



**OCEANIC CONSULTING CORPORATION SUPPORTING MEMORIAL UNIVERSITY'S DEPARTMENT OF NATIONAL DEFENCE (DND) AND NATURAL SCIENCES AND ENGINEERING RESEARCH COUNCIL OF CANADA (NSERC) DND/NSERC RESEARCH PARTNERSHIP GRANT**

November 15, 2006, St. John's, Newfoundland & Labrador, Canada

Oceanic Consulting Corporation is pleased to congratulate Memorial University's Dr. Wei Qiu and his research team for the success in being awarded a Department of National Defence (DND) and Natural Sciences and Engineering Research Council of Canada (NSERC) DND/NSERC Research Partnership Grant. Supported by Oceanic and Defence Research and Development Canada (DRDC) Atlantic, Dr. Qiu has received \$245,000 in cash and \$25,000 in in-kind contributions for the three-year \$270,000 collaborative research project entitled *Development of Numerical Tools for Propeller Tip Vortex Flow Computation* scheduled to begin in October 2006. This project is the third such award that Oceanic has supported at Memorial University. To date, Oceanic has helped Memorial obtain nearly \$1,500,000 cash in research funding.

The research addresses the development of numerical tools to improve the safe and effective operation of surface ships and underwater vehicles, which is one of the priority research areas noted by DND and NSERC in their creation of the DND/NSERC Research Partnership program.

The first objective of Dr. Qiu's research is to develop numerical methods to compute the turbulent vortex flow from propeller blade tips. The second objective is to accurately predict the viscous flow field around a ship including the effects of the free surface and the propeller inflow conditions.

Propeller cavitation is of major concern for naval warships, research ships, ferries and cruise ships since it is the predominant source of propeller-generated noise and vibration. Cavitation not only influences low frequency propeller-induced pressure fluctuations on the ship hull but also increases high frequency noise levels in ships. For naval ships this aspect is particularly challenging.

The DND/NSERC Research Partnership Program aims to capitalize on the complementary R&D capacity existing in Canadian universities to: generate new knowledge and support the development of new technical capabilities relevant to the development and application of dual-use technologies in selected areas of interest to both DND and NSERC; build strong two- and three-way linkages and create synergy between researchers in universities and the private sector; achieve the efficient and effective transfer of research results and technology to identified receptors in the public and the private sector; and train and develop highly qualified personnel in priority areas consistent with the future human resource requirements in the public and private sectors.

Oceanic Consulting Corporation is an ocean engineering firm that provides services in marine performance prediction, design evaluation, and contract research to the international marketplace. Employing 46 people in St. John's, the firm exports over 90% of its services outside Canada.

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