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EDITOR: FREDERICK H. MALTZ

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OCEANS '07
ABERDEEN • SCOTLAND 18-21 JUNE 2007



Oceans '07 will be held in Scotland at the Aberdeen Exhibition and Conference Center. EurOCEAN 2007 will co-locate with Oceans07!

The prestigious Oceans Conference and Exhibition is coming to Aberdeen, Scotland on 18-21 June 2007. This major international conference is run under the auspices of the Oceanic Engineering Society (OES) and its parent organization The Institute of Electrical and Electronic Engineers (IEEE).

Oceans conferences have a long-established history and global pedigree and are regarded equally favorably by industrialists and academics alike. They are intended to promote and disseminate knowledge, understanding and awareness amongst engineers and scientists in Marine Technology, Oceans Science and Oceanic Engineering. Their remit is to bring the major

players in the field together with the up-and-coming young scientists and students in a forum of easy interaction and interchange of knowledge and experience in order to enhance our appreciation of the role the Oceans play in our lives and environment and how to utilize the technology to achieve this.

Since June 2005, IEEE/OES is now offering two Oceans conferences every year: one in North America and the other alternating between Europe (in odd years) and Asia/Pacific (in even years). The Aberdeen event will be the FIRST time Oceans has come to the United Kingdom.

(see Call for Papers page 33)

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President's Corner

A very active year is scheduled for the society in 2007. Our two major conferences are to be held in very attractive venues, Aberdeen, Scotland in June and Vancouver, British Columbia in late September. The Aberdeen conference is to be held in conjunction with EuroOceans, a major EC conference. In addition, the annual OTC in Houston will be held as usual in the first week of May. Following the Aberdeen event the International Submarine Races will be held at DTMB in Carderock, Maryland. The society will also be represented at the National Ocean Science Bowl that is run by CORE the last weekend in April. We sponsor four of the eight prizes for the winners of the runoff. In April, our UT series is continuing with a symposium in Tokyo again examining the scientific uses of submarine cables. AUV 06 was held in February of this year due to some scheduling conflicts. Plans are also underway to run a symposium in Chile in December. Add to this the society's involvement in the Global Earth Observation System of Systems (GEOSS) and one can readily see that we are very busy.

Future conferences, symposia, and workshops are in the planning stages that require a considerable commitment of time from the organizers and the society governing body. If one goes to our web site—www.oceanicengineering.org—the listing of venues that have been approved by the ADCOM and those under consideration by our RECON committee is extensive. None of these events just happen. They represent a considerable time commitment on the part of those that have taken on the responsibility to see that these events are successful from both a technical and financial viewpoint.

Therefore, I would again ask any society member that has both the time and the inclination to get involved in this process



as more hands make each task more manageable. Anyone interested in assisting with our OCEANS events should contact either Joe Vadus or Rene Garello our two conference vice presidents. In addition, our technical committees can always use more help in reviewing papers for the events and assisting in workshops and symposia. Contact the chair of the technical committee that suits your interests and he will gladly welcome you onboard.

I would like to recognize Gamal Hassan for his efforts in invigorating our Houston presence. He has established a chapter in the city that will assist with our participation in the OTC. We are one of eleven sponsors for this event that has approximately 500,000 square feet of exhibit space and 56,000 attendees. The society has been involved since its inception in the 1970's.

Sandy Williams and I made a recent trip to Australia to assist in running a GEOSS meeting at CISRO. While there we also met with the LOC for OCEANS 2010 Sydney headed by Brian Ferguson. We encouraged the members to form a chapter and Sandy gave a presentation on his technical committee area of expertise, current measurements. He also gave this same talk in Melbourne to garner more members for the proposed chapter.

A committee led by Stan Chamberlain is in the process of writing a history of the society that will be published next year to commemorate our 40 years existence as a council and a society. Stan and his committee are working with IEEE headquarters to produce the document. This document should make interesting reading.

Get involved in your society and you will find a wealth of information and fellowship.

Jim Barbera, IEEE/OES President

Offshore Technology Conference Attendance Reaches 25-Year High

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HOUSTON, Texas, USA (May 3, 2007 – Attendance at the 2007 Offshore Technology Conference (OTC) reached a 25-year high to 67,155, as offshore professionals from 110 countries met to learn about the latest technology to develop more oil and natural gas resources from beneath the ocean. The world's largest offshore event was held 30 April-3 May at Reliant Park in Houston.

Attendance for 2007 increased 13 percent from 59,236 attendees in 2006. OTC's exhibition expanded for the first time into the adjacent Reliant Stadium and added more outdoor exhibit space in 2007. The show included nearly 2,400 companies from more than 30 countries, up from 2,229 in 2006. Total exhibit space was nearly 530,000 square feet, about the size of 13 football fields.

"The impressive increase in attendance reflects the strong state of the industry and the demand for advanced technology that allows us to find new resources in deeper water and harsher environments. The technical conference also allowed professionals to share solutions that will improve our ability to supply clean, affordable and abundant energy in the face of increasing global demand," said Arnis Judzis, 2007 OTC chairman.

OTC Awards Luncheon keynote speaker Chad Deaton, chief executive officer of Baker Hughes, noted that the industry faces geopolitical uncertainty and economic challenges in meeting increased global demand for energy, but said that the industry can control its own destiny by driving change. "We'll be consuming 50 percent more oil per day in 2030 than we use today," Deaton said. "Operators tend to wait for other companies to try

new technology first, and only apply new tools after they have been proven in other people's wells....To really drive change, the service companies need help from operators to adopt new technologies more rapidly. With your help, we can gain experience more quickly and accelerate deployment of next-generation technologies."

OTC offered special sessions on significant industry topics, such as the changing roles of national oil companies and international oil companies, the industry's preparation for the upcoming hurricane season, the realities facing OPEC, and emerging areas for offshore development, in addition to 300 technical presentations. OTC's Spotlight on New Technology program highlighted 14 innovative technologies that are already making the industry more effective.

OTC held *The Next Wave* event to address issues important to industry professionals under the age of 35. The first Energy Education Institute brought 100 Houston area elementary and secondary teachers to OTC for a workshop on bringing energy topics to their classrooms.

