

Centre for Marine Simulation

Full-Motion Capability | Real-Time Integrated Technology | Simulation Specialists



MARINE INSTITUTE



Face your challenges here.



Experience a whole new level of simulated reality.

At the edge of the harsh North Atlantic Ocean, discover a training facility of a different class. Meet the Marine Institute's Centre for Marine Simulation... North America's most advanced marine simulation solutions provider.

We have an edge of our own.

High fidelity, state-of-the-art technology, 360° visuals, and motion systems that provide our clients with unprecedented realism.

Our objective is simple:

Improve operational efficiency by enhancing a mariner's knowledge, skill, and confidence.



FULL MISSION SHIP'S BRIDGE SIMULATOR







COME TO SEA...VIRTUALLY

Individuals and teams train here for one reason ... because CMS combines real experience with some of the most sophisticated technology on the planet.

We are one of the few simulation centers in the world where mariners can train for challenging offshore situations in an environment that doesn't just mimic reality but looks and feels unquestionably real.

IT'S ALL IN ONE PLACE

Our uniqueness hinges on the way we service our clients. **We have the technology and maritime expertise in house; we can customize *any operation, any vessel, and any location.*** With our own simulation experts we can make your reality our reality, virtually. Master Mariners, Naval Architects, GIS Experts, and Database Developers make up the CMS team.

Full stop.

A Simulator Suite Under Your Command

CMS operates a suite of simulators for an array of marine operations.

NAVIGATION

OFFSHORE
OPERATIONS

SHIP
MANOEUVRING

PLATFORM + VESSEL
STABILITY

DYNAMIC
POSITIONING

BRIDGE
MANAGEMENT

UNDERWATER
INTERVENTION

TUG SUPPORT

Our Simulators Include:

- **FULL MISSION SHIP'S BRIDGE**
Motion capable
360° visuals
- **HIBERNIA OFFSHORE OPERATIONS BRIDGE (ANCHOR HANDLING/SUPPLY)**
Motion capable
360° visuals
- **BALLAST CONTROL**
Motion capable
- **CARGO HANDLING**
- **DYNAMIC POSITIONING**
Motion capable
160° visuals
- **ELECTRONIC CHART DISPLAY AND INFORMATION SYSTEMS (ECDIS)**
- **FAST TIME SIMULATOR**
- **GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM (GMDSS)**
- **LIFEBOAT LAUNCH – CONVENTIONAL AND FREEFALL**
Motion capable
- **PROPULSION PLANT**
- **REMOTELY OPERATED VEHICLE (ROV)**
- **SIMULATED ELECTRONIC NAVIGATION (SEN) BRIDGE AND LIVE EQUIPMENT LABORATORY**
120° visuals
- **TUG (VOITH SCHNEIDER & CONVENTIONAL DRIVES)**
130° VISUALS
- **HELICOPTER DITCHING**
Motion Capable

