



**23RD INTERNATIONAL CONFERENCE ON
DATABASE SYSTEMS FOR ADVANCED APPLICATIONS**

21ST TO 24TH MAY 2018, GOLD COAST, AUSTRALIA

DASFAA 2018

General Chair's Welcome Message

Welcome to DASFAA2018, the 23rd International Conference on Database Systems for Advanced Applications.

Welcome to Gold Coast, Australia, a major tourist destination in Australia.

DASFAA is an annual international database conference, which showcases state-of-the-art R&D activities in database systems and their applications. It provides a forum for technical presentations and discussions among database researchers, developers and users from academia, business and industry.

Firstly, we would like to thank Program Co-Chairs Prof Shazia Sadiq, Prof Jian Pei and Prof Yannis Manolopoulos; Industrial/Practitioners Track Co-Chairs Dr Yu Zheng and Dr Qing Liu; Demo Track Co-Chairs Prof Sebastian Link and Prof Chaoyi Pang for setting up a high quality technical program with 83 full research papers, 21 short papers, 6 industry papers and 8 demo papers in the program.

The program covers big data and AI and database applications, in particular, topics include Network Embedding, Recommendation, Graph and Network Data Processing, Social Network Analytics, Sequence and Temporal Data Processing, Trajectory and Streaming Data, RDF and Knowledge Graphs, Text and Data Mining, Medical Data Mining, Security and Privacy, Search and Information Retrieval, Query Processing and Optimizations, Data Quality and Crowdsourcing, Learning Models, Multimedia Data Processing, Distributed Computing.

Further highlights include three keynote talks:

1. Graph Processing: Applications, Challenges, and Advances by Prof Xuemin Lin (UNSW, Sydney Australia)
2. Landscape of Practical Blockchain Systems and Their Applications by Dr C. Mohan (IBM Almaden Research Center, San Jose, California)
3. Vision Perception for Environmental Informatics by Prof Yongsheng Gao (Griffith University)

And a Panel discussion on “Database with AI: New Wine or New Bottle” led by Prof Qing Li (City University of Hong Kong).

The program has also included 4 satellite workshops:

1. The 5th International Workshop on Big Data Management and Service (BDMS 2018);
2. The 5th International Symposium on Semantic Computing and Personalization (SeCoP 2018);
3. The 2nd International Workshop on Graph Data Management and Analysis (GDMA 2018) and
4. The 3rd Workshop on Big Data Quality Management (BDQM 2018).

We would like to thank Prof Chengfei Liu and Prof Lei Zuo for coordinating the workshop program and organisers from each workshop for organising the reviews and selecting workshop papers.

We would also like to thank all other members of the Organizing Committee, and many volunteers, for their great support in the conference organization:

- Tutorial Chair: Prof Yoshiharu Ishikawa
- PhD Consortium Chair: Prof Zhiguo Gong
- Panel Co-Chairs: Prof Sean Wang and Prof Sven Hartman
- Proceedings Chair: Dr Jianxin Li
- Publicity Co-Chairs: Dr Ji Zhang, Prof Xin Wang, Dr. Shuo Shang
- Local Organization Co-Chairs: Prof Junhu Wang, Prof Bela Stantic and Prof Alan Liew
- DASFAA Liaison officers: Prof Xiaofang Zhou and Kyuseok Shim
- Web Master: Mr Xuguang Ren

Special thanks go to local Organizing Committee chair Prof Junhu Wang (Griffith University) for his dedicated work for the conference logistics.

Many thanks to the authors who submitted their papers to the conference and to PC members who reviewed papers and helped to make the selection.

Lastly we acknowledge the generous financial support from Griffith University, Destination Gold Coast and Springer.

Gold Coast is a major tourist destination in Australia, with its sunny subtropical climate and is well known for its surfing beaches, high-rise dominated skyline, theme parks, nightlife, and rainforest hinterland. It is also the major film production hub for Queensland. May is one of the best seasons for visiting Gold Coast. Wish you enjoy your stay at Gold Coast.

