

## **CAPRICORN**



### Cimic And Planning Research In Complex

**Operational Realistic Network** 



### **CAPRICORN Partners & Stakeholders**













## **CAPRICORN Highlights**

Capricorn is a groundbreaking Project due to its Innovative application of Simulation

 Investigation on the use of Intelligent CGF and Simulation for Operational Planning

 Advanced Human Behavior Hierarchical Models for Intelligent Agents and CGF

 Modeling CIMIC & PSYOPS for Interoperable Simulation

 Enhanced Interoperable Multilevel Models for Operational Planning







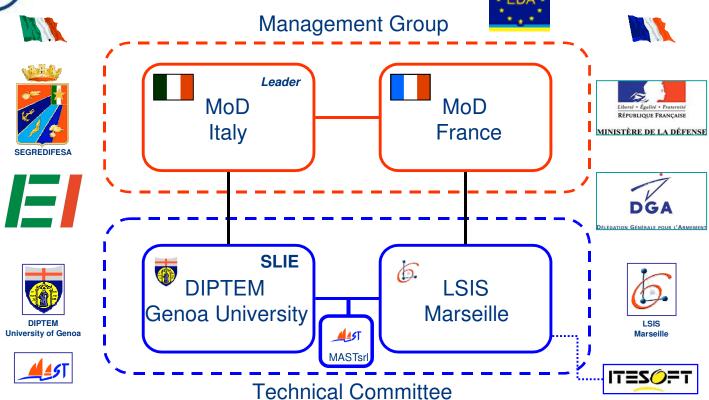








### **CAPRICORN Team**



**CAPRICORN - CIMIC And Planning Research In Complex Operational Realistic Network** 













### **CAPRICORN Partners**

### DIPTEM University of Genoa, Italy

- 60 Researchers 30 PhD Students and co-operating researchers and professionals
- Major Research Areas: M&S, Logistics, Quality Assurance, Safety, Mathematical Modelling, Operational Research, Industrial Technology
- 2 Research Facilities at Genoa University: Savona Campus and Genova Campus

### LSIS, France

- More than 100 researchers and more than 100 PhD and master students
- Computer sciences, control and images
- UMR CNRS
- MOFED : Discrete Events Models and Formalisms

### • MAST, Italy

- Actively involved in the Simulation Team lead by DIPTEM University of Genoa
- Major Research Areas
  - M&S-based Decision Support Systems
  - Virtual Simulation
  - Military Applications
- MAST-DIPTEM Joint-Lab located in Savona Campus













### McLeod Institute of Technology and M&S **M&S Net Genoa Center**

Email: agostino@itim.unige.it

**URL:** 

www.mcleodinstitute.org www.m-s-net.org



The research group of DIME of *Genoa University* is active from '60 in Simulation applied to Industrial Engineering and is cooperating with M&S Net and MITIM

The activities involve modeling, simulation, VV&A and analysis of Industrial Applications and Services (design, re-engineering, management, training etc.)

**Chemical Facilities** as:

**Harbor Terminals** 

**Manufacturing** 

**Public Transportation** 

**Power Plants Public Services Environment** Assembling Logistics

The Department staff is in touch world-wide with the simulation community and is present actively to conferences, exhibitions and working meetings with the major **Associations, Agencies and Companies.** 

34 M&S Net Centers World-Wide











### Simulation Team MITIM DIME

The Simulation Team - DIME of Genoa University carries out many industrial simulation projects in cooperation with the large corporations and small and medium sized Enterprises; some example of recent industrial simulation project are following:



**Europa ENI** 







Ansaldo



Cetena





LOCKHEED MARTIN









**Simulation & Virtual Project Management** of Car Deck Construction for Fast Ferry













Simulation for Re-Engineering Supply Chain in a Large Chain of Grocery Stores PIAGGIO PIAGRO









Members of MISS are appointed in several positions in simulation community such as:



Board of Directors of SCS and Chairman of Technical Chapter









Italian Point of Contact of ISAG (International Simulation Advisory Group) MAST Università di Genova







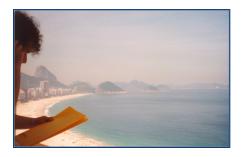
### **DIPTEM - University of Genoa**

DIPTEM was founded in 1997 as evolution of the Institute of Technology and Industrial Management (ITIM) that was operative from '60. DIPTEM is composed by about 60 faculty members, 15 technicians and administrative, plus several PhD Students, external Researchers and Consultants. DIPTEM teachers are involved in Undergraduate, Postgraduate and Professional activities in Engineering, Management.

DIPTEM active in R&D Projects for major Institutions, Companies and Governmental Organisations. DIPTEM co-operates actively with major Excellence Centers World-Wide.















# **University of Genoa:** an Overview

The University of Genoa is one of the oldest in Italy and in the World (founded in 1471 AD), it is located in middle of Italian Riviera.

The students are about 40,000 (about 8,000 new entries), and the engineering departments has about 7,500 students (12% in Savona Branch Departments); in effect the Savona Campus Savona holds about 1,000 Engineering Students.

That campus is located about 2 km from Savona Downtown, in an old complex of barracks recently converted into new

University Buildings (over an area of 200,000 m<sup>2</sup>).

