



東亞研究型大學協會
東アジア研究型大学協会
동아시아연구중심대학협의회
The Association of East Asian Research Universities



京都大学
KYOTO UNIVERSITY

ACTIVITY REPORT

The 9th AEARU Web Technology and Computer Science Workshop – Cloud Computing and the Search for Knowledge –

January 17 (Mon) – 18 (Tue), 2011
Clock Tower Centennial Hall, Kyoto University, Japan

Organized by Kyoto University

Co-organized by the Global COE Program on Informatics Education and
Research Center for a Knowledge-Circulating Society
Sponsored by the Kyoto University Foundation

Overview

The 9th AEARU Web Technology and Computer Science Workshop was held at Kyoto University, on January 17–18, 2011. The two-day event was divided into four sessions, each of which focused on a different aspect of the central theme of cloud computing in the East Asian region. The sessions featured key-note speeches and presentations by thirty-four researchers and students from six different countries and regions. Session participants included researchers and interested parties from many different higher education institutions, as well as from the private sector. The first day of the workshop also featured two concurrently held PhD roundtable sessions, in which young doctoral students enthusiastically gave presentations on their current research, and shared information and opinions on a wide range of related topics. The workshop attracted a total of 112 participants during the course of its two days.

The main topics of the workshop were as follows:

- 1) Web search and data mining
- 2) Web intelligence and social computing
- 3) Service computing, cloud computing and computing science
- 4) Multimedia technology on the Web
- 5) Use of Web technology and cloud computing for educational purposes

A related event, the 9th International Conference on Creating, Connecting and Collaborating through Computing (C5 2011), was held at the same venue on January 18–20. Many of the AEARU workshop participants took advantage of the opportunity to participate in both events

Organizing Committee

AEARU Workshop Organizing Committee Co-Chairs:

- Yoshimasa Nakamura
(Dean, Graduate School of Informatics, Kyoto University)
- Katsumi Tanaka
(Vice-Dean and GCOE Leader, Graduate School of Informatics, Kyoto University)

AEARU Workshop Program Committee:

- Masatoshi Yoshikawa
(Prof., Graduate School of Informatics, Kyoto University)
- Sadao Kurohashi
(Prof., Graduate School of Informatics, Kyoto University)
- Michihiko Minoh
(Prof., Academic Center for Computing and Media Studies, Kyoto University)
- Yoshinori Hara
(Prof., Graduate School of Management, Kyoto University)
- Masao Fukushima
(Prof., Graduate School of Informatics, Kyoto University)
- Hiroshi Nagamochi
(Prof., Graduate School of Informatics, Kyoto University)
- Hiroshi Nakashima
(Prof., Academic Center for Computing and Media Studies, Kyoto University)
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PROGRAM

January 17 (Monday)

	International Conference Hall I	International Conference Hall II
10:00–10:20	Opening President Hiroshi Matsumoto (Kyoto U.) Dean & Prof. Yoshimasa Nakamura (Kyoto U.)	
10:20–12:00	Cloud Computing <i>(chaired by Y. Nakamura)</i> A Social Network Analysis System Using Mass Data Mining Based on Cloud Computing <i>Chong-Jun Wang (Nanjing U.)</i> High-Performance as a Service; Cloudy Supercomputing in Kyoto <i>Hiroshi Nakashima (Kyoto U.)</i> Cache-as-a-Service: Efficient Data Processing by a Pluggable Cache <i>Heon Young Yeom (Seoul National U.)</i> Linggle: Using Cloud Computing to Analyze the Web for eLearning <i>Jason S. Chang (Tsing Hua U. - Hsinchu)</i>	
12:00–13:20	Lunch	
13:20–15:00	Social Computing <i>(chaired by K. Tanaka)</i> Evolution of Social Networks New Patterns and a New Generator <i>Ming Zhang (Peking U.)</i> Friendship Prediction in Social Network <i>Jie Tang (Tsinghua U. - Beijing)</i> An Object Deputy Approach for Web Community Management <i>Zhiyong Peng (Wuhan U.)</i> iGraph: A Framework for Comparisons of Disk-based Graph Indexing Techniques <i>Wook-Shin Han (Kyungpook National U.)</i>	
15:00–15:20	Coffee Break	
15:20–18:00	PhD RoundTable (1) <i>(chaired by H. Ohshima, Y. Yamamoto, T. Yamamoto)</i> Commonsense Knowledge Mining from the Web <i>Chi-Hsin Yu (Taiwan U.)</i> Enhancing Credibility Judgment of Web Search Results <i>Yusuke Yamamoto (Kyoto U.)</i> Processing SPARQL Queries with Regular Expressions in RDF Databases <i>Jinsoo Lee (Kyungpook National U.)</i> Joint refinement of related links and category links on social collaborative encyclopedias <i>Fan Bu (Tsinghua U. - Beijing)</i> Scene Object Level Image Content Generation and Editing <i>Ming-Ming Cheng (Tsinghua U. - Beijing)</i> User Sharing Behavior Prediction in Social Network <i>Peng Cui (Tsinghua U. - Beijing)</i> Using Community Q&A Corpus for Exploratory Web Searches <i>Takehiro Yamamoto (Kyoto U.)</i> Recommendation Algorithm Based on Graph-Model Considering User Background Information <i>Ziqi Wang (Peking U.)</i>	PhD RoundTable (2) <i>(chaired by Q. Ma, T. Konda, T. Minami)</i> Towards Efficient Subgraph Searching over Large-Scale Graph Databases under MapReduce Framework <i>Yifeng Luo (Fudan U.)</i> Web-scale Computer-Assisted Language Learning Systems Based on Cloud Computing Technology <i>MeiHua Chen (Tsing Hua U. - Hsinchu)</i> Cache-Aware Implementation of Three-Dimensional FDTD Kernel <i>Takeshi Minami (Kyoto U.)</i> A load balancing algorithm in Cloud Computing <i>Pan Lei (Nanjing U.)</i> A Three Layer System Architecture for Web-Based Unstructured Data Management <i>Rongrong Li (Wuhan U.)</i> Running MapReduce in Inter-cluster Environments <i>Shin-Gyu Kim (Seoul National U.)</i> Parallel computation algorithm DDC for Matrix Singular Value Decomposition and a cloud computing service <i>Taro Konda (Kyoto U.)</i> A snowdrift game solution to vertex cover of general networks <i>Yang Yang (Fudan U.)</i>
19:00–21:00	Reception Dinner at Ganko Takasegawa Nijoen	

