

Simulation & Medicine

La Marina, Fiera di Genova, Piazzale Kennedy, Genova, Italy
February 11, 2009 - Meeting Opening at 4:30 pm -6:30 pm

Prof. Rosen visit to Simulation Team in Genoa provides the opportunity to organize a SIREN Meeting for presenting advance in M&S applied to Medicine in Joint Cooperation with DIMS PhD Program; the Agenda includes:

- **Welcome,**

A. Bruzzone & R. Cianci, MISS DIPTTEM

- **Simulation in Medicine: Past Present and Future**

J. Rosen, Dartmouth College

- **Genoa Research in Plastic Surgery**

P. Santi & E. Raposio, DICMI

- **Biometrics & Simulation**

A. Bruzzone, MISS & A. Tremori, MAST

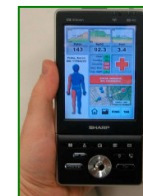
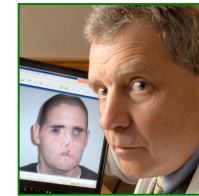
M&SNet



Simulation has evolved over the centuries but has not been applied to medicine until the 20th century with the introduction of virtual reality and computers. Prior to the 20th century simulation took the forms of physical models and cadavers. With the introduction of flight simulation there was an effort to move similar approaches into medicine. This was pushed by the demands of minimally invasive surgery and the introduction of robotics in surgery. More recently we have seen the introduction of cognitive task analysis to further define how we measure the success of the introduction of simulation to surgical procedures. In the 21st century in addition to cognitive task analysis tools we are beginning to see the migration of advanced intelligence tools to simulation. This is the introduction of algorithms that allow us to model the actions of a human as an adversary or in the medical case the actions of a surgeon in the operating room. We are just at the beginning of how we will use adversarial reasoning in the medical environment and in high risk time constrained situations like surgery. This talk will have as its goal to the introduction of many more questions than answers for the audience to solve in the upcoming decades. Its further goal is to unite the Italian community of scientists with the Americans in exploring solutions to these problems.



The Meeting will start at 4:30 pm at “La Marina” (Fiera di Genova), facing the main entrance of Genoa Port; after the meeting it will be organized a cocktail party sponsored by the Simulation Team for the attendees and to guarantee networking and interactions. Please send an Email to Dr. Marina Massei (marina.massei@liophant.org) for confirming your attendance.



For further Information:

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Joe Rosen is serving as Professor of Surgery, Dartmouth Hitchcock Medical Center.

He have also a position as Adjunct Professor of Engineering and Senior Lecturer Thayer School of Engineering at Dartmouth. He completed his B.A. in Biology at Cornell University and his M.D. at Stanford University School of Medicine. His research interests includes: Nerve repair and human machine interfaces, microsurgery and transplantation of limbs, computer-aided surgery, virtual reality simulators and methods of education, telemedicine and informatics, healthcare delivery for medical disasters and counter measures for bio-terrorism. He is teaching during 2008-2010, Healthcare and Biotechnology in the 21st Century and Virtual Medicine and Cybercare.



Agostino G. Bruzzone is Full Professor in DIPTeM University of Genoa. He has been actively involved in the M&S scientific community from several years and served as Director of the McLeod Institute of Simulation Science (MISS), Associate Vice-President and Member of the Board of the SCS (Society for Modeling & Simulation international), President of the Liophant Simulation, VicePresident of MIMOS (Movimento Italiano di Simulazione) and Italian Point of Contact for the ISAG (International Simulation Advisory Group) and Sim-Serv.



Roberto Cianci is serving as Full Professor in Genoa University and he teaches Modeling and Applied Mathematics in Engineering. He is director of the PhD Program in Simulation and Mathematical Engineering of Genoa University and he is active in several research projects. His activities on PDE (Partial Differential Equations) are focusing on applications and he is internationally active in developing innovative methodologies in Mathematical Modeling.



Edoardo Raposio is an expert in surgery related to scalp where his research results one the most extended internationally and include the introduction of new techniques and innovative methodologies. He developed a new surgery treatment for Hyperhidrosis and he is responsible for the new methodologies (i.e. FRAS) . He is teaching Plastic Surgery in Genoa University and he is responsible of several University Courses and research Project.



PierLuigi Santi is Director of Plastic Surgery Operative Unit in Genoa University and he is an international expert in Reconstructive Surgery with special attention to post-oncology in addition he research in aesthetic and malformation surgery; he is author of over 400 scientific publications and he is in charge in Organization and Direction on several National and International Courses and he is responsible of several research project in Plastic Surgery. He was awarded with gold medal by Purkyni University BRNO and he served as President of Italian Reconstructive and Aesthetic Plastic Surgery Society SICPRE



Alberto Tremori completed his degree in Electronic Engineering in Genoa University where he acquired experience in M&S Simulators. He was involved in joint Simulation Researches Projects among National Simulation Center, Institute for Simulation & Training, Kennedy Space Center NASA and McLeod Institute of Simulation Science. He developed the first European ISO9000 certificate for Technical Nautical Port Service. He participated in several International Conferences as speakers in Europe, Asia and North America. He accumulated experiences along the years working in major companies (IBM, Xerox, IDC, think3, Solid Works), currently he is President of MAST a SME active in HiTech R&D.