TAP INTO IT

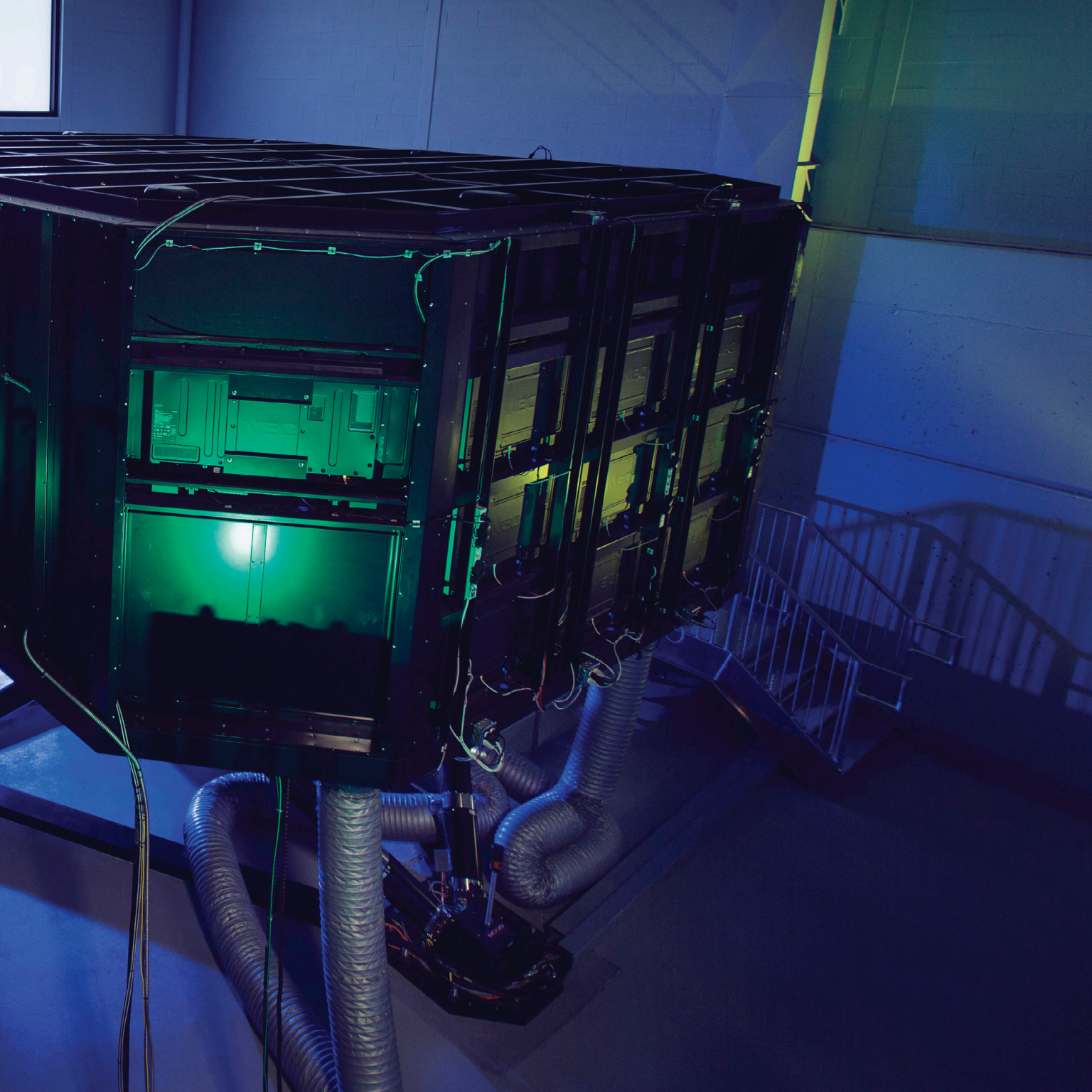
Offshore Oil and Gas Operations

In any offshore operation, highly trained personnel are critical. Practicing standard and emergency procedures prior to a real mission provides the best solution to ensure your crew can get the job done right.

CMS can replicate specialized oil and gas operations including anchor handling; platform supply; offshore loading; rig stability; and dynamic positioning. Through simulation, prepare for your offshore challenges.

"To ensure our people are competently trained to deal with the challenging support operations off East Coast Canada, we use CMS to simulate our supply vessels and the realistic environments our crew face every day"

– Captain Tom Swift, Atlantic Towing Limited



BREAK THE ICE

Ice Navigation/Operations

Operating in ice is extremely challenging and unpredictable. Our location gives us an advantage; we are accustomed to working in these waters and have spent decades learning from it. By combining our experienced instructors and advanced simulation technology, CMS can prepare your navigators to conduct effective, safe, and economic voyages through ice-infested waters.

"CMS is the only place in Canada that offers lectures and simulation exercises in Ice Navigation. Shipping companies and navigators from around the world benefit from this training. I have had the good fortune to be a part of this course for over 10 years now."

– Captain Andrew McNeil, Retired Ice Master, Canadian Coast Guard

SAIL TO THE EDGE

Vessel Design and Equipment Testing

Through numerical modeling, CMS can build your vessel with hydrodynamic accuracy. Find your vessel's navigational limitations or investigate its seaworthiness.

Deploy your real equipment on board our simulators and test it for functionality and ease of use; let us market your technology to our global clientele.

"CMS provided us with an ideal platform and customer base in which to showcase our state-of-the-art sigma S6 Ice Navigator™ radar technology. At the same time we provided them with cutting-edge tools for their ice navigation training. It has been a win-win partnership."

– Brian Johnston, Rutter Technologies



HIBERNIA OFFSHORE OPERATIONS SIMULATOR





TEST THE WATERS

Port Development and Manoeuvring Studies

Building a new port or expanding current facilities? Let CMS simulate the layout and design to ensure vessels can arrive and depart safely. Determine tug requirements and berthing arrangements in real time to control your costs.

