

**International Journal on
Advances in Life Sciences**



2014 vol. 6 nr. 3&4

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© (4236) by International Academy, Research, and Industry Association (IARIA)
Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (4237)

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: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

CONTENTS

pages: 87 - 96

Energy Harvesting Nanostructured Porous Silicon Scaffolds for Enhanced Efficiency Biofuel Cells

Mohamad Hajj-Hassan, Lebanese International University, Lebanon

Houssein Hajj-Hassan, Lebanese International University, Lebanon

Hassan Khachfe, Lebanese International University, Lebanon

pages: 97 - 106

Design, Creativity and Human Computer Interaction Design Education

Alma Leora Culén, University of Oslo, Norway

Henry N. Mainsah, Oslo School of Architecture and Design, Norway

Sisse Finken, University of Oslo, Norway

pages: 107 - 121

An Interactive Web Tool to Facilitate Shared Decision Making in Dementia: Design Issues Perceived by Caregivers and Patients

Marijke Span, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands

Carolien Smits, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands

Leontine Groen-van de Ven, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands

Jan Jukema, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands

Ruud Janssen, Research group IT Innovation in Health Care, Windesheim University of Applied Sciences Zwolle, The Netherlands

Myrra Vernooij-Dassen, Department of Primary Care, IQ HealthCare, Radboud University Nijmegen; Kalorama Foundation, Radboud Alzheimer Centre Nijmegen, The Netherlands

Jan Eefsting, Department of Nursing Home Medicine and EMGO Institute for Health and Care Research, VU University Medical Centre Amsterdam, The Netherlands

Marieke Hettinga, Research group IT Innovation in Health Care, Windesheim University of Applied Sciences Zwolle, The Netherlands

pages: 122 - 135

The State of Video-Based Learning: A Review and Future Perspectives

Ahmed Mohamed Fahmy Yousef, Learning Technologies Research Group (Informatik 9), RWTH Aachen University, Germany

Mohamed Amine Chatti, Learning Technologies Research Group (Informatik 9), RWTH Aachen University, Germany

Ulrik Schroeder, Learning Technologies Research Group (Informatik 9), RWTH Aachen University, Germany

pages: 136 - 146

The Inertia of the Status Quo: A Change Management Analysis of Technological Innovation

Anthony Glascock, Drexel University, USA

pages: 147 - 156

Wireless Health: Making Your Devices Talk -- A Review, Solution, and Outlook for Wireless Health Connectivity

Stephan Hengstler, MeshEye Consulting, United States

pages: 157 - 166

Social Networking, the Catalyst for Identity Thefts in the Digital Society

Eric Holm, Federation University Australia, Australia

pages: 167 - 176

Managing Language Diversity Across Cultures: the English-Mongolian Case Study

Amarsanaa Ganbold, National University of Mongolia, Mongolia

Feroz Farazi, University of Trento, Italy

Moaz Reyad, University of Trento, Italy

Oyundari Nyamdavaa, National University of Mongolia, Mongolia

Fausto Giunchiglia, University of Trento, Italy

pages: 177 - 183

The Diffusion of a Personal Health Record for Patients with Type 2 Diabetes Mellitus in Primary Care

Floor Sieverink, University of Twente, The Netherlands

Louise Braakman-Jansen, University of Twente, The Netherlands

Yvonne Roelofsen, Isala, The Netherlands

Steven Hendriks, Isala, The Netherlands

Robbert Sanderma, University of Twente, The Netherlands

Henk Bilo, Isala / University of Groningen and University Medical Centre Groningen, The Netherlands

Julia Van Gemert-Pijnen, University of Twente, The Netherlands

pages: 184 - 194

Remote Synchronous Usability Testing as a Strategy to Integrate Usability Evaluations in the Software Development Process: A Field Study

Fulvio Lizano, National University, Costa Rica

Jan Stage, Aalborg University, Denmark

pages: 195 - 209

A Pseudo-HDR Method Implementation for Medical Images Enhancement. New post-processing method for X-ray chest image quality enhancement

Desislava Georgieva, New Bulgarian University, Bulgaria

Vesselin Gueorguiev, Technical University Sofia, Bulgaria

Ivan Evgeniev Ivanov, Technical University Sofia, Bulgaria

pages: 210 - 219

Understanding eHealth use from a Persuasive System Design Perspective: an Antibiotic Information Application for Nurses

