Session 1: Communications Network and Protocols I

Experimental Evaluation of Congestion Avoidance ................................................................. 1

   David Murray and Kevin Ong

On the Benefits of Using Multipath TCP and Openflow in Shared Bottlenecks .................................................. 9

   Marcus Sandri, Alan Silva, Lucio A. Rocha, and Fabio L. Verdi

Base Station Selection in M2M Communication Using Q-Learning Algorithm in LTE-A Networks ................................................................. 17

   A.H. Mohammed, A.S. Khwaja, A. Anpalagan, and I. Woungang

Evaluation of AggSessAC Admission Control Solution to Improve Network Revenue ........................................... 23

   Andris Skrastiņš and Gunārs Lauks
Session 2: Ad Hoc and Mesh Networks I

E-MAnt Net: An ACO-Based Energy Efficient Routing Protocol for Mobile Ad Hoc Networks ................................................................. 29

Sswoyjanya Harishankar, Isaac Woungang, Sanjay Kumar Dhurandher, Issa Traore, and Shakira Banu Kaleel

Implementation and Experimental Results of a WMN Testbed in Indoor Environment Considering LoS Scenario ......................................................... 37

Tetsuya Oda, Admir Barolli, Shinji Sakamoto, Leonard Barolli, Makoto Ikeda, and Kazunori Uchida

Application of WMN-SA Simulation System for WMN Node Placement in a Realistic Scenario ........................................................................ 43

Shinji Sakamoto, Tetsuya Oda, Leonard Barolli, Makoto Ikeda, Fatos Xhafa, and Kazunori Uchida

Energy-Efficient Cooperative MAC Protocol Based on Power Control in MANETs ............................................................... 48

Xiaoying Zhang, Alagan Anpalagan, Lei Guo, and Ahmed Shaharyar Khwaja

Continuous Neighbor Discovery Protocol in Wireless Ad Hoc Networks with Sectored-Antennas ......................................................................... 54

Zeeshan Hameed Mir, Woo-Sung Jung, and Young-Bae Ko

Session 3: Wireless Sensor Networks I

Efficient Coverage of Agricultural Field with Mobile Sensors by Predicting Solar Power Generation ................................................................. 62

Masaru Eto, Ryo Katsuma, Morihiko Tamai, and Keiichi Yasumoto

A Novel Outlier Detection Model Based on One Class Principal Component Classifier in Wireless Sensor Networks .................................................. 70

Oussama Ghorbel, Mohamed Abid, and Hichem Snoussi

AAEERP: Advanced AUV-Aided Energy Efficient Routing Protocol for Underwater WSNs ................................................................. 77

Naveed Ilyas, Nadeem Javaid, Zafar Iqbal, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, and Muhammad Shoaih

An Efficient Distributed TDMA MAC Protocol for Large-Scale and High-Data-Rate Wireless Sensor Networks .................................................. 84

Kouhei Moriyama and Yongbing Zhang

DYN-NbC: A New Routing Scheme to Maximize Lifetime and Throughput of WSNs ................................................................. 92

Ayeshaa Hussain Khan, Nadeem Javaid, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, and Noman Haider
Session 4: Distributed and Parallel Systems I

Performance Analysis of Traffic Bottleneck Induced by Concentration at K-Ary N-Cube NoC Routers .............................................................. 98

Samia Loucif

A Simple Predicate to Expedite the Termination of a Randomized Consensus Algorithm ................................................................. 106

Michel Raynal

A Server Selection Method for Web-Based Multiserver Systems ................................................................. 112

Masaki Kohana and Shusuke Okamoto

A Thread Merging Transformation to Improve Throughput of Multiple Programs .................................................. 118

Yuanfang Chen and Xiaoming Li

Processing Group Reverse kNN in Spatial Databases ........................................................................................................... 126

Anasthasia Agnes Haryanto, David Taniar, and Kiki Maulana Adhinugraha

Efficient Processing of Queries over Recursive XML Data .............................................................................................. 134

Norah Saleh Alghamdi, Wenny Rahayu, and Eric Pardede

Session 5: Communications Network and Protocols II

An Efficient and Provable Secret Shared Key Computation for Cryptographic Protocol Across Insecure Channel ........................................... 143

Ndibanje Bruce, Hyunho Kim, Suhyun Park, and Hoonjae Lee

A Scalable Inter-AS QoS Routing Architecture in Software Defined Network (SDN) .................................................. 148

