# Database Systems for Advanced Applications

## Aims of the Conference

As an annual international conference in Pacific Asia region, DASFAA is an international forum for academic exchanges and technical discussions among researchers, developers and users of databases from academia, business and industry. The conference will promote research and development activities in database field among participants and their institutions from Pacific Asia and the world as well.

## Areas of Interests

The areas of interests of the conference include, but are not limited to the following:

- Query Language and Query Optimization
- Multidatabases and Federated Databases
- Security and Integrity Maintenance
- Data Mining and Knowledge Discovery
- Statistical and Scientific Databases
- Parallel and Distributed Databases
- Data Warehouses
- Information Retrieval with Database Systems
- Workflow Management
- E-commerce Data Processing
- Multimedia Databases
- Internet and the WWW Data Management
- Digital Libraries
- Mobile Databases
- User Interfaces
- Temporal and Spatial Databases
- Active Databases
- Data Streams
- P2P and Grid-Based Data Management
- Sensor Data Managing
- XML Databases
- New Applications
- DB-IR Integration
- Semantic Web

**Research Program Committee Co-Chairs**

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Cuiping Li (Renmin University, China)

Jianzhong Li (Harbin Institute of Technology, China)

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Xuan Zhou (CSIRO, Australia)

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## 14:30-16:00

## Research Session 1: P2P-Based Technologies

Session Chair: Takahiro Hara (Osaka University, Japan)

- **Distributed Cache Indexing for Efficient Subspace Skyline Computation in P2P Networks**
  Lijiang Chen, Bin Cui (Peking University, China), Linhao Xu (IBM China Research Lab, China), Heng Tao Shen (University of Queensland, Australia)
- **iDISQUE: Tuning High-Dimensional Similarity Queries in DHT Networks**
  Xiaolong Zhang, Lidan Shou (Zhejiang University, China), Kian-Lee Tan (National University of Singapore, Singapore), Gang Chen (Zhejiang University, China)
- **Adaptive Ensemble Classification in P2P Networks**
  Hock Hee Ang, Vivek Gopalkrishnan, Steven C.H. Hoi, Wee Keong Ng (Nanyang Technological University, Singapore)

## Research Session 2: Data Mining Technologies

Session Chair: Yasuhiko Morimoto (Hiroshima University, Japan)

- **Mining Rare Association Rules in the Datasets with Widely Varying Items' Frequencies**
  R. Uday Kiran, P. Krishna Reddy (International Institute of Information Technology-Hyderabad, India)
- **CAMLS: A Constraint-based Apriori Algorithm for Mining Long Sequences**
  Yaron Gonen, Nurit Gal-Oz, Ran Yahalom, Ehud Gudes (Ben Gruion University of the Negev, Israel)
- **PGP-mc: Towards a Multicore Parallel Approach for Mining Gradual Patterns** (S)

Anne Laurent (LIRMM, France), Benjamin Negrevergne (LIG, France), Nicolas Sicard (LRIE, France), Alexandre Termier (LIG, France)

- **Generalised Rule Mining** (S)
  Florian Verhein (Ludwig-Maximilians-Universität, Munich, Germany)

## Research Session 3: XML Search and Matching

Session Chair: Makoto Onizuka (NTT Cyber Space Laboratories, NTT Corporation, Japan)

- **An Effective Object-level XML Keyword Search**
  Zhifeng Bao (National University of Singapore, Singapore), Jiaheng Lu (Renmin University of China, China), Tok Wang Ling, Liang Xu, Huayu Wu (National University of Singapore, Singapore)
- **Effectively Inferring the Search-for Node Type in XML Keyword Search**
  Jiang Li, Junhu Wang (Griffith University, Australia)
- **Matching Top-k Answers of Twig Patterns in Probabilistic XML**
  Bo Ning (Swinburne University of Technology, Australia/Dalian Maritime University, China), Chengfei Lu (Swinburne University of Technology, Australia), Jeffrey Xu Yu (Chinese University of Hong Kong, China), Guoren Wang (Northeastern University, China), Jianxin Li (Swinburne University of Technology, Australia)

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## 16:30-18:00

## Research Session 4: Graphs

Session Chair: Sourav Bhowmick (Nanyang Technological University, Singapore)

