

Sim & Sea

The Simulation and the Sea

 **MIMOS** movimento italiano
modellizzazione e simulazione

MIMOS Workshop on Simulation Tools and
Techniques applied within
Marine Domain

Galata, Sea Museum, Genoa, Italy, June 9 2014

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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.

Topics

The "**Sim & Sea, the Simulation and the Sea**" proposes contributions and live demonstration on various applications of marine M&S, which include, but are not limited, to the following topics:

- *Autonomous Underwater Vehicle Simulation*
- *Live, Virtual & Constructive Marine Simulators*
- *Marine Virtual Prototyping*
- *Simulation Based Naval Design*
- *Oil and Gas Simulation*
- *Ship Simulation*
- *Simulation and Sea Keeping*
- *Port and Logistics Simulation*
- *Training & Simulation in Marine Environment*
- *M&S in Naval Defense*
- *Interoperable Naval Simulation*
- *Homeland Security within Marine Domain*
- *Sea and Serious Games*
- *Underwater and Surface M&S*
- *Unmanned Surface Vehicles Simulation*
- *ROV Simulation*

Registration

Workshop registration is **Free** and should to be completed before June 1 2014, on Sim & Sea web site at www.mimos.it. For further details please check www.mimos.it or contact organizers (christian.bartolucci@simulationteam.com).

Location and Venue

The Workshop is held on the Meeting Room of Galata, Sea Museum, Calata dei Mari, 1, 16126 Genoa, Italy, June 9, 2014 / www.liophant.org/conferences/2014/simsea



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General Chairs

- Agostino Bruzzone – Director M&S Net and MIPET DIME Università di Genova
- Francesco Lupi – CEO BK srl Brain and Knowledge
- Aldo Zini – Member of the Board of Directors MIMOS, CETENA, Fincantieri Group

Scientific Committee

- Giovanni Benvenuto – DITEN
- Agostino Bruzzone – M&S Net & Genoa University
- Stefano Brizzolaro – MIT
- Laura Boldi - Selex ES
- Emilio Campana - INSEAN
- Antonio Martella - Simulation Team
- Gianluca Massucco – NATO STO CMRE
- Vincenzo Milano –M&S COE
- Fabrizio Sciarra – BK
- Alberto Tremori – DIME Università di Genova
- Andrea Trucco – A3US, Università di Genova
- Aldo Zini - Cetena

Workshop Preliminary Program

10:00 Welcome

Prof. Bruzzone, Simulation Team President
Dr. Merlo, Genoa Port Authority President
ADM Morellato, CSSN Director, MMI
Prof. Massardo, Genoa Polytechnic School Dean
Prof. Zunino, DIME Genoa University Director
RADM Hank Ort, (Ret.) NATO CMRE Director
CAPT Vincenzo Milano, M&S COE Vice Director
Dr. Paolo Proietti, MIMOS Vice President

10:30 Joint Naval Simulation

Chairman: Gianluca Massucco, NATO STO CMRE

Naval M&S Activities within NATO

Vincenzo Milano, NATO M&S COE

Naval Joint Tactical Simulation

Bruzzone, Fontaine, Grasso, Berni, Merani,
Massucco, NATO Center for Maritime Research
and Experimentation

Moby: a Simulation Tool for Evaluating Maritime Surveillance

Vatne, Norwegian Defense Research
Establishment (FFI)

Ship Deck Simulator at Naval Academy: 2000 - 2014 Evolution

Perrone, MMI Accademia Navale

Ship Simulation and Port Assessment

Caprino, Preverero, Zini, Cetena/Fincantieri

12:00 Break



13:00 Modeling and Simulation at Sea

Chairman: Aldo Zini, CETENA, Fincantieri Group

Training using "Virtual Reality" and HIL

Sciarra, Corsanini, BK and OTO Melara

HLA Simulator for Ship Maneuvering and Pilot Supervision

Longo, Nicoletti, Bartolucci, Simulation Team,
MSC-LES, Cal-Tek

Interoperable Marine Simulation for Port Safety and Security

Bruzzone, Poggi, Tremori, Martella, Camponeschi,
Simulation Team

Re Artù - Ottimizzatore per Sistemi Subacquei

Multivariabile,
Signorini, WASS

Evoluzioni del Shore Integration and Acceptance Center

Boldi, Guano, Picollo, Selex ES

14:30 Break

15:00 Simulation in Marine Domain

Chairman: Francesco Lupi, BK

An Interactive Mixed Reality Environment for Virtual Exploration of Archaeological Sites

Magrini, Moroni, Pascali, Pieri, Reggiannini, Tampucci,
Salveti, ISTI CNR

3D Experience for Virtual worlds

Garella, Ciriello, Dassult Systems srl

Uso combinato di Tecniche di Simulazione, Emulazione e Virtualizzazione a supporto del progetto di Sistemi VTS

Gelli, Battaglia, Ficco, Canonico, Selex SESM UNINA

CFD al servizio dell'Ambiente: Inquinanti nel Mare

Palo, XC Engineering

La Modellazione 3D e Real-Time applicata al Marittimo

Davide Marini, Gianluca Ceccarelli. DLTM Animaria

16:30 Sim&Sea Panel & Open Discussion

Chairman: Agostino Bruzzone, Univ. of Genoa