Murat Karakus and Arjan Durresi

A Flexible Read-Write Abortion Protocol to Prevent Illegal Information Flow .................................................. 155

Shigenari Nakamura, Dilewaer Duolikun, Tomoya Enokido, and Makoto Takizawa

Evaluation of Human Activity Recognition and Fall Detection Using Android Phone ........................................... 163


Heterogeneous Network Handover Using 3GPP ANDSF .............................................................................................. 171

Chin-Yu Liu, Fang-Yie Leu, Jung-Chun Liu, Aniello Castiglione, and Francesco Palmieri

Session 6: Ad Hoc and Mesh Networks II

A Protocol for End-to-End Key Establishment During Route Discovery in MANETs .................................................. 176

Shrikant H. Talawar and R.C. Hansdah

Probabilistic Key Pre-Distribution for Heterogeneous Mobile Ad Hoc Networks Using Subjective Logic ...................................... 185

Mahdieh Ahmadi, Mohammed Gharib, Fatemeh Ghassemi, and Ali Movaghur

Optimizing Cached Route Time-to-Live in Mobile Ad-Hoc Networks .................................................................................... 193

Quang-My Tran and Arek Dadej
Transmitting Scalable Video Streaming over Wireless Ad Hoc Networks ................................................................. 201
Walayat Hussain, Farookh Khadeer Hussain, and Omar Khadeer Hussain

Performance Analysis of WMN-GA Simulation System for Different WMN Architectures Considering OLSR .............................................................................................................................................. 207
Admir Barolli, Tetsuya Oda, Leonard Barolli, Fatos Xhafa, Vincenzo Loia, and Kazunori Uchida

Optimization of Giant Component and Number of Covered Users in Wireless Mesh Networks: A Comparison Study .......................................................................................................................................................... 215
Vladi Kolici, Leonard Barolli, Shinji Sakamoto, Tetsuya Oda, Fatos Xhafa, and Kazunori Uchida

Session 7: Wireless Sensor Networks II

Energy-Efficient QoS Routing in Wireless Multimedia Sensor Networks ................................................................. 223
Ziad Serhan and Wafaa Bou Diab

Improving the Energy Efficiency of a Clock Synchronization Protocol for WSNs Using a TDMA-Based MAC Protocol ............................................................................................................................................ 231
Siddharth Watwe and R.C. Hansdah

Achieving Data Survivability and Confidentiality in Unattended Wireless Sensor Networks ......................................................... 239
Arpan Sen, Shrestha Ghosh, Arinjoy Basak, Harsh Parsuram Puria, and Sushmita Ruj

Energy Efficient Extended Coverage in Wireless Sensor Networks .................................................................................. 247
Nachiketa Tarasia, Manas Ranjan Lenka, and Amulya Ratna Swain

Parallel Processing Simulator for Separate Sensor of WSN Simulator with GPU ................................................................. 255
Hyun-Woo Kim, Eun-Ha Song, Jong Hyuk Park, and Young-Sik Jeong

Session 8: Distributed and Parallel Systems II

Processing and Analytics of Big Data Streams with Yahoo!S4 .............................................................................................. 263
Fatos Xhafa, Victor Naranjo, and Santi Caballé

Asynchronous Migration of Process Replicas in a Cluster ................................................................................................. 271
Dilawaer Duolikun, Tomoya Enokido, Hui-Huang Hsu, and Makoto Takizawa

Energy-Efficient Delay Time-Based Process Allocation Algorithm for Heterogeneous Server Clusters ................................................................. 279
Tomoya Enokido and Makoto Takizawa

TeleBuilder: A 3DCG Builder System for Multiplayers via Network .................................................................................. 287
Ningping Sun, Masataka Murakami, Youhei Yamashita, and Tomonori Yagi

