

Contents

Adding Secure Communication Mechanism to Existing Distributed Applications by Means of AOP	1
Ozgur Koray Sahingoz	
Multi-Level Dynamic Key Management for Scalable Wireless Sensor Networks with UAV	11
Ozgur Koray Sahingoz	
A Multi-Modal Coevolutionary Algorithm for Finding All Nash Equilibria of a Multi-Player Normal Form Game.	21
Nona Helmi and Gelareh Veisi	
Study on Analysis Android Applications for Smartwork.	31
Seung-hwan Ju, Hee-suk Seo and Jin Kwak	
Face Recognition System for the Enhanced Authentication in the Smart Work Environment	39
SangKon Han, Seokhwan Yang, Jae-hyuk Choi and Mokdong Chung	
The Innovation Telehospice System in Taiwan: A Home-Based Hospice Care Service Application	49
Mei-Ju Su, Yu-Jen Hsieh, Chien-An Yao, Fei-Pei Lai, May-Hua Liao and Heng-Shuen Chen	
MimicGesture: Secure Device Pairing with Accelerometer-Based Gesture Input	59
Oyuntungalag Chagnaadorj and Jiro Tanaka	

Worst Case Response Time Analysis of Sporadic Tasks with Precedence Constrained Subtasks Using Non-preemptive EDF Scheduling	69
Armaghan Darbandi and Myung Kyun Kim	
App Development for Jeju Spring Water Information Visualization	81
JinLong Piao and Seong Baeg Kim	
Novel Clustering Scheme to Guarantee Lifetime of Wireless Sensor Networks	89
Babar Shah, Chung-Jae Lee, JinYong Seong and Ki-Il Kim	
An Operation Scheduling Technique for Coarse Grained Reconfigurable Architectures	99
Yongjoo Kim, Jongwon Lee, Doosan Cho and Yunheung Paek	
An Implementation of Leaf Recognition System Based on Leaf Contour and Centroid for Plant Classification	109
Kue-Bum Lee, Kwang-Woo Chung and Kwang-Seok Hong	
The Relative Importance of Weather Factors and the Predictions About the Groundwater Level in Jeju	117
Chan Jung Park, Junghoon Lee, Seong Baeg Kim and Jung Suk Hyun	
Design of Web Simulation and Content Service on EDISON.	127
Young Jin Jung, Du-Seok Jin, Bu-Young Ahn, Jerry Hyeon Seo, Hoon Ryu, Ok-Hwan Byeon, JongSuk Ruth Lee and Kumwon Cho	
A Collusion-Resistant Trust Management Scheme for Distributed P2P Network	135
Byong-lae Ha and Gi-hwan Cho	
An Effective Routing Cost Approximation in Many-to-Many Communication for Wireless Sensor Networks	145
A. S. M. Sanwar Hosen and Gi-hwan Cho	
An Energy-Efficient Selective Forwarding Attack Detection Scheme Using Lazy Detection in Wireless Sensor Networks	157
Junho Park, Dong-ook Seong, Myungho Yeo, Byung-yup Lee and Jaesoo Yoo	

**ID Globalization Across Multiple Convergence Spaces
Using Smart Cameras** 165
Geon Woo Kim and Jong Wook Han

**Vehicle Inside Information Recording System Using GPS
and In-Vehicle Network.** 175
Sung-Hyun Baek and Jong-Wook Jang

**Security Based Semantic Context Awareness System
for M2M Ubiquitous Healthcare Service** 187
Yunjeong Choi, Inshil Doh, Seung-Soo Park and Ki-Joon Chae

**Energy-Efficient In-Network Density Query Processing
in Wireless Sensor Networks** 197
Dong-ook Seong, Junho Park, Jihee Lee, Myungho Yeo,
Myoungho Kim and Jaesoo Yoo

**A Sensor Positioning Scheme Using Neighbor Density Probability
Models in Irregular Wireless Sensor Networks.** 207
Hyuk Park, Donggyo Hwang, Junho Park,
Dong-ook Seong and Jaesoo Yoo

**A Certificate Enhanced Group Key Framework for Vehicular
Ad Hoc Networks** 215
Ching-Hung Yeh, Meng-Yen Hsieh and Kuan-Ching Li

