

The Marine Institute's Centre for Marine Simulation (CMS) is gearing up to welcome some of the top high-rise structural engineering firms in the world when it co-hosts a Building Motion Workshop with RWDI Group/Motioneering on Sept. 11-12.

RWDI Group /Motioneering specializes in the design, development and monitoring of motion solutions for a wide range of structural applications. Last fall, the company used the Centre's ship bridge simulator for the first time to predict the swaying motion of the Chicago Spire, a supertall skyscraper currently under construction in Illinois.

"Since the bridge simulator is usually employed for marine training and marine-related research, working with engineers to test a building's motion was a challenging yet opportune departure for CMS," said CMS director Capt. Chris Hearn. "Adapting the ship bridge for structural engineering research has created a new demand for our expertise and facilities."

A select group of 30 international engineers have been invited to CMS to experience full scale and realistic building motions that represent true wind-induced behaviour in high-rise towers. Over the two-day workshop, participants will engage in a range of scenarios on the ship bridge, which will be transformed to resemble a residential condominium unit in a high-rise tower. To complete the visual experience, the simulator's 360-degree video screen will project the tower's surrounding city landscape.

The participants will examine each scenario placing them in context with commonly used motion criteria and design guidelines used today. Experts from RWDI Group/Motioneering and the Marine Institute will also present on wind engineering, human kinetics and the physiology of motion perception.

"This is a first-time special event for RWDI/Motioneering and the Marine Institute," said Hearn. "We are going to ensure that these individuals come away from this workshop having recognized the immense potential our facility offers for high-rise structural engineering."