Anomaly Detection of Solar Power Generation Systems Based on the Normalization of the Amount of Generated Electricity ............................................................................................................................................. 294
Yohei Akiyama, Yuji Kasai, Masaya Iwata, Eiichi Takahashi, Fumiaki Sato, and Masahiro Murakawa
Session 9: Pervasive and Ubiquitous Computing I
Location Search Based on Subarea Fingerprinting and Surface Fitting for Indoor Positioning System .................................................................................................................. 302
Bang Wang and Shengliang Zhou
User-Centric Contexts Sensing for Instant Information Seeking Support ................................................................................................................. 310
Neil Y. Yen and Jason C. Hung
A New Unreliable Failure Detector for Self-Healing in Ubiquitous Environments ................................................................. 316
Anubis Graciela de Moraes Rossetto, Carlos O. Rolim, Valderi Leithardt,
Guilherme A. Borges, Cláudio F.R. Geyer, Luciana Arantes, and Pierre Sens
Improving Energy Saving Techniques by Ambient Intelligence Scheduling ................................................................. 324
Matteo Cristani, Erisa Karafili, and Claudio Tomazzoli
Privacy-Preserving Ubiquitous Social Mining via Modular and Compositional Virtual Sensors ........................................................................................................... 332
Evangelos Pournaras, Izabela Moise, and Dirk Helbing

Session 10: Security and Privacy I
Encrypted Gradient Descent Protocol for Outsourced Data Mining ................................................................................................. 339
Fang Liu, Wee Keong Ng, and Wei Zhang
A Proposal and Implementation of an ID Federation that Conceals a Web Service from an Authentication Server .................................................................................................................. 347
Yuto Iso and Takamichi Saito
O-Bin: Oblivious Binning for Encrypted Data over Cloud ................................................................................................................. 352
Mahmood Ahmad, Zeeshan Pervez, Byeong Ho Kang, and Sungyoung Lee
Traffic Flow Classification and Visualization for Network Forensic Analysis ................................................................................................. 358
Nuttachot Promrit and Anirach Mingkhwan
Efficient Authentication, Traitor Detection, and Privacy-Preserving for the Most Common Queries in Two-Tiered Wireless Sensor Networks ......................................................................................................... 365
Thach V. Bui, Thuc D. Nguyen, Noboru Sonehara, and Isao Echizen

Session 11: Wireless Sensor Networks III
AGA-MAC: Adaptive Geographic Anycast MAC Protocol for Wireless Sensor Networks ................................................................. 373
Tales Heimfarth, João Carlos Giacomini, and João Paulo de Araujo
A Distributed Approach to Construct Hierarchical Structure for Routing with Balanced Energy Consumption in WSNs ......................................................................................................... 382
Subhasis Dash, Satya Sundar Mallick, R.C. Hansdah, and Amulya Ratna Swain
A New Linear Cluster Handling (LCH) Technique Toward’s Energy Efficiency in Linear WSNs ................................................................. 389
M. Sajid, K. Khan, U. Qasim, Z.A. Khan, S. Tariq, and N. Javaid

(LEACH)2: Combining LEACH with Linearly Enhanced Approach for Cluster Handling in WSNs ................................................................. 394

Extensive Simulation Performance Evaluation of MSK Scheme with Error Correcting Codes in Wireless Sensor Networks ................................................. 400
Rajoua Anane, Ridha Bouallegue, and Kosai Raoof

Session 12: Internet Computing and Web Applications

Detection of Illegal Players in Massively Multiplayer Online Role Playing Game by Classification Algorithms ................................................................. 406
Zhongqqiang Zhang, Hiroaki Anada, Junpei Kawamoto, and Kouichi Sakurai

City-Level Geolocation Based on Routing Feature ................................................................. 414
Fan Zhao, Yuhan Song, Fenlin Liu, Ke Ke, Jingning Chen, and Xiangyang Luo

Framework of Marketing or Newsletter Sender Reputation System (FMNSRS) ................................................................. 420
Akkarach Kawbunjun, Ubon Thongsatapornwatana, and Woraphon Liliatsakun

Exploring Stock Market Using Twitter Trust Network ................................................................. 428
Yefeng Ruan, Lina Alfantoukh, and Arjan Durresi

A Framework for Secure Information Flow Analysis in Web Applications ................................................................. 434
Ralph Adaimy, Wassim El-Hajj, Ghassen Ben Brahim, Hazem Hajj, and Haidar Safa

A Network Topology Visualization System Based on Mobile AR Technology ................................................................. 442
Toshiyuki Haramaki and Hiroaki Nishino

Session 13: Pervasive and Ubiquitous Computing II

Implementation of the Smart Chair System for Multi-functional Unconstrained Healthcare Monitoring ................................................................. 448
Byeong-Ju Kim, Yun-Hong Noh, and Do-Un Jeong

