Chair’s Report

This has been a very productive year for the OOAE Division despite the very difficult times we have been experiencing in the latter part. I have had the pleasure of working with a dedicated group of volunteers who have gone well beyond the call of duty; you will see the amount of time many of them have put into the OOAED matters as you read through this issue of our newsletter. Our goal is a simple one to state: to serve the members of our academic and professional community better. Nothing can make us more satisfied in this endeavor than to accomplish this goal.

Many articles in this issue, written by the members of the Extended Executive Committee of the OOAED, attempts to inform you of and to receive feedback on, some of the projects we have been working on, inline with our vision for the long term prosperity of our division.

Let me review some of these projects, certainly in no order of importance:

1. After the completion of a very successful OMAE 2001 Conference held in Rio de Janeiro (see the article by Denby Morrison) last June, the preparations for the International OMAE 2002 Conference in Oslo are going very well; we have received more than 400 abstracts in 7 symposia. To learn more about OMAE 2002, promises to be an outstanding conference, see the article by OMAE 2002 Chair Arvid Naess and the TPC Chair Subrata Chakrabarti. I am sure you have already noticed that we are almost completely ‘electronic’ this year in any and all OMAE conference communications, from submission of abstracts to final registration. The creation of the OMAE 2002 website (www.asmeconferences.org/omaee02/) by ASME staff is of no small task by any means, and we owe our gratitude to all at ASME who have contributed to this project, of which we are quite proud. Thanks are especially due to Ramon Johnson, who is the administrator of our division at ASME, for accommodating our special needs in this regard, and to my mentor, in charge of this project on the OOAED side, Subrata Chakrabarti, who has been so patient with all of us in seeing that the site works perfectly. OMAE 2002 web site is one of the first of its kind in the business; visit it.

2. We have established a new Ocean Engineering Technical Committee, and the first Ocean Engineering Symposium with almost one hundred papers will be held as part of OMAE 2002. With this new symposium, we will be filling the void in technical areas of interest to most of our members. However, being so young, the activities of the Ocean Engineering Symposium will certainly need to be reviewed and
Chair’s Message (continued from page 1)

revised after OMAE 2002; suggestions by the members of the ocean engineering community on this issue will greatly be appreciated; feel free to contact Dan Valentine or me on this issue.

3. As part of the Ocean Engineering Symposium, a “mini symposium” on water waves, ship waves, and marine hydrodynamics will be held during OMAE 2002 to honor the scholarly contributions and teachings of Prof. John V. Wehausen of U.C. Berkeley. The EC member Dan Valentine has graciously initiated this meeting. Thank you, Dan!

4. The EC member John Robinson has analyzed membership statistics of OOAED. This analysis reveals a number of interesting facts about us; see his article, “What is Ocean Engineering?”

5. We have been actively developing projects that should be of interest to our student members, the most important group of members as they represent our future. Bob Randall leads the student activities committee with his great enthusiasm and initiatives; we are very lucky to have Bob among us. He reports here on the first OOAED Graduate Student Paper Contest and the first International Student Offshore Design Competition that OOAED co-sponsors with SNAME.

6. The Houston Chapter of OOAED has been very active. Thanks to the diligent works of James Mahler, Rick Weiss, Sam Nasr, Charles Dalton, Phil Grossweiler, and Steve Barras, under the leadership of John Halkyard, a number of projects, some of which are of continuing education in nature, are undertaken; see John’s article.

7. An exciting project on a Joint Pipeline Committee, involving four technical divisions of ASME, including OOAED, has recently been initiated by the Pipelines Systems subdivision Chair, Mike Yoon. Terry Jones and Mamdouh Salama represent OOAED on this committee, and we look forward to strengthening our relations with other divisions in the area of pipelines; see Terry’s article on the issue.

8. The Journal of Offshore Mechanics and Arctic Engineering, Transactions of ASME, a prestigious journal of OOAED, will have theme, or special, issues from time to time. This is done in response to your suggestions. One such issue is scheduled for publication in May, and another theme issue will follow this. See Stephen Liu’s article on JOMAE.

These are some of the projects on which we have been working. I will report to you more in the next issue of our newsletter on some other continuing and new projects. It should be ready for mailing sometime in April. And please do not hesitate to contact one of the officers of the division or myself (see the OOAED Roster) if you have any suggestions or comments on how we can improve serving you better. Also, please consider serving in one of the committees of OOAED; we need your help. Thank you for your support and encouragement. We always look forward to your visit of OOAED web site at www.ooae.org.

