

The 18th Asia-Pacific Web Conference


APWEB 2016

Sept 23-25, 2016

Suzhou, China



PROGRAM

 Soochow Advanced Data Analytics Lab
苏州大学先进数据分析研究中心

 Springer

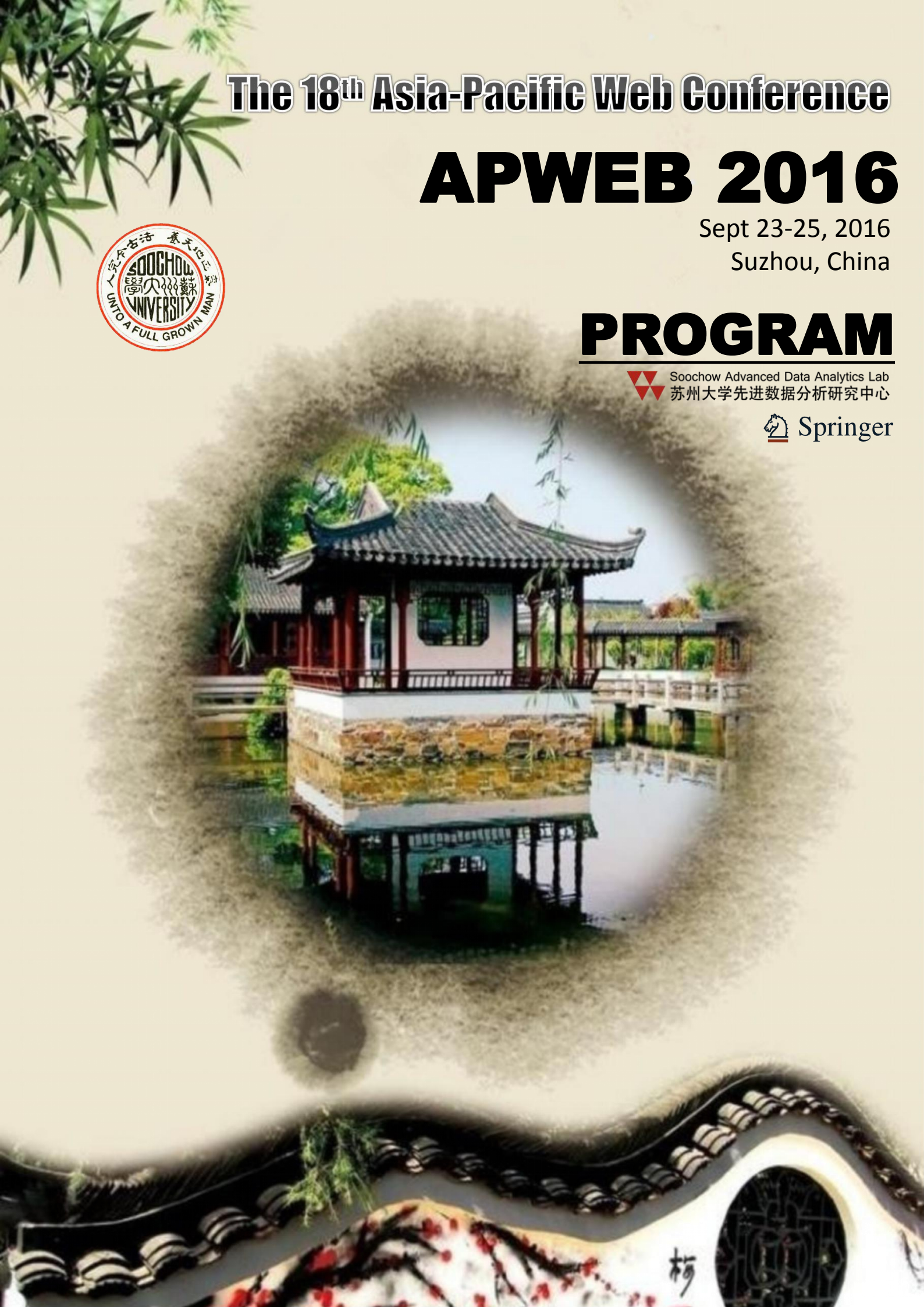


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Preface

Welcome to APWeb 2016! This is the 18th Edition of the Asia Pacific Web Conference. Since the first APWeb conference started in 1998, APWeb evolves over the time to lead the frontier of data-driven information technology research. It has now firmly established itself as a leading Asia-Pacific focused international conference on research, development and advanced applications on large-scale data management, Web and search technologies, and information processing. Previous APWeb conferences were held in Guangzhou (2015), Changsha (2014), Sydney (2013), Kunming (2012), Beijing (2011), Busan (2010), Suzhou (2009), Shenyang (2008), Huangshan (2007), Harbin (2006), Shanghai (2005), Hangzhou (2004), Xi'an (2003), Changsha (2001), Xi'an (2000), Hong Kong (1999), and Beijing (1998).