"I have been to other simulation facilities and I am very impressed with the equipment and expertise at CMS; it is world class. The realism of the simulated port environment, blended with motion is remarkable, compared to the actual operation. Working with the Centre, Groupe Ocean was able to gather proficient data to support our analysis for new tug tonnage."

– Captain Sylvain Desgagnes, Groupe Ocean



INVEST IN YOUR PEOPLE

We've been where you are; we've done what you're doing. So, we've invested in our technology and in our people to help make your operation even safer.

At CMS, you'll receive competency-based training. You'll engage in team-based exercises using integrated systems that operate like your work environment. Our training courses,

regulatory and non-regulatory, are held to international standards and our customized programs meet or exceed them.

We train mariners who work in some of the most hazardous conditions in the world, performing very stressful and challenging tasks in the maritime field. Our simulation systems must replicate these risks and they do, unequivocally.





Friday, February 12, 20

Main

Sea Rose

80

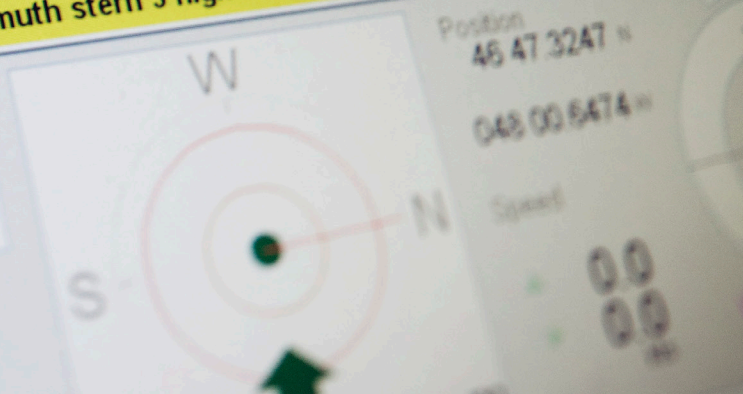
Offload Help

14:05:51 12/02/16

Warning

Normal

Azimuth stern 3 high force





PUSHING SIMULATION BEYOND THE LIMITS

CMS works with private and public entities to conduct research for real world applications. Whether it's developing cutting-edge technology for Arctic exploration and navigation or investigating the effects of motion and marine equipment on the human psyche, our facilities provide a safe and cost-effective laboratory for innovative discoveries.

Our strength lies in our partnerships with researchers and marine experts around the globe: government agencies, post-secondary institutions, oil and gas operators, marine suppliers, and simulation manufacturers.

Explore the uncharted with us.

ACCREDITATION

Training courses delivered by CMS are subject to rigorous academic scrutiny. The majority of courses delivered at the Centre are accredited by national and international regulatory or other external approving agencies. As part of the Marine Institute, an ISO 9001 accredited training organization, CMS is also subject to regular audits.

Training accreditation:


- Transport Canada
- Nautical Institute
- Canadian Association of Petroleum Producers (CAPP)

Equipment accreditation:

- Det Norske Veritas (DNV)

Professional Affiliations:

- Nautical Institute (NI)
- International Marine Contractors Association (IMCA)
- International Maritime Lecturers Association (IMLA)
- International Navigation Lecturers Conference (INSLC)
- International Association of Maritime Universities (IAMU)
- International Marine Simulator Forum (IMSF)

An underwater photograph showing a dead animal, possibly a seal or sea lion, lying on a sandy seabed. The animal is positioned horizontally in the lower half of the frame. The water is dark blue, and the seabed is covered in sand and some small rocks or debris. The lighting is somewhat dim, typical of an underwater environment.

"CMS's capability to build ship models and geographic locations with virtual accuracy has been extremely valuable to Fednav. Their attention to detail, adaptability, and drive for quality have made us repeat customers."

– Tim Keane, Fednav Limited



FULL MISSION SHIP'S BRIDGE SIMULATOR



CONTACT US

Director, Centre for Marine Simulation

T: 1 709 778 0305

Industrial Projects and Applied Research

T: 1 709 778 0339

Regulatory and Non-Regulatory Training

T: 1 709 778 0453

Email: cms@mi.mun.ca

www.mi.mun.ca/cms