For further Information about the University of Genoa:

http://st.itim.unige.it http://www.unige.it







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### Savona Campus & Facilities

The University of Genoa includes a new campus in Savona about 2 km outside Downtown; bus services and large parking areas guarantee easy access.

That structure has been obtained transforming Army barracks; today the campus includes a big park with facilities such as tennis courts and sport grounds.

holds The **Depts** campus **Engineering, Economy and Education;** new laboratories have been realised by **Simulation Team (Cybersar Mobile Lab,** HLA Lab).

**Facilities for Professional Congress** available Centres the are in surroundings















OverWindows \_ X

### Partners & Spin-Off

Former Students and Researchers from MISS DIPTEM Simulation Team created over the years spin off and companies that currently cooperate in M&S. MAST srl (Management of Advanced Solutions and Technologies) is devoted to drive Innovation to Success in a wide spectrum of Application for different Business Sectors, Companies, Corporations, Agencies, Societies and Governmental Services.

MAST puts *Modeling and Simulation* to work by creating Outstanding Solutions Essential to a Better, Safer, Healthier and Wealthier Life operating worldwide.

MAST offers a wide range of innovative products and services for markets including:





- Electronics
- Engineering
- Safety and Security
- Retail







- Petrochemical
- Energy and Power
- Shipping & Transportation

















### **MAST**, Italy

- Actively involved in the Simulation Team lead by DIPTEM University of Genoa
- Major Research & Development Areas
  - M&S-based Decision Support Systems
  - Intelligent Agent CGF
  - Virtual Simulation
  - Military Applications
- MAST-DIPTEM Joint-Lab located in Savona Campus

















### LSIS, France

- UMR CNRS
- More than 100 researchers
- More than 100 PhD and master students
- Computer sciences, control and images
- MOFED: Discrete Events Models and Formalisms
- LSIS cooperates with companies, such as ITESOFT,
  - sponsoring PhD Students and Programs





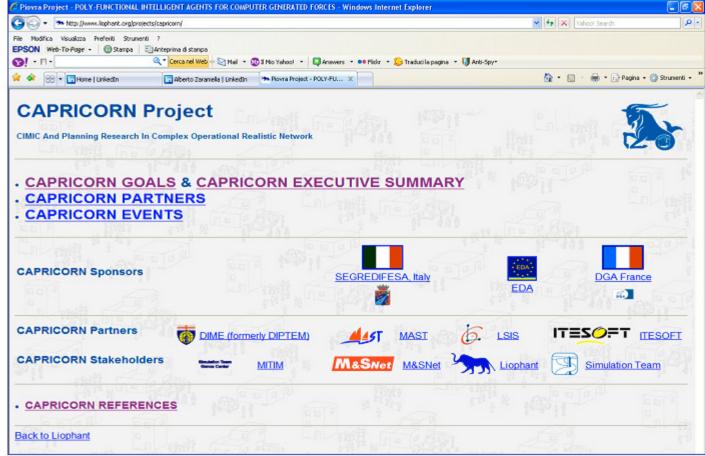








## **CAPRICORN Web Support**













### **Networks and Supports**

- LSIS, DIPTEM and MAST are active in multiple
  Networks that will support the diffusion in Scientific
  Events related to M&S
  - Simulation Team
  - I\_M\_CS
  - Society for M&S International (SCS)
  - M&S Net
  - ...













### Who We Are?

Universities, Research Centers and Companies operating worldwide in synergy developing Innovative Solutions with a particular focus in Modelling and Simulation

















Università di Cagliari













> VIRTUALY











etea SICUREZZA

SimCenter Universitat Autonoma de Barcelona







Università di Perugia



**MSC-LES** 



Rio de Janeiro **Brazil** 



McLeod Institute of **Technology & Interopeable Modeling Simulation Genoa** 



Marseille







DIPTEM Università di Genova



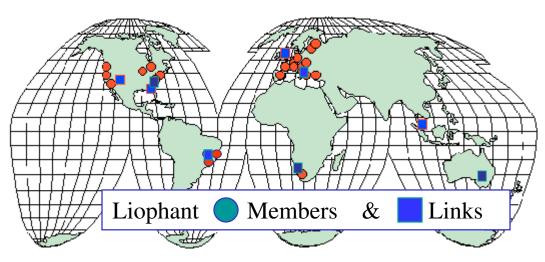
## **Liophant Simulation**

Email info@liophant.org



The *Liophant Simulation* involves World-Wide over 120 Scientists and Technicians working in Companies and Academia. The *Liophant* develops Advanced R&D Projects for Real Applications:

The Liophant Simulation promotes international Cooperations and exchanges with Excellence Centers World-Wide: i.e. NCS, KSC, VMASC, KPI



www.liophant.org



LSIS Marseil

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The International Activity of Liophant Simulation









### References



#### Simulation Team



DIPTEM University of Genoa via Opera Pia 15 16145 Genova, Italy www.itim.unige.it Agostino G. BRUZZONE agostino@itim.unige.it



**LSIS** 

#### **LSIS**

Av Escadrille Normandie Niemen 13397 Marseilles, France www.lsis.org <u>Claudia FRYDMAN</u> claudia.frydman@lsis.org





#### **MAST**

Simulation Lab, via Molinero 1 17100 Savona, Italy www.mastsrl.eu Enrico BOCCA enrico.bocca@simulationteam.com









