

# **IET International Conference on Technologies for Active and Assisted Living (TechAAL 2015)**

IET Seminar Digests 2015/15741

London, United Kingdom  
5 November 2015

ISBN: 978-1-5108-1913-9

**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 the Institution of Engineering and Technology  
All rights reserved.

Printed by Curran Associates, Inc. (2016)

For permission requests, please contact the Institution of Engineering and Technology  
at the address below.

Institution of Engineering and Technology  
P. O. Box 96  
Stevenage, Hertfordshire  
U.K. SG1 2SD

Phone: 01-441-438-767-328-328  
Fax: 01-441-438-767-328-375

[www.theiet.org](http://www.theiet.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](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>BARRIERS TO THE DIFFUSION OF TELECARE AND TELEHEALTH IN THE EU: A LITERATURE REVIEW</b> .....	1
<i>S. Merkel, P. Enste</i>	
<b>SPEECH-ENABLED ENVIRONMENTAL CONTROL IN AN AAL SETTING FOR PEOPLE WITH SPEECH DISORDERS: A CASE STUDY</b> .....	7
<i>H. Christensen, M. Nicolao, S. Cunningham, S. Deena, P. Green, T. Hain</i>	
<b>THE EFFICACY OF “BUSYNESS” AS A MEASURE FOR BEHAVIOUR PATTERN ANALYSIS USING UNLABELLED SENSOR DATA: A CASE STUDY</b> .....	13
<i>L. Fiorini, P. Caleb-Solly, A. Tsanaka, F. Cavallo, P. Dario, C. Melhuish</i>	
<b>ON THE DEVELOPMENT OF A SERVICE ROBOT FOR SOCIAL INTERACTION WITH THE ELDERLY</b> .....	19
<i>D. Portugal, P. Trindade, E. Christodoulou, G. Samaras, J. Dias</i>	
<b>AUTOMATING SENIOR FITNESS TESTING THROUGH GESTURE DETECTION WITH DEPTH SENSORS</b> .....	25
<i>A.R. Gonçalves, E.R. Gouveia, M.S. Cameirão, S. Bermúdez i Badia</i>	
<b>PERFORMANCE ANALYSIS OF SELF-ORGANISING NEURAL NETWORKS TRACKING ALGORITHMS FOR INTAKE MONITORING USING KINECT</b> .....	31
<i>S. Gasparrini, E. Cippitelli, E. Gambi, S. Spinsante, F. Florez-Revuelta</i>	
<b>INFRASTRUCTURELESS PEDESTRIAN NAVIGATION TO ASSESS THE RESPONSE OF ALZHEIMER'S PATIENTS TO VISUAL CUES</b> .....	37
<i>I.D. McCarthy, K. Yong, T. Suzuki, B. Yang, D. Boampong, C. Holloway, N. Tyler, A. Carton, S. Crutch</i>	
<b>GAIT ANALYSIS ON THE MOVE: THE INFINITE GAIT WALKWAY</b> .....	42
<i>S. Wakolbinger, J.A. Birchbauer, S. Küberl</i>	
<b>A DYNAMIC SEGMENTATION BASED ACTIVITY DISCOVERY THROUGH TOPIC MODELLING</b> .....	48
<i>I.I. Kennedy, U. Naem, A.-R. Tawil</i>	
<b>ACTIVE AND ASSISTED LIVING IN YOUR GARDEN</b> .....	54
<i>C. Zschippig, T. Kluss</i>	
<b>COGNITIVE TESTS FOR THE DIAGNOSIS OF ALZHEIMER'S DISEASE BASED ON VIRTUAL ENVIRONMENTS</b> .....	60
<i>J.M. Fernandez Montenegro, V. Argyriou</i>	
<b>CRTEXTER: WEB-BASED INVESTIGATIVE TOOL FOR THE BLIND</b> .....	65
<i>L. Naranjo</i>	
<b>DATA QUALITY ORIENTED TAXONOMY OF AMBIENT ASSISTED LIVING SYSTEMS</b> .....	70
<i>F.H. Aysha Beevi, S. Wagner, S. Hallerstede, C.F. Pedersen</i>	
<b>ELECTROPALATOGRAPHY AS A HUMAN INPUT DEVICE FOR PATIENTS SUFFERING FROM SPINAL CORD INJURIES</b> .....	76
<i>R.J. Horne, S.W. Kelly</i>	
<b>PERFORMANCE EVALUATION OF JOINT ANGLES OBTAINED BY THE KINECT V2</b> .....	80
<i>L.G. Wiedemann, R. Planinc, I. Nemeč, M. Kampel</i>	
<b>PROPOSAL OF A MOBILE APPLICATION FOR MINDFULNESS PRACTICE IN ELDER PEOPLE</b> .....	86
<i>A. Sánchez, I. Plaza, C.T. Medrano, J. Garcia-Campayo</i>	
<b>Author Index</b>	