SmartMind: Activity Tracking and Monitoring for Patients with Alzheimer’s Disease ................................................................. 453
Kam-Yiu Lam, Nelson Wai-Hung Tsang, Song Han, Joseph Kee-Yin Ng, Sze-Wei Tam, and Ajit Nath

On Data Fusion for Orientation Sensing in WBASNs Using Smart Phones ................................................................. 461
Danish Mahmood, Nadeem Javaid, Muhammad Imran, Zahoor Ali Khan, Umar Qasim, and Mohammed Alnuem

Detecting Driver Distraction Using Smartphones ................................................................. 468
Vamsi Paruchuri and Aravind Kumar
On the Protection of fMRI Images in Multi-domain Environments

Arcangelo Castiglione, Alfredo De Santis, Raffaele Pizzolante, Aniello Castiglione,
Vincenzo Loia, and Francesco Palmieri

Session 14: Security and Privacy II

An Endorsement-Based Mobile Payment System for a Disaster Area

Babatunde Ojetunde, Naoki Shibata, Juntao Gao, and Minoru Ito

A Data Visualization Approach for Trustworthiness in Social Networks for On-line Learning

Jorge Miguel, Santi Caballé, Fatos Xhafa, and Vaclav Snasel

On Modeling Protocol-Based Clustering Tag in RFID Systems with Formal Security Analysis

Ndibanje Bruce, Hyunho Kim, Youngjin Kang, Youngsil Lee, and Hoonjae Lee

Correlation Power Analysis Attack on the Ping Pong-128 Key Stream Generator

Young-Jin Kang, Hyun Ho Kim, Ndibanje Bruce, Younggoo Park, and Hoonjae Lee

Scalability of Privacy-Preserving Linear Regression in Epidemiological Studies

Hiroaki Kikuchi, Hideki Hashimoto, Hideo Yasunaga, and Takamichi Saito

Session 15: P2P Systems

P2P-Based Service Distribution over Distributed Resources

Sujoy Mistry, Dibyanshu Jaiswaly, Arijit Mukherjee, and Nandini Mukherjee

A Reliable System for JXTA-Overlay P2P Platform Considering Number of Authentic Files, Security and QoS Parameters

Yi Liu, Donald Elmazi, Shinji Sakamoto, Leonard Barolli, Fatos Xhafa, and Kazunori Uchida

Content Access Control Scheme for P2P Networks Using a Reputation Value

Kentaro Aburada, Yoshihiro Kita, Mirang Park, and Naonobu Okazaki

Causally Ordered Delivery of Event Messages with Keyword Vectors in P2P Publish/Subscribe Systems

Hiroki Nakayama, Dilawaer Duolikun, Tomoya Enokido, and Makoto Takizawa

Accurate Data Aggregation on Unstable Structured P2P Network

Atsushi Takeda, Takuma Oide, Akiko Takahashi, and Takuo Suganuma

Session 16: Security and Privacy III

Encrypted Association Rule Mining for Outsourced Data Mining

Fang Liu, Wee Keong Ng, and Wei Zhang

RTT-Based Random Walk Approach to Detect Stepping-Stone Intrusion

Jianhua Yang and Yongzhong Zhang
A New (n, 2n) Double Block Length Hash Function Based on Single Key Scheduling .................................564

Atsuko Miyaji and Mazumder Rashed

ConDroid: Targeted Dynamic Analysis of Android Applications .................................................................571

Julian Schütte, Rafael Fedler, and Dennis Titze

Apparecium: Revealing Data Flows in Android Applications ........................................................................579

Dennis Titze and Julian Schütte

Session 17: Agents and Intelligent Computing

Neuromodulating Cognitive Architecture: Towards Biomimetic Emotional AI ........................................587

Max Talanov, Jordi Vallverdú, Salvatore Distefano, Manuel Mazzara, and Radhakrishnan Delhibabu

Tabu Search Based Approach to Solve the TAs Reconfiguration Problem in LTE Networks ................................593

Haidar Safa and Nadine Ahmad

Neural Network-Based Estimation for OFDM Channels ..............................................................................600

Chia-Hsin Cheng, Yung-Fa Huang, Hsing-Chung Chen, and Tsung-Yu Yao

Strength-Constrained Weighted Evolution Model for Wireless Sensor Networks .......................................605