The 2008 OTC, "Waves of Change," takes place 5-8 May 2008 at Reliant Center at Reliant Park. For more information, visit www.otcnet.org.

About OTC

Founded in 1969, the Offshore Technology Conference is the world's foremost event for the development of offshore resources in the fields of drilling, exploration, production and environmental protection. OTC is held annually at Reliant Center in Houston. For more information, visit www.otcnet.org.

Visit the OES online, link to the IEEE homepage:
<http://www.oceanicengineering.org>

CONFERENCE DEVELOPMENT REPORT

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OCEANS 2006 MTS/IEEE Boston

This was a most successful conference as reported in this issue. This conference was first recognized by RECON (OES Conference Development) in 2002, a four year lead time. John Irza was identified as the lead person and later designated as Conference Chair. Four years ago, our concern was focused on the Boston "Big Dig" massive road redirection, and will it be completed in time...and it was. RECON efforts are seldom remembered. If you tell someone you helped start it four years ago, they just roll their eyes. In this case, John Irza paused to remember.



are complete and ready for transition to JOAB.

OCEANS '10 - Sydney, Australia, May 24-28, 2010: R. Wernli, S. Chamberlain and J. Collins conducted a RECON visit following the OCEANS '06 Singapore conference in May 2006. Brian Ferguson of the Sidney Local Organizing Committee gave a presentation to OES AdCom in Boston and the venue and LOC plan was subsequently approved. The conference facilities and hotels bordering famous Darling Harbor are ideal for OCEANS.

Conference Development (RECON Reports)

Bob Wernli continues to do a very creditable job as OES Reconnaissance (RECON) Committee Chair. In Boston, at the OES AdCom and RECON Meetings, Bob Wernli reported progress on Future OCEANS Conferences out to 2013. His report is summarized below.

FUTURE OCEANS CONFERENCE STATUS

OCEANS '07 Aberdeen, June 18-21, 2007 and OCEANS '07 MTS/IEEE Vancouver, September 20-25, 2007 are under the cognizance of the Joint Oceans Advisory Board (JOAB).

OCEANS/TECHNO-OCEAN MTS/IEEE 2008(OTO'08)

Kobe, Japan, April 8-11, 2008: April is the month for Cherry Blossom Festivals in Japan. The Memorandum of Understanding was signed in Boston by MTS, OES and Japan's Techno-Ocean Network.. Bob Wernli and Judy Krauthammer of MTS attended a RECON/ planning meeting in Kobe in October, during TO'06, the 20th Anniversary of Techno-Ocean. The Web site for OTO '08 is < <http://www.oceans08mtsieekobe-technocean08.org/> .

OCEANS '08 - Quebec, Canada, September 14-19, 2008: RECON tasks are complete and now transferred to Conference Operations (JOAB).

OCEANS '09 - Bremen, Germany, May 11-15, 2009: RECON tasks are complete and a Letter of Acceptance was signed by the OES President but pending approval in Bremen and ready for transition to JOAB.

OCEANS '09 - Biloxi, MS, October 27-29, 2009: The Biloxi venue was approved at a joint MTS/OES meeting in BOSTON, following a presentation by Ed Gough of the Biloxi Local Organizing Committee. The main Biloxi Hotels are restored after the devastation of Katrina, and a few new ones are being constructed. The Biloxi Coliseum will be used again, and a RECON visit is planned when the principal hotel is selected. RECON tasks

OCEANS '10 MTS/IEEE - Seattle, Washington, Fall 2010:

Ted Brockett of the Seattle Local Organizing Committee gave a briefing tot the RECON Committee meeting in Boston. The same venue used for OCEANS '99 is acceptable to MTS and OES. A presentation is planned for the AdCom meeting in Vancouver at Oceans 2007 Bob Spindel is chairing this conference series for the third time after big successes in '89 and '99. Ted Brockett is co-chairman and Norman Miller provides OES Liaison.

OCEANS '11 - Santander, Spain, Spring 2011:

A tradeoff between Santander located on the Atlantic coast with Valencia on the Mediterranean coast was completed by the LOC with Santander recommended. Facilities, hotels and plans are most impressive. Letters of support were received from the President of the region of Cantabria and the Mayor of Santander. In 2007, Valencia will be the site of the Americus Sailing Cup Races. A site visit is planned prior to the OCEANS '07 Conference in Aberdeen in June, with follow-on discussions at the RECON meeting in Aberdeen. A presentation for site approval is expected at the AdCom meeting in Vancouver.

OCEANS '11 MTS/IEEE - Hawaii:

A presentation by John Wiltshire was given at the RECON meeting in Boston regarding a tradeoff comparison between the Hilton Hawaiian Village (HHV), Honolulu, Oahu and the Hilton Waikoloa, Kona on the "Big Island". Despite previous successes at the Hilton Hawaiian Village, the Hilton Waikoloa was recommended and accepted. A site visit will be conducted early in 2007 with a presentation planned for the AdCom meeting in Vancouver

OCEANS '12 - Asia/Pacific:

The RECON committee is considering potential sites. Korea and China are being considered and Japan is also a possibility, if a four year cycle is desired.. Tamaki Ura and Hisaaki Maeda are leading this RECON effort.

OCEANS '12 MTS/IEEE - North America:

The RECON committee is considering potential sites. Providence, Newport and Halifax have been suggested. Providence appears to be the

first option. A Letter of Interest by the LOC principals needs to be submitted to MTS & OES, before RECON engages.

OCEANS '13 - Europe: Open for suggestions at RECON meeting in Boston. Genoa, Italy has been suggested along with the Region of La Spezia, Italy and Norway.

OCEANS '13 MTS/IEEE - San Diego, CA. October 21-25, 2013: Kevin Hardy and Bob Wernli are organizing the LOC and have booked the Town and Country Hotel and Convention Center for 21-25 October because of the popular demand and competition for this venue. A Letter of Interest by the LOC principals needs to be submitted to MTS & OES, before RECON engages.