Cengiz Ertekin, OOAED Chair

The New Ocean Engineering Symposium and the John V. Wehausen “Mini Symposium” on Water Waves

The Ocean Engineering Symposium of the OMAE 2002 Conference is a new symposium that is now included as a part of this well-established annual conference. The “main event”, in lieu of the traditional workshop of an OMAE symposium, is the mini symposium that was organized to honor Professor John V. Wehausen of the University of California at Berkeley.

The new OE symposium was established in conjunction with a new technical committee (viz., the Ocean Engineering Committee) as a consequence of the recent merger of the former OE and OMAE Divisions. The goal of the OE Symposium is to bring together individuals interested in communicating ideas on ocean, marine and naval sciences and technologies. Some of the areas of interest are ship waves and resistance, underwater vehicles, propulsion devices, drag reduction, cavitation, seakeeping, maneuvering and control (ROV, AUV, etc.), vibrations, acoustics, underwater technology (diving, life support), linear and nonlinear waves and wave mechanics, wave interactions with structures, flow-structure interaction (moorings, buoys, offshore structures, etc.), aquacultural engineering, and computational mechanics.

The OE symposium provides an opportunity for the community to bring us up to date on current progress, and to share this progress with recently graduated engineers. A complete list of topics included in the OE Symposium can be found at: http://www.ooae.org/omaesymposia/oesymposeym.htm.

The main event of the OE Symposium is the John V. Wehausen (Mini) Symposium on Water Waves, Ship Waves and Marine Hydrodynamics: A celebration to honor the contributions of Professor John V. Wehausen. The principal goal of this symposium is to honor the significant accomplishments of Professor John V. Wehausen in the fields of linear and nonlinear water waves that have guided our community in the investigation of these phenomena. In addition, the goals are to review the present state of wave mechanics and the future of this field of investigation from the point of view of naval architecture, ocean and offshore engineering. This symposium shall provide guidance for those of us interested in continuing to advance this field of investigation at the outset of this new century and new millennium.

Professor Wehausen has graciously accepted our invitation to honor him at the OMAE 2002 Conference in Oslo, Norway in June of 2002. The call for participation by his former students and colleagues, and others intimately interested in the subject has led to what shall prove to be a major event.

Within the topical area of water-wave mechanics of the J.V. Wehausen Symposium, there are papers on surface waves, internal waves, ship waves, wave interaction phenomena and shallow-water waves. Papers on computational simulations, theoretical models, laboratory investigations and field studies of nonlinear waves and nonlinear wave interactions that provide insight into dynamics are also included.

The members of the OE-JVW Symposium Organizing Committee are Subrata K. Chakrabarti, R. Cengiz Ertekin, Joseph L. Hammack, Daniel T. Valentine, and Ronald W. Yeung. The author of this article takes this opportunity to formally thank his colleagues for helping organize this important event.

Daniel Valentine, OE Symposium and JVW Workshop Co-Coordinator

Strengthen your profession; become a primary member of the OOAED Division!
What is Ocean Engineering?

That’s a question that I’m sure has been asked of many of you. Most people have never heard of it. My explanation that it was an “inter-disciplinary technical specialty encompassing all aspects of working in the ocean environment” drew blank looks from everybody. I therefore began describing myself simply as a Mechanical Engineer. People understand that. And it was easier. But, what is an Ocean Engineer? What does he/she do?

The curriculum had its beginning in the mid-60s at universities such as MIT, Florida Atlantic University, University of Rhode Island and University of Hawaii. It was started in response to the Navy’s need for engineers specially trained to work in the ocean. If you are old enough, you will remember the loss of the USS Thresher or some of the early Man in the Sea saturation diving projects. You might have read about the then secret projects involving submarine design. At the same time, the oil industry was going offshore as the search for energy moved out to the continental shelf and arctic seas. And it has moved into progressively deeper and deeper waters.

OOAE Division was formed by merging the OE and OMAE Divisions of ASME. The expansion of programs within the new OOAE Division therefore included technical areas that reflect the needs of the Ocean Engineers. This can clearly be seen in the newly established Ocean Engineering Symposium to be held during OMAE 2002 in Oslo, with approximately 100 abstracts submitted already as of writing of this article.

