#### **WAMS 2013**



## The International Workshop on Applied Modeling and Simulation

November 24-27, 2013 Buenos Aires, Argentina



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#### **Program**

#### **Plenary Talks**

Computer Assisted Surgical Training: Enhancing Patients' Safety through Simulation Technology and Human Skill

**Prof. Jerzy W. Rozenblit** (Dept. of Electrical and Computer Engineering, Dept. of Surgery, College of Medicine, The University of Arizona)

Minimally invasive surgeries reduce recovery time and postoperative pain. However, in these procedures surgeons may lose many of the tactile and visual cues that they rely upon in conventional surgery. Our work focuses on the use of high technology to assist in laparoscopy training. This talk will provide an overview of the concepts, will discuss some of the existing systems, their advantages and shortcomings. Then, a design of a surgical training and assessment system that provides sensing and reasoning capabilities in laparoscopy education will be presented. A training device prototype has been developed and will be demonstrated. I will also discuss our vision for the future use of this technology as a surgical assistant system in the operating room.

#### The CAPRICORN Project

**Agostino Bruzzone** (Simulation Team, DIME University of Genoa)

Capricorn aims is support operations planning and management in complex scenarios where population and interest groups are critical elements; in particular the project is focused on a complex South Asia scenario. The context allows to simulate investments and operations over a an asymmetric mission environment with different parties and articulated social frameworks. The proposed scenario is characterized by various degrees of freedom and it is modelled and simulated in order to evaluate the evolution of human

behaviour and socio-psychological aspects. It involves Intelligent Agents (IAs) driven Computer Generated Forces (CGF) that represent also people and interest groups (i.e. Middle Class, Nomads, Clans). The project is focused on Civil Military Co-operations(CIMIC) and Psychological Operations (PSYOPs) while the simulation has been developed using an architecture that involves various federates in different roles (IAs-driven HLA)

#### **Program**

Monday November 25 <sup>th</sup> , 2013	Tuesday November 26 <sup>th</sup> , 2013
	Plenary session

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8:30 - 10:00	Registration	The CAPRICORN Project	
		Agostino Bruzzone Simulation Team, DIME University of Genoa	
	Plenary session	Session 3 Miscellaneous aspects of simulation Chair: Marina Massei	
	Computer Assisted Surgical Training: Enhancing Patients' Safety through Simulation Technology and Human Skill  J. Rozenblit	The Effect of Jet Velocity and Wall Temperature on Indoor Air Flow and Temperature Distribution Karel Frana, Jianshun S. Zhang, Milos Muller	
10:30 - 12:00	University of Arizona, USA	Simulation of Traffic Road by Batches Petri Nets as Hybrid Mesoscopic Models Radhia Gaddouri, Leonardo Brenner, Isabel Demongodin	
		Analytical Evaluation of Interactivity Mediated by a Dynamic Hypermedia Device Guillermo Rodríguez, Patricia San Martín	
		Performing Fault Tree Analysis of a Modelica-based System Design through a Probability Model Peter Fritzson, Alfredo Garro, Mattias Nyberg, Lena Rogovchenko-Buffoni, Andrea Tundis	
12:00 - 14:00	Lunch		
	Session 1 Session 4		
	Reliability		
	_	Industry Chair: Agostino Bruzzone	
	Chair: Claudia Frydman  Simulation & Neural Networks Applications in Software Reliability Analysis Vojo Bubevski	Industry Chair: Agostino Bruzzone Simulation Aids Long-Term Capacity at a Sunglasses Manufacturing Plant Sagar Ratti, Ravi Lote, Edward Williams, Onur Ülgen	
14:00 - 15:30	Chair: Claudia Frydman  Simulation & Neural Networks Applications in Software Reliability Analysis Vojo Bubevski  A Monte Carlo Method for Reliability Evaluation of a System Integrity Protection Scheme in the Chilean Power Grid	Chair: <b>Agostino Bruzzone</b> Simulation Aids Long-Term Capacity at a Sunglasses Manufacturing Plant Sagar Ratti, Ravi Lote, Edward Williams,	
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20:00		Gala Dinner
	Analysis and Diagnosis of SME Lucas Boullosa, Cecilia Zanni-Merk, Nathalie Gartiser, Ana Casali	Casapietra, Massimiliano Corso, Angelo Ferrando, Paolo Porro, Francesca Dell'Acqua

For further information please contact WAMS

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