FUTURE SYMPOSIA REPORT

Fifth Underwater Technology '07 and Scientific Use of Submarine Cables '07 Symposium

This will be a joint Symposium held at the University of Tokyo's new Komaba Center located in the Institute of Industrial Science. The dates are April 17-20, 2007, four days starting with a technical tour. Plenary speakers are lined up. On the fifth day, April 21 the attendees are invited to Shanghai (Jiao Tong University) for a two-day workshop April 23-24, and technical tour on April 25.

General Co-Chairs are Tamaki Ura, Robert Wernli & Junzo Kasahara. Sponsors include: University of Tokyo's Institute of Industrial Science; ONR Global-Asia; JAM-E STEC. Note that M-E is Marine-Earth.

US/EU-Baltic International Symposia

The first & second US/EU-Baltic International Symposium 2004 & 2006 were successfully held in Klaipeda, Lithuania and reported in the OES Newsletter. The series continues on a biennial cycle, the next planned for May 27-28-29, 2008

in Tallinn, Estonia. Attendees in the last symposium recommended Tallinn. The Estonian Embassy in Washington was contacted to obtain top level recommendations of leading Marine Institutions in Tallinn. The list included the Ministry of Environment, which was an excellent starting point. They named Tallinn Technical University's Marine Systems Institute and its Director Dr. Juri Elken. The draft "Call for Papers" is included in this issue. The web site < www.US-EU-Baltic2008.org > is being prepared.

Chile-US Ocean Engineering Workshop/Symposium

This has been on the radar screen since 2003. The first effort involved working with Prof. Victor Gallardo, Universidad de Concepcion (in Concepcion, Chile) introduced to me by Sandy Williams at OCEANS 2003. A preliminary proposal was prepared jointly with Gallardo, who, unfortunately was unable to obtain adequate support from his University and resulted in cancellation. I contacted Prof. Hugh Rudnick, former IEEE Region 9 Director and proposed that the IEEE Chile Section take the lead. We have only 3 OES Members in Chile according to OES Membership Chair Ken Ferer, who is participating in this effort. Prof. Rudnick provided the E-mail addresses of the Section Chair and others, who were receptive to a cooperative effort.

The IEEE Chile Section sent a Letter of Interest for a Workshop or Symposium in Chile. The Section named Gaston Lefranc, Vice Chairman of IEEE Chile Section, as the link between the Section, OES and the local organization. He contacted the Oceanic Group of the School of Sea Sciences (Grupo de Oceanografia de la Escuela de Ciencias del Mar), Catholic University of Valparaiso (PUCV). Dr. Sergio Salinas is in charge to organize the possible Workshop or Symposium and to talk with IEEE. They have concern about the procedure and financial issues. A joint proposal will be prepared to solicit support for grants and services.



Tallinn University of Technology (TUT).L-R: J. Barbera, OES Pres., J. Vadus OES VP; Prof. Rein Vaikmae, Vice Rector; Prof.Juri Elken, Director, Marine Systems Institute. TUT is the leading University in Estonia



Estonia Academy of Sciences. L-R: Prof. Leo Motus, Secretary General; J. Vadus & J.Barbera of OES and Juri Elken, TUT.The historic center of the port city of Tallinn is on UNESCO's List of World Heritage Centers.



Tallinn, Estonia--Technical Program Planning Meeting. L-R: Urmas Raudsepp, EU Technical Program Chair & Gennadi Lessen of TUT with Sandy Williams OES, US Technical Program Chair. An International Technical Program Committee was established to provide wide representation in the US & EU.



Washington D.C. --Joint Baltic American National Committee (JBANC) Workshop. -- President of Lithuania, Valdas Adamkus gave the opening address with moderators: Juri Luik, Estonia's Ambassador to the US and John Cloud, US Ambassador to Lithuania. Reliable energy supply to the three Baltic States was highlighted as a major concern. J.Barbera and J.Vadus, OES were participants.



Chile: Fisheries Development Institute (IFOP), Valparaiso, Chile. L-R Sergio Salinas; Enrique Aranda, Marine Operations; Vivian Montecino, Exec. Director; J.Vadus & J Carroll of OES. (Note: Wall picture is the President of Chile, Michelle Bachelet, formerly of Bethesda, MD.) It was noted that Chile is the world's second largest exporter of Salmon.



Chile: Catholic University of Valparaiso (PUCV). J. Carroll & J.Vadus of OES, flanked by L-R: Sergio Salinas, S.A. Zahr Maluk, Vice Rector; Sergio Marshall, Vice Rector and Juan Diaz. Some interest was expressed in real time measurement of seismic activity and tsunamis. There is considerable seismic activity offshore.



Chile: Servicio Hydrografico Y Oceanografico de la Armada (SHOA)-Chilean Navy. L-R: Sergio Salinas, J. Vadus, OES; CDR. Andris Enriquez; J. Carroll of OES and Juan Diaz. SHOA patrols the long 4000 km coastline. The historic center of the port of Valparaiso is a World Heritage Site.



Chile: Vina Del Mar. J.Carroll of OES flanked by Marisel Medina, PUCV and Gaston Lefranc, Former Chair, Chile IEEE Section. This is one of the major coastal resorts in South America.



Santander, Spain. Venue for OCEANS 2011 Europe. L-R: Jesus Manuel.de la Cruz, Complutense University, Madrid, Head Organizing Committee; Bob Bannon, OES RECON; Bob Wernli, OES RECON Chair; Gema Igual Ortis, Santander Gov't Rep.; Rene Garelo, OES VP; Francisco J.Velasco, University of Cantabria. The port city of Santander is on Bay of Biscay on the Atlantic Coast. Regional Government offers strong support.

Obituary – Geneviève Jourdain

Geneviève Jourdain passed away quite suddenly by the end of last year. She was turning 61 and ready to retire. She had been for a very long time a member of our community of Oceanic Engineering as well as the Signal Processing one. She was a professor at the French “Institut National Polytechnique de Grenoble (INPG)” and she was deeply involved in the research lab in which she started her career (Centre d’Etudes des Phénomènes Aléatoires et Géophysiques – CEPHAG). She was one of the main contributors to the development of the discipline of Signal Processing in France, applied to underwater acoustics and telecommunications. She always maintained a strong relationship with the large companies and civil and military institutions for developing research activities in our oceanic engineering fields.



