tour, 8 a.m.-4 p.m. \$17
- Conferees and guests are invited to all of the above events.



Chairman: D.M. Hughes, Oceanering International

**1. The Underwater Service Industry** — D.M. Hughes, Oceanering International

**2. A Critical Review of Oil Spill Risk Analysis** — H.N. Passafium and G.G. Tharakan, Massachusetts Institute of Technology, Cambridge, Mass.

**3. The Loft Concept: Offshore Helicopter Flight Following Using Loran-C** — R.J. Hillon, FAA, Systems Research and Development Service, Washington, D.C. and J.F. Carriff, DOT/Transportation Systems Center, Cambridge, Mass.

**4. How to Employ a Diving Company: A Discussion from a Management Viewpoint** — C. von Alt, Atlantic Diving Company, Inc., Gloucester, Mass.

**SESSION H5**  
Thursday, 17 September, 1530-1700  
**Economic Potential of the Ocean - II**  
Chairman: Marion M. Montague  
Library of Congress

INC., Charles D. Matthews, National Ocean Industries Association, Stephen P. Chamberlain, American Petroleum Institute

A special one-day session has been developed to address the technology, and decision-making constraints involved in carrying out exploration, selection, development and production of Outer Continental Shelf (OCS) petroleum resources. The primer is designed to provide an introductory technical background for the engineering and scientific community and a general overview for legislative, business and policy-making groups. Specific areas covered by the primer are:

1. OCS Oil and Gas as Part of the Energy Mix for 1950
2. Geological, Geophysical, and Geochemical Exploration Technology
3. Economic and Technology Dilemmas in Determining High Potential and High Development Interest Prospects
4. The OCS Leasing Process
5. Exploratory Drilling Phase of OCS Operations
6. Development Drilling and Production Operations

1. *In Situ* Optical Sensor for Fluorescence, Scattering and Transmittance — Y. Tsuji, T. Hara and K. Sasaki, Japan Marine Science and Technology Center, Yokosuka, Japan
2. **Coral Reef Management: Bonaire vs. Maclean** — V.S. Hodgson, Framingham, Mass., State College
3. **Carbohydrate Binding Proteins in Intraspecific Marine Microbial Associations** — S.H. Iman, R.F. Bard and T.R. Tosteson, University of Puerto Rico, Mayaguez
4. **Pharmacological Activity of High Molecular Weight Micro-Algal Extracts** — J.R. Galarza, R. Hevuelia, B.R. Zaidi, R.F. Bard, and T.R. Tosteson, University of Puerto Rico, Mayaguez
5. **A Comparison of Two Tropical Ecosystems: The Mangroves and the Corals (Reefs) with Special Reference to Fishes** — M.J. Prince, Jayaseelan and K. Krishnamurthy, Annamalai University, Tamilnadu, South India

- SESSION L4**  
Friday, 18 September, 1530-1700  
**Marine Biota - II**
1. **Statistics of Extreme Storm Surges in Eastern Canadian Water Bodies** — T.S. Murty, Institute of Ocean Sciences, Sidney, British Columbia, Canada; and M.I. El-Sabh and J.M. Brand, University of Quebec at Rimouski
  2. **A Statistical Approach to Ocean Wave Modeling, Using Buoy Data** — M.K. Draper, H.A. Gamber and T.A. Watkins, University of New Orleans, New Orleans

## At press time, these are exhibitors

The following organizations have confirmed exhibit space at press time:

- Aanderaa Instruments, Ltd.  
Atlantic Diving Co., Inc.  
AT&T Long Lines  
Bell & Howell  
Benthos Corporation  
Brantner & Associates, Inc.  
Canflex Manufacturing, Inc.  
Charles Stark Draper Laboratory, Inc.  
Consolidated Products/South Bay Cable Control Data Corporation  
Corland Line Co.  
Custom Cable Co.  
Datasonics, Inc.  
Defence Mapping Agency  
D.G. O'Brien, Inc.  
Diving Unlimited International  
Ecom Communications Systems  
EG&G Sea Link  
Electronic Sales of New England  
Emerson and Cuming/W.R. Grace and Co. Fathom 36, Inc.  
Environmental Devices Corp.  
EPC Labs, Inc.  
Fluid Dynamic  
General Instrument Corporation  
General Oceanics, Inc.  
Gould Inc., Chesapeake Instrument Division  
Guidline Instruments, Inc.  
Hermes Electronics, Ltd.  
Hydro Products
- InterOcean Systems, Inc.  
ITT Cannon Electric  
Jack McCarthy Associates  
JMR Instruments, Inc.  
Klein Associates, Inc.  
Lucker Manufacturing Co.  
Marsh-McBrierty, Inc.  
M.I.T. Sea Grant  
Motorola Mini-Ranger  
Neil Brown Instrument Systems, Inc.  
Ocean Instruments, U.S.A., Inc.  
Oceanus-Woods Hole  
Ocean Research Equipment, Inc.  
Optelecom, Inc.  
Preformed Line Products  
Raytheon Ocean Systems Co.  
Raytheon Submarine Signal Division  
Robert A. Petterson, Inc.  
Rochester Corporation  
Schonsted Instrument Co.  
Sea Data Corporation  
Sea Mac Division, Harvey-Lynch, Inc.  
Simplex Wire and Cable Company  
Sonatech, Inc.  
Sub-Sea Systems  
Telstar Electronics  
Telharometer  
The Zippertubing Co.  
Wall Rope Works/Yale Cordage  
Whitehall Manufacturing Corp.

National Marine Fisheries Service, Dept. of Commerce  
New England Division, U.S. Army Corps of Engineers  
Woods Hole Oceanographic Institution  
National Oceanic and Atmospheric Administration, Dept. of Commerce

(Members of organizations listed above are entitled to discount admission, as described in advance registration form.)

## Many events planned

(Continued from Page 1)

U.S. Coast Guard Academy Cadet Chorus entertains with songs and chants. The featured speaker will be Dr. Harold Edgerton, widely known ocean scientist and engineer from the Massachusetts Institute of Technology, and co-founder of EG&G Corp. Cocktails will be at 6:30, dinner at 7:30.

On Friday, September 18, MTS will sponsor a president's luncheon from 12:15 to 1:45 p.m. All are invited.

If you are staying in Boston on Saturday, you may tour the Woods Hole Laboratories from 8 a.m. to 4 p.m. There will be a presentation and tour of the facilities, followed by a lunch at the marine biological laboratory overlooking Eel Pond. The cost is \$17, including transportation and lunch. See the registration form for sign-up. If you are checking out of the hotels, your luggage can be put on the bus, which will stop at Boston's Logan Airport on the return trip.

### Spouse Tours of Boston

If you are bringing your spouse and family members to Boston, they may tour the city while you attend the conference. Several different types of tours are available. A shuttle bus from the hotel will stop at historic sites, including the Kennedy Library, New England Aquarium, and the U.S.S. *Constitution*. Visitors may stay at each place any length of time they wish, and catch the next bus to another point of interest. Cost per day is \$3.50 for adults, \$2 for children.

Gray Line Bus Tours also are available for Boston, Lexington and Concord, Plymouth, Salem, and other places of interest. Inquire at the hotel reservations desk.

If your family would like to experience on foot the character of Boston, they may follow the Freedom Trail and visit Faneuil Hall, Paul Revere's house, and the Old North Church. There is no charge to walk the Trail, which begins in downtown Boston.

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