DASFAA 2018 General Co-Chairs

Yanchun Zhang, Victoria University and Fudan University
Rao Kotagiri, The University of Melbourne

May 2018

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University, Korea

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Xuguang Ren, Griffith University,
Australia

Program Schedule

21 May 2018 –Workshops

Time	Room	Boulevard room 1	Boulevard room 2
8:00		Registration Desk Open	
9:00-10:30		BDMS session 1	SeCop Session 1
10:30 -11:00		Tea Break	
11:00 -12:30		BDMS session 2	SeCop Session 2
12:30 - 13:30		Lunch	
13:30 – 15:00		BDQM Session 1	GDMA Session 1
15:00 – 15:30		Tea Break	
15:30 -17:00		BDQM session 2	GDMA Session 2
17:30 -19:00		Reception	

22 May, 2018

Room Time	Boulevard room 1	Boulevard room 2	Boulevard room 3	Palm room 1	Palm room 2
9:00 -10:30	Main Conference Opening and Keynote by Professor Xuemin Lin (Boulevard room 1)				
10:30-11:00	Tea Break				
11:00-12:30	Research Session 1 Network embedding	Research session 2 Recommendation (i)	Research Session 3 Graph and network Data(i)	Research session 4 Sequence and Temporal Data Processing	Demo session
12:30-13:30	Lunch				
13:30-15:00	Research Session 5 Trajectory and Stream Data (i)	Research Session 6 Recommendation (ii)	Research Session 7 Graph and network Data (ii)	Research Session 8 Text and Data Mining (i)	Research session 9 Multimedia Data Processing
15:00-15:30	Tea Break				

15:30-17:15	Research Session 10 Trajectory and Stream Data (ii)	Research Session 11 Security and privacy	Research Session 12 Graph and Network Data (iii)	Research Session 13 Text and Data Mining (ii)	Research session 14 Query Processing and Optimization
17:45-22:00	Banquet				

23 May, 2018

Room Time	Boulevard room 1	Boulevard room 2	Boulevard room 3	Palm room 1	Palm room 2
9:00 -10:30	Best Paper Awards and Keynote by Dr Chandrasekaran Mohan (Boulevard room 1)				
10:30-11:00	Tea Break				
11:00-12:30	Research Session 15 Social network Analysis (i)	Research session 16 Learning Models (i)	Research Session 17 Data Quality and Crowd Sourcing (i)	Industry Session 1	Tutorial / ADC PhD school
12:30-13:30	Lunch				
13:30-15:00	Research Session 18 Social network Analysis (ii)	Research Session 19 Learning Models (ii)	Research Session 20 Data Quality and Crowd Sourcing (ii)	Industry Session 2	Tutorial / ADC PhD School
15:00-15:30	Tea Break				
15:30-17:15	Research Session 21 Social network Analysis (iii)	Research Session 22 Learning Models (iii)	Research Session 23 Medical Data Mining	Research session 24 RDF and Knowledge Graphs	Tutorial / ADC PhD School

24 May, 2018

Room Time	Boulevard room 1	Boulevard room 2	Boulevard room 3
8:30-8:50	ADC Opening (Boulevard room 1)		
9:00-10:30	DASFAA & ADC Combined Keynote by Professor Yongsheng Gao (Boulevard room 1)		
10:30-11:00	Tea break		
11:00-12:30	DASFAA & ADC Panel Discussion (Boulevard room 1)		
12:30-13:30	Lunch		
13:30-15:00	Research session 25 Distributed Processing	Research session 26 Search and IR	ADC
15:00-15:30	Tea break		
15:30-17:00		ADC/PhD school	ADC