Geneviève was one of my professors when I got my MSc degree - followed by my PhD - at INPG in the late seventies. She was a fantastic professor: always smiling, full of energy and without compromise when it comes to give a mark to the students.

As president of the French chapter, and on behalf of all the members of the French chapter, I would like to present all my condolences to her family and above all to my friend, Jean-Yves Jourdain, her husband, founder of the French chapter and a driving force behind the Oceans’94 and ’98 conferences in FRANCE. We are all in deep sorrow.

René Garello
Vice-President Conference Operations



OES and the Texas Connection

Claude P. Brancart
IEEE/OES OTC Program Committee

The Beginning

In 1969, eleven technical societies got together to create the Offshore Technology Conference, OTC. They wanted a vehicle where their societies could be represented to a growing market, the offshore oil industry. These became the sponsoring societies and it was decided that they would be responsible for the technical programs at the conference. A broader OTC Committee, the conference committee, would handle all other aspects: exhibitors, socials, programs and proceedings, registration, and venue. IEEE-OES was one of those original eleven societies.

The first OTC attracted 4,200 attendees, 125 technical papers, and 200 exhibitors. Each subsequent year, the growth in the number of attendees and exhibitors was remarkable. 1982 is considered the peak of the OTC experience, with 108,000 attendees and 2,500 exhibitors. In 1983, the offshore oil market experienced a major decline. Conference attendance was halved. In 1984, OTC presented a technical-papers-only program, and there were only 2,273 attendees at that conference. The organizers felt that even with the global decline of the offshore oil business, there would always exist the need for a professional platform for the technical program and hardware exhibitors to present their capabilities. OTC would be the showcase for new technologies needed to explore for offshore oil and extract it from deep waters, some of which are hostile environment, all around the world.

Ever since 1986, the attendance, number of technical papers presented, and number of exhibitors have steadily increased. This growth has benefited Houston, Texas greatly. The income brought into the city by OTC from its inception in 1969 through OTC 2005 was \$1,643,932,242. The Offshore Technology Con-

ference (OTC) has become the world’s major event for commercial entities involved with all aspects of offshore oil: exploration, drilling, production, transport, support and protection of men, equipment, and the environment. OTC has maintained Houston, Texas, as its venue except for one detour to New Orleans, as Houston is considered to be the offshore oil capital of the world.

A list of the founding societies that constitute the OTC Sponsor Organization follows:

- American Institute of Chemical Engineers (AICE)
- American Association of Petroleum Geologists (AAPG)
- The American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME)
- American Society of Civil Engineers (ASCE)
- American Society of Mechanical Engineers-Petroleum Division (ASME-PD)
- Institute of Electrical and Electronic Engineers-Oceanic Engineering Society (IEEE-OES)
- Marine Technology Society (MTS)
- Society of Exploration Geophysicists (SEG)
- Society of Mining, Metallurgy, and Exploration, Inc. (SME)
- Society of Naval Architects and Marine Engineers (SNAME)
- Society of Petroleum Engineers (SPE)
- The Minerals, Metals, and Materials Society (TMS)

Of the 12 societies listed, all but the American Institute of Mining, Metallurgical, and Petroleum Engineers (AIME) make up the OTC Program Committee. Each society is represented on that committee by a chairperson, vice-chairperson, and up to 15 subcommittee members. One of the 11 society chairpersons is selected each year to serve as the OTC Program Committee



Jim Barbera at booth for OTC 2006



Jim and Ken Ferer at the booth

chairperson for the following year. The Program Committee chairperson serves for one year, and is succeeded by the vice-chairperson. The outgoing chairperson fills the position of Active Arena chairperson after completing his term as Program Committee chairperson.

Every OTC technical program consists of 7 parallel tracks of 7 sessions each, resulting in 49 technical sessions. Each session has a maximum of 7 technical papers, a minimum of 5. As many as 5 sessions can be created as panels. Of these 49 sessions, the OTC Conference Committee reserves 2. Twenty-two special sessions are devoted to the specific technical areas of the sponsoring societies.

The sponsoring society subcommittee members are responsible for soliciting abstracts. Technical quality, audience appeal, and relevance of abstracts to the session topics are considered. The sponsoring society subcommittee members present the special sessions to the Program Committee, who seldom reject any. The other 25 sessions are created by the Program Committee in a one day-long meeting from the pool of remaining abstracts. The committee identifies session chairs, who in turn interact with the authors up to the time of presentation. To compensate for the void created by withdrawn papers, 4 alternate sessions (28 papers) are created which represent a pool of papers that usually are incorporated into the technical program. The alternate papers are included in the published Proceedings.

The level of due diligence exerted by the Technical Program

Committee subcommittee is very high, and the technical quality of the selected abstracts is commensurate with the selection process effort. The abstract statistics are impressive. On average, 750 abstracts are received, of which only 350 can be accepted. The withdrawal rate is 14% to 17%, generally attributed to conflicts with work schedules.

IEEE-OES is a small player on the OTC Program Committee, but over the past seven years our involvement has increased. We show a consistent presence and level of involvement, and our financial rewards are enormous. I have represented the OES on the Program Committee for the past seven years as chairman. Previous to my involvement, we had no active presence. Over time, I have been able to create sessions like the "East Coast of Canada: The Next North Sea?," not generally an OTC type of subject. We even have had sessions on ocean wind energy that were very well received. We will continue to expand our involvement because the paradigms continue to change. We now have our new Houston chapter involved. Gamal Hassan, the chapter chair, has accepted the position of vice-chair of the OTC IEEE/OES Technical Program Committee.

The Present

During the 2006 OTC, OES President, Jim Barbera met Gamal Hassan, an engineer in Houston with Baker Hughes who was interested in becoming involved with the OES and OTC. Jim remarked that OES had been trying to establish a chapter in



Claude Brancart at gathering for Dec. 2006 Meeting in Houston Texas



Claude with Gamal Hassan during the Dec. 2006 Meeting in Houston

Houston for the past 10 years without any success. Gamal Hassan offered to try. Three months later, OES officially had a chapter in Houston with 25 members.