- **NOVA: A Novel And Efficient Framework For Finding Subgraph Isomorphism Mappings In Large Graphs**
  Ke Zhu, Ying Zhang, Xuemin Lin, Gaoping Zhu, Wei Wang (University of New South Wales, Australia)
- **Efficiently Answering Probability Threshold-based Shortest Path Queries over Uncertain Graphs**
  Ye Yuan (Northeastern University, China), Lei Chen (Hong Kong University of Science and Technology, China), Guoren Wang (Northeastern University, China)
- **Discovering Burst Areas in Fast Evolving Graphs**
  Zheng Liu, Jeffrey Xu Yu (Chinese University of Hong Kong, China)

# Research Session 5: Spatial Databases

Session Chair: Jiaheng Lu (Renmin University, China)

- **Answering Top-*k* Similar Region Search Queries**
  Chang Sheng (National University of Singapore, Singapore), Yu Zheng (Microsoft Research Asia, China), Wynne Hsu, Mong Li Lee (National University of Singapore, Singapore), Xing Xie (Microsoft Research Asia, China)

- **Efficient Approximate Visibility Query in Large Dynamic Environments**
  Leyla Kazemi, Farnoush Banaei-Kashani, Cyrus Shahabi (University of Southern California, USA), Ramesh Jain (University of California, Irvine, USA)

- **The Objects Interaction Matrix for Modeling Cardinal Directions in Spatial Databases**
  Tao Chen, Markus Schneider, Ganesh Viswanathan, Wenjie Yuan (University of Florida, USA)

- **Efficient Algorithms to Monitor Continuous Constrained *k* Nearest Neighbor Queries**
  Mahady Hasan, Muhammad Aamir Cheema (University of New South Wales, Australia), Wenyu Qu (Dalian Maritime University, China), Xuemin Lin (University of New South Wales, Australia)

# Industrial Session 1: Cloud/SaaS

Session Chair: Takahiko Shintani (Hitachi, Ltd., Japan)

- **Development procedure of the cloud-based applications** (invited)
  Masayoshi Hagiwara (Microsoft, Japan)

- **Rapid Development of Web Applications by Introducing Database Systems with Web APIs**
  Takeru Inoue (NTT Network Innovation Laboratories, Japan), Hiroshi Asakura, Yukio Uematsu (NTT Communications Coporation, Japan), Hiroshi Sato, Noriyuki Takahashi (NTT Network Innovation Laboratories, Japan)

- **A General Maturity Model and Reference Architecture for SaaS Service**
  Seungseok Kang, Jaeseok Myung, Jongheum Yeon (Seoul National University, Korea), Seong-wook Ha, Taehyung Cho, Ji-man Chung (Q.N.SOLV Corporation, Korea), Sang-goo Lee (Seoul National University, Korea)

## Tutorial 1:

## Introduction to Social Computing

Irwin King (Chinese University of Hong Kong, China)

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**Friday, April 2, 2010**

## 9:00- 10:00

## Keynote 2:

## Cloud Data Management @ Yahoo!

## Raghu Ramakrishnan (Yahoo! Research, USA)

Session Chair: Masaru Kitsuregawa (The University of Tokyo, Japan)

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## 10:30-12:30

## Research Session 6: XML Technologies

Session Chair: Chengfei Liu (Swinburne University of Technology, Australia)

- **Chasing Tree Patterns under Recursive DTDs**
  Junhu Wang (Griffith University, Australia), Jeffrey Xu Yu (Chinese University of Hong Kong, China)
- **Efficient Label Encoding for Range-based Dynamic XML Labeling Schemes**
  Liang Xu, Tok Wang Ling, Zhifeng Bao, Huayu Wu (National University of Singapore, Singapore)
- **An Efficient Parallel PathStack Algorithm for Processing XML Twig Queries on Multi-core Systems**
  Jianhua Feng, Le Liu, Guoliang Li, Jianhui Li, Yanhao Sun (Tsinghua University, China)
- **Keyword Search on Hybrid XML-Relational Databases Using XRjoin** (S)
  Liru Zhang, Tadashi Ohmori, Mamoru Hoshi (University of Electro-Communications, Japan)

- **Efficient Database-Driven Evaluation of Security Clearance for Federated Access Control of Dynamic XML Documents** (S)

  Erwin Leonardi, Sourav S. Bhowmick (Nanyang Technological University, Singapore), Mizuho Iwaihara (Waseda University, Japan)

## Research Session 7: Time Series and Streams

Session Chair: Xiaofang Zhou (University of Queensland, Australia)

- **Speeding up Complex Video Copy Detection Queries**

  Ira Assent (Aalborg University, Denmark), Hardy Kremer, Thomas Seidl (RWTH Aachen University, Germany)

