

4th International Workshop on Innovative Simulation for Health Care (IWISH 2015)

Held at the 12th International Multidisciplinary Modeling and
Simulation Multiconference (I3M 2015)

Bergeggi, Italy
21 – 23 September 2015

Editors:

**Agostino G. Bruzzone
Marco Frascio
Francesco Longo**

**Yury Merkuryev
Vera Novak
Jerzy W. Rozenblit**

ISBN: 978-1-5108-1380-9

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2015) by CAL-TEK S.r.l.
All rights reserved.

Printed by Curran Associates, Inc. (2015)

For permission requests, please contact CAL-TEK S.r.l.
at the address below.

CAL-TEK S.r.l.
Via Umberto Nobile 80
87036 Rende (CS)
Italy

Phone: +39 333 7042 612
Fax: +39 0984 937849

info@cal-tek.eu

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

Index

Towards a hybrid virtual/physical nuss procedure surgical simulator	1
Mohammad F. Obeid, Eun-sil Heo, Krzysztof J. Rechowicz, Robert E. Kelly, Frederic D. McKenzie	
Popliteal artery aneurysm: a bioengineering study on pathogenesis	10
Francesca Condemi, Raffaele Serra, Stefano de Franciscis, Gionata Fragomeni	
Sitting vs standing: a computational comparison of hemodynamics in carotid bifurcation	17
Maria Vittoria Caruso, Raffaele Serra, Paolo Perri, Stefano de Franciscis, Gionata Fragomeni	
Agent-based modelling for rethinking the socioeconomic determinants of child health in sub-saharan africa	23
Carine Van Malderen, Hedwig Deconinck, Niko Speybroeck, Jean-Christophe Chiem	
Rotated principal components for fuzzy segmentation szinitigraphic time series in individual dose planing	33
Werner Backfriedler, Gerald Zwettler	
Simulation-based framework to compute population risk related to traffic accidents	38
FJ Otamendi, D Garcia-Heredia	
Biosignal acquisition system for prosthesis control and rehabilitation monitoring	46
Volkhard Klinger	
Using the OSCE method in a simulation centre to ensure equity and objectivity in assessing the communication and relational skills in a large of student nurses during a long examination session	54
Annamaria Bagnasco, Angela Tolotti, Giancarlo Torre, Loredana Sasso	
The interprofessional skill lab in the simulation centre: an experience of communication between the medical-nursing team and family members	57
Annamaria Bagnasco, Sue-Anne Maruffi, Gianluca Catania, Giancarlo Torre, Loredana Sasso	
An advanced centre of simulation to support caregivers providing home care to chronically ill patients, patients with rare diseases, and end of life care	59
Annamaria Bagnasco, Giancarlo Torre, Roberta Centanaro, Lucia Bacigalupo, Loredana Sasso	
A simulation tool to plan daily nurse requirements	61
Paolo Barone, Francesco Imbimbo, Rosa Napoletano, Stefano Riemma, Debora Sarno	
The development of a low-cost obstetric simulator to train midwifery students and test objective examinations' skills	66
S. Ricci, A. Paci, S. Marcutti, P. Marchiolè , G. Torre , M. Casadio, G. Vercelli, M. Cordone	
The foundation for multi-scale modeling of the digital patient	73
C. Donald Combs	

Lean Management practices to improve performances in operating rooms	78
Antonio Calogero, Francesco Longo, Letizia Nicoletti, Marina Massei, Adriano Solis	
New Treatment strategies for diabetes-related cognitive decline in global healthcare	90
Vera Novak	
Author index	101