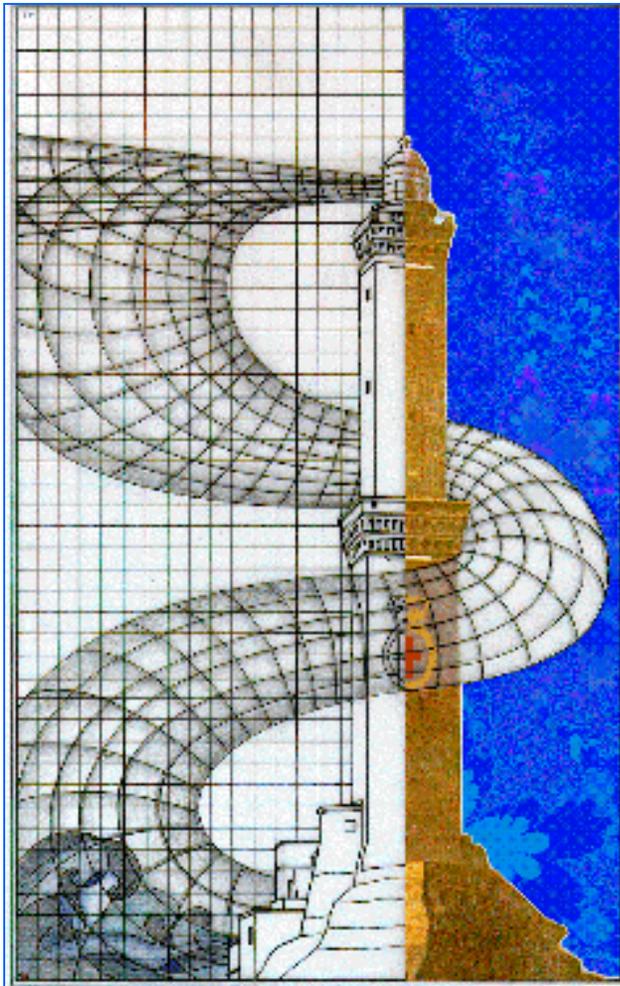**McLeod Institute of Technology and Interoperable Modeling & Simulation**

M&S Net

Genoa Center - Report 2012

MITIM M&S Net
Genoa Center
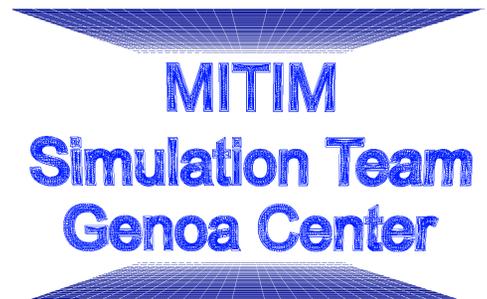# Simulation Team

Savona Campus & Savona Labs

via Cadorna 2
17100 Savona, Italy

Tel   **+39 019 219 45 251**
Fax   **+39 019 230 22 89**

URL   www.itim.unige.it/mcleod

EMAIL agostino@itim.unige.it

MITIM & M&S Net- Genoa
DIPTEM University of Genoa

MITIM Simulation Team Genoa Center

M&SNet

Email: agostino@itim.unige.it   URL: www.itim.unige.it

The research group of MITIM M&S Net-DIPTEM of *Genoa University* is active from '60 in Simulation applied to Industrial Engineering.

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

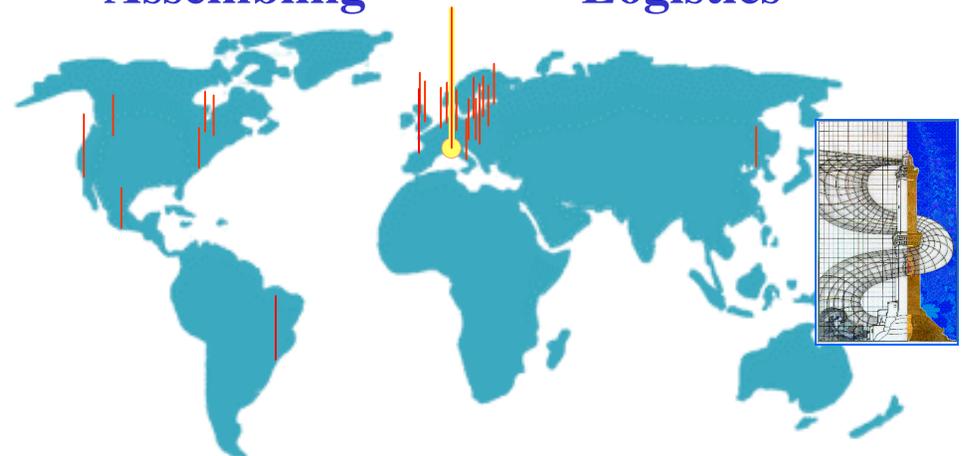|		
Chemical Facilities	Power Plants	PM
Harbor Terminals	Public Services	Environment
Manufacturing	Assembling	Logistics
Public Transportation		

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.

28 M&S Net Centers World-Wide

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 40 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. In Fact DIPTEM was changing name from DIP to DIPEM after ITIM.

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 m²).

For further Information about
the University of Genoa:
> http://st.itim.unige.it
> http://www.unige.it

Savona Campus & Facilities

Savona Campus

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.

The campus holds Dept. on Engineering and also Economical courses; new laboratories have been realised in Simulation, Logistics & Industrial Eng. (SAMS Project), Ecology and Chemical.

Facilities for Professional Congress Centres are available in the surroundings

Congress Centre

MITIM -M&S Net DIPTEM Genoa Univ.

The **MITIM-M&S Net DIPTEM** 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:

ADtranz
ABB Daimler-Benz

On-Line Simulation for Distributed Production Management of Locomotives

Ansaldo

Distributed Synthetic Environment for Power Plant Design

Cetena Fincantieri

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

COOP

Simulation for Re-Engineering Supply Chain in a National Chain of Grocery Stores

Members of MITIM was appointed in several positions in simulation community such as:

- Italian Point of Contact of ISAG (International Simulation Advisory Group)
- Associate Vice President of SCS and Chairman of Industrial Relations for Europe
- Member of NATO Industrial Advisory Group for Simulation & VV&A for Design

Logistics Networks & Supply Chain Management

MARLON: petro-chemical logistics funded by ENI

Military Applications

SAS085, Genova, February 1-4 Research on Agility NATO group (IA) for Computer Generated Forces (CGF): research project funded by Selex

PANOPEA: joint research MITIM-DIPTEM and Turkish Naval Academy

CAPRICORN: CIMIC and PSYOPS development (Italian MoD, LSIS, DGA France) 2009-2012

PNRM CGF C4 IT: CGF for C4 in NCW 2009-2011

Haiti-Like: IA-CGF NCF for Country Reconstruction 2009-2010 joint project MITIM-DIPTEM/US-JFCOM
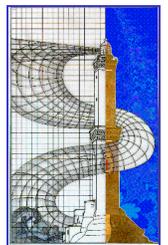
MITIM - M&S Net Genoa
International Cooperations in 2011

CAPRICORN

- **LSIS**

I_M_CS Common Activities

- **Arcavacata University**

- **LSIS, Marseille, France**

- **Liophant Simulation**
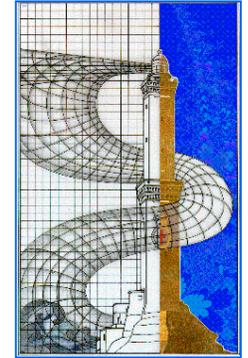
ERASMUS

- **University of Pardubice, Czech Rep.**

UNITE FP7- 248583

- **Riga Technical University, Latvia**

MITIM - M&S Net Genoa
Conferences & Workshops

MITIM Simulation Team Genoa Center

SCIENTIFIC EVENTS 2011/2012:
- CAPRICORN Users Meeting January 18 2012, M&S COE Rome, Italy
- CAPRICORN CIMIC Group, January 18 2012, M&S COE Rome, Italy
- CAPRICORN Users Meeting February 22 2012, CE.FLI, Rome, Italy
- CAPRICORN Meeting with CE.FLI and M&S COE June 22 2012, NATO M&S COE,
- NATO MSG113, Genova, April 16-18