The chapter has established some goals and visions for itself. The short-term goal is to focus on research and development activities in the oil and gas industries and assist in bridging the communication gap across both industries. The vision is to strengthen OES's position within the industry, grow the membership, and improve the visibility of IEEE/OES with the industries. The long-term goal is to get IEEE/OES heavily involved in the energy sector. The future of the offshore oil and gas industries is in deep water. Major fields have been identified in 8,000 to 10,000 feet water depths, but these fields await development of cost effective deep-water drilling and production capabilities. There exists a mind set that very deep water production will be accomplished using complete underwater systems, divorced from topside support. This capability will require new technologies resident with IEEE and OES.

The Houston Chapter activities have been impressive. The chapter was officially established in August, 2006. The first meeting took place in September with presentations by OES president James Barbera and VP Stan Chamberlain, discussing the benefits of association with IEEE and OES. At the second meeting, held

the first week of December, Claude Brancart reviewed OES's involvement with OTC and presented opportunities for chapter members to become involved. The meeting resulted in five members signing on as subcommittee members of the OTC IEEE/OES Technical Program Committee. Presently the chapter seeks to conduct technically oriented meetings in Houston every two months hosted by an oil-related corporation. The subject of the first meeting, hosted by Baker Hughes, was "Innovative Integrated Modeling & Field Development Optimization Technology," presented by Michael Litvak of BP. One hundred twenty people attended, many IEEE members. The intent is to build on the momentum established by the first meeting.

Summary

OES will have an increased level of activity and involvement in Texas, Houston, and the OTC. A major incentive is the awareness that the eleven founding societies were, and still are, allocated a fixed percentage of the net proceeds of the conference. These funds are what keep IEEE-OES economically viable. Without them, our way of existence would change. I envision our OTC involvement to increasing in scope and magnitude, thanks to the talent now available from our Houston chapter and their chair, Gamal Hassan.

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My organization.
My IEEE.

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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.

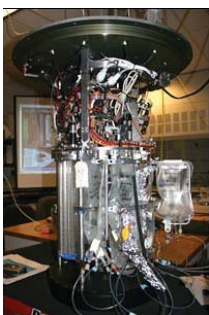
MARS is closer than you think

The Monterey Bay Aquarium Research Institute (MBARI) garnered a fair bit of popular press coverage recently as their Monterey Accelerated Research System (Mars) team deployed 32 miles of electrical cable from a shore station to an undersea location at 3,000m depth.

The BBC, among other media outlets, ran several items documenting how the MARS project will provide long-term insights into marine processes that have heretofore been only observed in small snapshots of time.



The main Mars science node sits at a depth of almost 900m. Running off the node will be a series of instruments that constantly return data to shore.



“Lab in a can” – a self-contained underwater DNA analyzer

“We’re taking the enormous communications and power infrastructure we have on land and extending it to the deep ocean,” said Dr Jim Bellingham, director of engineering at MBARI.

“We use ships a lot and might visit a certain region of the seafloor only once in our lifetime. It’s a very limited way to study the ocean,” he said. “Cabled networks are an opportunity to go out to the exciting and interesting parts of the seafloor and monitor them over long periods of time.”

The underwater hub or junction box will allow researchers the ability to deploy a wide variety of instruments without concern for limited battery life or limited communication bandwidth. MBARI is presently working on its “Lab in a can,” a self-contained underwater DNA analyzer that will give scientists the ability to sequence the DNA of ocean organisms in-situ.

Calamari for the city!

Most readers have probably heard by now of the giant squid that was caught off the coast of New Zealand in February. Weighing in at 992 pounds, this catch could produce calamari rings the size of tractor tires. With a length of over 30 feet, this squid would prove to be a formidable opponent for any adversary.



Giant squid caught off New Zealand.

A rising tide...

...Raises all boats, as the saying goes. But a rising global water level is another matter altogether. A number of articles have recently appeared in the mainstream media, warning of the impact that global warming will have on the world’s ocean levels.

A March article in USA Today highlighted the unusual vulnerability of North Carolina’s Outer Banks barrier islands. While most continental locations tend to be better prepared for an overall rise in sea level, barrier islands have few options available to them..

One International Study Panel has predicted that the ocean level could rise by as much as 2 feet over the course of the next century.

Tenth Annual National Ocean Sciences Bowl

IEEE Oceanic Engineering Society (OES) participated once again as a sponsor in the 10th Annual National Ocean Science Bowl (NOSB) this year held at State University New York at Stony Brook University (on Long Island) and hosted by the Marine Sciences Research Center on April 30th. This high school NOSB regional competition event is brought about by the Consortium for Oceanographic Research and Education (CORE) and its 94 members. Washington based CORE is a non-profit organization representing leading public and private ocean research and education institutions, aquaria and industry.

This year's NOSB event brought together the top 25 USA high schools with 125 students after intense regional competitions from over 400 schools and more than 2000 students. Each high school had five students and coach(s) in attendance plus NOSB regional directors and officials. In ten years, NOSB has reached over 16,000 students and teachers; inspiring many to become ocean scientists, teachers and policy makers.

Of special note, MS Susan Haynes, Director of NOSB, provided statistics of this year's competition. During the 2006 NOSB Regional competition, the student population consisted of 48.6% females and 51.4% males. The high school student grades were as follows: Grade 12- 39.3%, Grade 11- 30.2%, Grade 10- 15.8% and Grade 9- 8.0%.

The mission of NOSB is to prepare the next generation of students for careers in ocean science by providing an educational forum for students to excel in math and science as well as receive national recognition for their diligence and talents. NOSB has proven it can generate student interest and excitement about science and the oceans, giving young people a chance to examine the marine sciences, as an in-depth area of study and as a possible career.

Contoocook Valley Regional High School (ConVal from N.H.) returns home after winning the 10th Annual National Ocean Sciences Bowl (NOSB) held at Stony Brook University in Stony Brook, New York on Monday, April 30th. Twenty-five high schools from all over the United States competed in the NOSB Final Competition with prizes and scholarships on the line. The NOSB is a program of the Consortium for Oceanographic Research & Education (CORE) based in Washington, DC.