Session Details

Research Session 1: Network Embedding

Session Chair: Professor Chengfei Liu

1. Enhancing Network Embedding with Auxiliary Information: An Explicit Matrix Factorization Perspective
Junliang Guo, Linli Xu, Xunpeng Huang and Enhong Chen
2. Attributed Network Embedding with Micro-Meso Structure
Juan-Hui Li, Chang-Dong Wang, Ling Huang, Dong Huang, Jianhuang Lai and Pei Chen
3. An Efficient Exact Nearest Neighbor Search by Compounded Embedding
Mingjie Li, Ying Zhang, Yifang Sun, Wei Wang, Ivor W. Tsang and Xuemin Lin
4. (short). BASSI: Balance and Status Combined Signed Network Embedding
Yiqi Chen, Tiejun Qian, Ming Zhong and Xuhui Li

Research Session 2: Recommendation (i)

Session Chair: Dr Saeid Hosseini

1. Geographical Relevance Model for Long Tail Point-of-Interest Recommendation
Wei Liu, Zhi-Jie Wang, Bin Yao, Mengdie Nie, Jing Wang, Rui Mao and Jian Yin
2. Exploiting Context Graph Attention for POI Recommendation in Location-based Social Networks
Siyuan Zhang and Hong Cheng
3. Restricted Boltzmann Machine Based Active Learning for Sparse Recommendation
Weiqing Wang, Hongzhi Yin, Zi Huang, Xiaoshuai Sun and Nguyen Quoc Viet Hung

Research Session 3: Graph and Network Data Processing (i)

Session Chair: Dr Jianxin LI

1. K-Connected Cores Computation in Large Dual Networks
Lingxi Yue, Dong Wen, Lizhen Cui, Lu Qin and Yongqing Zheng
2. Graph Clustering with Local Density-Cut
Junming Shao, Qinli Yang, Zhong Zhang, Jinhui Liu and Stefan Kramer
3. External Topological Sorting in Large Graphs
Zhu Qing, Long Yuan, Fan Zhang, Lu Qin, Xuemin Lin and Wenjie Zhang
4. (short). Adaptive and Parallel Data Acquisition from Online Big Graphs
Zidu Yin, Kun Yue, Hao Wu and Yingjie Su

Research Session 4: Sequence and Temporal Data Processing

Session Chair: Dr Saiful Islam

1. Distributed In-memory Analytics for Big Temporal Data
Bin Yao, Wei Zhang, Zhi-Jie Wang, Zhongpu Chen, Shuo Shang, Kai Zheng and Minyi Guo
2. Scalable Active Constrained Clustering For Temporal Data
Son T. Mai, Sihem Amer-Yahia, Ahlame Douzal Chouakria, Ky T. Nguyen and Anh-Duong Nguyen
3. Nearest Subspace with Discriminative Regularization for Time Series Classification
Zhenguang Zhang

4. (short). Efficient Approximate Subsequence Matching Using Hybrid Signatures

Tao Qiu, Xiaochun Yang, Bin Wang, Yutong Han and Siyao Wang

Research Session 5: Trajectory and Streaming Data (i)

Session Chair: Prof Junming Shao

1. MDTK: Bandwidth-saving Framework for Distributed Top-k Similar Trajectory Query

Zhigang Zhang, Cheqing Jin and Aoying Zhou

2. Modeling Travel Behavior Similarity with Trajectory Embedding

Wenyan Yang, Yan Zhao, Bolong Zheng, Guanfeng Liu and Kai Zheng

3. MaxBRkNN Queries for Streaming Geo-Data

Hui Luo, Farhana Choudhury, Zhifeng Bao, Shane Culpepper and Matt Zhang

4. (short). A Parallel Spatial Co-location Pattern Mining Approach Based on Ordered Clique Growth

Peizhong Yang and Lizhen Wang

Research Session 6: Recommendation (ii)