Nan Jiang, Tao Wan, Lingfeng Liu, and Jin Li

Session 18: Cloud, Data Centers and Services Computing I

Cooperative Resource Management in a IaaS ..................................................................................................611

Giang Son Tran, Alain Tchana, Daniel Hagimont, and Noel De Palma

A Network-Aware Optimization for VM Placement ......................................................................................619

L.A. Rocha and F.L. Verdi

Efficient Computation Offloading Strategies for Mobile Cloud Computing ...............................................626

Yaling Tao, Yongbing Zhang, and Yusheng Ji

On Supporting Service Selection for Collaborative Multi-cloud Ecosystems in Community Networks ........634

Amin M. Khan, Felix Freitag, Smrati Gupta, Victor Muntès-Mulero, Jacek Dominiak, and Peter Matthews

TROBADOR: Service Discovery for Distributed Community Network Micro-Clouds ..................................642

Mennan Selimi, Felix Freitag, Roger Pueyo Centelles, Agustí Moll, and Luis Veiga

FIrM: Functional Middleware with Support to Multi-tenancy .................................................................650

André Silva and Nelson Rosa
Session 19: Scalable Computing and IoT

Free Split: A Write-Ahead Protocol to Improve Latency in Distributed Prefix Tree Indexing Structures ..............................................................658
   Rudyar Cortés, Xavier Bonnaire, Olivier Marin, and Pierre Sens

A Survey of Home Energy Management for Residential Customers .................................................................666
   Ihsan Ullah, Nadeem Javaid, Mohammad Imran, Zahoor Ali Khan, Umar Qasim,
   Mohammed Alnuem, and Mudassar Bashir

A Rule Processing Scheme Using the Rete Algorithm in Grid Topology Networks ..............................................674
   Tomoya Kawakami, Tomoki Yoshihisa, Yutaka Yanagisawa, and Masahiko Tsukamoto

Consumers’ Sentiment Analysis of Popular Phone Brands and Operating System Preference Using Twitter Data: A Feasibility Study .........................................................680
   Deepali Arora, Kin Fun Li, and Stephen W. Neville

Fog Computing Micro Datacenter Based Dynamic Resource Estimation and Pricing Model for IoT .............................................................687
   Mohammad Aazam and Eui-Nam Huh

Preparing and Inter-Connecting Hyper-Converged SmartX Boxes for IoT-Cloud Testbed .................................................................695
   Sun Park, Byungrae Cha, and Jongwon Kim

Session 20: Security and Privacy IV

Cryptographic Operation Load-Balancing between Cryptographic Module and CPU ..............................................698
   Yohei Kaneko, Takamichi Saito, and Hiroaki Kikuchi

An Approach to Detect Remote Access Trojan in the Early Stage of Communication ....................................706
   Dan Jiang and Kazumasa Omote

Privacy Preserving Data Processing ........................................................................................................714
   Hiroshi Yamaguchi, Masahito Gotaishi, Phillip C-Y Sheu, and Shigeo Tsujii

Study of Filter Sharing Method Using Virtual Peers in P2P Networks ...........................................................720
   Masahiro Sakuma, Yoshihiro Kita, Kentaro Aburada, Mirang Park, and Naonobu Okazaki

Per Connection Server-Side Identification of Connections via Tor ..................................................................727
   Andrew Springall, Christopher DeVito, Shou-Hsuan, and Stephen Huang

Session 21: Vehicular and Cognitive Radio Networks

A Testbed Using USRP(TM) and LabView(R) for Dynamic Spectrum Access in Cognitive Radio Networks ..........................................................735
   Nimish Sharma, Danda B. Rawat, Bhed B. Bista, and Sachin Shetty

Performance Evaluation of Software Defined and Cognitive Wireless Network Based Disaster Resilient System ........................................................741
   Goshi Sato, Noriki Uchida, and Yoshitaka Shibata
Cluster Based Semantic Data Aggregation in VANETs .......................................................... 747
   Aboobeker Sidhik Koyamparambil Mammu, Josef Jiru, and Unai Hernandez Jayo

A Message Suppression Controller for Vehicular Delay Tolerant Networking ........................................... 754
   Taiki Honda, Makoto Ikeda, Seiichiro Ishikawa, and Leonard Barolli

**Session 22: Cloud, Data Centers, and Services Computing II**

Towards Resource-Aware Business Process Development in the Cloud .......................................................... 761
   Emna Hachicha and Walid Gaaloul