Jobke Wentzel, University of Twente, the Netherlands

Nienke Beerlage-de Jong, University of Twente, the Netherlands

Lars Nijdam, Hospital Medisch Spectrum Twente, the Netherlands

Regine van Drie-Pierik, Hospital Medisch Spectrum Twente, the Netherlands

Lisette van Gemert-Pijnen, University of Twente, the Netherlands

pages: 220 - 228

Refining Advanced Professional Development for Online Teaching and Course Building: An Evaluation From the Faculty Perspective

Vanessa Slinger-Friedman, Kennesaw State University, USA

Joe Terantino, Kennesaw State University, USA

Christopher K. Randall, Kennesaw State University, USA

Philip J. Aust, Kennesaw State University, USA

Tamara Powell, Kennesaw State University, USA

pages: 229 - 239

Developing a Data Infrastructure for Patient-Centered Telemedicine

Juha Puustjärvi, University of Helsinki, Finland

Leena Puustjärvi, The Pharmacy of Kaivopuisto, Finland

pages: 240 - 251

Technology-Enhanced Language Learning: A Case Study of a Global Classroom in Second Life

Kevin Oh, University of San Francisco, USA

Natalie Nussli, University of San Francisco, USA

pages: 252 - 261

Early Stages of Business Modeling for Open Source Home Care Technology. Lessons learned from an initial Inventory.

Elles Gyaltsen-Lohuis, Windesheim University of Applied Sciences, The Netherlands

Marieke Hettinga, Windesheim University of Applied Sciences, The Netherlands

Ruud Janssen, Windesheim University of Applied Sciences, The Netherlands

Jan Nauta, Windesheim University of Applied Sciences, The Netherlands

Sikke Visser, Windesheim University of Applied Sciences, The Netherlands

pages: 262 - 271

Combining User-Centered Design with the Persuasive Systems Design Model; The Development Process of a Web-Based Registration and Monitoring System for Healthcare-Associated Infections in Nursing Homes

Nienke Beerlage-de Jong, University of Twente, the Netherlands

Andrea Eikelenboom-Boskamp, Canisius Wilhelmina Hospital & Radboud University Medical Centre, the Netherlands

Andreas Voss, Canisius Wilhelmina Hospital & Radboud University Medical Centre, the Netherlands

Robbert Sanderman, University of Twente & University of Groningen, the Netherlands

Lisette van Gemert-Pijnen, University of Twente, the Netherlands

pages: 272 - 278

Active Surgeon Support during Orthopedic Surgery using the BOreSCOPE-Exoskeleton: System Design and First Results

Peter P. Pott, Institute of Electromechanical Design, Technische Universität Darmstadt, Germany

Markus Hessinger, Institute of Electromechanical Design, Technische Universität Darmstadt, Germany

Roland Werthschützky, Institute of Electromechanical Design, Technische Universität Darmstadt, Germany

Helmut F. Schlaak, Institute of Electromechanical Design, Technische Universität Darmstadt, Germany

Eugen Nordheimer, Institute of Computer Engineering, Automation Lab, Heidelberg University, Germany

Essameddin Badreddin, Institute of Computer Engineering, Automation Lab, Heidelberg University, Germany

Achim Wagner, Institute of Computer Engineering, Automation Lab, Heidelberg University, Germany

pages: 279 - 290

Business Process Evaluation in Agile Business Process Management Using Quality Models

Michael Gebhart, iteratec GmbH, Germany

Marco Mevius, HTWG Konstanz, Germany

Peter Wiedmann, HTWG Konstanz, Germany

pages: 291 - 299

Teleconsultation/Telediagnosis using Teledentistry Technology: a Pilot Feasibility Study

Rodrigo Mariño, Oral Health CRC, Melbourne Dental School University of Melbourne, Australia

Utsana Tonmukayakul, Dental Health Services Victoria, Australia

Parul Marwaha, Oral Health CRC, Melbourne Dental School, University of Melbourne, Australia

Richard Collmann, Victorian eResearch Strategic Initiative, University of Melbourne, Australia

