

# OCEANS 2009 IEEE Bremen Conference and Exhibition

*Dr. Christoph Waldmann,  
Conference Chair*



This year's OCEANS conference in Europe was hosted from May 11th to May 14th in the Hanseatic City of Bremen in Germany. Held at the modern Bremen Convention and Fair Centre the conference was organized in facilities that provided ideal conditions and a number of amenities for this particular event. In retrospect, the organizers are extremely happy with the attendance and the positive atmosphere in which the OCEANS 09 IEEE Bremen took place. Starting from the icebreaker party until the end of the last sessions lively discussions between participants from over 40 nations and representatives from more than 100 companies involved in the field of ocean technologies provided the base of bringing everyone up to date about future directions in this field. In the words of the chairman Prof. Gerold Wefer the OCEANS 09 was a complete success demonstrating the global interest in ocean engineering and its growing importance. For over 30 years now the OCEANS conferences have developed into the central event in this field providing an excellent platform for all branches of marine technology to give a comprehensive overview of ongoing activities.

## Awards

At the IEEE luncheon on Tuesday, May 12th, Jerry Carroll, president of OES, presented the Award for an IEEE Fellow of the Oceanic Engineering Society to Jean- Pierre Hermand from Brussels University in Belgium. His work excelled in the field of ocean acoustics where he significantly contributed to the progress in the field of passive acoustic tomography.

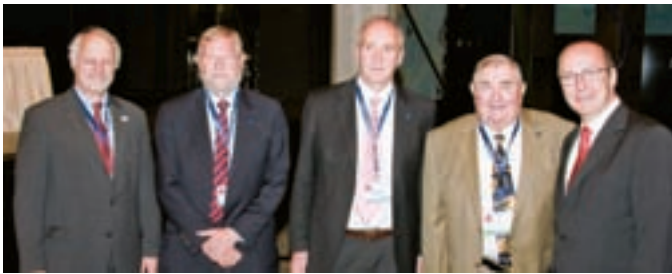
## Attendees

With more than 1000 attendees from Europe, North America, Asia, Australia and Africa all expectations of the organizers were exceeded. The IEEE and the Bremen team were particularly pleased about the huge number of students and young engineers who attended the sessions. For the chairman of the conference Gerold Wefer this demonstrates the strong interest in the field and how attractive this field is for young academics. The Upper Town Hall with its interior design that goes back to the Hanseatic seafarer tradition provided an ideal setting for the student award ceremony. This ceremony also demonstrates the importance of the transfer of knowledge to future generations for the progress in this field.



## Keynote Speeches

With about 400 participants the plenary session was very well attended. OES President Jerry Carroll opened the session. Next, Minister Ralf Nagel brought greetings and a warm welcome from the City and State of Bremen. The auditorium was given an overview about the history, state of the art and future of ocean sciences and technology. The director of the NATO Underwater Research Center in La Spezia, François-Régis Martin-Lauzer, covered these three branches for the field of ocean acoustics in his presentation. His talk about “The impact of underwater acoustic on ocean research and surveillance” clarified how the close interaction between pure research and applications lead to the central role that ocean acoustics plays for the progress in ocean science and technology. Prof Wefer, Director of the research centre MARUM, gave an excellent overview about the role of ocean technology in marine research presenting latest developments in deep sea technology like the new drilling device MeBo of the research centre MARUM. The Global Earth Observation System of Systems GEOSS that is currently planned and implemented will embrace all earth related science disciplines. Udo Gaertner, a consultant for the German government, emphasized the importance of GEOSS and pledged for a strong involvement of ocean sciences in this initiative.



Udo Gaertner, Gerold Wefer, Christoph Waldmann, Jerry Carroll, Ralf Nagel

## Exhibition and Social Events

A highlight of the exhibition was the 60,000 liter aquarium. It provided the opportunity for students and school kids to test self-designed underwater vehicles. A ROV student competition set a stimulus to attract young people into this vital field of sciences. Exhibitors also welcomed the additional attractions. As all coffee breaks and meals were served in the exhibition hall the exhibitors were pleased with the number of attendees. People are looking forward to the next OCEANS conference in Bremen.



