

How a motion-rich environment impacts psycho-physical performance and decision-making: a maritime context.

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The existence of boats predates written history and evidence of maritime trade between geographically remote communities has been documented for over 2000 years. While ship design and technologies for navigation have changed considerably, operations in motion-rich environments still present impediments upon the physical and cognitive demands of mariners. Exposures to motion-rich environments have been known to contribute to motion-induced sickness (MIS), motion-induced interruptions (MII) and motion induced fatigue (MIF). Unfortunately, research into the effects of motion on physical and cognitive performance is difficult to undertake in the field because of the inherent variability of motion states and the large differences in vessel hydrodynamics (i.e. how ships respond to the energies of the water). Thus, motion-based simulators have been employed to control for motion exposure, in hopes of better understanding "cause and effect" and/or dose-response. This presentation will explore the outcomes of laboratory-based experiments on the psycho-physical and decision-making performances during the exposure of participants to motions.