

# **HEALTHINFO 2024**

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

November 3rd - 7th, 2024

Nice, France

### **HEALTHINFO 2024 Editors**

Katie Crowley, Lero - the Science Foundation Ireland Research Centre for Software and University of Limerick, Ireland

Ita Richardson, Lero - the Science Foundation Ireland Research Centre for Software and University of Limerick, Ireland

#### Printed from e-media with permission by:

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

Some format issues inheren	nt in the e-media	version may also	annear in this print versi	on.
Donie Torniae issues innere.	it iii tiic c iiicaia	TOI STOIL IIIM J WISO	appear in this print (croi	

Copyright© (2024) by International Academy, Research, and Industry Association (IARIA) Please refer to the Copyright Information page.

Printed with permission by Curran Associates, Inc. (2025)

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**

Real-world ADL Recognition with Deep Learning and Smartwatches: A Pilot Study Mustafa Elhadi Ahmed, Hongnian Yu, Michael Vassallo, and Pelagia Koufaki	1
Challenges and Strategies of Inter-Disciplinary Research and Development: Lessons from a Telehealth Project Wei Zhou, Andy Li, Rashina Hoda, Chris Bain, Sam Georgy, Teresa O'Brien, Mahima Kalla, Olivia Metcalf, Wendy Chapman, and Peter Poon	8
Hip Fracture Patient Pathways and Agent-based Modelling Alison N. O'Connor, Stephen E. Ryan, Gauri Vaidya, Paul Harford, and Meghana Kshirsagar	11
User and Developer Perspectives of Technology Enabled Care  Derek Ross, Ann-Marie Morrissey, Ita Richardson, Deepa Narasimha, Gobe Leinaeng Mphusu, Kevin Moore, and Katie Crowley	17
Qawqaa: Aural Rehabilitation System for Children with Cochlear Implant Using Virtual Reality (VR) Leenah AlMashari, Sadeem AlSudais, and Meriam Kefi	23
Fundamental Skills for Learning Strategies Based on Multiple Intelligences-Based on 192 Cases of Problematic Behavior in Vocational Training  Norikatsu Fujita and Sho Aoki	26
Mobile App Use among Chronic Pain Patients - A Gamified Approach  Anabela Marques and Duarte Duque	32
Transforming Healthcare: The Role of AI and Informatics in Modern Medical Support Amit Srivastava	37
Social Engagement Embeddings of Parkinson's Disease through Autoencoders Ting Xiao, Poulomi Guha, and Ali Shah Tajuddin	43
Does Complexity Pay Off? Applying Advanced Algorithms to Depression Detection on the GLOBEM Dataset Sebastian Cavada, Alvaro Berobide, and Yevheniia Kryklyvets	48
AI-based Estimation of Lower Limb Joint Moments in Stance Phase Using a Single Wearable Inertial Sensor Kyoko Shibata and Kohei Watanabe	53