



# **CENTRIC 2013**

The Sixth International Conference on Advances in Human oriented and  
Personalized Mechanisms, Technologies, and Services

October 27 - November 1, 2013

Venice, Italy

## **CENTRIC 2013 Editors**

Lasse Berntzen, Vestfold University College - Tønsberg, Norway

Stephan Böhm, RheinMain University of Applied Sciences - Wiesbaden, 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© (2013) by International Academy, Research, and Industry Association (IARIA)  
Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (2013)

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

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

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

# TABLE OF CONTENTS

## CENTRIC 1: TECHNOLOGIES FOR PERSONALIZED SERVICES

MobileSage - A Prototype Based Case Study for Delivering Context-Aware, Personalized, On-Demand Help Content .....	1
<i>Till Halbach, Trenton Schulz</i>	
Personalized Shopping Experience with NFC Smartphone Apps and Electronic Shelf Label.....	7
<i>Mark Bishop, Jarom Brown, Andrew Hansen, Reed Kleinman, Nigel Palmer</i>	
Student Driven Innovation: Designing University Library Services .....	12
<i>Alma Leora Culén, Andrea Alessandro Gasparini</i>	

## CENTRIC 2: USER RESEARCH AND USAGE BEHAVIOR

UWB Radar with Array Antennas for Human Respiration and Heartbeat Detection .....	18
<i>Huan Bang Li, Ryu Miura</i>	
An Application to Estimate the Cyber-risk Detection Skill of Mobile Devices Users (IDEA) .....	N/A
<i>Guillaume Schaff, Carlo Harpes, Romain Martin, Marianne Junger</i>	
Applying Augmented Reality to Tourism Pamphlet and its Evaluation .....	24
<i>Tadashi Miyosawa, Kentaro Hara, Kikunori Shinohara</i>	
Experiential Adaptation to Provide User-Centered Web Content Personalization .....	31
<i>Silvia Mirri, Catia Prandi, Paola Salomoni</i>	

## CENTRIC 3: USER-CENTRIC ADVANCED APPLICATIONS I

Development and Evaluation of a Rehabilitation Program using Kinect™ Motion Capture Technology .....	37
<i>Tadashi Miyosawa, Shinya Yanagisawa, Masao Okuhara</i>	
Interface Design Techniques for Electronic Nose Sensors:A Survey .....	44
<i>Saeed Samadi</i>	
Study of Cochlear Implants Electrodes Stimulation Based on the Physics of the Ear for Audio Signal Integrity Improvement .....	50
<i>Umberto Cerasani, William Tatinian</i>	
Sightseeing Spot Communication System using Four-Frame Stories .....	55
<i>Tomoko Izumi, Masaki Masuda, Yoshio Nakatani</i>	
An Opportunistic Tourism Navigation System using Photography Location Recommendation.....	61
<i>Hiroya Sakaguchi, Tomoko Izumi, Yoshio Nakatani</i>	

## CENTRIC 4: USER-CENTRIC ADVANCED APPLICATIONS II

Disaster Information Sharing System Using Pictograms Only .....	67
<i>Kakeru Kusano, Tomoko Izumi, Yoshio Nakatani</i>	
Engaging Practitioners to Deliver Government Carbon and Energy Phased Reduction Targets: Toward a Web 3.0 Approach.....	73
<i>Yacine Rezgui, Haijiang Li, Tom Beach, Ioan Petri</i>	
Modeling of the Organ of Corti Stimulated by Cochlear Implant Electrodes.....	80
<i>Umberto Cerasani, William Tatinian</i>	

## CENTRIC 5: PERSONALIZATION

Towards a Framework for Business Models in Event Management .....	86
<i>Christina Di Valentin, Andreas Segl, Dirk Werth, Peter Loos</i>	
Privacy-Centric Modeling and Management of Context Information .....	92
<i>Florian Dorfmeister, Sebastian Feld, Claudia Linnhoff-Popien, Stephan A. W. Verclas</i>	

<b>Towards Context-Driven User Interfaces in Smart Homes - The Cloud4all Project's Smart House</b>	
<b>Demo</b>	98
<i>Gotfried Zimmermann, Alexander Henka, Christophe Strobbe, Simone Mack, Annette Landmesser</i>	
<b>User-Centric Adaptive Automation through Formal Reconfiguration of User Interface Models</b>	104
<i>Benjamin Weyers</i>	

## **CENTRIC 6: USER EXPERIENCE AND USABILITY**

<b>A Multi-Method Approach to Assessing the Usability of Mobile Job Advertisements</b>	108
<i>Stephan Böhm, Susanne J. Niklas, Wolfgang Jäger</i>	
<b>An Exploration of Relationships between Culture Images and User Experience of Gesture Interaction</b>	112
<i>Tian Lei, Shuaili Wei</i>	
<b>The Case for Integrating Needs and Preferences in the Internet of Things</b>	118
<i>Andy Heath, Gill Whitney, Irena Kolar, Mark Springett</i>	
<b>Process of Gamification. From the Consideration of Gamification to its Practical Implementation</b>	126
<i>Cathie Marache-Francisco, Eric Brangier</i>	
<b>Citizen-centric eGovernment Services</b>	132
<i>Lasse Berntzen</i>	
<b>Author Index</b>	