APWeb 2016 is held during 23-25 September in the beautiful and cultural city of Suzhou, China, a city proud of her history of 2500 years. The host organization of APWeb 2016 is Soochow University, one of the fastest developing universities in China.

As in the previous years, the APWeb 2016 program features the main conference with research papers, an industry track, tutorials, distinguished lectures, demos and a panel. APWeb this year received 215 paper submissions to the main conference from North America, South America, Europe, Asia, and Africa. Each submitted paper underwent a rigorous review process by at least three independent referees from the program committee, with detailed review reports. Finally, 79 full papers, 25 short papers and 17 demo papers were accepted and included in this proceeding. The conference this year has three satellite workshops.

- Second International Workshop on Web Data Mining and Applications (WDMA 2016)
- First International Workshop on Graph Analytics and Query Processing (GAP 2016)
- First International Workshop on Spatial-temporal Data Management and Analytics (SDMA 2016)

We are fortunate to have three world-leading scientists as our keynote speakers; they are Zihua Zhou (Nanjing University, China), Cyrus Shahabi (University of Southern California, USA) and Yufei Tao (The University of Queensland, Australia). The Distinguished Lecture Series, co-chaired this year by Xiaokui Xiao (Nanyang Technology University, Singapore) and Xiaochun Yang (Northeastern University, China), invite active and high-impact researchers to discuss their work at APWeb. The two speakers this year are Chen Li (University of California, Irvine, USA) and Jianliang Xu (Hong Kong Baptist University).

The success of APWeb 2016 is not possible without the hard work by a great team of people, including Workshop Co-Chairs Rong Zhang (ECNU, China) and Wenjie Zhang (University of New South Wales, Australia), Tutorial Co-Chairs, Wook-Shin Han (POSTECH, Korea) and Weng-Chih Peng (National Jiao Tong University, Taiwan), Panel Chair, Ji-Rong Wen (Renmin University of China), Industrial Co-Chairs, Luna Xin Dong (Google Research, USA) and Ying Yan (Microsoft Research, China), Demo Co-Chairs, Zhifeng Bao (RMIT, Australia) and Xiangliang Zhang (KAUST, Saudi Arabia), Distinguished Lecture Series Co-Chairs, Xiaokui Xiao (Nanyang Technological University, Singapore) and Xiaochun Yang (Northeastern University, China), Publication Chair, Guanfeng Liu (Soochow University, China), Social Media and Publicity Chair, Han Su (University of Southern California, USA),

Sponsorship and Finance Chair, An Liu and Lei Zhao (Soochow University, China), Web Masters, Yan Zhao and Yang Li (Soochow University, China).

We would also like to take this opportunity to extend our sincere gratitude to the Program Committee members and external reviewers. A special thank goes to the Local Organization Chair, Zhixu Li (Soochow University, China) and his team or organizers and volunteers! Last but not least, we would like to thank all the sponsors, the APWeb Steering Committee led by Jeffrey Yu, and the host organization, Soochow University, for their support, help and assistance in organizing this conference.

This year's APWeb conference is also the last APWeb conference in its current form. From next year, APWeb and WAIM will be officially combined into one conference, under the new name "APWeb/WAIM Joint Conference on the Web and Big Data". These two conferences share many things in common, from research topics, their regional focuses and target audiences. Now they both share the same inspiration, to be a world class research conference on World Wide Web, Internet and Big Data research and applications with a clear focus on the Asia Pacific region. This year's APWeb is the end of a chapter that we are all proud of, and we are very excited to look forward to the new start!

Enjoy APWeb 2016 and Suzhou!