Session Chair: Dr Saeid Hosseini

1. Discrete Binary Hashing Towards Efficient Fashion Recommendation

Luyao Liu, Xingzhong Du, Lei Zhu, Fumin Shen and Zi Huang

2. Learning Dual Preferences with Non-negative Matrix Tri-factorization for Top-N Recommender System

Xiangsheng Li, Yanghui Rao, Haoran Xie, Yufu Chen, Raymond Y.K. Lau and Fu Lee Wang

3. (short). Low-rank and Sparse Cross-Domain Recommendation Algorithm
Zhi-Lin Zhao, Ling Huang, Chang-Dong Wang and Dong Huang
4. (short). Cross-Domain Recommendation for Cold-Start Users via Neighborhood Based Feature Mapping
Xinghua Wang, Zhaohui Peng, Senzhang Wang, Philip S. Yu, Wenjing Fu and Xiaoguang Hong

Research Session 7: Graph and Network Data Processing (ii)

Session Chair: Dr Jianxin LI

1. Finding All Nearest Neighbors with a Single Graph Traversal
Yixin Xu, Jianzhong Qi, Renata Borovica-Gajic and Lars Kulik
2. Towards Efficient Path Skyline Computation in Bicriteria Networks
Dian Ouyang, Long Yuan, Fan Zhang, Lu Qin and Xuemin Lin
3. Answering Why-Not Questions on Structural Graph Clustering
Chuanyu Zong, Xiufeng Xia, Bin Wang, Xiaochun Yang, Xiangyu Liu, Rui Zhu and Jiajia Li
4. (short). Answering the Why-not Questions of Graph Query Autocompletion
Guozhong Li, Nathan Ng, Peipei Yi, Zhiwei Zhang, Byron Choi and Sourav S Bhowmick

Research Session 8: Text and Data Mining (i)

Session Chair: Prof Xiang Ao

1. Interpreting Fine-Grained Categories from Natural Language Queries of Entity Search
Denghao Ma, Yueguo Chen and Xiaoyong Du

2. Improving Short Text Modeling by Two-level Attention Networks for Sentiment Classification
Yulong Li, Yi Cai, Ho-Fung Leung and Qing Li
3. Efficient and Scalable Mining of Frequent Subgraphs Using Distributed Graph Processing Systems
Tongtong Wang, Hao Huang, Wei Lu, Zhe Peng and Xiaoyong Du
4. (short). Main Point Generator: Summarizing with a Focus
Tonglee Chung, Bin Xu, Yongbin Liu and Chunping Ouyang

Research Session 9: Multimedia Data Processing

Session Chair: Professor Shazia Sadiq

1. Fusing Satellite Data and Urban Data for Business Location Selection: A Neural Approach
Yanan Xu, Yanyan Shen, Yanmin Zhu and Jiadi Yu
2. Index and Retrieve Multimedia Data: Cross-modal Hashing by Learning Subspace Relation
Luchen Liu, Yang Yang, Mengqiu Hu, Xing Xu, Fumin Shen, Ning Xie and Zi Huang
3. Deep Sparse Informative Transfer SoftMax for Cross-Domain Image Classification
Hanfang Yang and Xiangdong Zhou
4. (short). Sitcom-stars Oriented Video Advertising via Clothing Retrieval
Haijun Zhang, Yuzhu Ji, Wang Huang and Linlin Liu

Research Session 10: Trajectory and Streaming Data (ii)

Session Chair: Prof Junming Shao

1. Free-rider Episode Screening via Dual Partition Model
Xiang Ao, Yang Liu, Zhen Huang, Luo Zuo and Qing He
2. Maximize Spatial Influence of Facility Bundle Considering Reverse k Nearest Neighbors
Shenlu Wang, Ying Zhang, Xuemin Lin and Muhammad Aamir Cheema
3. A Road-Aware Neural Network for Multi-step Vehicle Trajectory Prediction
Jingze Cui, Xian Zhou, Yanmin Zhu and Yanyan Shen
4. Secure data aggregation with integrity verification in Wireless Sensor Networks
Ying Liu, Hui Peng, Yuncheng Wu, Juru Zeng, Hong Chen, Ke Wang, Weiling Lai and Cuiping Li