MITIM Genoa is co-organizing:
- The international Workshop on Applied Modelling and Simulation within SCM MEMTS 2011 Sankt-Petersburg, Russia in Co-operation with Riga Technical University
- WORKSHOP HMS2012, Wien, Austria , in Co-operation with I_M_CS, Sept. 2012
- WORKSHOP I3M2012, Wien, Austria , in Co-operation with I_M_CS, Sept. 2012
- WORKSHOP EMSS2012, Wien, Austria , in Co-operation with I_M_CS, Sept. 2012
- WORKSHOP MAS2012, Wien, Austria , in Co-operation with I_M_CS, Sept. 2012
- WORKSHOP IMAACA2012, Wien, Austria , in Co-operation with I_M_CS, Sept. 2012
- WORKSHOP DHSS2012, Wien, Austria , in Co-operation with I_M_CS, Sept. 2012

- **WORKSHOP IWISH2012, Wien, Austria , in Co-operation with I_M_CS, Sept. 2012**
- **Workshop WAMS2012, Roma, Italy, co-located with 7th NATO CAX Forum, Sept 2012**

NEW EVENTS

MITIM - M&S Net Genoa
Exchanges 2010/2011

MITIM Simulation Team Genoa Center
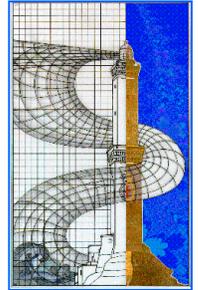
Visitors:

- Jan Fikejz, PHD from University of Pardubice, Czech Rep., July 2012,
- Nato MSG 113, Wayne Buck et al., April 2012
- Prof. Antonin Kavicka, University of Pardubice, Czech Rep., August 2011
- Prof. Julija Petuhova, Riga Tech.University, February-July 2011
- Lt. Arda Ceylan, Turkish Naval Academy, September-February 2011
- Prof. Luis Pastor, University Rey Juan Carlos, Madrid, S, March 2011
- Dr. Jose de No,Consejo Superior de Investigaciones Científicas - CSIC, Madrid, S, March 2011
- Prof.Ryszard Klempous, Prof.Andrzej Kasprzak, Prof. Cezary Madryas, Wroclaw University of Technology, Poland (june 2011)

MITIM - M&S Net Genoa
Exchanges 2010/2011
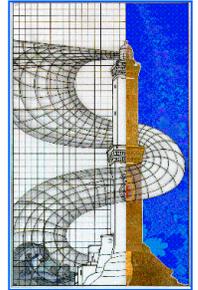
Visiting activities:

- **Francesca Madeo, Dartmouth College, Naval Postgraduate School, Harvard Medical School, USA, april-june 2012**
- **Agostino Bruzzone, University of Wroclaw, Poland, May 2012**
- **Agostino Bruzzone, Charles Sturt University, Australia, May 2012**
- **Marco Pucciano, Ford Motor Company, USA, March 2012**
- **Agostino Bruzzone, University of Pardubice, Czech Rep., (march 2011)**
- **Federico Tarone, Agostino Bruzzone, MIT, Boston, USA, March 2011**
- **Agostino Bruzzone, Marina Massei, LAMCE-COPPE, UFRJ, Brasil (april 2011)**
- **Agostino Bruzzone, Turkish Naval Academy,(june 2011)**
- **Alberto Tremori, University of Stavanger, Norway (june 2011)**
- **Alberto Tremori, NATO C3 Agency, Brussels, Belgium (june 2011)**

MITIM - M&S Net Genoa
Scientific Issues 2011/2012

MITIM Simulation Team Genoa Center
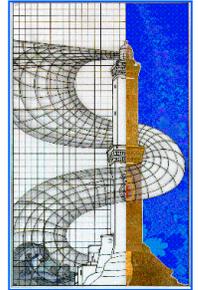
Scientific Issues

Publications: Journal Papers (3), Conference Papers (10), Technical Reports (9), Tutorial & Invited Speeches (3), Award (1 SCS)

Active Participation at Conferences
AMS2012, Kuta, Indonesia
MATHMOD2012, Wien, Austria
SpringSim2012 Orlando, F, US
ITEC2012, London
AMS 2012, Kuta, Indonesia
MOSIM, Bordeaux, 2012
SCSC2011, The Hague, NL
I/ITSEC2011, Orlando, US
EMSS, Roma, Italy 2011
HMS, Roma, Italy 2011
I3M, Roma, Italy 2011
MAS, Roma, Italy 2011
SpringSim, Boston, 2011
ITEC 2011 Cologne
ITEC 2011 Cologne
AMS 2011, Manila
FP7 meeting, Stavanger, Norway, 2011
ICCRTS, Quebec City, 2011
SCM MEMTS 2011 Sankt-Petersburg, Russia
SpringSim, Boston, M, 2011
ITEC 2011 Cologne
AMS 2011, Manila
FP7 meeting, Stavanger, Norway, 2011
ICCRTS, Quebec City, 2011
Graduate Student Forum of Beihang, 2011

Active Participation at NATO Groups
NATO Joint CAX Forum 2011
SAS085, Genova, 2011
SAS085, Quebec City, 2011
RTO MSG 085
NMSG 113 Serious Games

Project: CAPRICORN

Civil Military Co-operation And Planning Research in Complex Operational Realistic Network

CAPRICORN

CAPRICORN is developed for Italian and French MoDs under "Ad Hoc Research & Technology Projects and Programmes of the European Defence Agency". Project aim is:

- **Investigate Basic Operational Planning:**

- **Advanced Human Behaviour Hierarchical Modeling**

- **Enhanced Interoperable Multilevel Models**

- **Development of CIMIC and PSYOPS models interacting with intelligent agents in CAPRICORN.**

Project: PNRM CGF C4 IT

PNRM CGF C4 IT is developed for Italian MoD. Project aim is:

- **A new generation of Interoperable Intelligent Agent driven Computer Generated Forces for Command, Control, Communications and Computer Systems in Network Centric Warfare**

http://www.simulationteam.com/

File   Modifica   Visualizza   Preferiti   Strumenti   ?

Welcome to the Frontpage - Simulation Team
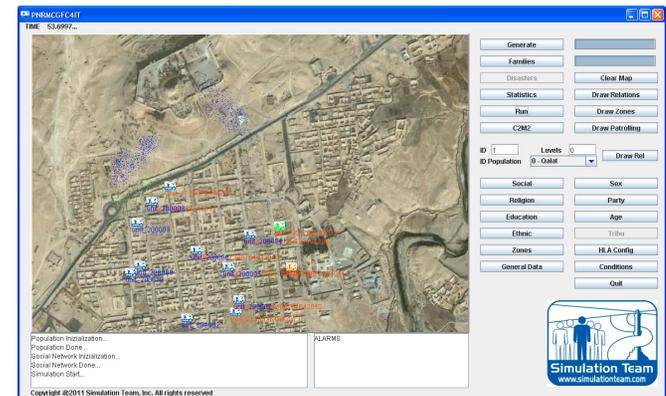
Home   People   Partners   Solutions   Events   Links   Media ▾   News

Simulation Team

Simulators, Decision Support Systems and Training Equipment

Simulation at Work

Simulation at work | Our network | Containerized Simulator | Visit our media gallery!

» Simulation Team: an Excellence Network in modelling and simulation

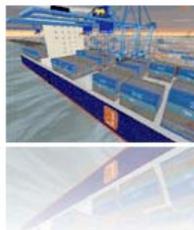The Simulation Team was established in early third millenium for Leading a Pool of HiTech Institutions active in Modelling & Simulation. The Simulation Team represents an Excellence Network involving top quality international institutions. The Simulation Team

» Our structure is our strength!

The Simulation Team benefits from its structure, being able to support projects and initiative anywhere worldwide by direct involvement of high qualified representative based on local reference member and with the strong combined skills provided by the whole network.

» Simulation Team: wide range of innovative products and services

The Simulation Team offers a wide range of innovative products and services for markets including aerospace, communications, construction, defense, electronics, engineering, health care, logistics, nutrition, petrochemical

Fine   Internet   100%

Program: DIMS

Dottorato in Ingegneria Matematica and Simulazione

DIMS is a PhD program in Mathematical Engineering and Simulation started in 2005 in Genoa University.