Given these roots of our profession, what have we become? Membership statistics for the OOAE Division give us some interesting and surprising answers. Over 25% of the OOAE Division are students. OOAE had 242 student members as of October 1. This is a clear indication of a continuing interest in ocean technology. Hopefully, the student members will maintain their ASME membership and interest in the OOAE Division as they go on to their careers.

Division interest selections on ASME membership renewals show that 10% of us elected Petroleum Divisions as our division of secondary interest. Obviously, there is a close relationship between the OOAE Division and offshore oil industry. But we are not a one-industry division. Other secondary division selections, in order of occurrence, were Design Engineering, Applied Mechanics, Management, Pressure Vessels & Piping and Fluid Mechanics. And many people who selected those particular divisions as their primary division also chose OOAE as their second or third choice. Clearly, we are a group with diverse interests. Most of us live in Texas. That is another indication of the ties we have to the offshore industry. But there are also groups of us that live in California, Virginia, Florida, Maryland, and Connecticut. These states have significant ocean related government installations. Therefore, a significant number of us work either for the government or government contractors in something other than oil related careers.

Job function selections show that, after students, the next largest groups are Consultants and Managers. They are followed closely by System Designers and Product Designers. This is yet another indication of the diversity within our ranks.

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There you have it. We are mostly student-consultant-manager-designers who work in petroleum-government-product design and reside in Texas-California-Northeast. With such a diverse and widespread membership, it is a challenge to develop programs to satisfy everyone’s interests. However, OOAE Division has a lot to offer. We publish a respected technical journal. We put on a major international technical conference every year. This year we will co-sponsor a student design contest with SNAME. We offer scholarships and have a graduate student paper contest. All of these programs exist because of the roots of our profession, what have we become? Membership statistics for the OOAE Division give us some interesting and surprising answers. Over 25% of the OOAE Division are students. OOAE had 242 student members as of October 1. This is a clear indication of a continuing interest in ocean technology. Hopefully, the student members will maintain their ASME membership and interest in the OOAE Division as they go on to their careers.

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What is Ocean Engineering?
(continued from page 3)

your industry or location to get involved with OOAE. Review a student paper.
Mentor a design team. Write a paper for the annual OMAE Conference. Organize a local chapter. Coordinate a conference session. Do you live near a piece of ocean engineering history? Nominate it as an ASME Historical Landmark. Are you an industry pioneers? Write down or dictate your experiences so they can be saved for future engineers. Big or small, no volunteer will be turned down. Visit your OOAE web site and contact anyone in the Division leadership. Volunteer and help guide the future of your profession.

John Robinson, P.E.,
Membership Committee Chair

International Student Offshore Design (ISODC) Competition

The OOAE Division of ASME and the Society of Naval Architects and Marine Engineers (SNAME) are co-sponsoring the International Student Offshore Design Competition (ISODC) for the academic year (September 2001 - August 2002). The intent of the competition is to develop an appreciation of the design process, encourage teamwork, and establish mentor relationships between students and the offshore industry professionals. Undergraduate design course projects (capstone design course) are the primary focus of the competition. However, thesis and independent study projects are also eligible. The design requirements, competition rules, and submission requirements can be found or linked from www.ooae.org. The initial entry registration is due on or before February 28, 2002, which can be accomplished at the SNAME web site (www.sname.org). The initial entry registration is due on or before February 28, 2002, which can be accomplished at the SNAME web site (www.sname.org). The final entry registration is due on or before February 28, 2002, which can be accomplished at the SNAME web site (www.sname.org).

The efforts of all student participants are very much appreciated and congratulations are extended to the winners. The contribution of the judging committee is very much appreciated. Ramon Johnson and his staff at ASME headquarters arranged for the distribution of the awards, plaques and certificates, and their efforts are greatly appreciated. The recognition of the graduate students in this competition will hopefully encourage more students and more universities to participate in the 2001–2002 competition, see below.

OOAE Division’s Graduate Student Paper Competitions

2000-2001 OOAE Graduate Student Paper Competition Results: The 2000–2001 Graduate Student Paper Competition has been completed. John Robinson organized the judging committee consisting of Terry Jones, Don Davis, Robert Latorre, and Robert Bea. The winner for the doctoral level paper was a tie between Anouck Girard and Ayman Mahfouz and the winner at the Masters Level was Todd Gregory and Raymond Rojas.

