

## *DRAFT INDUSTRY DAY ANNOUNCEMENT*

### **SPECIAL NOTICE 12-SN-0005**

#### **ONR Industry Day Notice**

#### **Tools and Models for Predicting the Magnitude and Distribution of Forces on the Towed Array System**

##### **General Information:**

Classification Code: A – Research & Development

NAICS Code: 541712

**Description:** The Office of Naval Research (ONR) plans to conduct an Industry Day to present an upcoming Broad Agency Announcement (BAA) that will address the total towed array system response to the forces acting upon it as well as the reliability attributed to the entire towed array system. In order to achieve these goals, the development of tools and models is required for predicting the magnitude and distribution of forces on the towed array system during its life cycle including array storage, array deployment, array towed operation and array retrieval. Efforts will be required to characterize both handler and hydrodynamic forces that include static and dynamic, cyclic stress, and fatigue through an integrated program of modeling, experimental design, component prototype fabrication and testing, model validation, and model-based design improvements. These BAA outputs will be closely integrated with other Navy efforts to ultimately improve overall system reliability. Partnering on this BAA is greatly encouraged in order to provide the complete skill set required to be brought to bear on this subject.

The purpose of the Industry Day is to discuss the tools and models to be developed and applied for predicting the magnitude and distribution of forces, operational stresses, cyclic loading and mechanical stresses placed on a towed array and its constituent internal components (i.e. individual connectors, wiring, strain relief, etc.) during its life cycle as it relates to the forthcoming BAA for this topic. Challenge problem areas to be addressed in the forthcoming BAA will be discussed, including modeling of hydrodynamic array streaming conditions, cylindrical turbulent boundary layer flow induced stresses at high Reynolds numbers, modeling of array handler induced stresses, and modeling of the associated reliability as it relates to the overall towed array system that encompasses the towed array and its handling system. General questions related to the pending BAA will be accepted during the meeting for consideration.

The Industry Day will be held at the Naval Undersea Warfare Center, Building 80, Newport, Rhode Island, 02841-1708 on Thursday, 8 March 2012. Check-in will begin at 1000 am Eastern Standard Time and the meeting will begin at 1200 noon Eastern Standard Time. Details concerning registration to attend this event are available at the following website:

<https://secure.onr.navy.mil/events/regdetail.asp?cid=827..>

Registration will close at 4:00 PM Eastern Standard Time on Friday, 2 March 2012. Pre-Registration is required. Walk-ins will not be permitted. Registration is limited to two (2) representatives from each organization attending the Industry Day; however, if requested attendance exceeds the capacity of the conference room, it may be necessary to further limit attendance of personnel from each organization to just one (1). ONR will reply via e-mail with the registration confirmation. All expenses associated with attendance will be the responsibility of the participant(s).

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Questions/comments resulting from the Tools and Models for Towed Arrays and Towed Array Systems Industry Day will be accepted via email from 8 March through 15 March, 2012. The limited timeframe for questions/comments is to allow for potential feedback to be incorporated into any resulting BAA.

Submit questions/comments to the following email address:

[IndustryDayQuestionsToolsandModelsforTowedArraySystem@onr.navy.mil](mailto:IndustryDayQuestionsToolsandModelsforTowedArraySystem@onr.navy.mil). Questions/comments shall be reviewed and will be considered when finalizing the resulting BAA.

Points of Contact:

Technical Point of Contact:

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