

Research Training Centre for Naval Design and Manufacturing



PhD SCHOLARSHIP

Understanding the unsteady loading on lifting surfaces due to turbulence

Closing Date

15 July 2020

Applicants should contact the primary supervisor, and submit their Expression of Interest (EOI) with a cover letter and CV to the APPLY NOW button at <https://www.utas.edu.au/research/degrees/available-phd-projects/phd-projects/college-of-sciences-and-engineering/australian-maritime-college/understanding-the-unsteady-loading-on-lifting-surfaces-due-to-turbulence>

Further info: Jonathan.Binns@utas.edu.au

Funding

RTCNDM Scholarship 2020: This scholarship provides a \$30,000 living allowance for 3.5 years with no extension, plus access to funds for associated research and training costs as approved.

The Research Project

The purpose of the study is to gain insight into the unsteady loading imparted to lifting surfaces immersed in structured turbulent flows. The study will experimentally explore the dependency on the physical characteristics of the oncoming flow and the hydrofoil geometry. New instrumentation will be developed with an extended range of frequency resolution to provide greater insight into the correlation between the underlying flow physics and the resulting unsteady force spectra.

The main benefit of the outcomes of this project will be to contribute to improved control surface design for submarine and other submerged naval platforms. Reduced vibration and radiated noise will result in improved structural design and signature performance.

Eligibility & Selection Criteria

The following eligibility criteria apply to this project:

- Honours degree or equivalent in mathematics, science or engineering

Expertise & outcomes in the following areas is highly desirable:

- Publications & awards relative to opportunity
- Experimental fluid mechanics
- Advanced data analysis skills

The successful candidate must be prepared to submit a valid application for Australian Security Clearance (for further information, see www.defence.gov.au/security/clearances).

Application

Submit an EOI before 15 July through the Apply Now at

For More Project Information

Please contact Professor Paul Brandner (p.brandner@utas.edu.au) for more information on the project.