The winners received a $500 cash award and a certificate from ASME and a plaque was sent to the university department of each award winner. In addition, the winners will be reimbursed for travel expenses from a pool of $1,500 if they can attend OMAE 2002 in Oslo. The efforts of all student participants are very much appreciated and congratulations are extended to the winners. The contribution of the judging committee is very much appreciated. Ramon Johnson and his staff at ASME headquarters arranged for the distribution of the awards, plaques and certificates, and their efforts are greatly appreciated. The recognition of the graduate students in this competition will hopefully encourage more students and more universities to participate in the 2001–2002 competition, see below.

Table 1. The winning papers in the 2000-2001 OOAE Division’s Graduate Student Paper Competition.

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<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>University</th>
<th>Advisor</th>
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<tr>
<td>Girard,</td>
<td>Relative Dynamic Positioning of Ships and/or Offshore Platforms Using</td>
<td>University of California</td>
<td>Prof. K.</td>
<td>Doctoral</td>
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<tr>
<td>Anouck</td>
<td>Nonlinear Dynamic Surface Control</td>
<td>at Berkeley</td>
<td>Hedrick</td>
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<tr>
<td>Gregory,</td>
<td>Feasibility of a Cold Seawater Facility</td>
<td>University of Hawaii</td>
<td>Prof. K.F.</td>
<td>Masters</td>
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<td>Todd &amp; Rojas</td>
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<td>Cheung</td>
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<td>Rojas</td>
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<td>Mahfouz,</td>
<td>On-line Prediction of the Hydrodynamic Parameters in the Coupled</td>
<td>Memorial University of</td>
<td>Prof. M.</td>
<td>Doctoral</td>
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<tr>
<td>Ayman</td>
<td>Heave and Pitch Motion Equations for Underwater Robotic Vehicles</td>
<td>Newfoundland</td>
<td>Haddara</td>
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<td></td>
<td>Using Measured Responses at Sea</td>
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An Outstanding Conference...

The 20th International OMAE Conference in Rio de Janeiro, Brazil, June 2001, achieves outstanding attendance, and excellent technical and business content.

The 20th OMAE Conference was held in the glorious and technically charged, venue of Rio de Janeiro. As Brazil is a leader in production from deep and ultra-deep water, the technical content was stimulated by the venue. Papers and special sessions covering a wide array of technical topics including coastal, offshore, reliability, materials, pipelines, and safety. The location was further conducive to topical luncheons that emphasized Brazil’s experience in the offshore areas. A remarkable presentation was also given on the events surrounding safety and accidence offshore, including recent finding from the P36 incident.

OMAE has built a reputation for a venue to not only exchange technical ideas, but also to mingle with colleagues in an informal setting. The social functions arranged by the local Brazilian hosts achieved this wonderfully, and we have fond memories of the main function, under a full moon overlooking a Rio marina.

The local organizers also had an extensive exhibit that added to the theme of the conference.

Well over 500 participants from government, business, industry and universities contributed to yet another outstanding value for the time spent together on the OMAE conference.

Denby Morrison, International Conference Committee Chair

OOAED Houston Chapter Activities

Marginal Field Workshop: The Houston Chapter of OOAED sponsored a half-day workshop at OMAE 2001 in Rio on “Optimal Development of Marginal Fields in Deepwater”. About 60 people participated in the workshop. Five topics were presented followed by a lively discussion:

• Drivers in Deepwater Marginal Field Development (Mike Curole, Shell)
• Drilling Challenges (Irv Brooks, Chevron)
• Subsea as Part of the System (Denby Morrison, Shell)
• Infrastructure (Jim Maher, CSO-Aker)
• New Approaches / Flexibility / Reducing Risks (Ed Horton, CSO-Aker)

This workshop is being expanded into a six session course to be held on Thursday evenings in Houston starting on February 28, 2002. A distinguished group of speakers have committed to participate in this course, which will include coverage of all the key functional areas (reservoir characterization, drilling, completions, subsea, facility selection, export, construction, HSE and regulatory issues) as well as discussions from both the major operators and the independent operators point of view on the development of marginal fields in deepwater. The final session will be devoted to Case Studies. Steve Barras of CSO-Aker is Chairman of the Workshop Committee. Anyone interested in more information can contact him at (281) 588-7504.