After winning their respective regional competitions in February, the twenty-five high schools had the opportunity to compete over their knowledge of our oceans during the two-day NOSB competition. The team from New Hampshire made it all the way to the finals before defeating Cranston High School West (Cranston, Rhode Island) to win the 2007 NOSB title.

The top eight teams were:

- 8th Place – Durant High School – Plant City, Florida
- 7th Place – Dexter High School – Dexter, Michigan
- 6th Place – Churchville-Chili High School – Rochester, New York
- 5th Place – Smoky Hill High School – Aurora, Colorado
- 4th Place – Santa Monica High School – Santa Monica, California

3rd Place – Lincoln-Sudbury High School – Sudbury, Massachusetts

2nd Place – Cranston High School – West – Cranston, Rhode Island

1st Place – Contoocook Valley Regional High School – Peterborough, New Hampshire

Also, Poplarville High School from Poplarville, Mississippi won the James D. Watkins Sportsmanship Award for demonstrating the best sportsmanship throughout the NOSB final competition. Admiral James D. Watkins started the NOSB program in 1997 when he was the President and CEO of CORE.

“The students competing in the National Ocean Sciences Bowl Finals are exceptionally brilliant and are what make this such a special and prestigious program,” said Richard D. West, President of CORE. “These students are the future stewards of our oceans and we hope that they lead this nation to understand, conserve and protect our ocean resources,” continued West.

The weekend started on Saturday April 28, with a choice of eleven field trips to the areas marine related facilities. This writer joined 17 students, six coaches and several regional directors for a tour of the Vanderbilt “Eagles Nest” Marine Museum and Mansion located on 43 acres of waterfront property overlooking Long Island Sound. The tour started with a special briefing by two scientists from Cornell University at the Planetarium regarding the lobster population issues in Long Island Sound followed by a power point presentation on the horseshoe crab life with Q&A for the students. William Vanderbilt II had a passion for American racecars and the ocean. On many of his yachts, he voyaged to many parts of the globe collecting artifacts and specimens. In one room are various seashells, sea life and models of his yachts. In the Marine Museum, originally called the Hall of Fishes, are extensive specimens of sharks, marine animals that have been painted and preserved. On the second floor are examples of fish and Mr. Vanderbilt's diving suit.

The day did not end here. A buffet dinner was served by the university dining service followed by the guest speaker Greg Marshall the executive director and director of remote imaging from National Geographic. Greg developed the “Cittercam” and showed many marine species view in the water and on land from their perspective. The night was topped off with theater presentation of Romeo and Juliet.

On Sunday, an intense day of competition and round robin eliminations rounds continued and was conducted by Dr. Dick Spinrad of NOAA. The day was topped by a dance for the students. And finally, the last day of competition and awards arrived. A video of ADM Watkins was shown at the beginning of the awards ceremony.

Vice ADM Conrad Lautenbacker presented awards to the first and second place winners:

Eight days exploring the vast array of ocean sites and aquatic research and entertainment facilities on the island of Maui in Hawaii. This adventure will include visits to Maui



L to R ADM Dick West, Pres of CORE, and Pam Hurst IEEE OES, team captains from the winning team's #5-8 winners and Susan Haynes, Director NOSB. See list in text for school and city/states.

Ocean Center, Ioa State Park, the 11 different ecosystems of Haleakala National Park, taking part in valuable native aquatic species research, and opportunities to kayak and snorkel, and the second trip of six days at the Bermuda Institute for Ocean Sciences exploring the unique geography and biology of the island of Bermuda, snorkeling pristine coral reef habitats and observing and participating in some of the research conducted at the institute. Both of these trips are sponsored by the National Oceanic and Atmospheric Administration.

Ms. Ann Close of the University of Southern California presented 3rd place award. The USC Wrigley Institute for Environmental Studies supports the NOSB. This team received a trip to Catalina Island where they will stay at the University of Southern California's Wrigley Institute for Environmental Studies. This trip will include kayaking in around the coves and

natural caves lining the coast, snorkeling with leopard sharks and rays in the marine preserve surround the research facility, assisting scientists with research and exploring the interior of the island. This trip is made possible by NOAA and the USC Wrigley Institute.

RADM Fred Byus presented the 4th place team a four day trip to Miami and the Florida Keys where you will visit with scientists at University of Miami's Rosenstiel School for Marine and Atmospheric Science (RSMAS) on Virginia Key, snorkel and learn about the coastal and reef fish ecology of the Florida Keys, and visit the Dolphin Research Center on Grassy Key. This trip is supported by NOAA, RSMAS, Sea Camp, and the Dolphin Research Center.

Additionally, this writer and presenter had an incredible time and was very proud of our Nation's young ocean science future leaders.

French Student Support

The French chapter has started a yearly support of student at the MSc level in Oceanic Engineering related fields. This support is intended for student having to follow an internship abroad in a research lab or a company.

We developed several criteria such as:

- the student academic results,
- the student motivation
- the research project quality
- the endorsements by faculty members

This year we have selected two projects and rewarded the students:

1. Thomas TELANDRO, ISEN Toulon / DNM « Signal et Trajectographie » Université de Toulon.

Subject: "Comparative study of speckle noise reduction on SAS images"

Recherche : une bourse pour étudier à l'étranger Tel 2713107

Deux étudiants ont reçu une bourse de recherche, hier, à l'École nationale supérieure des télécommunications (ENST), allouée par l'association Océans Europe. Récompensés pour la qualité des travaux qu'ils mènent, ils pourront ainsi financer un stage à l'étranger.