- **Efficient Skyline Maintenance for Streaming Data with Partially-Ordered Domains**

  Yuan Fang (Institute for Infocomm Research, Singapore), Chee-Yong Chan (National University of Singapore, Singapore)

- **A Simple, yet Effective and Efficient, Sliding Window Sampling Algorithm**

  Xuesong Lu (National University of Singapore, Singapore), Wee Hyong Tok (Microsoft, Singapore), Chedy Raissi, Stéphane Bressan (National University of Singapore, Singapore)

- **Detecting Leaders from Correlated Time Series** **(Best Paper Award)**

  Di Wu, Yiping Ke, Jeffrey Xu Yu (Chinese University of Hong Kong, China), Philip S. Yu (University of Illinos at Chicago, USA), Lei Chen (Hong Kong University of Science and Technology, China)

## Industrial Session 2: Query Processing/Data mining

Session Chair: Rafi Ahmed (Oracle, USA)

- **Lazy View Maintenance for Social Networking Applications**

  Keita Mikami, Shinji Morishita, Makoto Onizuka (NTT Corporation, Japan)

- **Birds Bring Flues? Mining Frequent and High Weighted Cliques from Birds Migration Networks**

  MingJie Tang, Weihang Wang (Chinese Academy of Sciences, China), Yexi Jiang (Sichuan University, China), Yuanchun Zhou (Chinese Academy of Sciences, China), Jinyan Li (Nanyang Technological University, Singapore), Peng Cui, Ying Liu, Baoping Yan (Chinese Academy of Sciences, China)

- **Performance Improvement of OpenJPA by Query Dependency Analysis**

  Miki Enoki, Yosuke Ozawa, Tamiya Onodera (IBM Research Tokyo, Japan)

- **Chimera: Stream-oriented XML Filtering/Querying Engine**
  Tatsuya Asai, Shin-ichiro Tago, Hiroya Inakoshi, Seishi Okamoto (Fujitsu Laboratories, Ltd., Japan), Masayuki Takeda (Kyushu University, Japan)

## Tutorial 2:

## Mining Moving Object, Trajectory and Traffic Data

Jiawei Han, Zhenhui Li, and Lu An Tang (University of Illinois at Urbana-Champaign, USA)

## 14:00-15:30

## Research Session 8: Advanced Data Mining

Session Chair: Jeffrey Xu Yu (Chinese University of Hong Kong, China)

- **Mining Outliers with Ensemble of Heterogeneous Detectors on Random Subspaces (Best Student Paper Award)**
  Hoang Vu Nguyen, Hock Hee Ang, Vivekanand Gopalkrishnan (Nanyang Technological University, Singapore)
- **Mining Diversity on Networks**
  Lu Liu (Tsinghua University, China), Feida Zhu (Singapore Management University, Singapore), Chen Chen (University of Illinois at Urbana-Champaign, USA), Xifeng Yan (University of California at Santa Barbara, USA), Jiawei Han (University of Illinois at Urbana-Champaign, USA), Philip Yu (University of Illinois at Chicago, USA), Shiqiang Yang (Tsinghua University, China)
- **Mining Regular Patterns in Data Streams**
  Syed Khairuzzaman Tanbeer, Chowdhury Farhan Ahmed, Byeong-Soo Jeong (Kyung Hee University, Korea)

## Research Session 9: Query Processing

Session Chair: Reynold Cheng (University of Hong Kong, China)

- **k-ARQ: k-Anonymous Ranking Queries**
  Eunjin Jung (University of Iowa, USA), Sukhyun Ahn, Seung-won Hwang (POSTECH, Korea)

- **QSQL: Incorporating Logic-based Retrieval Conditions into SQL**

  Sebastian Lehrack, Ingo Schmitt (Brandenburgische Technische Universität Cottbus, Germany)

- *k*-**Selection Query over Uncertain Data** (Best Student Paper Award Runner-up)

  Xingjie Liu, Mao Ye (Pennsylvania State University, USA), Jianliang Xu (Hong Kong Baptist University, China), Yuan Tian, Wang-Chien Lee (Pennsylvania State University, USA)

## Research Session 10: Web

Session Chair: Sang-goo Lee (Seoul National University, Korea)

- **Analysis of Implicit Relations on Wikipedia: Measuring Strength through Mining Elucidatory Objects**

