



## Guest Lecture: Challenges for Unmanned Embarked Aviation

Doctor Bernard Ferrier

Wednesday 20 April 2016, 15:00

Harrison Lecture Theatre 004

Refreshments will be available before the presentation



There are a number of challenges associated with the launch and recovery process of unmanned aerial units onboard ships. In this talk, I will be discussing the MQ-8C Fire Scout system, which is required to undergo ship suitability assessments in the form of dynamic interface (DI) testing aboard ship. DI testing evaluates all aspects of shipboard helicopter compatibility such as adequacy, effectiveness and safety of shipboard aviation support facilities, and procedures for all ship-based helicopter types. To facilitate the upcoming assessment, a parallel effort was initiated to apply motion simulation defining deck interface experimentation ahead of sea trials. Analysis is made of various system component responses to the encountered motions and forces from a generic mono-hull vessel. Results are presented in relation to the deck stability problems normally confronted by a helicopter during recovery in progressively difficult conditions.

### About Dr. Bernard Ferrier

Dr. Bernard Ferrier is a Systems Engineering and Technology Associate (SETA) in The Naval Air Systems Command PMA-266 with the primary task of integrating Fire Scout Endurance upgrade technologies into the Fire Scout Launch and Recovery System. He is also the Engineering Head of the Hoffman Engineering's Dynamic Interface Lab in Arlington, VA. Dr. Ferrier led the CL227 UAV dynamic interface program at Bombardier, Inc. and was a rotor dynamist and project leader of the dynamic interface program of the marinised AH-64 (Apache) and LHX programs at the McDonnell Douglas Helicopter Company. He received his last doctorate in helicopter/ship interface engineering at the École Polytechnique de Montréal (Québec) Canada.