This PhD program was activated DIPTEM (Production Engineering & Mathematical Modelling Dept.) and DIBE (BioEngineering Dept.) during fall 2005 and become active with beginning of 2006.

Today DIMS involves about 20 courses in M&S for PhD Students.

Currently 20 PhD Students are enrolled in this program and for 2011 5 additional positions will be activated (2 grants, 3 free)
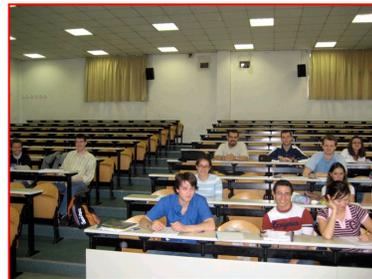
Sviluppo di una Tesi di Simulazione, Report Annuale e 5-6 Corsi nei primi due Anni:

- **P. Bagnerini**   **Metodi numerici per la soluzione di equazioni differenziali**
- **A. Bruzzone**   **High Level Architecture/Distributed Interactive Simulation**
- **A. Bruzzone**   **Verification, Validation & Accreditation in Modeling & Simulation**
- **A. Bruzzone**   **Advanced Logistics Models**
- **A. Bruzzone**   **Project Management & Concurrent Engineering in R&D Projects**
- **A. Bruzzone**   **Modellistica e Simulatione (Modeling & Simulation)**
- **C. Cervellera**   **Statistica e Regressione Non Lineare**
- **R. Cianci**   **Equazioni differenziali alle derivate parziali ed applicazioni**
- **M. Muselli**   **Machine Learning**
- **M. Parodi**   **PDE nei Modelli per l'Ingegneria**
- **F. Patrone**   **Teoria dei Giochi**
- **M. Sanguineti**   **Reti Neurali per l'Ottimizzazione**
- **M. Storace**   **Analisi dei Sistemi Dinamici Non Lineari**
- **D. Percivale, T. Zolezzi**   **Calcolo delle variazioni ed applicazioni**

Program: Master in M&S

Master in Modelling & Simulation

MITIM Genoa and DIPTEM are working forward to establish a new Master in Modelling & Simulation focused on Defense sector and Interoperability in joint cooperation with Major Italian MoD Institutions active in M&S.

Program: MIPET

Master in Industrial Plant Engineering & Technologies

The Master in Industrial Plants is a Master degree program organized in Genoa University focusing on preparing new generations of top quality technical experts for process engineering and power equipment supplier as well as construction contractor. Its main aim it is to satisfy the expectation from Leading Industries in term of high technical skills and excellence capabilities in Industrial Plants and Engineering. The Master Program is directed by Faculty of Engineering in strong cooperation with leader industries and major companies operating in these industrial sectors, this aspect guarantees the relevance and effectiveness of the initiative. In fact this project it is part of a large initiative devoted to develop excellence in Industrial Plant Engineering through the synergy between the expertise of Genoa University Engineering Faculty and Top Level Companies with long traditions that are leading this Area Nationally and Internationally in term of turnovers, size, processes and products complexity as well as know how and technical skills.

Master in Industrial Plant Engineering and Technologies

SPONSOR & SUPPORTERS

SPONSOR COMPANIES EDITION 2010

ABB   AnsaldoEnergia A Finmeccanica Company   BOMBARDIER   DANIELI Centro Combustione   Duferco Engineering   FAGIOLI

IRIDE   PAUL WURTH   PMS   projenia   tenova

Prof. Agostino Bruzzone

www.master.impianti.unige.it

Program: Premitel

Preparation for Management within Innovative Transportation services and Evolving Logistics

PREMITEL Program (Preparation Business Management, Transportation and Logistics) was established to provide Methodologies and Tools for Transportation Services and Logistics with special attention on the following issues:

– *Assessment and Forecasting of logistics demand while facing emerging behaviors and new trends*

   Definition of Evaluation criteria and solution for Supply Chain Management (SCM)

   Planning and Management of transport and logistics services

   Technology Transfer and Skill Acquisition on logistics considering operations, economy, legal aspects, engineering

– *Identification of customer needs*

– *Use of Models and Tools for operative, economic & financial analysis and evaluation of investments and management solution for transport infrastructures and logistics*

   Marketing planning for new transportation services and logistics

   Development of systems of management and control for Logistics and SCM

   Support and Guide the public administrators and operators in decision making and in the definition and implementation of realistic and effective policies in Transportation

The aim of the course and then PREMITEL the preparation of a new generation of experts that who could be valuable in business within the area of Logistics and Transportation Services, becoming the new leaders in this area to support developments and strategic decisions and their implementation. People involved in the program should have skills in the fundamentals of engineering, economics, and regulatory and procedural issues related to transport and logistics characteristic within their university education; the attendees are students of Engineering, Economics or Law Faculties with Genoa, Rome, Bologna, Trieste, Salerno Universities. The PREMITEL is founded by the Italian National Department of Transportation.
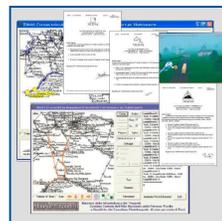
Teaching Style

The courses are organised based on different modes:

- Lecturing

- Interactive Exercises on PC

- M&S Team Working Games
  - Co-operative: i.e. SUMBA
  - Competitive: i.e. BABEL
  - Co-operative & Competitive: i.e. J20
- Innovative Solutions integrated in Courses
  - Clickers for Real-Time Dynamic Teaching/Testing
  - E-Learning Platforms

Blended Education

Dottorato in Ingegneria Matematica and Simulazione

Corso: Modelling & Simulation, DIMS PhD Program - Microsoft Internet Explorer

File   Modifica   Visualizza   Preferiti   Strumenti   ?

Indietro   Cerca   Preferiti

Indirizzo http://logi1.itim.unige.it/moodle/course/view.php?id=4   Vai

Modelling & Simulation, DIMS PhD Program

Sei collegato come Agostino Bruzzone.

MISS Genoa Courses ▶ M&S, DIMS   Cambia ruolo in ...   Attiva modifica

Persone
- Partecipanti

Attività
- Compiti
- Forum
- Risorse
- Wiki

Ricerca nei forum

Attività settimanale

- Forum News
- Lectures & Exercises
- M&S Preliminary Analysis (not an Exercise!)
- M&S Basic Concepts
- M&S Input
- M&S Validity
- M&S Output Analysis
- Report relativo a Modello Sistema Logistico Portuale Rinfuse FLOCOTER
- Wiki for FLOCOTER Model

10 April 16 April	☐
17 April 23 April	☐
24 April 30 April	☐
1 May 7 May	☐
8 May 14 May	☐

Ultime notizie

Aggiungi un nuo...
argomento...

24 Jun, 21:29
Tomaso Poggi
incontro mercoledì 27
luglio altro...

30 May, 16:40
Agostino Bruzzone
Forum is Going altro...

14 May, 20:48
Agostino Bruzzone
M&S Input altro...

14 May, 20:48
Agostino Bruzzone
Modelling & Simulation
Basic Concepts altro...

9 May, 15:45
Agostino Bruzzone
Welcome to M&S Course
altro...

Vecchi argomenti ...

Internet

Opportunita` di Lavorare in Remoto ed interagire con le nuove soluzioni tecnologiche.