Research Session 11: Security and Privacy

Session Chair: Professor Chengfei Liu

1. Publishing Graph Node Strength Histogram with Edge Differential Privacy
Qing Qian, Zhixu Li, Pengpeng Zhao, Wei Chen, Hongzhi Yin and Lei Zhao
2. PrivTS: Differentially Private Frequent Time-constrained Sequential Pattern Mining
Yanhui Li, Guoren Wang, Ye Yuan, Xin Cao, Long Yuan and Xuemin Lin
3. Secure Range Query over Encrypted Data in Outsourced Environments
Ningning Cui, Xiaochun Yang, Leixia Wang, Bin Wang and Jianxin Li

4. TRQED: Secure and Fast Tree-based Private Range Queries over Encrypted Cloud
Wei Yang, Yang Xu, Yiwen Nie, Yao Shen and Liusheng Huang

Research Session 12: Graph and Network Data Processing

(iii)

Session Chair: Prof Xin Wang (Tianjin Univeristy)

1. SSRW: A Scalable Algorithm for Estimating Graphlet Statistics Based on Random Walk
Chen Yang, Min Lyu, Yongkun Li, Qianqian Zhao and Yinlong Xu
2. Multi-metric Graph Query Performance Prediction
Keyvan Sasani, Mohammad Hossein Namaki, Yinghui Wu and Assefaw Gebremedhin
3. A Privacy-Preserving Framework for Subgraph Pattern Matching in Cloud
Jiuru Gao, Jiajie Xu, Guanfeng Liu, Wei Chen, Hongzhi Yin and Lei Zhao
4. (short). Exploiting Reshaping Subgraphs From Bilateral Propagation Graphs
Saeid Hosseini, Hongzhi Yin, Ngai-Man Cheung, Kan Pak Leng, Yuval Elovici and Xiaofang Zhou

Research Session 13: Text and Data Mining (ii)

Session Chair: Saiful Islam

1. A Scalable Framework for Stylometric Analysis of Multi-author Documents
Raheem Sarwar, Chenyun Yu, Sarana Nutanong, Norawit Uraileertprasert, Nattapol Vannaboot and Thanawin Rakthanmanon

2. Is a Common Phrase an Entity Mention or Not? Dual Representations for Domain-Specific Named Entity Recognition
Jiangtao Zhang, Juanzi Li, Xiaoli Li and Yixin Cao
3. Recognizing Textual Entailment with Attentive Reading and Writing Operations
Liang Liu, Huan Huo, Xiufeng Liu and Vasile Palade
4. (short). Online Subset Topic Modeling for Interactive Documents Exploration
Linwei Li, Yaobo Wu, Yixiong Ke, Chaoying Liu, Yinan Jing, Zhenying He and Xiaoyang Sean Wang
5. (short). Efficient Infrequent Itemset Mining using Depth-first and Top-down Lattice Traversal
Yifeng Lu, Florian Richter and Thomas Seidl

Research Session 14: Query Processing and Optimizations

Session Chair: Professor Yuanyuan Zhu

1. Collusion-Resistant Processing of SQL Range Predicates
Manish Kesarwani, Akshar Kaul, Gagandeep Singh, Prasad Deshpande and Jayant Haritsa
2. Interactive Transaction Processing for In-Memory Database System
Tao Zhu, Donghui Wang, Huiqi Hu, Weining Qian and Aoying Zhou
3. An Adaptive Eviction Framework for Anti-caching Based In-Memory Databases
Kaixin Huang, Shengan Zheng, Yanyan Shen, Yanmin Zhu and Linpeng Huang
4. Efficient Complex Social Event-Participant Planning Based on Heuristic Dynamic Programming
Junchang Xin, Mo Li, Wangzihao Xu, Yizhu Cai and Zhiqiong Wang