**Migration of Application Data to REST-Based
Online Storage Service** 223
Tetsuya Hirai, Masanori Hiroto, Masami Mohri
and Yoshiaki Shiraishi

**Development of Knocking Identification and Engine Balance
Correction Algorithms for CRDI Engine Electronic Control Unit** 233
Hwa-seon Kim, Seong-jin Jang and Jong-wook Jang

**A Lightweight Remote User Interface and Content Sharing
System for Smart Consumer Devices** 243
Yuseok Bae and Jongyoul Park

Reusable Context-Aware Software 251
Ichiro Satoh

Byte-Addressable Persistent RAM APIs for Flexible Memory Management and Protection 261
Hidayat Febiansyah and Jin Baek Kwon

Design and Implementation of Ubiquitous ECG Monitoring System by Using Android Tablet 269
Jiunn Huei Yap and Do Un Jeong

An Approach to Creating an Ontology and Rule Set for Situation Aware Software in Mobile Environments 279
Joonseok Park, Soohye Shin and Keunhyuk Yeom

Fast Coding Algorithm for High Efficient Video Coding (HEVC) 289
Jong-Hyeok Lee, Chang-Ki Kim, Jeong-Bae Lee and Byung-Gyu Kim

Tour Schedule Generation Integrating Restaurant Options for Electric Vehicles 299
Junghoon Lee, Hye-Hin Kim, Gyung-Leen Park, Byung-Jun Lee, Seulbi Lee and Dae-Yong Im

Modified Intensive Prototype Model for Better User Experience and Usability Improvements in Software and Web Application Design and Development 307
Sami Abduljalil Abdulhak, Gi-Hyun Hwang and Dae-Ki Kang

An Equidistant Message Power Attack Using Restricted Number of Traces on Reduction Algorithm 315
Jong-Yeon Park, Dong-Guk Han, Okyeon Yi and JeongNyeo Kim

An Efficient Continuous Reverse Skyline Query Processing Method Over Moving Objects 323
Jongtae Lim, Yonghun Park, Kyoungsoo Bok and Jaesoo Yoo

Mobile P2P Social Network Using Location and Profile 333
He Li, Kyoungsoo Bok and Jaesoo Yoo

Development of a 3D Digital Textbook Using X3D 341
Jeong-Hun Hong, Mihye Kim and Kwan-Hee Yoo

Clustering Method Using Item Preference Based on RFM for Recommendation System in U-Commerce 353
Young Sung Cho, Song Chul Moon, Seon-phil Jeong, In-Bae Oh and Keun Ho Ryu

Integrative In-Home Display Development for Smart Places 363
Junghoon Lee, Gyung-Leen Park and Jikwang Han

Adaptive Packet Coalescing Mechanism in Energy Efficient Ethernet 371
Sung-Keun Lee, Yong-Jae Jang and Kyoung-Wook Park

An Integration Framework of Cloud Computing with Wireless Sensor Networks 381
Pengfei You, Huiba Li, Yuxing Peng and Ziyang Li

Dynamic Distributed PMIPv6 for Distributed Mobility Management 389
Seong-Mun Kim, Hyon-Young Choi, Sung-Gi Min and Youn-Hee Han

Cloud-Based Mobile Distance Learning System 399
Jang Ho Lee

A Practical Approach Implementing a Wearable Human Activity Detector for the Elderly Care 407
Chankyu Park, Jaehong Kim and Ho-jin Choi

Formal Verification of SyncML Protocol for Ubiquitous Data Coherence 415
Seungsu Chun, Seungryoung Lee and Donghoon Oh

Cloud Authentication Based on Anonymous One-Time Password 423
Ali A. Yassin, Hai Jin, Ayad Ibrahim, Weizhong Qiang and Deqing Zou

Efficient Scalable Video Coding (SVC) Scheme for Multiple Channel Connections 433
Chang-Ki Kim, Gwang-Soo Hong, Byung-Gyu Kim, Jeong-Bae Lee and Jeong-Ju Yoo

GIS-Based Analysis of Personal Accessibility Measures of Daily Travel 443
Chen Ni and Suxia Liu

Visual Analysis of Portable Computer Forensic Data 453
Keonwoo Kim and Sung Kyong Un