Simulation Team Professional Certification

Simulation Team established a procedure for Certify people attending to Professional Courses; currently this procedure involves SIREN courses and it is based on an operative protocol to appoint Certifications to course attendees.
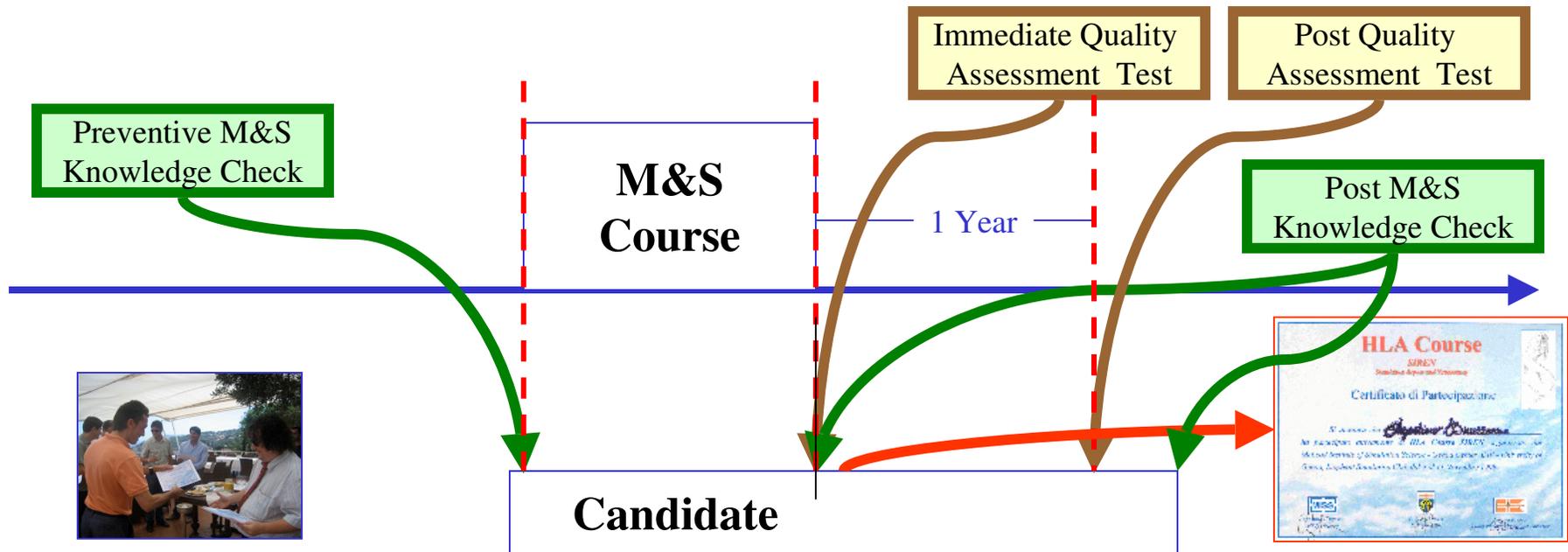
SIREN Professional Certification Over the Time

Simulation Team Course Attendees are subjected to Certification Exam and to an additional check after one year.

Credits related to M&S Activities during following years are recorded on Individual Resume:

- Conference Attendance
- Posters at Conferences
- Papers at Conferences
- Journal Papers
- Program Committees
- Project Teams
- M&S Tutorials
- M&S Courses

M&S Professional Certificates

Professional Simulation Team Certificates for SIREN Courses are ranked based on the following levels:

Professional SIREN Courses include the following Thematic Areas and Subjects:	Professional MISS Certificates for SIREN Courses are ranked based on the following progression:
● PM — Project Management for M&S Projects ● M&S — Modeling & Simulation Course ● HLA — High Level Architecture Course ● VV&A — Verification, Validation & Accreditation Course ● DIS — Distributed Interactive Simulation Course	○ Introduction ● Elements ● Basic ● Intermediate ● Regular (Default)

SIREN Course Satisfaction Levels

Chart — Satisfaction [0-10], vertical axis labeled:
- 8 Excellent
- 7.5
- 7 Good
- 6.5
- 6
- 5.5
- 5 Weak
- 4.5
- 4 Poor

Horizontal axis categories:
- Quality of SIREN Lectures:
- Quality of SIREN Printed Material:
- Quality of SIREN CD Material:
- Quality of SIREN VV&A Exercise:
- Quality of SIREN HLA Exercise:
- Level of Understanding of M&S Fundamentals:
- Level of Understanding of VV&A Fundamentals:
- Level of Understanding of DIS Fundamentals:
- Level of Understanding of HLA Fundamentals:
- Impact of the SIREN Course on my Activities
- Improvement to my Overall Simulation Know-How
- Quality of Undestanding the SIREN Course Language
- Respect to my background, the SIREN Course was:
- Respect to my Needs, the SIREN Course was:

SIREN Courses are checked versus attendee's satisfaction level and needs in order to be properly tailored for each case and every user

Data Sample

SIREN Quality Assessment

The quality of SIREN Courses resulted to be very satisfactory both based on the immediate feedback and in term of operative follow up measured after one year from Course Completion
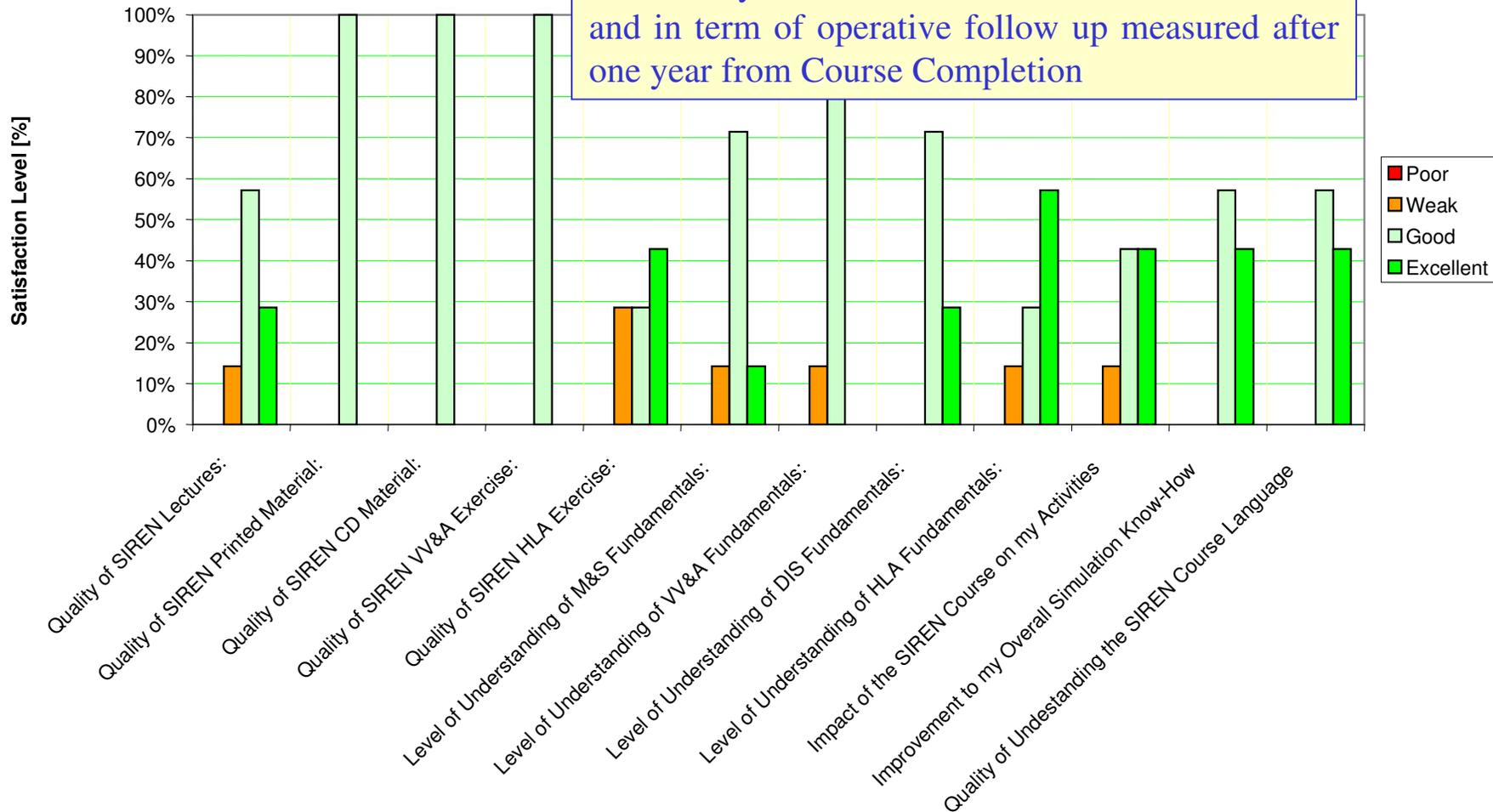
Data Sample