Research Session 15: Social Network Analytics (i)

Session Chair: Professor Xin Wang (Tianjin University)

1. Tracking Dynamic Magnet Communities: Insights from a Network Perspective
Chang Liao, Yun Xiong, Xiangnan Kong and Yangyong Zhu
2. Discovering Strong Communities with User Engagement and Tie Strength
Fan Zhang, Long Yuan, Ying Zhang, Lu Qin, Xuemin Lin and Alexander Zhou
3. Functional-Oriented Relationship Strength Estimation: From Online Events to Offline Interactions
Chang Liao, Yun Xiong, Xiangnan Kong and Yangyong Zhu
4. (short). Detecting Top-k Active Inter-Community Jumpers in Dynamic Information Networks
Xinrui Wang, Hong Gao, Jinbao Wang and Jianzhong Li

Research Session 16: Learning models (i)

Session Chair: AProf Alan Liew

1. Representation Learning for Large-scale Dynamic Networks
Yanwei Yu, Huaxiu Yao, Hongjian Wang, Xianfeng Tang and Zhenhui Jessie Li
2. Multi-view Discriminative Learning via Joint Non-negative Matrix Factorization
Zhong Zhang, Zhili Qin, Peiyan Li, Qinli Yang and Junming Shao
3. Efficient Discovery of Embedded Patterns from Large Attributed Trees
Xiaoying Wu and Dimitri Theodoratos

Research Session 17: Data Quality and Crowdsourcing (i)

Session Chair: Professor Shazia Sadiq

1. Repairing Data Violations with Order Dependencies
Yu Qiu, Zijing Tan and Weidong Yang
2. Multi-Worker-Aware Task Planning in Real-time Spatial Crowdsourcing
Qian Tao, Yongxin Tong, Yuxiang Zeng, Zimu Zhou, Lei Chen and Ke Xu
3. MT-MCD: A Multi-task Cognitive Diagnosis Framework for Student Assessment
Tianyu Zhu, Qi Liu, Zhenya Huang, Defu Lian, Enhong Chen, Yu Su and Guoping Hu
4. (short). Effective Solution for Labeling Candidates with a Proper Ration for Efficient Crowdsourcing
Zhao Chen, Peng Cheng, Chen Zhang and Lei Chen

Research Session 18: Social Network Analytics(ii)

Session Chair: Dr Fan Zhang

1. Sample Location Selection for Efficient Distance-Aware Influence Maximization in Geo-Social Networks
Ming Zhong, Qian Zeng, Yuanyuan Zhu, Jianxin Li and Tiejun Qian
2. Identifying Topical Opinion Leaders in Social Community Question Answering
Tao Zhao, Hong Huang and Xiaoming Fu
3. Personalized Geo-Social Group Queries in Location-Based Social Networks
Yuliang Ma, Ye Yuan and Guoren Wang

4. (short). Direction Recovery in Undirected Social Networks Based on Community Structure and Popularity
Yi-Ming Wen, Chang-Dong Wang and Kun-Yu Lin

Research Session 19: Learning Models (ii)

Session Chair: Dr Xiaohui Tao

1. Multi-view Proximity Learning for Clustering
Kun-Yu Lin, Ling Huang, Chang-Dong Wang and Hong-Yang Chao
2. Extracting Label Importance Information for Multi-Label Learning
Dengbao Wang and Li Li
3. Exploiting Instance Relationship for Effective Extreme Multi-label Learning
Feifei Li, Hongyan Liu, Jun He and Xiaoyong Du
4. (short). Classification Learning from Private Data in Heterogeneous Settings
Yiwen Nie, Shaowei Wang, Wei Yang, Liusheng Huang and Zhenhua Zhao

Research Session 20: Data Quality and Crowdsourcing (ii)