Le professeur René Garelo, président de l'association Océans Europe, a remis, hier, une bourse à deux étudiants sélectionnés pour la qualité et l'originalité des travaux proposés dans le cadre de leur cursus de fin d'études. Ces

Thomas Telandro et Anne Vernier ont reçu une bourse de recherche, hier, pour financer leurs travaux sur les domaines de l'océan.

d'études indispensable pour l'obtention de leur diplôme. Ces prix seront renouvelés tous les ans.

hétéroclite, océanographie, instrumentation, etc.). Les critères de sélection portent sur la qualité du dossier scolaire de la problématique.

cheurs qui connaissent bien l'étudiante ou l'étudiant. Cette année, les deux récipiendaires sont Thomas Telandro, de l'université de Toulon, qui obtient 1.500 € pour effectuer un stage à l'université de Tokyo et Anne Vernier, étudiante à Brest, qui reçoit 500 €. Elle réalisera un stage à La Haye, en Hollande. L'association Océans Europe a été créée à Brest, en 2002, dans l'objectif de promouvoir le rayonnement des sciences et de l'ingénierie marine sous toutes ses formes. Elle est plus particulièrement soutenue par la société savante américaine Oceanic Engineering Society. Elle a déjà organisé plusieurs confé-

Copy of the article published in the local newspaper. From left to right: Manell Zakharia, Philippe Courtmontagne (on behalf of Thomas Telandro), René Garelo, Jacques Jestin, Anne Vernier, Jean-Marc Le Caillec and André Quinquis (all members of the French chapter).

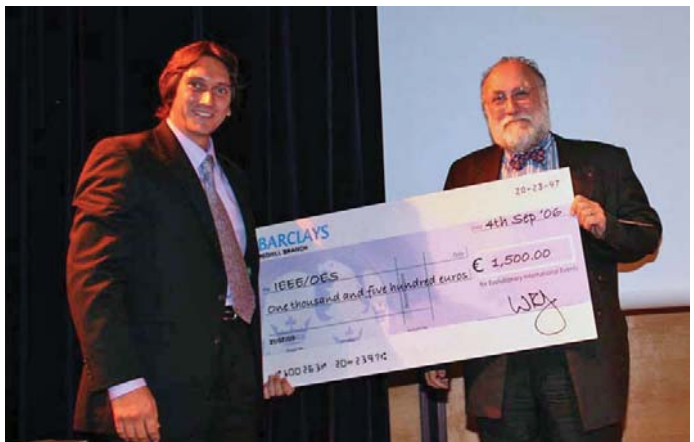
Internship placement: Dept. « Underwater Acoustic System Engineering », Tokyo University, Japan - Duration: 5 months - Grant: 1500 ¥

- Anne VERNIER, ENSIETA Brest, “Electronique et signal pour les systèmes embarqués, instrumentation sous-marine » Subject: “Interferometric SAS for the detection of buried objects”

Internship placement: TNO defense security and safety, La Haye, The Netherlands - Duration: 5 months - Grant: 500 €

The French chapter would like to acknowledge the financial support rewarded by the MAST (Maritime Systems And Technology - <http://www.mastconfex.com/>) committee for our contribution to their conference.

René Garello
Vice-President Conference Operations



Warren Edge, left, giving the grant to Manell Zakharia.

OCEANS 06MTS/IEEE - Boston Student Poster Program

The nineteenth Student Poster Program was held at OCEANS 06 MTS/IEEE Boston. Once again there was a very fine display of student posters located in the center of the exhibits area at the Hynes Convention Center in Boston, MA. The posters were prominently displayed and were widely viewed by the conference attendees. The Student Poster Session was organized by Dr. Alexandra Techet from MIT. 49 poster abstracts were received and 24 were selected for presentation. Poster abstracts were obtained from students in the US, Canada, France, Italy, Russia, China, Venezuela, and the UK. The program was supported by funding from the Office of Naval

Research and from the National Science Foundation.

A new event was the addition of a Poster Precis prior to the beginning of the poster display. Each student gave a brief concise overview of the project in 2-3 slides to the judges panel, fellow students and guests. This introduction gave the judges a great overview of the work as well as an opportunity to the student to give an oral presentation. The awards for the winning posters were presented at the Wednesday evening Gala at the Museum of Science. Two level of awards were given. First to Graduate Students and second to undergraduate students. The posters were:



Student Poster Participants assembled at the Boston Science Museum Gala with Dr. Alex Techet at far the right.

Daniel Walker, MIT

“Micro Autonomous Underwater Vehicle Concept for Distributed Data Collection”

Zhenhai Wang - University of Massachusetts, Dartmouth, MA

“Factor Analysis for Ocean Seismic Remote Sensing”

Rogelio Morales - Universidad Central de Venezuela - Caracas, Venezuela

“Prototype of a Stereoscopic Vision System to Improve Image Quality in Turbid Waters During Underwater Inspections”



Student Poster Winners with Dr. Alex Techet 4th from left and Norman Miller (OES Student Coordinator) at the far right.



First Place Winner Brandon Cochenour with Dr. Alex Techet.

Alexander Pavin - MIT
“The Pipeline Identification Method Basing on AUVs Echo-Sounder Data”

Brandon Cochenour - Naval System Command/Johns Hopkins University
“Effects of Multiple Scattering on an Underwater Wireless Optical Communications Link”

Jiaming Zhang - University of Massachusetts, Dartmouth, MA
“Development of an Integrated Acoustical-Optical Platform for Detecting Groundfish”

Lauren Cooney - MIT
“Design of an ROV to Compete in the 5th Annual MATE ROV Competition and Beyond”

Jesse Kipp - University of Wisconsin -Milwaukee Great Lakes WATER Institute, WI
“A Software Framework for an Integrated Observing System”

Korey Verhein - University of Wisconsin-Milwaukee Great Lakes WATER Institute, WI
“An Inexpensive Underwater Multi-Point Temperature System”

Lauren Cooney - MIT
“Design of an Acoustic-Homing Autonomous Surface Vessel”

Fan Gu - University of New Hampshire-Durham, NH
“Optimal Image Blending for Underwater Mosaics”

Xiaoling Chen-Steven Institute of Technology - Hoboken, NJ
“Passive Acoustic Detection of Divers Under Strong Interference”

Madaline Barbu - University of New Orleans - New Orleans, LA
“Acoustic Seabed Classification using Fractional Fourier Transform and Time-Frequency Transform Techniques”

Lloyd Ackermann - Florida Atlantic University - Dania Beach, FL
“Hydrodynamic testing of as Vectored-Thruster Propelled UUV”

Zhipeng Sun - Harvard University - Cambridge, MA
“Size Spectrum of Suspended Particulate Matter in the Bohai Sea”