SIREN Self Evaluation

The SIREN is continuously monitoring the Course Attendee's Background and Needs in term of M&S fundamentals and Simulation Advances

Satisfaction Level [%]

Legend:
- Too Basic
- Basic
- Good
- Too Advanced

Respect to my background, the SIREN Course was:

Respect to my Needs, the SIREN Course was:
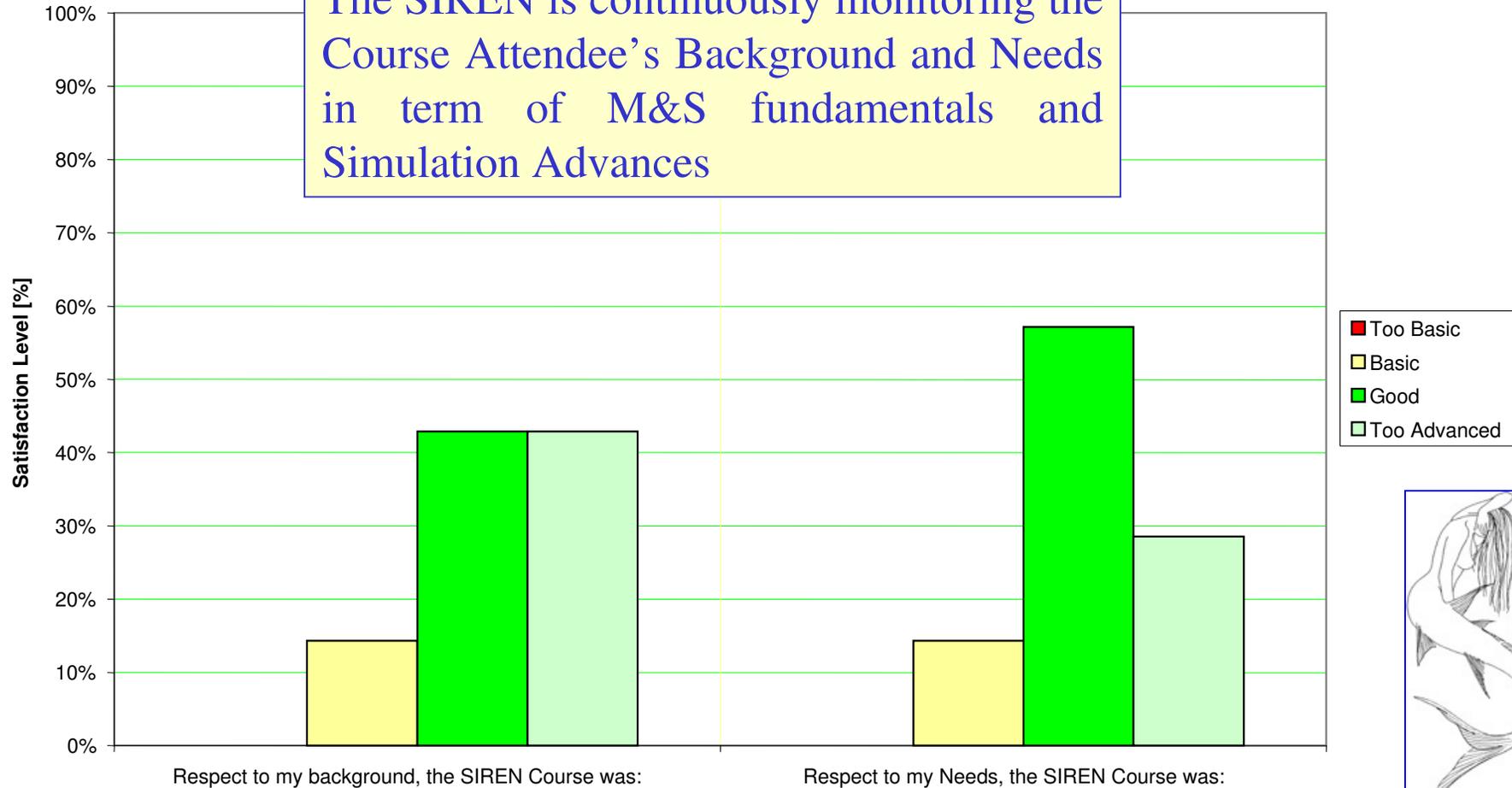
Data Sample

SIREN Quantitative Improvements

Course Involvement vs. Grade Obtained for Attendees

SIREN Course Attendees

+107% by SIREN Course in HLA

Knowledgement Improvement: +20% by SIREN Course in VV&A

People Not Trained in SIREN with Background in Simulation (PhD Students)

- ◆ VV&A
- ■ HLA

Grade Obtained [100%] (y-axis: 0% to 120%)

Course Involvement [100%] (x-axis: 0% to 70%)

Certification of SIREN Courses corresponds to an improvement in M&S knowledge that is quantitatively measured

Data Sample

Simulation Team
MISS DIPTEM Genoa

SIREN Impact vs. Traditional Education

Grade Obtained in SIREN Test

Results are compared Statistically among different communities, backgrounds and users in order to guarantee effectiveness of SIREN Courses

Legend:
- Military SIREN Course
- Industrial/Academic SIREN Course
- PhD Student Without SIREN Course

Obtained Grade [%] (Y-axis: 0% to 100%)

X-axis categories: VV&A Grade, HLA Grade, Overall
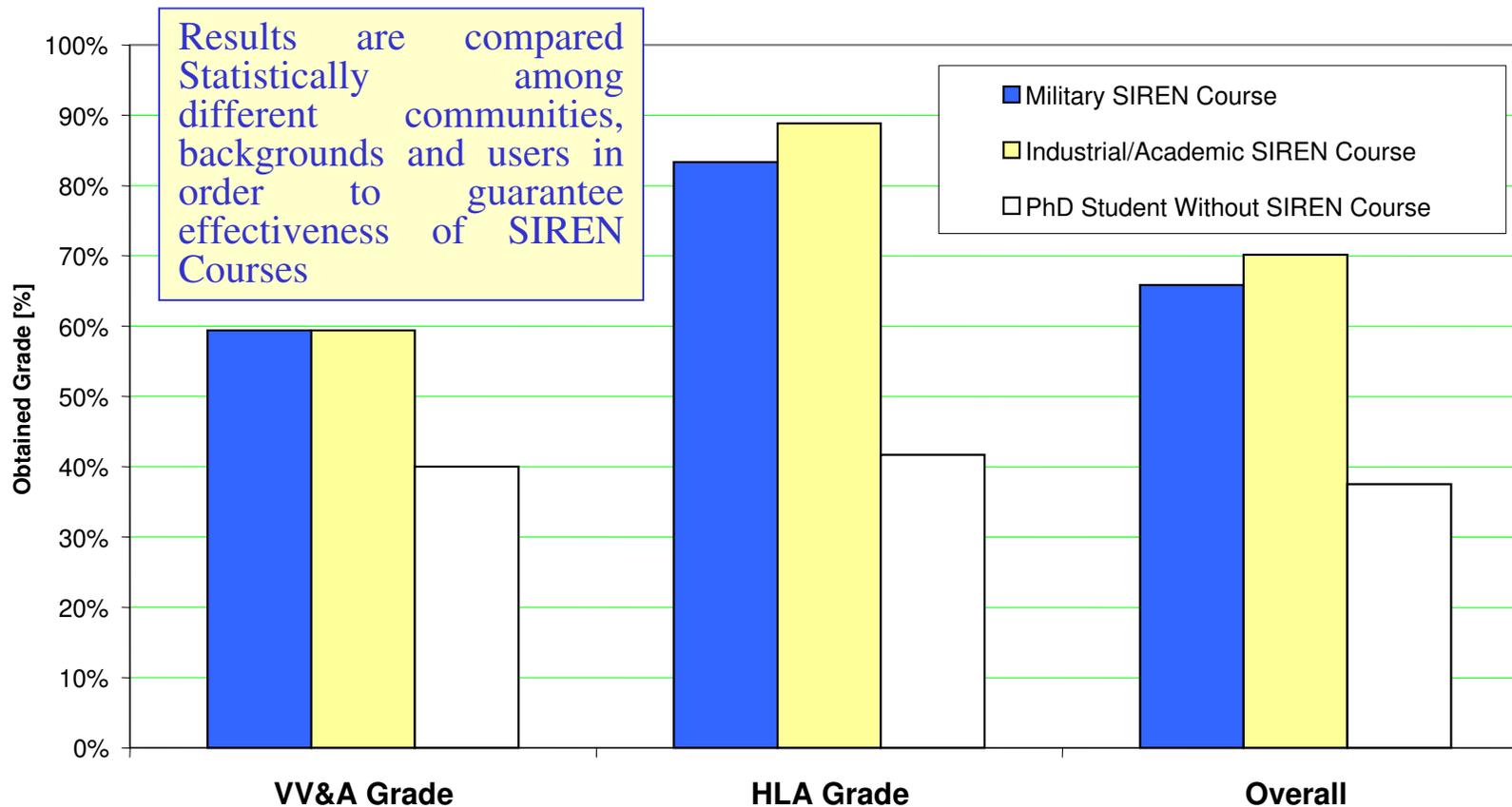
Data Sample

