13th International Workshop on Innovative Simulation for Health Care (IWISH 2024)

Held at the 21st International Multidisciplinary Modeling and Simulation Multiconference (I3M 2024)

Tenerife, Spain 18 – 20 September 2024

Editors:

Agostino G. Bruzzone Marco Frascio

Francesco Longo Vera Novak

ISBN: 979-8-3313-0717-2

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.

This work is licensed under a Creative Commons Attribution 4.0 International License. License details: http://creativecommons.org/licenses/by-nc-nd/4.0/.

No changes have been made to the content of these proceedings. There may be changes to pagination, and minor adjustments for aesthetics.

Printed with permission by Curran Associates, Inc. (2024)

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: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

<u>Index</u>

Identifying and addressing disruptions in healthcare supply chain management	1
Puravkumar Patel, Smitesh Shah, Silvia Carpitella and Sepideh Abolghasem	
Achieving realism in women's health simulation with silicone rubber labia majora	10
augmented with an anatomically correct uterus: An enhanced training experience for nursing students	10
Darlene Showalter, Jarmel Poole, Haley Hoy, Kevin Hernandez, Delaney Enlow, Cooper	
Gunter, Gary Maddux and Bernard Schroer	
Low-cost female catheterization simulator for increasing anatomical accuracy and clinical competency of insertion	20
Darlene Showalter, Haley Hoy, Kevin Hernandez, Cooper Gunter, Delaney Enlow, Gary	
Maddux and Bernard Schroer	
3D printed models of the major congential heart defects: integration into the training	29
of nursing students Katherine Morrison, Tracy Lakin, Haley Hoy, Delaney Enlow, Kevin Hernandez, Gary	
Maddux and Bernard Schroer	
Step-up approach in trauma surgery training: a pilot course	39
Federica Renzi, Michele Altomare and Osvaldo Chiara	
Mathematical Modeling of Behavior-Induced Body Weight Changes	44
Mantana Chudtong, Pitchaporn Paitong and Andrea De Gaetano	
Simulating Brain Gradient-Echo Magnetic Resonance Images through Microstructural Modeling	51
Mert Şişman, Alexandra Roberts, Hangwei Zhuang, Renjiu Hu, Junghun Cho, Shun Zhang,	
Pascal Spincemaille, Thanh Nguyen and Yi Wang	
Optimizing Pharmaceutical Supply Chain Configuration in Primary Healthcare: A Mathematical Modeling and Decision Support Approach	60
Manal AlZaidan, Majed Hadid, Regina Padmanabhan and Laoucine Kerbache	
Calibration error as loss function in binary classification	65
Stephan Dreiseitl	
A numerical model to investigate aorta coarctation	74
Gionata Fragomeni, Patrizia Vizza, Arrigo Palumbo and Vera Gramigna	
Stochastic modeling of glioblastoma spread: a numerical simulation study	79
Alessandro Borri, Massimiliano D'Angelo, Laura D'Orsi, Marcello Pompa, Simona Panunzi and Andrea De Gaetano	
Molecular docking of triazole-based ligands with KDM5A to identify potential inhibitors	85
Jose Siguenza and Haci Baykara	
Gait Evaluation for Prevention and Rehabilitation based on Dynamic-Time-Warping	93
and Acceleration Measurement	
Jan Beckmann and Volkhard Klinger	
	1

Visualization of Patient Progress Monitoring and Vital Signs Trends in Electronic Nursing Reports	100
Barbara Traxler, Clara Diesenreiter and Oliver Krauss	
Integration of Industry 4.0 Technologies for Enhancing Healthcare Efficiency and Patient Care: A Comprehensive Literature Review	107
Martina Cardamone, Antonio Cimino, Virginia D'Augusta, Antonio Nervoso, Antonio	