  Xinpeng Zhang, Yasuhito Asano, Masatoshi Yoshikawa (Kyoto University, Japan)

- **Summarizing and Extracting Online Public Opinion from Blog Search Results**

  Shi Feng (Northeastern University/Chinese University of Hong Kong, China), Daling Wang, Ge Yu (Northeastern University, China), Binyang Li, Kam Fai Wong (Chinese University of Hong Kong, China)

- **Cloud as Virtual Databases: Bridging Private Databases and Web Services** (S)

  Hiroaki Ohshima, Satoshi Oyama, Katsumi Tanaka (Kyoto University, Japan)

- **Temporal Top-*k* Search in Social Tagging Sites Using Multiple Social Networks** (S)

  Wenyu Huo, Vassilis J. Tsotras (University of California, Riverside, USA)

## Demo Session

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## 16:00-17:30

## Research Session 11: Sensor Networks and Communications

Session Chair: Cyrus Shahabi (University of Southern California, USA)

- **Air-Indexing on Error Prone Communication Channels**

  Emmanuel Müller, Philipp Kranen, Michael Nett, Felix Reidl, Thomas Seidl (RWTH Aachen University, Germany)

- **Content-Based Multipath Routing for Sensor Networks**
  Inchul Song, Yohan J. Roh, Myoung Ho Kim (KAIST, Korea)
- **Evaluating Continuous Probabilistic Queries over Imprecise Sensor Data**
  Yinuo Zhang, Reynold Cheng (University of Hong Kong, China), Jinchuan Chen
  (Renmin University of China, China)

## Research Session 12: Information Management

Session Chair: Yoshihiko Ichikawa (Yamaguchi University, Japan)

- **BPMN Process Views Construction**
  Sira Yongchareon, Chengfei Liu, Xiaohui Zhao (Swinburne University of Technology,
  Australia), Marek Kowalkiewicz (SAP Research, Australia)
- **Active Duplicate Detection (Best Paper Award Runner-up)**
  Ke Deng (University of Queensland, Australia), Liwei Wang (Wuhan University,
  China), Xiaofang Zhou, Shazia Sadiq, Gabriel Pui Cheong Fung (University of
  Queensland, Australia)
- **FlexTable: Using a Dynamic Relation Model to Store RDF Data**
  Yan Wang, Xiaoyong Du, Jiaheng Lu, Xianfang Wang (Renmin University of China,
  China)

## Research Session 13: Communities and Web Graphs

Session Chair: Sherif Sakr (University of New South Wales, Australia)

- **An MDL Approach to Efficiently Discover Communities in Bipartite Network**
  Kaikuo Xu, Changjie Tang, Chuan Li, Yexi Jiang, Rong Tang (Sichuan University,
  China)
- **Fires on the Web: Towards Efficient Exploring Historical Web Graphs**
  Zhenglu Yang (University of Tokyo, Japan), Jeffrey Xu Yu, Zheng Liu (Chinese
  University of Hong Kong, China), Masaru Kitsuregawa (University of Tokyo, Japan)
- **Identifying Community Structures in Networks with Seed Expansion** (S)
  Fang Wei (Alcatel-Lucent Shanghai Bell/Fudan University, China), Weining Qian (East
  China Normal University, China), Zhongchao Fei (Alcatel-Lucent Shanghai Bell/Fudan
  University, China), Aoying Zhou (East China Normal University, China)
- **Dynamic Agglomerative-Divisive Clustering of Clickthrough Data for
  Collaborative Web Search** (S)
  Kenneth Wai-Ting Leung, Dik Lun Lee (Hong Kong University of Science and
  Technology, China)

**Saturday, April 3, 2010**

**9:00-10:15**

**Awards Ceremony**

Katsumi Tanaka (Kyoto University, Japan), Tok Wang Ling (National University of Singapore, Singapore), Yoshiharu Ishikawa (Nagoya University, Japan), Qing Li (City University of Hong Kong, China), Takahiro Hara (Osaka University, Japan) and Kian-Lee Tan (National University of Singapore, Singapore)

**10+ Year Best Paper Award Talk**

Session Chair: Katsumi Tanaka (Kyoto University, Japan)

**10:45-12:15**

**Panel Session:**

**Future Directions of Innovative Integration between Multimedia Information Services and Ubiquitous Computing**

**13:30-15:30**

**Research Session 14: Trajectories and Moving Objects**

Session Chair: Xiaofeng Meng (Renmin University, China)

