HEALTHINFO 2017

The Second International Conference on Informatics and Assistive Technologies for Health-Care, Medical Support and Wellbeing

October 8 - 12, 2017

Athens, Greece

HEALTHINFO 2017 Editors

Doris Lindörfer, Ludwig-Maximilians-Universität München | IBE - Institut für medizinische Informationsverarbeitung, Biometrie und Epidemiologie, Germany

Hassan Khachfe, Lebanese International University, Lebanon

Birgit Gersbeck-Schierholz, Leibniz Universität Hannover, Germany

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© (2017) by International Academy, Research, and Industry Association (IARIA)
Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (2017)

International Academy, Research, and Industry Association (IARIA)
412 Derby Way
Wilmington, DE 19810

Phone: (408) 893-6407
Fax: (408) 527-6351

petre@iaria.org

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

Table of Contents

Utilizing Smartwatches for Supporting the Wellbeing of Elderly People 1
Klemens Waldhor and Rainer Lutze

Serious Games for Rehabilitation: Requirements for a Collaborative Environment 10
Hugo Barbosa, Antonio Castro, and Eurico Carrapatoso

CIPROS – An Instrument for Evidence-based Evaluation of EDC Systems and the DBFORM Example 16
Doris Lindoerfer, Thomas H. Muller, Kathrin Halfter, and Ulrich Mansmann

Graphical Bioinformatics – a Tool for the Characterization of Influenza Viruses 24
Dorota Bielinska-Waz and Piotr Waz

New Mathematical Description of the Zika Virus Genome 26
Piotr Waz and Dorota Bielinska-Waz

Identifying Influential Factors of Patient Length of Stay in a Surgery Center: a Simulation Modelling Approach 28
Chen Zhang, Hamza Hanchi, and Sebastiaan Meijer

Towards a Smart Dental Healthcare: An Automated Assessment of Orthodontic Treatment Need 35
Seiya Murata, Kobo Ishigaki, Chonho Lee, Chihiro Tanikawa, Susumu Date, and Takashi Yoshikawa

Evaluation of the Malfunctions of a Clinical Decision Support System Dependent on Electrocardiograms and Measurement of the QT Interval 40
Pedro Caraballo, Christopher Aakre, Tito Pena Guzman, Natalia Lazik, Robert Tarrell, J. Martijn Bos, and Michael Ackerman

Detecting Agitation Onset in Individuals with Dementia Using Smart Phone Sensors 42
Christianne Fowler, Ajay Gupta, Kurt Maly, Karen Karlowicz, Maheedhar Gunnam, Rohila Gudipati, Mahesh Kukunooru, and Rahul Rachamalla

Analysis of Medical Records Management in Brazilian Basic Healthcare Units: A Qualitative Approach 46
Rodolfo Barriviera, Carlos Maziero, and Celita Trelha