Kathryn D'Epagnier - Woods Hole Oceanographic Institution
“AUV Propellers: Optimal Design and Improving Existing Propellers for Greater Efficiency”

Paula Echeverri - MIT
“Experimental Investigation of Internal Tide Generation by Two-dimensional Topography”

Jeffery Kaeli - Virginia Polytechnic Institute and State University - Blacksburg, VA

“An Automated Morphological Image Processing Based Methodology for Quantifying Coral Cover in Deeper Reef Zones”

Michael Stanway - MIT
“Small Diameter Ducted Contrarotating Propulsor for Marine Robots”

Andy Schneider - University of Wisconsin - Milwaukee Great Lakes WATER Institute, WI
“Near Shore Wireless Communications System for Sensor Buoys”

Ye Li - University of British Columbia - Vancouver, BC, Canada
“Modeling the Operation and Maintenance Cost of Large Scale Tidal Current Turbine Farm”

Laura Amate - 13S UNSA-CNRS - Sophia-Antipolis, France
“A Contribution to the Problem of Mapping Seabed Transition Zones”

Daniela Donno - Politecnico di Milano - Milan, Italy
“Seismic Shape Parameters Estimation and Ground-roll Suppression using Vector Sensor Beamforming”

The Judging Team did an out standing job of evaluating the posters and reached a consensus on the ranking of the posters. Prizes were awarded as follows:

Graduate

First Place

- Brandon Cochenour

Second Place

- Lauren Cooney
- Jordan Stanway

Third Place

- Alexander Pavin
- Ye Li

Undergraduate

First Place

- Zhipeng Sun

Second Place

- Jeff Kaeli

Third Place

- Andy Schneider

All of the Students were asked to stand and were given a round of applause at the conclusion of the Awards presentation.

Norman D. Miller
Student Activities Coordinator

CALL FOR PAPERS, TUTORIALS and STUDENT POSTERS

Marine Challenges: Coastline to Deep Sea

A Major International Technology Conference and Exhibition

18-21 June 2007

Oceans '07 is the premier forum in 2007 for all leading international scientists, engineers, technologists, suppliers and end-users in the maritime, ocean, and subsea community to meet.

We now invite the global community to make a contribution to our marine challenges theme and offer abstracts for state-of-the-art **Papers** and proposals for **Tutorials**. We also continue to encourage student participation through the **Student Poster Competition** and invite

undergraduate and postgraduate presentations in a special poster session.

Oceans '07 will be held at the state-of-the-art Aberdeen Exhibition and Conference Centre located in Aberdeen, Scotland, UK. The conference and exhibition are co-located within the Conference Centre to enable all attendees to maximise opportunities for networking with academics and industry, and ensure that they gain maximum benefit from attendance.



OCEANS '07
ABERDEEN • SCOTLAND
18-21 JUNE 2007

IMPORTANT DATES TO REMEMBER:

Abstract Submission Deadline: **15 December 2006**

Tutorial and Student Poster Submission Deadline: **15 December 2006**

Author Notification: **9 February 2007**

Advance Registration closes: **2 March 2007**

Author Registration Deadline for Publication: **30 March 2007**

Manuscript Submission Deadline: **30 March 2007**



www.oceans07iee Aberdeen.org



Under the Sails at the Vancouver Convention & Exhibition Centre
Photo credit: Tourism Vancouver



Logo by Phil Nuytten

On the Edge of **Tomorrow**

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MTS/IEEE OCEANS 2007 Vancouver

Vancouver, British Columbia
September 29–October 4, 2007



**For the Call for Papers,
Exhibitors and Attendees
see www.oceans2007.org.**

ANNOUNCING the 2007

IEEE UNDERWATER ACOUSTIC SIGNAL PROCESSING WORKSHOP

<http://www.uasp.org>

Sponsored by the IEEE Providence Section
with promotional partners the IEEE Oceanic Engineering Society and Raytheon

October 17–19, 2007

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

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Local Arrangements

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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 Signal Processing for Distributed Systems**

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 16, 2007 - Deadline for abstract submission

July 30, 2007 - Deadline for those wishing to attend but not present

Aug. 20, 2007 - Notification of accepted abstracts and attendees

Sept. 14, 2007 - Room block at Whispering Pines Conf. Center released

Oct. 17–19, 2007 - Workshop

SECOND & FINAL ANNOUNCEMENT AND CALL FOR PAPERS



INTERNATIONAL SYMPOSIUM ON **OCEAN ELECTRONICS**

(SYMPOL – 2007)

11 – 14 December, 2007

The Ninth biennial Symposium on Ocean Electronics, 2007(SYMPOL – 2007) is organized as an international conference, addressing the global oceans, systems and technologies during 11-14 December 2007 in Cochin University of Science and Technology.

The general theme of SYMPOL-2007 is *Underwater Telemetry, Navigation and control*.

Call for Papers:

Authors are invited to submit papers of original research for presentation in the symposium on any aspect relating to Ocean Electronics and allied areas such as:

- | | |
|--|---|
| ☞ Underwater Sensor Technology | ☞ NDE for Ocean Structures/Cables/Pipelines |
| ☞ Underwater Imaging | ☞ Electronic Navigation Aids |
| ☞ Acoustic Holography | ☞ Ocean Exploration Systems |
| ☞ Remote Sensing | ☞ Tsunami Warning Systems |
| ☞ Marine Bio-Electronics | ☞ Marine Measurements and Data Logging |
| ☞ Underwater and Surface Communications | ☞ Non-acoustic Techniques for Underwater applications |
| ☞ Underwater Signal Processing | ☞ Seismic Signal Processing |
| ☞ Ocean Acoustics/Modeling | ☞ Sonar Technology |
| ☞ Underwater Telemetry/Command and Control | ☞ Other allied areas in Ocean Electronics |

The full papers prepared in the prescribed template, downloadable from www.doe.cusat.edu/sympol may be sent to: sympoldoe@gmail.com, prspillai@cusat.ac.in

The maximum length of the paper should not exceed 6 pages, including figures. The title of the paper should clearly indicate the contents and appear at the head of the work followed by the full name and affiliation of the authors. Accepted papers will be published in the Proceedings of **SYMPOL-2007**.

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