- **$B^s$-tree: A Self-tuning Index of Moving Objects**
  Nan Chen, Lidan Shou, Gang Chen, Ke Chen, Yunjun Gao (Zhejiang University, China)
- **Privacy-Preserving Location Publishing under Road-Network Constraints**
  Dan Lin, Sashi Gurung, Wei Jiang, Ali Hurson (Missouri University of Science and Technology, USA)

- **Incremental Clustering for Trajectories**
  Zhenhui Li (University of Illinois at Urbana-Champaign, USA), Jae-Gil Lee (IBM Almaden Research Center, USA), Xiaolei Li (Microsoft, USA), Jiawei Han (University of Illinois at Urbana-Champaign, USA)
- **NNCluster: An Efficient Clustering Algorithm for Road Network Trajectories**
  Gook-Pil Roh, Seung-won Hwang (POSTECH, Korea)

## Research Session 15: Skyline Queries

Session Chair: Wolf-Tilo Balke (Technische Universität Braunschweig, Germany)

- **Dynamic Skyline Queries in Large Graphs**
  Lei Zhou (Peking University, China), Lei Chen (Hong Kong University of Science and Technology, China), M. Tamer Özsu (University of Waterloo, Canada), Dongyan Zhao (Peking University/Ministry of Education, China)
- **Top-*k* Combinatorial Skyline Queries**
  I-Fang Su (National Cheng-Kung University, Taiwan), Yu-Chi Chung (Chang Jung Christian University, Taiwan), Chiang Lee (National Cheng-Kung University, Taiwan)
- **Extract Interesting Skyline Points in High Dimension**
  Gabriel Pui Cheong Fung (University of Queensland, Australia), Wei Lu (Ministry of Education/Renmin University of China, China), Jing Yang (Renmin University of China), Xiaoyong Du (Ministry of Education/Renmin University of China, China), Xiaofang Zhou (University of Queensland, Australia)
- **Transitivity-Preserving Skylines for Partially Ordered Domains** (S)
  Henning Köhler, Kai Zheng, Jing Yang, Xiaofang Zhou (University of Queensland, Australia)
- **Finding the Most Desirable Skyline Objects** (S)
  Yunjun Gao (Zhejiang University, China), Junfeng Hu (National University of Singapore, Singapore), Gencai Chen, Chun Chen (Zhejiang University, China)

## Research Session 16: Privacy and Security

Session Chair: Mizuho Iwaihara (Waseda University, Japan)

- **Multiple Sensitive Association Protection in the Outsourced Database**
  Xiao Jiang, Jun Gao, Tengjiao Wang, Dongqing Yang (Peking University, China)
- **A Semantic Information Loss Metric for Privacy Preserving Publication**
  Yu Liu, Ting Wang, Jianhua Feng (Tsinghua University, China)

- **On *t*-Closeness with KL-Divergence and Semantic Privacy**
  Chaofeng Sha, Yi Li (Fudan University, China), Aoying Zhou (East China Normal University, China)
- **Competitive Privacy: Secure Analysis on Integrated Sequence Data** (S)
  Raymond Chi-Wing Wong (Hong Kong University of Science and Technology, China), Eric Lo (Hong Kong Polytechnic University, China)
- **Privacy-Preserving Publishing Data with Functional Dependencies** (S)
  Hui (Wendy) Wang, Ruilin Liu (Stevens Institute of Technology, USA)

## Tutorial 3:

## Querying Large Graph Databases

Yiping Ke (Chinese University of Hong Kong, China), James Cheng (Nanyang Technological University, Singapore), and Jeffrey Xu Yu (Chinese University of Hong Kong, China)

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## 16:00-17:30

## Research Session 17: Data Streams

Session Chair: Raymond Chi-Wing Wong (Hong Kong University of Science and Technology, China)

- **Scalable Splitting of Massive Data Streams**
  Erik Zeitler, Tore Risch (Uppsala University, Sweden)
- **Constraint-Aware Complex Event Pattern Detection over Streams**
  Ming Li (Worcester Polytechnic Institute/IBM, USA), Murali Mani, Elke A. Rundensteiner (Worcester Polytechnic Institute, USA), Tao Lin (Amitive Inc., USA)
- **Attribute Outlier Detection over Data Streams**
  Hui Cao (Zhejiang University, China), Yongluan Zhou (University of Southern Denmark, Denmark), Lidan Shou, Gang Chen (Zhejiang University, China)