SIREN Impact vs. Traditional Education

Improvements on a Class on Detailed Issues related to:
DIS - HLA - M&S PM - VV&A

Legend:
- Before Siren
- Siren Course Certificate

Y-axis: **Grade [0/10]**
X-axis: **Different Students in the CLass**
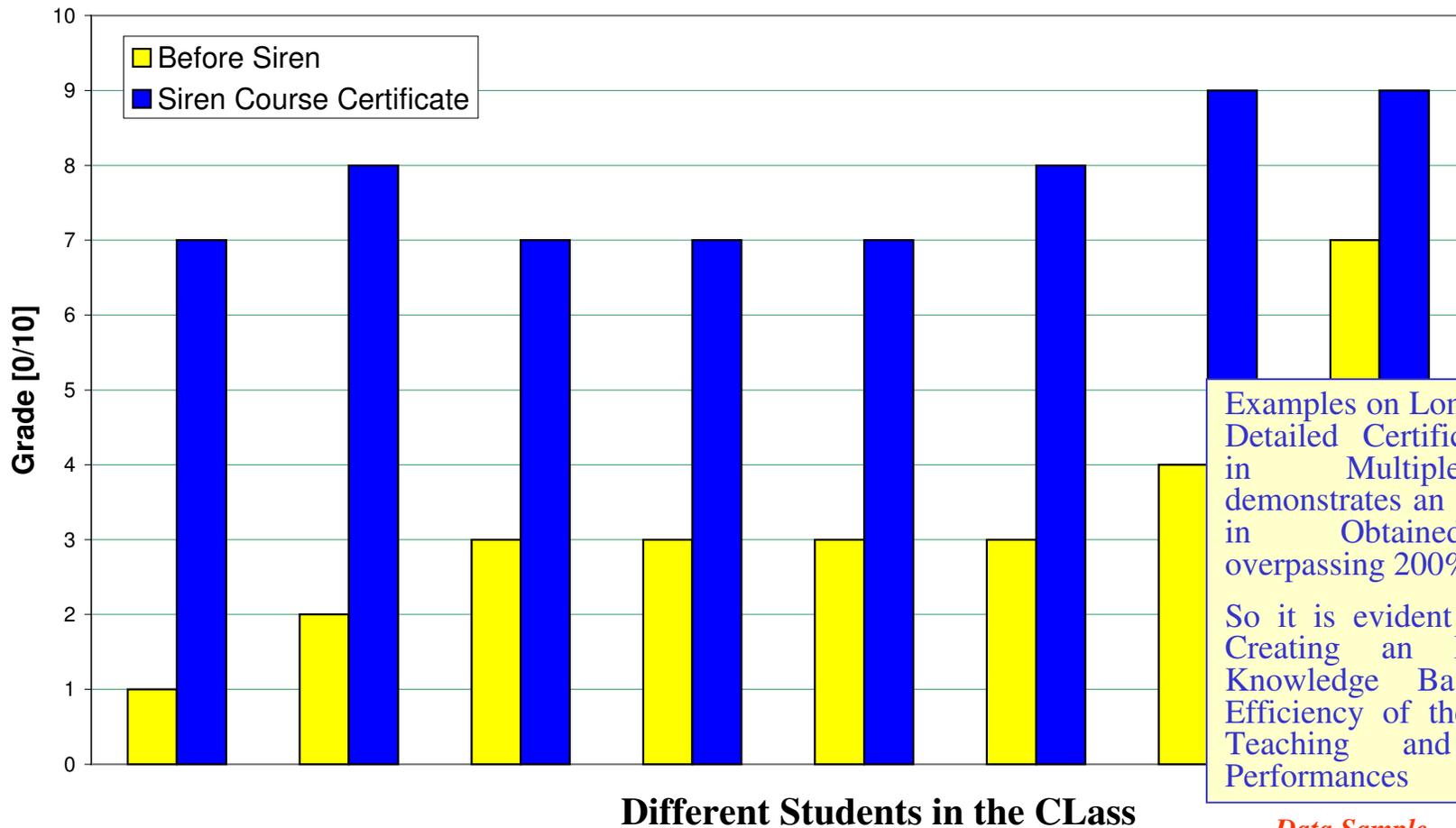
Examples on Long Classes and Detailed Certification Exams in Multiple Topics demonstrates an Improvement in Obtained Grades overpassing 200% as average.

So it is evident the need for Creating an Homogeneous Knowledge Base and the Efficiency of the Process for Teaching and Measuring Performances

Data Sample

Simulation Team
MISS DIPTEM Genoa

The 9th International Multidisciplinary Modeling & Simulation Multiconference

Wien, Austria September 2012

www.liophant.org/i3m

General Chairs:

Prof. Agostino Bruzzone
Simulation Team M&S Net, MISS-DIPTEM University of Genoa, ITALY

Prof. Yuri Merkuryev
Riga TU, Latvia

Program Chairs:

Prof. Francesco Longo
M&S Net MSC-LES, ITALY

IMAACA
Int. Conference on Integrated Modeling & Analysis in Applied Control & Automation

NSP
New Simulation Project Workshop

EMSS 2012
European Modeling & Simulation Symposium

DHSS 2012
Int. Defense & Homeland Security Simulation Workshop

MISS WORKSHOP
McLeod Institute of Simulation Science Workshop

M&S Net
M&S Network Workshop

MAS 2012
The International Conference on Modeling & Applied Simulation

HMS 2012
The International Conference on Harbour, Maritime & Multimodal Logistics Modeling & Simulation

I WISH 2012
The International Workshop on Innovative Simulation for Health Care

www.liophant.org/i3m

NEW EVENT

I3M 2012: New Edition
Next year the 9th edition of I3M will be held in the wonderful city of Wien renovating the opportunity to have an International Multiconference covering many different topics related to Modeling & Simulation in a sharp way and providing an ideal opportunity to meet together

European Modelling & Simulation Symposium - EMSS
The EMSS represents the 24th edition of the classic autumn M&S event in Europe; the Symposium is a really International meeting involving world experts in the area of M&S with special attention to methodologies, techniques and applications.

M&S Net New Simulation Project Workshop - NSP
This event is the ideal framework for setting up European Community and International Projects and it is an opportunity for hosting project review and exploitation meetings; NSP welcome submissions for panel sessions on new simulation project proposals.

The International Conference on Modeling & Applied Simulation - MAS
The MAS Workshop concentrates on applied M&S and IT Solutions; application fields include production, business and services; since 2002 MAS involves Experts and Users discussing about M&S as enabling technology for business and industry in real world.

The International Conference on Harbour, Maritime & Multimodal Logistics M&S - HMS
HMS Workshop is a traditional event and it was held successfully worldwide, usually in the surroundings of major international ports. It is focused on applications of simulation and computer technologies to logistics, supply chain management, multimodal transportation, maritime environment and industrial logistics.

IMAACA Conference
IMAACA focuses on all applications relevant to control & automation problems emphasizing the role of model analysis as integral part of the complete design of the automated system.