January 18 (Tuesday)

International Conference Hall I	
10:00–12:00	<u>AEARU/CS Joint Keynote Session</u> The future of the Human/Computer Interface <i>Ken Perlin (New York U.)</i> Title to be Confirmed <i>Maosung Son (Tsinghua U. - Beijing)</i>
12:00–13:20	Lunch
13:20–15:00	<u>Web Search & Mining</u> (chaired by <i>Y. Hara</i>) NLP-based Deep Indexing for Natural Language Search <i>Sadao Kurohashi (Kyoto U.)</i> Topic and Sentiment Lexicons Extraction <i>Xiaoyang Zhu (Tsinghua U. - Beijing)</i> Social Search and Web Information Credibility <i>Katsumi Tanaka (Kyoto U.)</i> Opinion Mining and Sentiment Analysis <i>Hsin-Hsi Chen (Taiwan U.)</i>
15:00–15:20	Coffee Break
15:20–17:00	<u>Systems and User Behavior Analysis</u> (chaired by <i>S. Kurohashi</i>) Recent Developments in Bidiagonal Matrix Singular Value Decomposition <i>Yoshimasa Nakamura (Kyoto U.)</i> More than cooperation: What we learn from evolutionary game dynamics on complex networks <i>Xiang Li (Fudan U.)</i> Dimensional Analysis of Modality-semantics and its Application on Expressive Audio-visual Speech Synthesis <i>Jia Jia (Tsinghua U. - Beijing)</i> An Empirical Behavior Analysis for Human Being and Organization to Gain Credibility <i>Yoshinori Hara (Kyoto U.)</i>
17:00–17:10	<u>Closing</u> Vice-President Junichi Mori (Kyoto U.) Prof. Katsumi Tanaka (Kyoto U.)



AEARU FUNDING REPORT

The 9th AEARU Web Technology and Computer Science Workshop – Cloud Computing and the Search for Knowledge –

At the time of application, the original intention was to use the AEARU funding to provide partial assistance with accommodation expenses for eleven PhD-level students (one from each non-Japanese AEARU member institution) to attend the workshop. The intention was to encourage students from non-Japanese member universities to travel to attend the workshop, as they would incur greater expenses than students travelling from within Japan.

In reality, however, not every non-Japanese member university took advantage of the invitation to receive the assistance. Ultimately, nine students from seven member universities were selected to receive the funding. The organizing committee reassessed the best way to make use of the AEARU funding, and it was decided that, as the number of students was fewer than had been originally planned, Kyoto University would provide an additional funding subsidy on top of the AEARU funds in order to fully cover both accommodation and travel expenses for the nine students.

The \$10,000 of AEARU funding was therefore divided evenly among the nine students as follows:
 $\$10,000 \div 9 = \$1,111.11$ (paid in Japanese yen: ¥91,372).

Each student, therefore, received ¥91,372 from the AEARU funds, plus an additional sum from Kyoto University to make the award sufficient to fully cover their travel and accommodation expenses, as detailed below (as each student's travel expenses varied, the subsidy by Kyoto University was different in each case).

* All figures in Japanese Yen

University	Name of Student	AEARU Funding	KU Subsidy	Total Award
Fudan University	Mr. Yifeng Luo	91,372	41,588	132,960
Fudan University	Mr. Yang Yang	91,372	9,468	100,840
Nanjing University	Mr. Pan Lei	91,372	16,708	108,080
Peking University	Ms. Ziqi Wang	91,372	42,258	133,630
Seoul National University	Mr. Shingyu Kim	91,372	18,838	110,210
Taiwan University	Mr. Chi-Hsin Yu	91,372	8,018	99,390
Tsinghua University - Beijing	Mr. Fan Bu	91,372	44,368	135,740
Tsinghua University - Beijing	Mr. Mingming Cheng	91,372	44,368	135,740
Tsing Hua University - Hsinchu	Ms. MeiHua Chen	91,372	10,718	102,090