## Research Session 18: Similarity Search and Event Processing

Session Chair: Vincent Oria (New Jersey Institute of Technology, USA)

- **ISIS: A New Approach for Efficient Similarity Search in Sparse Databases**
  Bin Cui (Peking University, China), Jiakui Zhao (China Electric Power Research Institute, China), Gao Cong (Aalborg University, Denmark)
- **Highly Scalable Multiprocessing Algorithms for Preference-Based Database Retrieval**
  Joachim Selke, Christoph Lofi, Wolf-Tilo Balke (Technische Universität Braunschweig, Germany)
- **IO$^3$: Interval-based Out-of-Order Event Processing in Pervasive Computing** (S)
  Chunjie Zhou, Xiaofeng Meng (Renmin University of China, China)
- **Peer-to-Peer Similarity Search based on M-Tree Indexing** (S)
  Akrivi Vlachou, Christos Doulkeridis (Norwegian University of Science and Technology, Norway), Yannis Kotidis (Athens University of Economics and Business, Greece)

## Research Session 19: Storage and Advanced Topics

Session Chair: Haruo Yokota (Tokyo Institute of Technology, Japan)

- **Update Migration: An Efficient B+ Tree for Flash Storage**
  Chang Xu, Lidan Shou, Gang Chen, Cheng Yan, Tianlei Hu (Zhejiang University, China)
- **Optimizing Write Performance for Read Optimized Databases**
  Jens Krueger, Martin Grund, Christian Tinnefeld, Hasso Plattner, Alexander Zeier (Hasso-Plattner-Institut, Germany), Franz Faerber (SAP AG, Germany)
- **Towards an Algebraic Framework for Querying Inductive Databases** (S)
  Hong-Cheu Liu (Diwan University, Taiwan), Aditya Ghose (University of Wollongong, Australia), John Zeleznikow (Victoria University, Australia)
- **Efficient Aggregate Licenses Validation in DRM** (S)
  Amit Sachan, Sabu Emmanuel (Nanyang Technological University, Singapore), Mohan S. Kankanhalli (National University of Singapore, Singapore)

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**Sunday, April 4, 2010 (Workshop Day)**

# 1st International Workshop on Graph Data Management: Techniques and Applications (GDM 2010)

chaired by Sherif Sakr and Wei Wang (University of New South Wales, Australia)

## 9:30-10:30 Invited Paper

- **On-Line Preferential Nearest Neighbor Browsing in Large Attributed Graphs**
  Jiefeng Cheng (University of Hong Kong, China), Jeffrey Xu Yu (The Chinese University of Hong Kong, China) and Reynold C.K. Cheng (University of Hong Kong, China)

## 10:45-12:15

- **Querying Graph-Based Repositories of Business Process Models**
  Ahmed Awad (University of Potsdam, Germany) and Sherif Sakr (University of New South Wales, Australia)
- **Mining Useful Time Graph Patterns on Extensively Discussed Topics on the Web** [Position Paper]
  Taihei Oshino, Yasuhito Asano, and Masatoshi Yoshikawa (Kyoto University, Japan)
- **SGDB - Simple graph database optimized for activation spreading computation**
  Marek Ciglan and Kjetil Norvag (NTNU, Norway)

# 3rd International Workshop on Managing Data Quality in Collaborative Information Systems (MCIS2010)

chaired by Shazia Sadiq , Xiaofang Zhou, Ke Deng (University of Queensland, Australia) and Xiaochun Yang (Northeastern University, China)

## 13:15-15:15

- **Checking Structural Integrity for Metadata Repository Systems by means of Description Logics**
  Xiaofei Zhao (Nanjing University of Information Science and Technology, China), Zhiqiu Huang (Nanjing University of Aeronautics and Astronautics, China)
- **On Memory and I/O Efficient Duplication Detection for Multiple Self-clean Data Sources**
  Ji Zhang (The University of Southern Queensland, Australia), Yanfeng Shu (CSIRO ICT

Centre, Hobart, Australia), Hua Wang (The University of Southern Queensland, Australia)

- **Top-K Generation of Mediated Schemas Over Multiple Data Sources** Guohui Ding, Guoren Wang, Bin Wang (Northeastern University, China)
- **A Graphical Method for Reference Reconciliation** Kong Qing, Li Qingzhong (Shandong University, China)

# 2nd International Workshop on Benchmarking of Database Management Systems and Data-Oriented Web Technologies (BenchmarX'10)

chaired by Jiri Dokulil, Irena Mlynkova and Martin Necasky (Charles University, Czech Republic)

