W-PSDS 2014 Workshop Organization....................................................................................................viii
WSSR 2014 Workshop Organization.........................................................................................................ix
FTSIS 2014 Workshop Organization..........................................................................................................x

W-PSDS 2014: Workshop on Planetary-Scale Distributed Systems

The 2nd Workshop on Planetary-Scale Distributed Systems (W-PSDS 2014) ............................................1
   João Carlos Antunes Leitão and Ricardo Manuel Pereira Vilaça

Declared Causality in Wide-Area Replicated Storage ..................................................................................2
   Kyle Lady, Minkyong Kim, and Brian Noble

The Case for Fast and Invariant-Preserving Geo-Replication .....................................................................8
   Valter Balegas, Sérgio Duarte, Carla Ferreira, Rodrigo Rodrigues,
   Nuno Preguiça, Marc Shapiro, and Mahsa Najafzadeh

Mitigating the Spread of a Virus in the Internet ...........................................................................................14
   Thanh Dang Nguyen, François Bonnet, and Xavier Défago

Latency Amplification: Characterizing the Impact of Web Page Content on Load Times ............................................20
   Cătălin-Alexandru Avram, Kenneth Salem, and Bernard Wong

Geo-Replicated Storage with Scalable Deferred Update Replication .........................................................26
   Daniele Sciascia and Fernando Pedone

SwiftCloud: Fault-Tolerant Geo-Replication Integrated all the Way to the Client Machine ..........................30
   Nuno Preguiça, Marek Zawirski, Annette Bieniusa, Sérgio Duarte,
   Valter Balegas, Carlos Baquero, and Marc Shapiro
Workshop on Self-Organization in Swarm of Robots: From Molecular Robots to Mobile Agents

Coverage Control Inspired by Bacterial Chemotaxis .................................................................34

Shinsaku Izumi, Shun-ichi Azuma, and Toshiharu Sugie

Locomotion of Metamorphic Robotic System Based on Local Information
(Extended Abstract) ..................................................................................................................40

Fengqi Chen, Yukiko Yamauchi, Shuji Kijima, and Masafumi Yamashita

Asynchronous Ring Gathering by Oblivious Robots with Limited Vision ..............................46

Sayaka Kamei, Anissa Lamani, and Fukuhito Ooshita

Discovering and Assessing Fine-Grained Metrics in Robot Networks Protocols ..................50

François Bonnet, Xavier Défago, Franck Petit, Maria Potop-Butucaru, and Sebastien Tixeuil

On the Worst-Case Initial Configuration for Conservative Connectivity
Preservation ............................................................................................................................60

Daichi Kaino and Taisuke Izumi

FTSIS 2014: First International Workshop on Future Technologies for Smart Information Systems

A Preference Extraction Method Using Installed Applications and Their Descriptions .............64

Seiya Mizuno, Jun Osawa, Takahiro Hara, and Shojiro Nishio

Location-Based Microblog Viewing System Synchronized with Web Pages .........................70

Yuanyuan Wang, Gouki Yasui, Yuji Hosokawa, Yukiko Kawai, Toyokazu Akiyama, and Kazutoshi Sumiya

A k-Anonymization Algorithm on Social Network Data that Reduces Distances between Nodes ...........................................................................................................................76

Rina Okada, Chiemi Watanabe, and Hiroyuki Kitagawa

Improvement of Pk-Anonymization ......................................................................................82

Miho Kakizawa, Chiemi Watanabe, Ryo Furukawa, and Tsubasa Takahashi

SeRAVi: A Spatio-Temporal Data Distribution Visualization System for Mobile Sensor Data Retrieval ..................................................................................................................88

Haruka Sazaki, Akimitsu Kanzaki, Takahiro Hara, and Shojiro Nishio

Service-Controlled Networking: Dynamic In-Network Data Fusion for Heterogeneous Sensor Networks ..................................................................................................................94

Mianxiong Dong, Takashi Kimata, and Koji Zettsu

An Efficient Indexing Method for Mobile Sensor Data Collection on Integrated Sensor Networks ...................................................................................................................100

Ryo Kawasumi, Tomoki Yoshihisa, Takahiro Hara, and Shojiro Nishio
Real-Time-Aware Embedded DSMS Applicable to Advanced Driver Assistance Systems ................................................................. 106
  Satoshi Katsunuma, Shinya Honda, Kenya Sato, Yousuke Watanabe,
  Yukikazu Nakamoto, and Hiroaki Takada

Adaptive Erasure Correction Coding for Energy Efficient Dependable Storage Systems ................................................................................................................................. 112
  Kousuke Ota, Viet Ta Hong, and Haruhiko Kaneko

Energy Efficient Storage Management Cooperated with Data Intensive Applications in Virtual Machines ................................................................. 119
  Shunsuke Yagai and Saneyasu Yamaguchi

Optimizing Concurrent Query Execution on Modern Multisocket Multicore Platform ......................................................................................................................... 125
  Fang Xi, Takeshi Mishima, and Haruo Yokota

kNN Search Utilizing Index of the Minimum Road Travel Time in Time-Dependent Road Networks ........................................................................... 131
  Yuka Komai, Duong Hong Nguyen, Takahiro Hara, and Shojiro Nishio

An Approach to Dynamically Adapting Distributed System Architecture ................................................................................................. 138
  Jingtao Sun and Ichiro Satoh

Author Index ......................................................................................................................................................................................... 144