



INTERNATIONAL WORKSHOP on Sim&Sea, the Simulation and Sea

June 9, 2014 - Galata Museum of the Sea - Descent de Mari 1, 16126 Genoa, Italy

The Simulation and the Sea

The Sea is a challenging world where often we have to operate at the limit of human capability. The complexity of this environment is balanced by the richness of its opportunities and we have to address a broad area of expertise as well as multiple sectors and topics to succeed over there; so, in this context, the modern methods of Modelling & Simulation (M&S) represent a strategic science; therefore simulation is the essential investigation tool able to extend our capabilities to study and analyze multidisciplinary problems within virtual interoperable worlds and to experiment new concepts and new strategies. Hence, the Workshop "Simulation and the Sea" focuses on specific issues related to Sea as a resource where to operate effectively and efficiently in the context of port & logistics, maritime navigation & shipping, oil & gas activities, defense and homeland security. From this point of view, Italy and Liguria in particular offer good examples of maritime M&S excellence within Academia and Industry, so Genoa is the ideal framework for this workshop. Indeed Liguria has always been particularly active at "sea side" in terms of simulation according to its peculiarities and to the presence of Excellence Centers in Marine Sector, Ship Yard Industry, Naval Defense, Port Terminals for cargo and passengers as well as Training Service and R&D.

The Workshop Sim & Sea addresses these issues in Genoa, the Galata Museo del Mare, by presenting the state of the art in the field of Interoperable Simulation (Connecting Simulators in Networks to create Virtual complex Worlds), Serious Games (Games devoted to Learning and Cooperation) and the related new technologies in the context of marine and naval sector.

More than one hundred national and international experts will intervene in the event by offering examples of simulation for the development of new concepts and technologies.

In fact, Sim & Sea is the workshop on the Simulation and the Sea, which leads to Genoa excellence Academic Institution (ie, Universita' di Genova, Polytechnic School, MIT, Unical), Research Centers (ie FFI Norwegian and Simulation Team), Defense (NATO Science and Technology Organization, Center for Research and Experimentation, M & Scenter of Eccelence, CSSN) and Large Industries and Small and Medium Enterprises, the event is organized by MIMOS (Italian Movement of Modeling and Simulation) and is





sponsored by CETENA Group FINCANTIERI, BK, Mast, Antycip, CAL-TEK, IB SPACE SOFTWARE, ECA-SINDEL.

In this regard, the Workshop Sim & Sea focuses precisely on highly topical issues related to the sea as a resource to be protected and exploited; In fact, the simulation allows to optimize the effectiveness and efficiency of operations both in the context of port and logistics, which in maritime navigation, the protection of natural resources and defense.

Among the new technologies tested virtually, for example, the use of autonomous systems, unmanned vehicles capable of operating above, below the surface of the sea and flying, which will allow in the near future to increase dramatically safety and knowledge of the oceans; Simulation allows you to design these systems from today both in terms of technical features and modes' of use by providing a competitive advantage to M&S users; this obviously creates new jobs that require high skills for young engineers and technicians.

This is a great opportunity 'for young people in areas of excellence and innovation that are internationally strategic in many different industrial areas (ie logistics, shipping, oil & gas, security, defense).

Not only that, the simulation is 'essential also for the training and qualification of the personnel delegated to operate on the sea and enables improvements into efficiency and competitiveness' of our reality' (ie, ships, ports, industries, activities' underwater).

During Sim & Sea the Genoa Port Authority, the Centre for Maritime Research and Experimentation, Science and Technology Organization of NATO (CMRE), the Polytechnic School and the DIME Universita' di Genova, the International Center of Excellence for Modeling & Simulation, the Simulation Team (22 Institutions and Hi-Tech Companies worldwide), the Liophant and the CSSN Italian Navy will present their collaborative efforts in this field established on their territory of Liguria even if the relevance of their cooperation is very international.





But Sim & Sea is not 'just a meeting of experts and scientists, it provides also the opportunity 'to allow the city' to directly experience virtual worlds flying, sailing or swimming underwater: Museum visitors will be able to Saturdays, Sundays and Mondays (7 to 9 June) to try innovative simulation systems, for example, you can 'enjoy the interactive experience of the Saracen pirates alongside the simulation of modern protection of traffic near the African coast.

Among the simulators planned for this show is remembered

- Once upon a time the Pirates (BK Simulator medieval Saracen attacks the coast of Liguria)
- Where are the Pirates Today? (Simulation Team and CMRE, presenting a virtual world where helicopters and RHIB allow to patrol the coast of Africa)
- Sail the Ship! (CETENA Fincantieri Group, simulator bridge of a ship)
- Security and Safety-Sea (DIME University Simulation of the 'surveillance of the Port of Genoa with, autonomous quadcopters vehicles and unmanned ground vehicles that enhance safety in automated port while performing operations)
- No Way to Hide (Center for Maritime Research and Experimentation: observed means of a swarm of autonomous sensors that maintains a continuous surveillance of the sea)
- Climb on Board (MSC-LES: driving the Hummer, the cars and trucks on board cargo ships complying with the rules and being not expect to do damage)
- Be Tug! (Simulation Team: Virtual Simulator allowing to maneuver a large ship with a tug)
- Stop the terrorist, underwater! (Universita 'di Genova & Dark Energy: Defend a marine area by a diver who wants to commit an act of terrorism)