## 9:00-10:30 Invited Talk

- **Benchmarking Holistic Approaches to TPQ Processing**
  Jiaheng Lu (Renmin University of China, China)

## 10:45-12:15 Session 1

- **Benchmarking the Compression of XML Node Streams**
  Radim Baca, Jiri Walder and Martin Pawlas, Michal Kratky (Technical University of Ostrava, Czech Republic)
- **Generation of Synthetic XML for Evaluation of Hybrid XML Systems**
  David Hall and Lena Stromback (Linkopings universitet, Sweden)
- **Benchmarking Publish/Subscribe-based Messaging Systems**
  Kai Sachs, Stefan Appel (TU Darmstadt, Germany), Samuel Kounev (Karlsruhe Institute of Technology, Germany), Alejandro Buchmann (TU Darmstadt, Germany)

## 13:15-14:15 Session 2

- **An Experimental Evaluation of Relational RDF Storage and Querying Techniques**
  Hooran MahmoudiNasab (Macquarie University, Australia), Sherif Sakr (University of New South Wales, Australia)

- **Analyzer: A Framework for File Analysis**

  Martin Svoboda, Jakub Starka, Jan Sochna, Jiri Schejbal and Irena Mlynkova (Charles University in Prague, Czech Republic)

# Workshop on Social Networks and Social Media Mining on the Web (SNSMW)

## 9:00-10:30 Tag and Ontology

- **Task-Oriented User Modeling Method and its Application to Service Navigation on the Web**

  Munehiko Sasajima, Yoshinobu Kitamura, Riichiro Mizoguchi (Osaka University, Japan)
- **Tag Disambiguation through Flickr and Wikipedia**

  Anastasia Stampouli, Eirini Giannakidou and Athena Vakali (Aristotle University of Thessaloniki, Greece)
- **Measuring Attention Intensity to Web Pages based on Specificity of Social Tags**

  Takayuki Yumoto and Kazutoshi Sumiya (University of Hyogo, Japan)

## 10:45-12:15 Web Service and Evaluation Framework

- **SQL as a Mashup Tool: Design and Implementation of a Web Service Integration Approach based on the Concept of Extensible Relational Database Management Systems**

  Yoshihiko Ichikawa, Yuuki Matsui, Minoru Tanaka (Yamaguchi University, Japan)
- **Design of Impression Scales for Assessing Impressions of News Articles**

  Tadahiko Kumamoto (Chiba Institute of Technology, Japan)
- **An Evaluation Framework for Analytical Methods of Integrating Electronic Word-of-Mouth Information: Position Paper**

  Kazunori Fujimoto (Kinki University, Japan)

## 13:15-15:15 Web Community Extraction

- **A Framework for Finding Community in Complex Networks**

  Naoki Okada, Yoshinori Hijikata, Shogo Nishida (Osaka University, Japan)
- **C&C: An Effective Algorithm for Extracting Web Community Cores**

  Xianchao Zhang, Yueting Li, Wenxin Liang (Dalian University of Technology, China)

- **Extracting Local Web Communities using Lexical Similarity**
  Xianchao Zhang, Wen Xu, and Wenxin Liang (Dalian University of Technology, China)
- **An improved algorithm for extracting research communities from bibliographic data**
  Yushi Nakamura, Toshihiko Horiike, Yoshimasa Taira, Hiroshi Sakamoto (Kyushu Institute of Technology, Japan)

## 15:30-17:30 Recommendation and Geographical Activity

- **Proposal of Deleting Plots from the Reviews to the Items with Stories**
  Kaori Ikeda, Yoshinori Hijikata, Shogo Nishida (Osaka University, Japan)
- **Basic Study on a Recommendation Method Considering Region-restrictedness of Spots**
  Kenta Oku, Fumio Hattori (Ritsumeikan University, Japan)
- **A Hybrid Recommendation Method with Double SVD Reduction**
  Yusuke Ariyoshi (Onomichi University, Japan), Junzo Kamahara(Kobe University, Japan)
- **Monitoring Geo-Social Activities through Micro-Blogging Sites**
  Tatsuya Fujisaka, Ryong Lee, Kazutoshi Sumiya (University of Hyogo, Japan)

## Data Intensive eScience Workshop (DIEW 2010)

chaired by Isao Kojima(AIST), Kento Aida(NII), Geoffrey Fox(Indiana U), Neil Chue Hong(OMII-UK) and Masatoshi Oishi(NAOJ)

