



**Unmanned Maritime Vehicle (UMV)  
Test & Evaluation Conference**  
Held in Conjunction with  
**Autonomous Underwater Vehicle (AUV) Fest 2005**



*“Accelerating Deployment of Unmanned Maritime Vehicles  
Through Advancements in Test & Evaluation”*

AUV Fest 2005  
June 7 - 16, 2005

UMV T&E Conference  
June 14 - 16, 2005

Event #5330

*National Unmanned Undersea Vehicle Test & Evaluation Center  
(NUTECH)*

Keyport, Washington

Sponsored by:

The Office of Naval Research

Naval Undersea Warfare Center

Naval Meteorology and Oceanography Command

and

NDIA's Test & Evaluation Division



# NDIA Unmanned Maritime Vehicle (UMV) Test & Evaluation Conference

June 14-16, 2005 Naval Undersea Museum Keyport, WA

## AGENDA

### Tuesday, June 14, 2005

7:15 a.m. **Conference Check-In and Continental Breakfast**

Naval Undersea Museum Lobby

### PLENARY SESSION

8:00 a.m. **Call to Order**

*Mr. C. Samuel Campagna*, Director, Operations, NDIA

8:05 a.m. **Presentation of the Colors and National Anthem**

*Navy Band of the Northwest* and *U.S. Navy Color Guard*

8:10 a.m. **Welcome**

*CAPT Daniel J. Looney, USN*, Commander, Naval Undersea Warfare Center Division, Keyport

8:15 a.m. **Navy Keynote**

Accelerating Deployment of Unmanned Maritime Vehicles Through Advancements in Test & Evaluation Capabilities  
*Dr. Paul Lefebvre*, Undersea Warfare Analysis and Assessment Product Area Director, Naval Undersea Warfare Center



8:45 a.m. **Industry Keynote**

Test & Evaluation Needs, Challenges, and Successes in Accelerating Delivery of UUV Systems to the Fleet  
*Mr. Chris von Alk*, Chairman, Hydroid, Inc.



9:15 a.m. **Break and Refreshments in Display Area**

9:15 a.m.-5:00 p.m. **Display Area & Remote AUV Fest 2005 Display Center Open**

Naval Undersea Museum Display Area and AUV Fest 2005 Remote Display Viewing Center

### TECHNICAL SESSION 1 – UMV T&E EXPERIENCES

10:15 a.m. **Opening Remarks**

*Mr. Richard R. Peel*, Conference Chairman, Naval Undersea Warfare Center

Design and Testing of the Spartan USV Mine Warfare Module

*Dr. Robert Mons*, Northrop Grumman Corporation

Simulation and In-water Testing of the Mid-sized Autonomous Research Vehicle (MARV) to Support USCG Homeland Security Applications

*Mr. Thomas Fulton*, Naval Undersea Warfare Center

Testing Automatic Ship Detection and Classification with EO Data

*Dr. Daniel Morris, Dr. Franklin Snyder, and Mr. Eric Hansen*, Northrop Grumman Corporation

Development of an Automated Biorobotic Marine Vehicle  
*Dr. Promode Bandyopadhyay*, Naval Undersea Warfare Center

12:00 p.m.

**Lunch**

1:00 p.m.-  
5:00 p.m.

**AUV Fest 2005 Demonstrations**

Shuttle bus transportation to/from the Keyport waterfront

5:30 p.m.-  
7:00 p.m.

**Opening Reception**

Naval Undersea Museum

## Wednesday, June 15, 2005

7:15 a.m.

**Conference Check-In and Continental Breakfast**

Naval Undersea Museum Lobby

### TECHNICAL SESSION 2 – IMPROVED UMV T&E SYSTEMS AND TECHNIQUES

8:00 a.m.

**Session Chairman's Opening Remarks**

*CDR Roy Barnes, USN*, Operational Test and Evaluation Force

High-Bandwidth Wireless Networks for UMV  
*Mr. Sean Kragelund*, Naval Postgraduate School

Improving "Ground Truth" Measurement & Stimulation for UMV T&E

*Mr. Troy D. Kelley*, Naval Undersea Warfare Center

Advanced Surface Launcher (ASL)

*Mr. David Lussier*, SEA CORP and *Mr. Michael Connelly*, Naval Undersea Warfare Center



9:45 a.m.

**Break and Refreshments in Display Area**

9:45 a.m.-  
5:00 p.m.

**Display Area & Remote AUV Fest Display Center Open**

Naval Undersea Museum Display Area and AUV Fest 2005 Remote Display Viewing Center

### TECHNICAL SESSION 3 – ADVANCES IN LAND-BASED AND LABORATORY T&E

10:15 a.m.

