

Table of Contents

Handling Positioning Errors in Location-based Services <i>Philipp Marcus and Claudia Linnhoff-Popien</i>	1
Event Driven Adaptive Security in Internet of Things <i>Waqas Aman and Einar Snekkenes</i>	7
A Certificate-based Context Aware Access Control Model For Smart Mobile Devices In Ubiquitous Computing Environments <i>Davut Cavdar, Ahmet Yortanli, Pekin Erhan Eren, and Altan Kocyigit</i>	16
Machine to Machine Trusted Behaviors <i>Margaret Loper and Jeffrey McCreary</i>	23
The Pervasive Information System Adaptation: Android Device Context <i>Achour Fatma, Jedidi Anis, and Gargouri Faiez</i>	27
Formal Modeling For Pervasive Design of Human-Computer Interfaces <i>Ines Riahi and Faouzi Moussa</i>	35
Mobile Staff Planning Support for Team Leaders in an Industrial Production Scenario <i>Sonke Knoch, Melanie Reiplinger, and Rouven Vierfuss</i>	44
Unified and Conceptual Context Analysis in Ubiquitous Environments <i>Jaffal Ali, Manuele Kirsch-Pinheiro, and Le Grand Benedicte</i>	48
Standardized Scalable Relocatable Context-Aware Middleware for Mobile aPplications (SCAMMP) <i>Fatima Abdallah, Hassan Sbeity, and Ahmad Fadlallah</i>	56
A Bayesian Tree Learning Method for Low-Power Context-Aware System in Smartphone <i>Kyon-Mo Yang and Sung-Bae Cho</i>	62
Immersive Virtual Environment and Artificial Intelligence: A proposal of Context Aware Virtual Environment <i>Fabricio Herpich, Gleizer Bierhalz Voss, Felipe Becker Nunes, Rafaela Ribeiro Jardim, and Roseclea Duarte Medina</i>	68
Recommendation System for Assisting the Management of Information Technology <i>Taciano Balardin, Felipe Nunes, Gleizer Voss, Jose Valdeni, and Roseclea Medina</i>	72
Monitoring, Modeling and Visualization System of Traffic Air Pollution – A Case Study for the City of Skopje <i>Nikola Koteli, Kosta Mitreski, Danco Davcev, and Margarita Ginovska</i>	80

A Peer-to-Peer Model for Virtualization and Knowledge Sharing in Smart Spaces <i>Sergey Balandin and Dmitry Korzun</i>	87
Cost-Optimized Location and Service Management Scheme for Next-Generation Mobile Networks <i>Chulhee Cho, Jun-Dong Cho, and Jongpil Jeong</i>	93
New First - Path Detector for LTE Positioning Reference Signals <i>Pawel Gadka</i>	99
Wearable Sensor System Prototype for SIDS Prevention <i>Gustavo Lopez, Mariana Lopez, and Luis A. Guerrero</i>	105
On Secure-Smart Mobility Scheme in Proxy Mobile IPv6 Networks <i>Jae-Young Choi, Jun-Dong Cho, and Jongpil Jeong</i>	112
Mobile Transactions over NFC and GSM <i>Muhammad Qasim Saeed, Colin Walter, Pardis Pourghomi, and Gheorghita Ghinea</i>	118
Action Recognition with Depth Maps Using HOG Descriptors of Multi-view Motion Appearance and History <i>DoHyung Kim, Woo-han Yun, Ho-Sub Yoon, and Jaehong Kim</i>	126
Swoozy - An Innovative Design of a Distributed and Gesture-based Semantic Television System <i>Matthieu Deru and Simon Bergweiler</i>	131
Augmented Object Development using 3D Technology - An Object Redesign Process in the UbiComp Domain <i>Gustavo Lopez, Daniel Alvarado, Luis A. Guerrero, and Mariana Lopez</i>	140
Reversible Watermarking Based on Histogram Shifting of Difference Image between Original and Predicted images <i>Su-Yeon Shin, Hyang-Mi Yoo, and Jae-Won Suh</i>	147
Using the White Space for Digital Inclusion <i>Abdelnasser Abdelal and Aysha Al-Hinai</i>	151
Compact Three-dimensional Vision for Ubiquitous Sensing <i>Kumiko Yoshida and Kikuhito Kawasue</i>	157
A Flexible Framework for Adaptive Knowledge Retrieval and Fusion for Kiosk Systems and Mobile Clients <i>Simon Bergweiler</i>	164
Ubiquitous Smart Home Control on a Raspberry Pi Embedded System <i>Jan Gebhardt, Michael Massoth, Stefan Weber, and Torsten Wiens</i>	172