The aquarium was used for student ROV competitions as well as equipment demonstrations

## Student ROV Competitions



Ten year old robotics competitors being interviewed

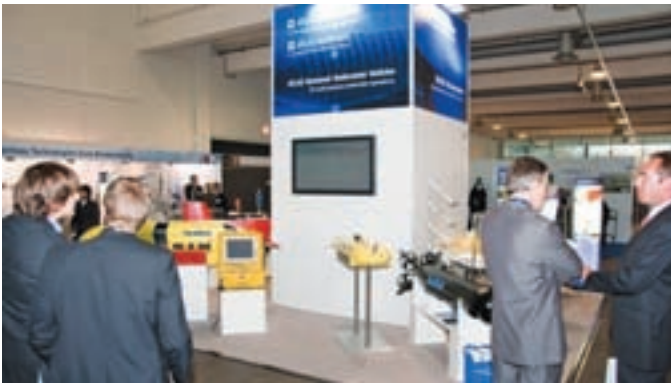


14–15 year old robotics competitors



Competition robot in the tank

## Exhibit Booths



Atlas-Maridan



Briese Schifffahrts GmbH & Co. KG



Fugro



Develogic GmbH



Contros Systems & Solutions



Maritime Technologies from Bremerhaven



MARUM Centre for Maritime Environmental Sciences



J. Bornhoft Industriegeräte GmbH



IFremer



FielaX



MacArtney Group



Internet Operated Vehicle

## Technical Sessions

On Tuesday through Thursday, papers on a variety of topics were presented as outlined below. The volume of data presented as well as the rich diversity of topics are vibrant indicators of the technical value offered by the OCEANS conferences.

- Autonomous Underwater Vehicles
- Ocean Observing Systems and Strategies
- Vehicle Design
- Oceanographic Instrumentation, Buoys and Cables
- Acoustic Telemetry and Communication
- Ecology versus Economy
- Sonar Signal Processing
- Renewable Energy
- Vehicle Navigation
- Advanced Technology for Resource Exploration
- Sonar Imaging
- Coastal Radars
- Marine Life, Ecosystems, and Pollution Monitoring
- Estuary Systems and Wadden Seas
- Current Measurement Technology
- Marine Optics Technology and Communication
- Data Access, Handling, and Visualization
- Atlas Grex Project
- Array Signal Processing and Array Design
- Numerical Modeling
- Marine Law and Policy
- Automatic Control
- Spaceborne Ocean Observing
- Vehicle Performance
- Imaging and Vision
- Signal Processing Techniques
- Information Management
- Maritime Security and Surveillance
- Acoustical Oceanography
- Marine Safety and Security
- Marine Material Sciences and Marine Structures
- Ocean Noise and Seismo-Acoustics



Hwee-San Lim presents his paper on Chlorophyll Measurement from Landsat TM Imagery



Stephan Holsten delivering his paper on Global Maritime Surveillance with Satellite-based AIS



Eric Gill chairs the session on Coastal Radars



John Watson chairing the session on Imaging and Vision



Ed Sullivan presents his paper on Adaptive Model-Based Mine Detection/Localization using Noisy Laser Doppler Vibration Measurements

### Bremen City Sights

Founded in 787 AD, Bremen is one of Germany's oldest cities. Bremen was once an independent city that played an important role in Germany's political and economic development. The city was known as a free market trade region and eventually became the seat of the Hanseatic League, a powerful trade organization. This legacy left Bremen with a tradition of independence and



Bremen Congress Centre, site of the OCEANS '09 conference

free thinking that the residents are proud of today. The city has a rich and diverse cultural background making it a great place to visit. The pictures below document a few of the city sights enjoyed by those at the conference.



Bremen Park, a spacious open area with numerous walking trails, featured blooming rhododendrons of every color



A panorama of the Bremen town square. Still a dynamic location in the center of commercial and government sectors



A fairy tale by the Brothers Grimm tells a story of four animals known as the Bremen town musicians who have an adventure together. Located just off the town square, this statue reminds visitors of the story. In this picture, OES Treasurer Diane DiMassa holds the front hooves of the donkey; tradition says this can make wishes come true



A windmill in one of Bremen's parks draws your attention with a serene beauty punctuated by bright colors

## Reception and Banquet

On Wednesday evening a reception was held in the historic Rathaus Upper Hall of the Town Hall followed by a banquet in the Town Hall Cellar, a restaurant boasting the largest and oldest wine cellar in the region.



The upper hall of the Town Hall was richly decorated with model ships and paintings depicting the early days of Bremen as an important port and trading center. This served as the venue for our reception



Model ships suspended from the rafters of the upper hall.



After the reception and on the way to the banquet we were treated to some local characters telling their version of the story of the Bremen town musicians

## Local Organizing Committee



(Standing): Christoph Waldmann, Gerrit Meinecke, Thorsten Klein, Oliver Zielinski, Gerold Wefer, (Seated): Eberhard Sauter, Barbara Donner, Jana Stone, Manfred Schlösser, Albert Gerdes



Martina Pätzold, Student Program Chair, Jana Stone, and Barbara Donner, Local Arrangement Chair, receive flowers at the reception as a small token of thanks for their many efforts

Planning and hosting a conference like this is a monumental undertaking that requires a team of dedicated professionals. The great success of this conference can be attributed to this team. Many thanks to all of them for a job well done.