## 9:00-9:30 Invited Talk

- **Data-Intensive Research: realising the power of data**
  Malcolm Atkinson (UK e-Science Institute)

## 9:30-10:30

- **WISE-CAPS: Web-based Interactive Secure Environment for Collaborative Analysis of Planetary Science**
  Junya Terazono (University of Aizu, Japan), Ryosuke Nakamura, Shinsuke Kodama, Naotaka Yamamoto (AIST, Japan), Hirohide Demura, Naru Hirata, Yoshiko Ogawa (University of Aizu, Japan), Jun'ichi Haruyama, Makiko Ohtake (JAXA,Japan), Tsuneo Matsunaga (NIES, Japan)

- **Towards Large-Scale Scientific Dataspaces for e-Science Applications**
  Ibrahim Elsayed, Peter Brezany (Univ. of Vienna, Austria)

## 10:45-12:15

- **Provinding Constructed Buildings Information by ASTER Satellite DEM Images and Web Contents**
  Takashi Takagi, Hideyuki Kawashima, Toshiyuki Amagasa, Hiroyuki Kitagawa (University of Tsukuba, Japan)
- **Gfdnavi, Web-based Data and Knowledge Server Software for Geophysical Fluid Sciences, Part I: Rationales, Stand-alone Features, and Supporting Knowledge Documentation Linked to Data**
  Takeshi Horinouchi (Hokkaido University, Japan), Seiya Nishizawa (Kobe University, Japan), Chiemi Watanabe (Ochanomizu University, Japan), Akinori Tomobayashi (Shouganji, Japan), Shigenori Otsuka (Kyoto Univeristy Japan), Tsuyoshi Koshiro (JMA, Japan), Yoshi-Yuki Hayashi (Kobe University,Japan), GFD Dennou Club (Japan)
- **Gfdnavi, Web-based Data and Knowledge Server Software for Geophysical Fluid Sciences, Part II: Restful Web Services and Object-Oriented Programming Interface**
  Seiya Nishizawa (Kobe University, Japan), Takeshi Horinouchi (Hokkaido University, Japan), Chiemi Watanabe, Yuka Isamoto (Ochanomizu Univeristy, Japan), Akinori Tomobayashi (Shouganji, Japan), Shigenori Otsuka (Kyoto Univeristy Japan), GFD Dennou Club(Japan)

# 2nd International Workshop on Ubiquitous Data Management (UDM2010)

chaired by Yutaka Kidawara (NICT, Japan) and Ki-Joune Li (Pusan University, Korea)

## 13:15-15:15 Session 1: Search and Mining of Ubiquitous Data

- **Distributed SLCA-Based XML Keyword Search By Map-Reduce**
  Chenjing Zhang, Qiang Ma (Fudan University, China), Xiaoing Wang, Aoying Zhou (East China Normal University, China)
- **FVC: A Feature-Vector-based Classification for XML Dissemination**
  Xiaoling Wang, Aoying Zhou (East China Normal University, China)

- **An Object-Field Perspective Data Model for Moving Geographic Phenomena**
  Kyoung-Sook Kim (NICT, Japan), Yasushi Kiyoki (NICT, Keio University, Japan)
- **TRAMS3: An Efficient Framework for XML Structural Similarity Search**
  Peisen Yuan (Fudan University, China), Xiaoling Wang (East China Normal University, China), Chaofeng Sha, Ming Gao (Fudan University, China), Aoying Zhou (East China Normal University, China)

# 15:30-17:00 Session 2: Information Delivery in Ubiquitous Environment

- **An Asynchronous Message-based Knowledge Communication in a Ubiquitous Environment**
  Petri Rantanen (Tampere University of Technology, Finland), Takafumi Nakanishi (NICT, Japan), Pekka Sillberg, Hannu Jaakkola (Tampere University of Technology, Finland)
- **Providing Scalable Data Services in Ubiquitous Networks**
  Raghvendra Prasad (Purdue University, USA), Sanket Patil (IIIT Bangalore, India), Tanu Malik (Purdue University, USA), Amitabh Chaudhary (University of Notre Dame, USA), Venkat Venkatasubramanian (Purdue University, USA)
- **On-demand Data Broadcasting for Data Items with Time Constraints on Multiple Broadcast Channels**
  Ta-Chih Su, Chuan-Ming Liu (National Taipei University of Technology, Taiwan)