Matthew Hopcraft, Oral Health CRC, Melbourne Dental School, University of Melbourne, Australia
David Manton, Oral Health CRC, Melbourne Dental School, University of Melbourne, Australia
Andrew Stranieri, Centre for Informatics and Applied Optimisation, University of Ballarat, Australia
Ken Clarke, Institute for a Broadband-Enabled Society, University of Melbourne, Australia

pages: 300 - 309

Personalized Virtual Coaching for Lifestyle Support: Principles for Design and Evaluation

Olga Kulyk, Center for eHealth Research and Disease Management, University of Twente, The Netherlands
Rieks op den Akker, Human Media Interaction, University of Twente, The Netherlands
Randy Klaassen, Human Media Interaction, University of Twente, The Netherlands
Lisette van Gemert-Pijnen, Center for eHealth Research and Disease Management, University of Twente, The Netherlands

pages: 310 - 324

Impact of Population Size, Selection and Multi-Parent Recombination within a Customized NSGA-II for Biochemical Optimization

Susanne Rosenthal, FHDW, University of Applied Sciences, Germany
Markus Borschbach, FHDW, University of Applied Sciences, Germany

pages: 325 - 337

AMIDE — Automatic Molecular Inverse Docking Engine for Large-Scale Proteins Targets Identification

Romain Vasseur, MEDyC, UMR CNRS 7369, University of Reims (URCA), Reims, France
Stéphanie Baud, MEDyC, UMR CNRS 7369, University of Reims (URCA), Reims, France
Luiz Angelo Steffanel, SYSCOM Team, CReSTIC EA3804, University of Reims (URCA), Reims, France
Xavier Vigouroux, Center for Excellence in Parallel Programming, Bull SAS, Echirolles, France
Laurent Martiny, MEDyC, UMR CNRS 7369, University of Reims (URCA), Reims, France
Michael Krajecki, SYSCOM Team, CReSTIC EA3804, University of Reims (URCA), Reims, France
Manuel Dauchez, MEDyC, UMR CNRS 7369, University of Reims (URCA), Reims, France

pages: 338 - 349

Towards an interactive web tool that supports shared decision making in dementia: identifying user requirements

Marijke Span, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands
Carolien Smits, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands
Leontine Groen-van de Ven, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands
Jan Jukema, Research group Innovation of Care of Older Adults and Social Work, Windesheim University of Applied Sciences Zwolle, The Netherlands
Anita Cremers, TNO Human Factors, Utrecht University of Applied Sciences, department: Multi Modal User Interface Design, Utrecht, The Netherlands
Myrra Vernooij-Dassen, Department of Primary Care, IQ HealthCare, Radboud University Nijmegen; Kalorama Foundation, Radboud Alzheimer Centre Nijmegen, The Netherlands
Jan Eefsting, Department of Nursing Home Medicine and EMGO Institute for Health and Care Research, VU University Medical Centre Amsterdam, The Netherlands
Marika Hettinga, Research group IT Innovation in Health Care Windesheim University of Applied Sciences Zwolle, The Netherlands

pages: 350 - 363

On Benefits of Interactive Online Learning in Higher Distance Education: Repeating a Learning Analytics Project in the Context of Programming Education

Klaus Gotthardt, FernUniversität in Hagen, Germany
Bernd Krämer, FernUniversität in Hagen, Germany
Johannes Magenheimer, University of Paderborn, Germany
Jonas Neugebauer, University of Paderborn, Germany

pages: 364 - 372

A Virtual Patient Simulator Based on Human Connectome and 7 T MRI for Deep Brain Stimulation

Giorgio Bonmassar, Athinoula A. Martinos Center for Biomedical Imaging Department of Radiology Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, USA

Leonardo Angelone, Office of Science and Engineering Laboratories, Center for Devices and Radiological Health, U.S. Food and Drug Administration, Silver Spring, MD, USA

Nikos Makris, Department of Psychiatry and Neurology Massachusetts General Hospital, Harvard Medical School, Charlestown, MA, USA

pages: 373 - 382

Using Neural Networks and Feature Selection Algorithms in the Identification of Protein Signatures for the Prediction of Alzheimer's Disease

Lara Dantas, University of Pernambuco, Brazil

Mêuser Valença, University of Pernambuco, Brazil