M&S Net Workshop
The MS&Net workshop aims to create an evolving framework for sharing experience and knowledge in which participants have the possibility of effective cooperation. Tracks organization is intended to cover all the research areas of MS&Net centers: knowledge exchange is the key of successful collaborations.

The International Defense & Homeland Security Simulation Workshop
DHSS focuses on M&S advances within Defense and Homeland Security framework; DHSS is part of I3M and involves industrial, governmental and academic top experts in this areas

The International Workshop on Innovative Simulation for Health Care
IWHIS is directed to scientists, technicians, users and decision makers that are interested in the fast evolving and innovative sector of applying modern M&S within Health Care. The workshop is evolution of very successful tracks and workshops organized in previous conferences and it is becoming in 2012 a self independent international workshop

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McLeod Institute of Simulation Science Workshop
McLeod Institute of Simulation Science (MISS) is a Excellence Network involving worldwide 28 centers; in cooperation with the Society for Modeling & Simulation International, this workshop is a Meeting open to affiliated Centers and to external applicants

M&S Professional Courses at I3M
These M&S Professional Courses will be held in connection with I3M Multi-Conference; program, registration modules and tentative schedule are already available, please book them early. The M&S Courses are organized in cooperation with MISS-DIPTEM University of Genoa, Simulation Team and with Patronage Liophant Simulation and include foreground assessment for McLeod Institute of Simulation Science Professional Certification Program.

Paper Submission
Extended abstracts, full draft papers or other proposals should be submitted for the review process through the conference website.
Each extended abstract must include the title, authors, affiliations, addresses, main body and references for proper positioning in the conference. Each paper will be reviewed by at least two members of the International Program Committee taking into consideration scientific quality, originality and relevance. Only original papers, written in English will be accepted.
Your camera ready paper must be submitted through the conference website. Authors of accepted papers are expected to attend the conference, present their works, transfer copyright and pay conference registration fees at the time their camera ready papers are submitted.
Conference best papers will be directed to International Journals for possible inclusion through content extension.

Deadlines

Deadline Extended

Paper submission	May 15, 2012
Notification of Acceptance	June 15, 2012
Final Camera Ready Submission	July 15, 2012

MITIM Simulation Team Genoa Center

Simulation Team

M&S Net

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For further information please contact:
www.liophant.org/i3m

marina.massei@simulationteam.com
francesco.longo@simulationteam.com

The 9th International Multidisciplinary Modeling & Simulation Multiconference

The M&S Multiconference moving around the World and along the Years attended by Top Experts from Mediterranean, Latin & North Americas, Europe, Asia, Africa and Australia

September 19-21 2012
Wien, Austria

General Chairs

Agostino G. Bruzzone
MISS - Genoa Center
University of Genoa
Italy

Yuri Merkuryev
Riga Technical University
Latvia

Program Chair

Francesco Longo
MSC-LES
University of Calabria
Italy

Conference Coordinators

Claudia Frydman
LSIS, France

Miguel Angel Piera
UAB, Spain

Exhibition Chair

Enrico Bocca
Simulation Team
Italy

Download the I3M 2012 CFP

SPONSORS

Venue

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SECTION CHAPTER

REGISTRATION PROCEDURE

I3M 2012

The 9th edition of the I3M 2012 will be held in Wien (Austria) renovating the opportunity to have an international Multiconference involving the different topics related to Modelling & Simulation.

This year the I3M 2012 Multiconference includes:

EMSS 2012 — The European Modelling & Simulation Symposium - EMSS

HMS 2012 — The International Conference on Harbour, Maritime & Multimodal Logistics M&S - HMS

MAS 2012 — The International Conference on Modeling & Applied Simulation- MAS

IMAACA 2012 — The International Conference on Integrated Modeling and Analysis in Applied Control and Automation

DHSS 2012 — International Defense and Homeland Security Simulation Workshop

IWISH 2012 — The International Workshop on Innovative Simulation for Health Care

McLeod WORKSHOP — McLeod Workshop

M&SNet WORKSHOP — Modeling & Simulation Network Workshop

NSP — New Simulation Project Workshop

Plenary Speakers at I3M 2012, Wien

I3M & International Journals
It is a long tradition for I3M to provide opportunities to its Authors to extend their work for being published in International Journals; in fact as one of the most important and successful Simulation appointment, I3M 2012 includes historical conferences such us EMSS and HMS that this years will respectively celebrate the 24th and 14th years edition.
Thanks to the invaluable works of the Organizing Committees, International Program Committees, Reviewers and Local Organizers, this year the I3M Multiconference is one of the biggest events of M&S worldwide. So, due to these reasons, several International Journals will publish Special Issues based on a collection of extended versions of best selected papers among those submitted to I3M2012 (EMSS 2012, HMS2012, MAS2012, IMAACA 2012, DHSS2012, IWISH2012). In particular the following Special Issues will include papers from I3M:

Cognitive Computation
Special Issue on:
"Modeling and Simulation for Cognitive Computation"

Based on a collection of best papers to be submitted and presented at the multi-conference I3M 2012

International Journal of Simulation and Process Modelling
Special Issue on:
"The Future of Modeling & Simulation: applications in Industrial Plants, Processes and Services "

Based on a collection of best papers to be submitted and presented at the multi-conference I3M 2012 (including EMSS 2012, MAS 2012, HMS 2012, IMAACA 2012)

International Journal of Simulation and Process Modelling
Special Issue on:
"The Future of Modeling & Simulation: training, experimentation and decision making"

Based on a collection of best papers to be submitted and presented at the ... S 2012,

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International Journal of Critical Infrastructures
Special Issue on:
"Homeland security: a control system point of view "

Based on a collection of best papers to be submitted and presented at the multi-conference I3M 2012 (including EMSS 2012, MAS2012, HMS2012, IMAACA 2012, DHSS2012)

International Journal of Food Engineering
Special Issue on:
"Modelling and Simulation of Food Processing and Operations"

Based on a collection of best papers to be submitted and presented at the multi-conference I3M 2012 (including EMSS 2012, MAS2012, HMS2012, IMAACA 2012, DHSS2012)

International Journal of Privacy and Health Information Management
Special Issue on:
"Modeling, Simulation, and Computational Methods for Privacy and Healthcare Information "

Based on a collection of best papers to be submitted and presented at the multi-conference I3M 2012

As one of the most important and successful Simulation appointment, I3M 2012 includes historical conferences such us EMSS and HMS that this years will respectively celebrate the 24th and 14th years edition. Thanks to the invaluable works of the Organizing Committees, International Program Committees, Reviewers and Local Organizers, this year the I3M Multiconference is one of the biggest events of M&S worldwide.

Summersim

Architecture Complex, Genoa University
Stradone Sant'Agostino 11, Genoa, Italy
July 8-11, 2012

SPECTS GCMS SCSC 2012

General Chairs:
Prof. Agostino Bruzzone
Simulation Team M&S Net MISS-DIP TEM
Prof. Franco Davoli
DIST University of Genoa

SUMMERSIM 2012

Summersim is a large event usually organized in North America and Europe to provide the opportunity for publishing and presenting top quality scientific papers in the different areas of modeling & simulation (M&S). Focusing on several topical perspectives will illustrate the tremendous evolution of the modeling and simulation community. Summersim is really an international multiconference involving world experts in the area of M&S with special attention to methodologies, techniques and applications. The 2012 edition will be held in the core of the Italian Riviera providing participants with the opportunity to enjoy world famous beaches and locations such as Portofino, Cinque Terre, as well as a chance to visit Genoa, Maritime Republic, which, during the Middle Ages, was a Critical location in world history. Participants in SummerSim2012 are free to attend sessions and other activities in any of the constituent events, such as SPECTS, SCSC & GCMS. The Conference topics will include, among others, the following:

M&S Technologies
- Augmented Reality
- Common Training Architectures
- Constructive Simulation
- Continuous Simulation
- Data Fusion
- Data Mining
- Design of Experiments
- Discrete Event Simulation
- Distributed Interactive Simulation
- Experiential Digital Media
- High Level Architecture
- Human Behavior Models
- Live Simulation
- Modeling & Simulation Languages
- M&S System Architecture
- Parallel & Distributed M&S
- Real Time M&S
- Simulation Life-Cycle Evolution
- Simulation Software Engineering
- System Dynamics Representation
- Test & Training Enabling Architecture
- Virtual Reality
- Virtual Simulation
- Synthetic Environments
- VV&A
- Web-based Simulation