Session Chair: Dr Jinli Cao

1. Towards Adaptive Sensory Data Fusion for Detecting Highway Traffic Conditions in Real Time
Yanling Cui, Beihong Jin, Fusang Zhang and Tingjian Ge
2. On the Interaction of Functional and Inclusion Dependencies with Independence Atoms
Miika Hannula and Sebastian Link

3. Source Selection for Inconsistency Detection
Lingli Li, Xu Feng, Hongyu Shao and Jinbao Li
4. (short). Handling Unreasonable Data in Negative Surveys
Dongdong Zhao, Shu Fang, Jianwen Xiang, Jing Tian, Shengwu Xiong, Dong Li and Chunhui Yang

Research Session 21: Social network analysis (iii)

Session Chair: AProf Xin Wang (SWJTU, China)

1. Incremental and Adaptive Topic Detection over Social Media
Konstantinos Giannakopoulos and Lei Chen
2. Incorporating User Grouping into Retweeting Behavior Modeling
Jinhai Zhu, Shuai Ma, Chunming Hu, Hui Zhang and Xiong Li
3. Maximizing Social Influence for the Awareness Threshold Model
Haiqi Sun, Reynold Cheng, Xiaokui Xiao, Jing Yan, Yudian Zheng and Yuqiu Qian
4. A Time-aware Path-based Publish/Subscribe Framework
Mengdi Jia, Yan Zhao, Bolong Zheng, Guanfeng Liu and Kai Zheng

Research Session 22: Learning Models (iii)

Session Chair: Dr Wen Hua

1. Exploiting Ranking Consistency Principle in Representation Learning for Location Promotion
Siyuan Zhang, Yu Rong, Yu Zheng, Hong Cheng and Junzhou Huang
2. Patent Quality Valuation with Deep Learning Models
Hongjie Lin, Dongfang Du, Hao Wang, Han Wu, Biao Chang and Enhong Chen

3. Learning Distribution-Matched Landmarks for Unsupervised Domain Adaptation
Mengmeng Jing, Jingjing Li, Jidong Zhao and Ke Lu
4. Factorization Meets Memory Network: Learning to Predict Activity Popularity
Wen Wang, Wei Zhang and Jun Wang

Research Session 23: Medical Data Mining

Session Chair: AProf Ji Zhang

1. Personalized Prescriptions for Comorbidity
Lu Wang, Wei Zhang, Xiaofeng He and Hongyuan Zha
2. Modeling Patient Visit Using Electronic Medical Records for Cost Profile Estimation
Kangzhi Zhao, Yong Zhang, Zihao Wang, Hongzhi Yin, Xiaofang Zhou, Jin Wang and Chunxiao Xing
3. Learning the Representation of Medical Features for Clinical Pathway Analysis
Xiao Xu, Ying Wang, Tao Jin and Jianmin Wang
4. Domain supervised Deep Learning Framework for Detecting Chinese Diabetes-Related Topics
Xinhuan Chen, Yong Zhang and Chunxiao Xing

Research Session 24: RDF and Knowledge Graphs

Session Chair: AProf Peng Peng

1. Multi-Query Optimization in Federated RDF Systems
Peng Peng, Lei Zou and M. Tamer Özsu

2. Distributed Efficient Provenance-Aware Regular Path Queries on Large RDF Graphs
Yueqi Xin, Xin Wang, Di Jin and Simiao Wang
3. Discovering Graph Patterns for Fact Checking in Knowledge Graphs
Peng Lin, Qi Song, Jialiang Shen and Yinghui Wu
4. (short). KAT:Keywords-to-SPARQL Translation over RDF Graphs
Aaron Jin