Designing a Low-Cost Web-Controlled Mobile Robot for Home Monitoring <i>David Espes, Yvon Autret, Jean Vareille, and Philippe Le Parc</i>	178
A Real-time Color-matching Method Based on SmartPhones For Color-blind People <i>MyoungBeom Chung and Hyunseung Choo</i>	184
Co-creation of Sustainable Smart Cities <i>Virpi Oksman, Antti Vaatanen, and Mari Ylikauppila</i>	189
A Case Study on Understanding 2nd Screen Usage during a Live Broadcast - A Qualitative Multi-Method Approach <i>Mari Ainasoja, Juhani Linna, Paivi Heikkila, Hanna Lammi, and Virpi Oksman</i>	196
A Study on the Ka-band Satellite 4K-UHD Broadcasting Service Provisioning in Korea <i>Min-Su Shin, Joon-Gyu Ryu, Deock-Gil Oh, and Yong-Goo Kim</i>	204
SmartRoadSense: Collaborative Road Surface Condition Monitoring <i>Giacomo Alessandroni, Lorenz Cuno Klopfenstein, Saverio Delpriori, Matteo Dromedari, Gioele Luchetti, Brendan Dominic Paolini, Andrea Seraghiti, Emanuele Lattanzi, Valerio Freschi, Alberto Carini, and Alessandro Bogliolo</i>	210
Applying Flow-based Programming Methodology to Data-driven Applications Development for Smart Environments <i>Oleksandr Lobunets and Alexandr Krylovskiy</i>	216
Exploring Social Accountability for Pervasive Fitness Apps <i>Yu Chen, Jiyong Zhang, and Pearl Pu</i>	221
Multimodal Task Assignment and Introspection in Distributed Agricultural Harvesting Processes <i>Daniel Porta, Zeynep Tuncer, Michael Wirth, and Michael Hellenschmidt</i>	227
A Location Management System for Destination Prediction from Smartphone Sensors <i>Sun-You Kim and Sung-Bae Cho</i>	233
An SMT-based Accurate Algorithm for the K-Coverage Problem in Sensor Network <i>Weiqiang Kong, Ming Li, Long Han, and Akira Fukuda</i>	240
Uncertainty Aware Hybrid Clock Synchronisation in Wireless Sensor Networks <i>Christoph Steup, Sebastian Zug, Jorg Kaiser, and Andy Breuhan</i>	246
Bringing Context to Apache Hadoop <i>Guilherme Weigert Cassales, Andrea Schwertner Charao, Manuele Kirsch-Pinheiro, Carine Souveyet, and Luiz Angelo Steffanel</i>	252

Proposal U-Lab Cloud:Ubiquitous Virtual Laboratory based on Cloud Computing <i>Rafaela Ribeiro Jardim, Eduardo Lemos, Fabricio Herpich, Ricardo Bianchim, Roseclea Medina, and Felipe Becker Nunes</i>	259
Ergodic Capacity Analysis for Ubiquitous Cooperative Networks Employing Amplify-and-Forward Relaying <i>Peng Liu, Saeed Gazor, and Il-Min Kim</i>	263
CGSIL: A Viable Training-Free Wi-Fi Localization <i>Han Dinh Nguyen, Thong Minh Doan, and Nam Tuan Nguyen</i>	268
Automatic Modulation Classification of Digital Modulations Signals Based on Gaussian Mixture Model <i>Woo-Hyun Ahn, Jong-Won Choi, Chan-Sik Park, Bo-Seok Seo, and Min-Joon Lee</i>	275
Indoor Location Estimation Using Smart Antenna System with Virtual Fingerprint Construction Scheme <i>Shiann-Tsong Sheu, Yen-Ming Hsu, and Hsueh-Yi Chen</i>	281
Performance Evaluation of ZigBee Transmissions on the Grass Environment <i>Teles Bezerra, Saulo Silva, Erika Silva, Marcelo Sousa, and Matheus Cavalcante</i>	287