Establishment of Virtual Policy Based Network Management Scheme by Load
   Experiments in Virtual Environment ............................................................................................................. 769
   Kazuya Odagiri, Shogo Shimizu, Naohiro Ishii, and Makoto Takizawa

A Framework of Mobile Cloudlet Centers Based on the Use of Mobile Devices
   as Cloudlets ....................................................................................................................................................... 777
   Abdalla Artail, Karim Frenn, Haidar Safa, and Hassan Artail

Design and Implementation of the Hadoop-Based Crawler for SaaS Service Discovery .............................. 785
   Asma Alkalbani, Akshatha Shenoy, Farookh Khadeer Hussain, Omar Khadeer Hussain,
   and Yanping Xiang

Secured mVoIP Service over Cloud and Container-Based Improvement ..................................................... 791
   Byungrae Cha, Sun Park, Sujeong Shim, and Jongwon Kim

**Session 23: Security and Privacy V**

Introduction and Analysis of SDN and NFV Security Architecture (SN-SECA) .............................................. 796
   Danilo V. Bernardo and Bee Bee Chua

Enhancing RPL Resilience Against Routing Layer Insider Attacks ............................................................. 802
   Karel Heurtefeux, Ochirkhand Erdene-Ochir, Nasreen Mohsin, and Hamid Menouar

Secure Outsourcing of Multiple Modular Exponentiations ............................................................................. 808
   Jinyang Li and Jun Ye

Novel Approaches to Protecting Block Ciphers by Distributing Round Keys ................................................. 812
   Taeyoung Jung, Jaein Kim, Junyoung Park, and Kangbin Yim

Fuzzing CAN Packets into Automobiles ........................................................................................................... 817
   Hyeryun Lee, Kyunghee Choi, Kihyun Chung, Jaein Kim, and Kangbin Yim

**Session 24: Mobile Networks**

Message Relay Decision Algorithm to Improve Message Delivery Ratio
in DTN-Based Wireless Disaster Information Systems ......................................................................................... 822
   Miho Kawamoto and Tetsuya Shigeyasu

Adaptive Cell Range Expansion for Energy Cost Saving in Heterogeneous Cellular
   Networks with Hybrid Energy Supplies ........................................................................................................... 829
   Qiao Kong and Bang Wang
DCLA: Distributed Chunk Loss Avoidance Method for Cooperative Mobile Live Streaming ................................................................................................................................................................................................. 837
Kenta Mori, Sho Hatakeyama, and Hiroshi Shigeno

Upgrading 802.11 deployments: A Critical Examination of Performance ........................................................................................................................................................................................................ 844
Mamun Abu-Tair and Saleem N. Bhatti

MACoD: Mobile Device-Centric Approach for Identifying Access Point Congestion ........................................................................................................................................................................................................ 852
Woonghee Lee, Mungyu Bae, Hyunsoon Kim, Suk Kyu Lee, and Hwangnam Kim

Stateless Adaptive Reliable Broadcast Protocol for Heterogeneous Wireless Networks ...................................................................................................................................... 860
Vamsi Paruchuri and Arjan Durresi

Session 25: Multimedia Systems and Applications

A Triage Training System with Dynamic Scenario Change ........................................................................................................................................................................................................ 868
Misaki Hagino, Yuki Tayama, and Ken-Ichi Okada

An Adaptive Video Quality Control Method in Wireless Network Environment ........................................................................................................................................................................................................ 876
Motoo Ino, Koji Hashimoto, and Yoshitaka Shibata

Travel Agency Desk Support System Using Interest Degree ........................................................................................................................................................................................................ 882
Yusaku Maki, Satoshi Gondo, Tomoo Inoue, and Ken-Ichi Okada

MR Manual and Authoring Tool with Afterimages ........................................................................................................................................................................................................ 890
Hiroyuki Endo, Shinnosuke Furuya, and Ken-Ichi Okada

Item Similarity Learning Methods for Collaborative Filtering Recommender Systems ........................................................................................................................................................................................................ 896
Feng Xie, Zhen Chen, Jiaxing Shang, Wenliang Huang, and Jun Li

Implementation of an Eye Gaze Tracking System for the Disabled People ........................................................................................................................................................................................................ 904
Junghoon Park, Taeyoung Jung, and Kangbin Yim

Author Index ........................................................................................................................................................................................................ 909