



AMBIENT 2015

The Fifth International Conference on Ambient Computing, Applications, Services
and Technologies

July 19 - 24, 2015

Nice, France

AMBIENT 2015 Editors

Maarten Weyn, University of Antwerp, Belgium

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

Printed by Curran Associates, Inc. (2015)

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

TABLE OF CONTENTS

AMBIENT 1: AMBIENT COMPUTING ENVIRONMENTS, SENSORS AND HARDWARE

Effective Mission Management through Service-aware Streaming Infrastructure	1
<i>M. Roelands, W. Van Raemdonck, S. Menoret, L. Navarro, A. Bildea, S. Creiche</i>	
Monitoring Abnormal Behavior of Hospital Patients Using RGB+D Sensors.....	10
<i>S. Chae, K. C. Yow</i>	
Flexible Management of Ambient Assisted Living Environments by Ontology-Based Configuration.....	16
<i>T. Zentek, J. Bock, A. Rashid</i>	
Geolocation Architecture for Combining Multiple Technologies	21
<i>J.-B. Drucker, T. Ducrocq, C. Herault, G. Lefebvre, E. Ptak</i>	
An “Internet of Things” Vision of the Flood Monitoring Problem.....	26
<i>M. Ancona, A. Dellacasa, G. Delzanno, A. La Camera, I. Rellini</i>	

AMBIENT 2: AMBIENT DEVICES, APPLICATIONS AND SYSTEMS

A Smartwatch-Based System for Audio-Based Monitoring of Dietary Habits.....	30
<i>H. Kalantarian, M. Sarrafzadeh</i>	
k-Nearest-Neighbour Based Numerical Hand Posture Recognition Using a Smart Textile Glove	36
<i>C. Li, K. Bredies, A. Lund, V. Nierstrasz, P. Hemeren, D. Hogberg</i>	
Component Templates and Service Applications Specifications to Control Dynamic Adaptive System Configurations	42
<i>H. Klus, A. Rausch, D. Herrling</i>	
Touch User Interface Evaluation for E-book Systems: A Usability Experiment on Zinio and MagV	52
<i>Y.-C. Lin, C.-H. Yeh</i>	

AMBIENT 3: AMBIENT COMPUTING AND MODELING

Improvement on K-means and TSP Based Mobility Protocol of Wireless Sensor Network	56
<i>A. Ghabri, M. Bellalouna, W. Khaznaji</i>	
New Geometric Geolocalization Method for Tracking Patients in Medical Environments.....	65
<i>A. Ghabri, M. Bellalouna, L. Horchani</i>	
A Framework for Supporting Natural Interaction with Printed Matter in Ambient Intelligence Environments	72
<i>G. Margetis, M. Antona, C. Stephanidis</i>	
Multi-Target Data Association in Binary Sensor Networks.....	79
<i>S. M. Muller, A. Hein</i>	
Author Index	