The Autonomous Undersea Systems Institute Announces the 18th International Symposium on Unmanned Untethered Submersible Technology
(UUST 2013)

Symposium (sm-pz-iyum) NOUN: 1. A meeting or conference for discussion of a topic, especially one in which the participants form an audience and make presentations. 2. A collection of writings on a particular topic, as in a magazine. 3. A convivial meeting for drinking, music, and intellectual discussion among the ancient Greeks.
- American Heritage Dictionary

The 18th International Symposium on Unmanned Untethered Submersible Technology (UUST 2013) will be conducted on 11-14 August 2013 at the Portsmouth Sheraton Harborside Hotel. For over thirty years UUST meetings have supported the development of AUV systems and technology. The first symposium was held in May 1980, followed by seventeen more meetings - the most recent having been held in 2011 in Portsmouth, New Hampshire.

Each UUST event has attracted participants engaged in related research and development from throughout the United States and the World. Over the years, the international participation has been substantial, with one of the meetings having more international submissions than US submissions. Recently, more and more authors are presenting results of their experimentations, rather than designs, in progress. Advanced research is being reported in areas of autonomy, multiple vehicle cooperation, networking, and development of biologically inspired AUV’s. In addition, AUV’s are now widely available for academic research and commercial AUV applications are proliferating. A real hit for current sessions are lessons learned from real world operation. For example, one group realized that a white paint scheme was not helpful in an Antarctic environment.

Set in the historic seacoast town of Portsmouth, New Hampshire, the Sheraton Harborside Portsmouth Hotel provides the perfect atmosphere for a relaxed symposium, allowing attendees a chance to meet each other and share Sea Stories as well as gain insight into AUV systems and technology. It also allows for exploration of the lively seacoast town.

UUST 2013 provides an environment that encourages informal interaction of the participants. This allows an exceptional opportunity for networking with a spectrum of individuals involved in all aspects of AUV systems and technologies from basic research to operations to product development and marketing. The meeting also encourages a number of student activities, the most substantial being a student paper competition where the winners have all of their expenses paid to attend the meeting and receive a cash prize for their efforts.
Presentations at UUST 2013 will focus on the following technical subject areas:

- Applications of AUV Technology
- Autonomous Manipulation
- Bio-engineering
- Communications
- Distributed Control
- Energy
- Guidance and Control Systems
- Hydrodynamics
- Intelligent Systems and Technologies
- Modeling & Simulation
- Navigation
- Operational Systems Experience
- Reliability
- Sensor Systems and Processing
- Underwater Imaging
- Launch & Recovery Concepts

Attendance is limited to ensure a convivial atmosphere. Register early and participate. Further details on the symposium are available at [www.uust.org](http://www.uust.org)

--- AUV’s: A Brief History ---

Although autonomous undersea vehicles have been around for over a hundred years (Whitehead torpedoes were developed in 1866), scientists were just awakening to the possibilities of intelligent undersea vehicles enabled by the advances in computer technology in the early eighties. The first conferences concentrated on possible missions and applications appropriate for autonomous underwater vehicles. The attendees primarily were academic researchers.

As the years progressed, the emphasis shifted to exploration of the required technologies, designs for new platforms, and increased participation from international organizations. Early platforms were large, expensive, and primarily military in nature. As computing power became available, the cost and size shrunk making the use of AUV’s more available to pursue scientific tasks.

One of the early adopters of the AUV technology in the US was the US Navy. The Office of Naval Research (ONR) became an early sponsor of the conference and funded the development of the required technologies. Early applications of underwater search and survey were envisioned. In the past decade many more US and international organizations have supported a wide spectrum of development.

As the reliability of these systems and the growing number of applications were recognized, the AUV market expanded attracting industry to investigate the potential of the AUV market. Over the past few years, this recognition has driven the utilization of AUV systems and technology in a number of directions. With advances in a wide variety of related technology, many new application areas have been defined. A market has grown into, by some estimates, a $200 million USD per year marketplace. This UUST symposia have helped to bring this new technology to its current level of activity and will continue their objectives to encourage and support this growth.