A Universal Software Platform for a Smart Grid Service Gateway 461
Hae-jun Lee and Dae-young Seo

Modeling the Collaborative User Groups and Their Effectiveness for the Contents Recommender	471
Saim Shin, Sung-Joo Park, Da-Hee Kim, Se-Jin Jang and Soek-Pil Lee	
Analysis of Transmission Rate Using Zigbee Routing Protocol for u-Health	479
Jung Min Woo and Jeonghun Cho	
MHB-Tree: A Distributed Spatial Index Method for Document Based NoSQL Database System	489
Yan Li, GyoungBae Kim, LongRi Wen and HaeYoung Bae	
Betweenness of Expanded Ego Networks in Sociality-Aware Delay Tolerant Networks.	499
Yong-hwan Kim, Chan-Myung Kim, Youn-Hee Han, Young-Sik Jeong and Doo-Soon Park	
Extending Grid Infrastructure Using Cloud Computing	507
N. Mohan Krishna Varma and Eunmi Choi	
Experimental Development and Evaluation of IEEE 802.21 MIH for Enterprise WiMAX/WLAN Environments	517
Gyusun Yi, Eunchong Na and Sungwon Lee	
Performance Evaluation for Efficient Complex Event Processing System According to Event Types and Environment.	529
Duckwon Chung, Mino Ku, Yunjung Park and Dugki Min	
Improved CloudSim for Simulating QoS-Based Cloud Services.	537
Jun-Kwon Jung, Nam-Uk Kim, Sung-Min Jung and Tai-Myoung Chung	
An Improved Divisibility Test Algorithm for Primality Testing.	547
Arjun Kumar, TaeYong Kim and HoonJae Lee	
IRDT-GEDIR: Next-Hop Selection in Intermittent Wireless Multihop Sensor Networks	555
Takanori Takehira and Hiroaki Higaki	
XML-RPC Driven UCR Broker.	565
Rustam Rakhimov Igorevich, Eldor Primov Ismoilovich and Dugki Min	
A Study on Network Latency in the Concentric Clustering Scheme. . .	573
Sung-Min Jung, Tae-Kyung Kim and Tai-Myoung Chung	

Social Cooperative Networking Framework Based on UCR Broker. . . 581
 Eldor Primov Ismoilovich, Rustam Rakhimov Igorevich and Dugki Min

Ontology Usability Assessment Model for Context Information Process 589
 Sukyoung Kim, Eungha Kim and Youngil Choi

Wearable P2P Communication System Organization on Digital Yarn. 601
 Tae-Gyu Lee and Gi-Soo Chung

An Energy Optimized Unequal Clustering Routing Protocol in Wireless Sensor Networks 611
 Nurhayati Nurhayati, Gan Bayar and KyoungOh Lee

Augmented Reality Based Bridge Information System Using Smartphone. 621
 Sung-Han Bae, Gi-Yeol Lee and HwaMin Lee

Ant-Based Routing Protocol for Energy Efficient Use in Mobile Ad Hoc Networks 629
 Jipeng Zhou, Jianzhu Lu and Jin Li

A Study on the Framework of the Security-Based E-commerce Applications 639
 Jianhong Li

Fast and Secure Handover into Visited WLAN Networks. 649
 Imen El Bouabidi, Faouzi Zarai, Mohammad S. Obaidat and Lotfi Kamoun

Congestion Control for CognitiveMulti-Channel Wireless Mesh Networks 659
 Wonyong Yoon and Wooseong Kim

Exploiting Virtual Channel Flash Management Issue for Cost-Efficient NAND Usage in Mobile Devices 669
 Seung-Ho Lim, Min Choi and Young-Sik Jeong

Event-Aware Topology Management in Wireless Sensor Networks . . . 679
 Sankar Narayan Das, Sudip Misra and Mohammad S. Obaidat

Implementation of Disaster Broadcasting System for Efficient Situation Management Using Mobile Devices 689
 Geum Young Min, Hyoung Seop Shim and Duke Hoon Jeong

Golf Ball Bouncing Model Based on Real Images 699
 Seongmin Baek and Myunggyu Kim