Scholarship Awards, Summer Job Placement, and ISODC: The Houston Chapter has awarded three student scholarships. They are:

• Monte Jones, Sr. at the University of Houston, received $500.
• Helmi al-Jamal, MS Candidate and PhD aspirant at the University of Houston, received $1000. Helmi is doing research on Vortex Induced Vibration of Marine Risers.
• Erin Snively, Jr. at Rice University, received $500.

Unfortunately, we were unable to place any students in summer jobs this year. We will be trying again next summer! Charles Dalton is helping to administer the International Student Offshore Design Competition that is a joint venture between OOAED and the Society of Naval Architects and Marine Engineers, see the article by Bob Randall in this newsletter.

John Halkyard, OOAED Houston Chapter Chair

Joint Pipeline Committee

On September 29, a meeting was held between representatives of the ASME’s Pipelines Subdivision, the Petroleum Division and the Ocean, Offshore and Arctic Engineering Division. Also in attendance were Frank Adamek, ASME Vice President, Energy Resources Group, and Sam Zamrik, ASME Vice President, Materials & Structures Group.

The purpose of this meeting was for each of the three ASME technical groups that were represented to become better acquainted with their capabilities and needs, and to explore areas where they can collaborate with one another. Sam Zamrik also expressed the opinion that the Pressure Vessel and Piping Division would be interested in participating. At a later date, the NDE Division also expressed an interest in participating. Each of these divisions has activities in various aspects of pipelines with many areas of overlap.

The primary conclusion of this meeting was to form a Joint Pipeline Committee with one technical and one Executive Committee representative from each Division. This committee would further develop the goals and operational plans for the group. Potential areas of cooperation include:

• Joint long range planning
• Workshops, short courses and tutorials which would be portable between two or more conferences
• Joint efforts for publications

The first meeting of the Committee is tentatively scheduled for March 9, 2002 during the ASME TEC meeting in Houston. Terry Jones and Mamdouh Salama will represent OOAED.

Terry Jones, OOAED Representative to JPC and Pipeline Technology Symposium Coordinator

Announcing the New OOAED Discussion Forum!

OEAED is pleased to announce the newly formatted discussion forum created specifically for the ocean, offshore, and arctic engineering industry. The new OOAED discussion forum gives individuals the opportunity to post questions or comments as well as read and reply to existing comments. This public forum can be viewed by anyone and will often have posted questions from members and non-members alike seeking information related to the ocean, offshore, and arctic engineering industry. To post or reply to comments, users need to register as “forum users” by simply entering their email address and creating a username. Once registered, users are invited to share their engineering knowledge with the ocean, offshore, and arctic engineering industry. Please visit the new OOAED discussion forum at: http://ww2.asme.org/cfforum2000/viewtopics.cfm?Forum=28.

Ramon Johnson, ASME Staff
As a refereed technical journal, JOMAE, Transactions of ASME, is unique in that the publications reflect the leading edge R&D activities in the broad fields of offshore engineering (related to energy exploration), ocean engineering and polar & Arctic engineering. These activities include pipelines, materials, safety and reliability, and ocean space utilization, which go far beyond the narrower scopes of many other well-established journals.

JOMAE publishes around 300 pages of archival-quality papers per year. A high percentage of the manuscripts come from the annual International OMAE Conference Proceedings. Those publications in the proceedings that are recognized as distinguished and deserving to be published in an archival journal are recommended for further review by the rigorous JOMAE editorial board. The number of independent submission varies between 20 to 30 percent of the published papers. Priority handling is given to these independently submitted manuscripts. In addition to the regular issues, themed issues are programmed from time to time and much more.

For more information, please visit the OMAE 2002 conference web site at www.asmeconferences.org/omega2002.

We would like to acknowledge the following individuals from the ASME staff for their contributions in the planning, development, and maintenance of the conference web site:

- Paul Poots, Information Technology Analyst
- Cynthia Clark, Managing Editor, Technical Publishing
- Siu Lan Zhang, Applications Specialist
- Manoher Narahari, Contract Programmer
- Michael Tesler, Applications Specialist
- Patrick O’Connell, Director, Information Technology
- John Bendo, Manager, Engineering Programs
- Lauren Postyn, Manager, Meetings and Exhibits Department
- Deborah Johnson, Production Coordinator, New Media
- Ramon Johnson, Administrator, Engineering Programs

Ramon Johnson, ASME Staff