UNSW School of Mathematics and Statistics and the NSW Defence Innovation Network (DIN) have partnered with Naval Group, a world leader in maritime defence, to offer a fully funded PhD scholarship and top-up scholarship to grow local Australian skills and support Science, Technology, Engineering and Maths (STEM) career pathways in Defence. This project has been co-developed by Naval Group engineers and researchers at UNSW Sydney and Macquarie University and will be part of Naval Group’s long-term commitment to Australian defence research.

**Value:** $34,097/year for 3 years ($28,597 RTP stipend rate, indexed annually + $5,500 pa top-up).

**Topic Area:** This project aims to develop and validate fast, accurate mathematical methods for calculating the surface and interior wake “fingerprint” of submerged moving vessels. Utilising new concepts in fluid dynamics and exponential asymptotics to calculate wakes generated by submerged vessels, this project aims to address long-standing challenges to detection of submarine wakes. The expected outcomes of this project include rigorously tested algorithms for fast, accurate calculation of surface and interior wakes generated by submarines. The resulting benefits could be a game-changer for Australian remote surveillance and undersea warfare capability.

**Eligibility:** Applications are invited from domestic PhD candidates who are enrolling on a full-time basis. Applicants must have a Bachelor degree with first class honours, Master of Philosophy or Master of Research, or equivalent. The candidate must be eligible to enrol in an accredited Research Doctorate at UNSW. Applicants for this scholarship will not be considered if they do not meet the minimum UNSW requirements for doctoral candidature. Please first check the requirements for admission [https://research.unsw.edu.au/higher-degree-research-programs](https://research.unsw.edu.au/higher-degree-research-programs).

This scholarship is available to **Australian citizens only**. Successful applicants will be asked to provide a police clearance before commencing the project.

**How to apply:** Eligible candidates should first contact Dr Shane Keating to discuss their interest and suitability for this project by sending an email to s.keating@unsw.edu.au.

**Closing Date:** Closing date August 27th 2021.