Study on Low-Power Transmission Protocols for ZigBee Wireless Network-Based Remote Biosignal Monitoring Systems 709
 Young-Hyuk Kim, Il-Kown Lim, Jae-Pil Lee, Jae-Gwang Lee and Jae-Kwang Lee

Security Enhancements of a Mutual Authentication Scheme Using Smart Cards 717
 Younghwa An and Youngdo Joo

Research on Meteorology Indices Forecasting Framework based on Hybrid Cloud Computing Platforms 727
 Jia Fu, Junchao Wang, Lu Jing, Chen Zhenghong and Mingqiong He

Qualitative Analysis of Skull Stripping Accuracy for MRI Brain Images. 737
 Shafaf Ibrahim, Noor Elaiza Abdul Khalid, Mazani Manaf and Mohd Ezane Aziz

A Community Detection Scheme in Delay-Tolerant Networks. 745
 Chan-Myung Kim, In-Seok Kang, Youn-Hee Han and Chan Yeol Park

Modified Reflective Petri Net for Performance Evaluation of Policy-Driven ASBS. 753
 Liang Ge, Bin Zhang, Changsheng Zhang and Fei Li

Roadside Traffic Sensor Based Location-Aware Service for Road-Users 763
 Jeong Ah Jang and Dong Yong Kwak

Entropy-Based Grouping Techniques for Resource Management in Mobile Cloud Computing 773
 Ji Su Park and EunYoung Lee

A Deadlock Detection Algorithm Using Gossip in Cloud Computing Environments 781
 JongBeom Lim, TaeWeon Suh and HeonChang Yu

Detecting Return Oriented Programming by Examining Positions of Saved Return Addresses 791
 Jae-Won Min, Sung-Min Jung and Tai-Myoung Chung

Evaluation of DRAM Power Consumption in Server Platforms. 799
 Chanho Choi, Shin-gyu Kim, Hyeonsang Eom and Heon Y. Yeom

Toggle Keyboard: Design and Implementation of a New Keyboard Application Based on Android 807
 Tae-Kyu Yeom, Ji Soo Park, Il-Ho Park and Jong Hyuk Park

Efficient Mobile Device Management Scheme Using Security Events from Wireless Intrusion Prevention System. 815
 Hyeokchan Kwon and Sin-Hyo Kim

Extending Context Management for Proactive Adaptation in Pervasive Environments 823
 Sebastian VanSyckel, Gregor Schiele and Christian Becker

Implementation of 3D Deformable Objects on Smart Devices Using FFD-AABB Algorithm 833
 Min Hong, Jae-Hong Jeon, Dong-Ik Oh and Min-Hyung Choi

Social Activity-Based Content Metadata Modeling 841
 KyungRog Kim, YongSub Lee and Nammee Moon

Development of Smart Phone Apps as Active Learning Tools for U-Learning and its Learning Process for Middle School Students 851
 Chan Jung Park, Jae Hee Kang, Myung Jin Kim, Ye Rim Yu, Hyo Sang Kim and Jung Suk Hyun

User Interface Design Model for Supporting Multi Interaction Content Creation. 861
 Jung-Min Oh, Ginam Ko, Kyong-Ah Kim and Nammee Moon

An Adaptive Unchoking Algorithm for Efficient Mobile P2P Streaming in Wireless LAN 869
 Hun-Hoi Choi and Geun-Hyung Kim

WS-Direct: Web Service—Discoverability, Recoverability, Classifiability and Trustworthiness. 879
 Aziz Nasridinov and Jeongyong Byun

**Task Replication and Scheduling Based on Nearest Neighbor
Classification in Desktop Grids 889**
Joon-Min Gil, SungSuk Kim and JongHyuk Lee

**Information Technology Strategy Incorporating Dynamic
Pricing in the Business Model of the Future 897**
David S. Kung, Frank Lin and Harold Dyck

A Motion and Haptic System for Immersive Games 905
Sang-Youn Kim, Dong-Soo Choi and Kyeong-Jin Jeon



<http://www.springer.com/978-94-007-5856-8>

Ubiquitous Information Technologies and Applications
CUTE 2012

Han, Y.-H.; Park, D.-S.; Jia, W.; Yeo, S.-S. (Eds.)

2013, XIV, 914 p. 404 illus., Hardcover

ISBN: 978-94-007-5856-8