Computer Systems
- Distributed Architecture
- Computer Architectures
- Software
- Electronic Commerce
- Hardware and Software Monitors
- High Performance Computing
- Security and Information Assurance

Industry & Business Practices
- Collaboration Environments
- Simulation-based Acquisition
- Economics of M&S
- Education for M&S Professional
- Future of Modeling & Simulation
- Information Systems
- Infrastructure Planning & Design
- Communications & Media
- Logistics
- Management Science
- Manufacturing
- Process Engineering
- Scheduling
- Standards
- Telecommunications

Networking and Telecommunication Systems
- Internet Technology
- Networking Techniques
- Broadband Networks
- Wireless Systems and Networks
- Multimedia Systems, Communications and Applications

Tools, Methodologies and Applications
- Content Delivery
- Modeling
- Parallel and Distributed Simulation
- Verification and Validation
- Neural Networks and Fuzzy Logic Applications
- Performance Optimization, Bounds, and Models
- Queuing Systems and Networks
- Scalability Studies
- Integrated Modeling and Measurement
- On-Line Performance Adaptation and Tuning
- Process Algebra Based Models
- Mathematical Aspects and Integrated Design of Performance
- Case Studies

M&S Applications
- Adaptive Systems
- Agent Directed Simulation
- Artificial Life
- Artificial Neural Networks
- Bio-informatics
- Business Intelligence
- Data Fusion
- Fuzzy Logic
- Knowledge Management
- Knowledge Based Expert Systems
- New Product Development
- Complexity, Complex Systems
- Ecology & Environments
- Electro-Mechanical Systems
- Electro-Optics
- Geophysical Systems
- Manufacturing
- Marine Applications
- Materials Modeling & Simulation
- Defense Applications
- Queuing Systems
- Robotics & Autonomous Systems
- Synthetic Environment
- System Dynamics
- Training Simulators
- Transportation & Traffic

www.scs.org/summersim

MITIM
Simulation Team
Genoa Center

SPECTS 2012

The International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS2012) is an annual international conference acting as forum for professionals involved in performance evaluation of computer and telecommunication systems. Performance evaluation of computer systems and networks has progressed rapidly in the past decade and has begun to approach maturity. Significant progress has been made in analytic modeling, simulation, and measurement approaches for performance evaluation of computer and telecommunication systems. SPECTS is technically co-sponsored by IEEE Communications Society and IEEE SMC Society (pending sponsorship for 2012). Accepted papers of SPECTS are archived in IEEE Xplore (pending approval for 2012)

Honorary Chair:
Mohammad Obaidat Monmouth Univ. NJ USA
General Chair:
Jose Sevillano, Univ. of Seville, Spain
Program Chairs:
Raffale Bolla, Univ. of Genoa, Italy
Pere Vila, Univ. of Girona, Spain
Isaac Woungang, Ryerson Univ., ON, Canada

Paper Submission

Full papers should be submitted for the review process through the conference website.

Each submission must include the title, authors, abstract, affiliations, addresses, main body and references for proper positioning in the conference. Each paper will be reviewed by different members of the International Program Committee of the specific Conference and track taking into consideration scientific quality, originality and relevance. Only original papers, written in English will be accepted.

Authors of accepted papers are expected to attend the conference, present their works, transfer copyright and pay conference registration fees at the time their camera ready papers are submitted.

Conference best papers will be directed to International Journals for possible inclusion through content extension.

Summersim 2012 Deadlines
Special Session Proposals	January 16, 2012
Paper Submission	February 1, 2012
Notification of Acceptance	March 15, 2012
Final Submission	April 16, 2012
Early Registration	May 2, 2012

www.m-s-net.org/conf/summersim2012

SCSC 2012

The Summer Computer Simulation Conference represents one of the oldest event in M&S worldwide and at the same time the top Conference with state of art of most innovative Simulation Technologies. Summer Computer Simulation Conference (SCSC2012) focus is on Simulation as Enabler for the Future; in fact Modeling and Simulation (M&S) is a very critical area for supporting Research and Development, as well as competitiveness, worldwide. New technologies are enabling new uses of M&S and increasing its impact in new areas. SCSC2012 provides an International Forum for presenting the State of the Art in the International Simulation Community as well as the Effectiveness of Simulation Experiences in World Businesses. The best overall papers, as selected by the Conference Committee, will be considered for possible publication in special issue of International Journals.

General Chairs:
Peter Kropf, Université de Neuchâtel, Switzerland
Francesco Longo, MSC-LES Univ. Calabria, Italy
Program Co-Chairs:
Miquel Angel Piera, University Autonoma de Barcelona, Spain

GCMS 2012

The 5th International Conference on Grand Challenges in Modeling and Simulation (GCMS2012) is one of the main SummerSim2012 conferences, organized by the Society for Modeling and Simulation International (SCS). Following the success of the earlier conferences in Edinburgh, Istanbul and Ottawa the focus of GCMS2012 will continue to be on the major challenges that must be met if the full potential of modeling and simulation is to be realized. Significant progress in M&S methods and applications has accompanied the rapid growth in the power and cost-effectiveness of available computer systems, but many challenges remain.

GCMS General Chair:
Roy Crosbie, Cal. State Univ. Chico, CA, USA
GCMS Program Chairs:
Priscilla Elfrey, Kennedy Space Center - NASA, FL, USA
Terry Ericsen, Office of Naval Research, CA, USA
Ralph Huntsinger, CSU, Chico-Humboldt, CA, USA
Hamid Vakilzadian, University of Nebraska, Lincoln, NE, USA
GCMS Program Co-Chairs
Kelly Cooper, Office of Naval Research, CA, USA
Mhamed Itmi, INSA-ROUEN, France

Project: SIREN
Professional Courses

The professional courses have been organised since 2000 for world-wide professionals, in Italian, French and English, focusing on the following subjects:

- PM: Project Management in M&S Projects
- M&S: Modeling & Simulation
- HLA: High Level Architecture
- VV&A: Verification, Validation and Accreditation

The courses include lecturing and exercises; teachers are world-wide experts from major excellence centers (i.e. Boston College, Genoa University, NASA, DMSO, National Center for Simulation, SAIC, Aegis Technologies, California State University, Riga TU, UCF, MITIM).

Simulation Technology Transfer

Since 2000 MITIM-M&S Net DIPTEM organised Simulation Professional Courses:

- **Project Management**
- **Modelling & Simulation**
- **High Level Architecture**
- **Verification, Validation & Accreditation**

The Lecturers included experts from major excellence centres (i.e. Boston College, University of Genoa, NASA, DMSO, National Center for Simulation, SAIC, Aegis , California State University., Riga TU, UCF , MITIM).

The course attendance (PM ~60, M&S 15, HLA 20, VV&A 10) included Companies (i.e. Piaggio Aero Industries, Alenia Aeronautica, Alenia Marconi, SIA, Fincantieri, COOP) and Academia (Pol.Torino, TU Delft, Univ.Marseille, Pol.Milano, Univ.Firenze, Univ.Bari, Univ.L'Aquila, etc.).

Course Location

Lecturing

Team Working & Exercises

Conclusions

Genova SCSC 2012

The Liophant Simulation and MITIM M&S Net DIPTEM are acti
a
reference point between users and providers in simulation area.
The integration of experts, technicians is providing very good results on
real case studies and complex projects.

A new active area of development is related to distributed simulation and
web-based modeling for extending the impact and exploitation of these
proposed systems.

Every year MITIM M&S Net DIPTEM organizes Conferences and
International Workshops focusing on application of Modeling &
Simulation. 2012: HMS, MAS, EMSS, IMAACA, DHSS, IWISH in Wien
and SCSC2012 in Genova.

IMAACA   **M A S**
2012

There is a constant interest in fostering joint cooperation DHSS 2012
and exchanges with international
Excellence Centers working   Wien, Austria
on simulation.

H M S
2012

EMSS
2012

I W I S H
2012 The International Workshop on
Innovative Simulation for Health Care