**Session Chairman's Opening Remarks**

*Mr. Jim Griffin*, Naval Undersea Warfare Center

Multi-vehicle Collaborative Autonomous Control Under Difficult Communications Conditions

*Mr. Robert Chalmers*, Johns Hopkins University Applied Physics Laboratory

A Framework to Support UMV Design and Evaluation

*Dr. Roger Neill*, Australian Defence Science and Technology Organisation

Out-of-Water Test Methods to Accelerate Implementation of Autonomous Rendezvous in the NPS ARIES AUV

*CAPT John Nicholson, USN, United States Naval Academy*

Durability Assessment Using Accelerated Life Testing

*Mr. Gary Zook, Naval Undersea Warfare Center*

12:00 p.m.

**Lunch**

## **TECHNICAL SESSION 4 – DISTRIBUTED UMV T&E AND TESTING WITH TRAINING**

1:00 p.m.

**Opening Remarks**

*Dr. Thomas Swean, Office of Naval Research*

Testing and Training for the Modular Mission Package Program

*Mr. Mark Connolly, NSWC Panama City*

Collaborative Test, Training, Experimentation, & Evaluation Capability (CTEC) –

The NUTEC Engine for USW Live, Virtual, & Constructive Joint Testing

*Mr. Reid Johnson, Naval Undersea Warfare Center*

Enabling Effective & Efficient Fleet UMV Operational Training through Distributed USW Test & Training Technology

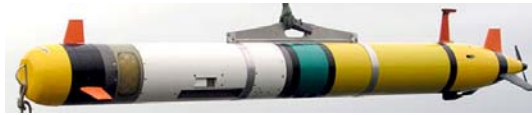
*Mr. Brian J. Williams, SAIC; Michael A. Kelf, Naval Undersea Warfare Center*

2:20 p.m.-

**AUV Fest 2005 Demonstrations**

5:00 p.m.

Shuttle bus transportation to/from the Keyport waterfront



## **Thursday, June 16, 2005**

7:15 a.m.

**Conference Check-In and Continental Breakfast**

Naval Undersea Museum Lobby

## **PLENARY SESSION DISTINGUISHED VISITORS DAY**

8:00 a.m.

**Call to Order**

*Mr. C. Samuel Campagna, Director, Operations, NDIA*

8:05 a.m.

**Presentation of the Colors and National Anthem**

*U.S. Navy Color Guard and Kitsap Chordsmen*

8:10 a.m.

**Welcome and Opening Remarks**

*Mr. Donald F. McCormack, Jr., Technical Director (Acting), Naval Undersea Warfare Center*

8:20 a.m.

**Plenary Session Introduction**

*Mr. Jim O'Bryon, Chairman, NDIA Test and Evaluation Division*

- 8:35 a.m. **NDIA Perspectives**  
*Lt Gen Lawrence Farrell, USAF (Ret), President & CEO, NDIA*
- 8:50 a.m. **Future Littoral USW With Unmanned Systems - An Integrated Warfare View**  
*VADM Roger Bacon, USN (Ret), Naval Post Graduate School*
- 9:05 a.m. **Naval Oceanography - Experimenting in to the Future**  
*Mr. Edward Gough, Technical Director, Naval Meteorology and Oceanography Command*
- 9:35 a.m. **Overview of Activities for Distinguished Visitors Day**  
*Mr. Steve Stuart, AUV Fest 2005 Event Manager, Naval Undersea Warfare Center*
- 9:45 a.m. **Break and Refreshments in Display Area**
- 10:15 a.m. **Highlights of AUV Fest 2005 Demonstrations**  
*Col William Schopf, USMC (Ret), Office of Naval Research Test Director*
- 11:00 a.m. **Panel Discussion**  
*Senior UUV Community Leaders from Government, Academia, and Industry*
- 12:10 a.m. **Closing Remarks**  
*CAPT Daniel J. Looney, USN, Commander, Naval Undersea Warfare Center Division, Keyport*
- 12:15 p.m. **Lunch**
- 12:15 p.m.-  
5:00 p.m. **Display Area & Remote AUV Fest 2005 Display Center Open**  
Display Area and AUV Fest 2005 Remote Display Viewing Center (Lower Level)
- 1:30 p.m. **Waterfront Vehicle Area Tours & Viewing of Live UMV Demonstrations**  
Shuttle bus transportation to/from the Keyport waterfront
- 5:30 p.m. **Salmon Bake**  
Keyport Lagoon Picnic Area



# AUV Fest 2005

National UUV Test & Evaluation Center



<http://kpwawao.kpt.nuwc.navy.mil/NUTEC>

## NDIA Unmanned Maritime Vehicle Test & Evaluation Conference

**“The Department of Defense finds that this event meets the minimum regulatory standards for attendance by DoD employees. This finding does not constitute a blanket approval or endorsement for attendance. Individual DoD component commands or organizations are responsible for approving attendance of its employees.”**

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