

Contents

Reconciling Humans and Technology: The Role of Ambient Intelligence. . . . <i>Norbert Streitz</i>	1
Engineering a Cyber-Physical Intersection Management – An Experience Report <i>Florian Wessling, Stefan Gries, Julius Ollesch, Marc Hesenius, and Volker Gruhn</i>	17
Exploring Design Opportunities for Intelligent Worker Assistance: A New Approach Using Projection-Based AR and a Novel Hand-Tracking Algorithm <i>Sebastian Büttner, Oliver Sand, and Carsten Röcker</i>	33
AuthentiCap - A Touchless Vehicle Authentication and Personalization System <i>Sebastian Frank and Arjan Kuijper</i>	46
Indoor Localization Based on Passive Electric Field Sensing <i>Biyng Fu, Florian Kirchbuchner, Julian von Wilmsdorff, Tobias Grosse-Puppenthal, Andreas Braun, and Arjan Kuijper</i>	64
Safety Services in Smart Environments Using Depth Cameras <i>Matthias Ruben Mettel, Michael Alekseew, Carsten Stocklöv, and Andreas Braun</i>	80
Contextual Requirements Prioritization and Its Application to Smart Homes . . . <i>Estefanía Serral, Paolo Sernani, Aldo Franco Dragoni, and Fabiano Dalpiaz</i>	94
Voices and Views of Informal Caregivers: Investigating Ambient Assisted Living Technologies <i>Christina Jaschinski and Somaya Ben Allouch</i>	110
Easy to Install Indoor Positioning System that Parasitizes Home Lighting . . . <i>Takuya Maekawa and Yuki Sakumichi</i>	124
Exploring the Use of Ambient WiFi Signals to Find Vacant Houses <i>Shin'ichi Konomi, Tomoyo Sasao, Simo Hosio, and Kaoru Sezaki</i>	130
A Framework for Distributed Interaction in Intelligent Environments. <i>Dario Di Mauro, Juan C. Augusto, Antonio Origlia, and Francesco Cutugno</i>	136

Which Mobile Health Toolkit Should a Service Provider Choose?
A Comparative Evaluation of Apple HealthKit, Google Fit,
and Samsung Digital Health Platform 152
Babak A. Farshchian and Thomas Vilarinho

Visual End-User Programming of Personalized AAL in the Internet
of Things 159
Yannis Valsamakis and Anthony Savidis

Opportunities for Biometric Technologies in Smart Environments 175
Olaf Henniger, Naser Damer, and Andreas Braun

New Approach for Optimizing the Usage of Situation Recognition
Algorithms Within IoT Domains 183
*Chinara Mammadova, Helmi Ben Hmida, Andreas Braun,
and Arjan Kuijper*

HUDConCap - Automotive Head-Up Display Controlled
with Capacitive Proximity Sensing 197
Sebastian Frank and Arjan Kuijper

E-Textile Couch: Towards Smart Garments Integrated Furniture 214
Silvia Rus, Andreas Braun, and Arjan Kuijper

Context-Aware Monitoring Agents for Ambient Assisted
Living Applications 225
*Sofiane Bouznad, Abdelghani Chibani, Yacine Amirat, Sabri Lyazid,
Edson Prestes, Faouzi Sebbak, and Sandro Fiorini*

Mobility Competencies of People with Down Syndrome Supported
by Technical Assistance: Results of the Requirement Analysis
in POSEIDON Project 241
*Anne Engler, Anna Zirk, Monique Siebrandt, Eva Schulze,
and Detlef Oesterreich*

An Exploratory Study on Electric Field Sensing 247
*Julian von Wilmsdorff, Florian Kirchbuchner, Biying Fu,
Andreas Braun, and Arjan Kuijper*

A Framework for Responsive Environments 263
Ben Salem, Jorge Alves Lino, and Jan Simons

Author Index 279



<http://www.springer.com/978-3-319-56996-3>

Ambient Intelligence

13th European Conference, Aml 2017, Malaga, Spain,

April 26-28, 2017, Proceedings

Braun, A.; Wichert, R.; Maña, A. (Eds.)

2017, X, 279 p. 115 illus., Softcover

ISBN: 978-3-319-56996-3