Research Session 25: Distributed Computing

Session Chair: Dr Saiful Islam

1. Efficient Snapshot Isolation in Paxos-Replicated Database Systems
Jinwei Guo, Peng Cai, Bingo Shaw, Weining Qian and Aoying Zhou
2. Proof of Reputation: A Reputation-based Consensus Protocol for Peer-to-Peer Network
Fangyu Gai, Baosheng Wang, Wenping Deng and Wei Peng
3. Incremental Materialized View Maintenance On Distributed Log-Structured Merge-Tree
Huichao Duan and Huiqi Hu
4. (short). CDSFM: A Circular Distributed SGLD-based Factorization Machines
Kankan Zhao, Jing Zhang, Liangfu Zhang, Cuiping Li and Hong Chen

Research Session 26: Search and Information Retrieval

Session Chair: Dr Wen Hua

1. iExplore: Accelerating Exploratory Data Analysis by Predicting User Intention
Zhihui Yang, Jiyang Gong, Chaoying Liu, Yinan Jing, Zhenying He, Kai Zhang and X. Sean Wang
2. Coverage-Oriented Diversification of Keyword Search Results on Graphs
Ming Zhong, Ying Wang and Yuanyuan Zhu
3. Novel Approaches to Accelerating the Convergence Rate of Markov Decision Process for Search Result Diversification
Feng Liu, Ruiming Tang, Xutao Li, Yunming Ye, Hui Feng Guo and Xiuqiang He
4. (short).Structures or Texts? A Dynamic Gating Method for Expert Finding in CQA Services
Zhiqiang Liu and Yan Zhang

Industry session 1

Session Chair: Dr Guandong Xu

1. An Industrial-scale System for Heterogeneous Information Card Ranking in Alipay
Zhiqiang Zhang, Chaochao Chen, Jun Zhou and Xiaolong Li
2. Unpack Local Model Interpretation for GBDT
Wenjing Fang, Jun Zhou, Xiaolong Li and Kenny Q. Zhu
3. A Twin-buffer Scheme for High-throughput Logging
Qingzhong Meng, Xuan Zhou, Shan Wang, Huijun Liu, Haiyan Huang and Xiaoli Liu

Industry Session 2

Session Chair: Dr Guandong Xu

1. Qualitative Instead of Quantitative: Towards Practical Data Analysis Under Differential Privacy
Xuanyu Bai, Jianguo Yao, Mingyuan Yuan, Jia Zeng and Haibing Guan
2. Client Churn Prediction with Call Log Analysis
Nhi N.Y. Vo, Shaowu Liu and Guandong Xu
3. Cost-sensitive Churn Prediction in Fund Management Services
James Brownlow, Charles Chu, Bin Fu, Guandong Xu, Ben Culbert and Qinxue Meng

Demo Session

1. AdaptMX: Flexible Join-Matrix Streaming System for Distributed Theta-Joins
Xiaotong Wang, Cheng Jiang, Junhua Fang, and Rong Zhang
2. MusicRoBot: Towards Conversational Context-aware Music Recommender System
Chunyi Zhou, Yuanyuan Jin
3. A System for Spatial-Temporal Trajectory Data Integration and Representation
Douglas Alves Peixoto, Xiaofang Zhou, Nguyen Quoc Viet Hung, Dan He, and Bela Stantic
4. A Movie Search System with Natural Language Queries
Xin Wang, Liang Zhao, Zonghai Li, Jiyong Zhong, Lan Yang, Huayi Zhan, Rui Sun, Bin Tan
5. HDUMP: A Data Recovery Tool for Hadoop
Zhongsheng Li, QiuHong Li, Wei Wang, Fengbin Qi, Yimin Liu

6. SLIND: Identifying Stable Links in Online Social Networks
Ji Zhang, Xiaohui Tao, Leonard Tan
7. EventSys: Tracking Event Evolution on Microblogging Platforms
Lin Mu, Peiquan Jin, Lizhou Zheng, En-Hong Chen
8. Modeling and Evaluating MID1 ICAL Pipeline on Spark
Zhongsheng Li, QiuHong Li, Yimin Liu, Wei Wang, Fengbin Qi

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