Tamer Ozsu and Xiaofang Zhou
APWeb 2016 General Co-Chairs
Feifei Li, Kyuseok Shim and Kai Zheng
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Program at a Glance

Friday, September 23 rd , 2016 (Workshop)	
8:00 – 18:00	Registration (Lobby, 1F)
9:00 – 12:00	Workshop on Web Data Mining and Applications (Huijie Hall 1, 2F, 慧杰 1 号厅)
12:00 – 13:30	Lunch
13:30 – 14:20	Workshop on Graph Analytics and Query Processing (Huijie Hall 1, 2F, 慧杰 1 号厅)
14:30 – 17:30	Workshop on Spatio-temporal Data Management and Analytics (Huijie Hall 1, 2F, 慧杰 1 号厅)
17:30 – 20:00	Reception (Lobby, 1F)

Saturday, September 24 th , 2016 (Main Conference)			
8:00 – 18:00	Registration (Lobby, 1F)		
8:30 – 9:00	Opening Professor Xiaofang Zhou, The University of Queensland (Huijie Shengdi Hall, 2F, 慧杰圣地厅)		
9:00 – 10:00	Keynote 1: Big Data Incremental Learning Professor Zhi-Hua Zhou, Nanjing University (Huijie Shengdi Hall, 2F, 慧杰圣地厅)		
10:00 – 10:30	Coffee Break		
10:30 – 12:00	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> DLS 1: Real-Time Analytics and Visualization on Large-Scale Spatial-Temporal-Textual Data Professor Chen Li, University of California, Irvine (Huijie Shengdi Hall, 2F, 慧杰圣地厅) </td> <td style="width: 50%; vertical-align: top;"> Tutorial 1: Data Science for Epidemic Computing Professor Kun-Ta Chuang, National Cheng Kung University (Huijie Hall 6, 2F, 慧杰 6 号厅) </td> </tr> </table>	DLS 1: Real-Time Analytics and Visualization on Large-Scale Spatial-Temporal-Textual Data Professor Chen Li, University of California, Irvine (Huijie Shengdi Hall, 2F, 慧杰圣地厅)	Tutorial 1: Data Science for Epidemic Computing Professor Kun-Ta Chuang, National Cheng Kung University (Huijie Hall 6, 2F, 慧杰 6 号厅)
DLS 1: Real-Time Analytics and Visualization on Large-Scale Spatial-Temporal-Textual Data Professor Chen Li, University of California, Irvine (Huijie Shengdi Hall, 2F, 慧杰圣地厅)	Tutorial 1: Data Science for Epidemic Computing Professor Kun-Ta Chuang, National Cheng Kung University (Huijie Hall 6, 2F, 慧杰 6 号厅)		
12:00 – 13:30	Lunch		

13:30 – 14:30	Keynote 2: Inference of Social Relationships from Location Data Professor Cyrus Shahabi, University of Southern California (Huijie Shengdi Hall, 2F, 慧杰圣地厅)		
14:30 – 15:00	Coffee Break		
15:00 – 16:30	Panel Web Data Management: Retrospection and Prospction (Huijie Shengdi Hall, 2F, 慧杰圣地厅)	Oral Session 1 (Huijie Hall 6, 2F, 慧杰 6 号厅)	Full Paper Poster Session 1 (Foyer, 2F, 2 楼大厅)
16:40 – 18:10		Oral Session 2 (Huijie Hall 6, 2F, 慧杰 6 号厅)	Demo Session (Foyer, 2F, 2 楼大厅)
18:30 – 20:30	Banquet (Huijie Shengdi Hall, 2F, 慧杰圣地厅)		

Sunday, September 25th, 2016 (Main Conference)

9:00 – 10:00	Keynote 3: Small and Sweet MapReduce Algorithms Professor Yufei Tao, The University of Queensland (Huijie Shengdi Hall, 2F, 慧杰圣地厅)		
10:00 – 10:30	Coffee Break		
10:30 – 12:00	DLS 2: Towards Interactive and Social-Aware Spatial Query Services Professor Jianliang Xu, Hong Kong Baptist University (Huijie Shengdi Hall, 2F, 慧杰圣地厅)	Tutorial 2: Workload-Aware Resource Management Technologies for Improving Server Performance Professor Hyeonsang Eom, Seoul National University (Huijie Hall 6, 2F, 慧杰 6 号厅)	
12:00 – 13:30	Lunch		
13:30 – 15:00	Oral Session 3 (Huijie Hall 6, 2F, 慧杰 6 号厅)	Full Paper Poster Session 2 (Foyer, 2F, 2 楼大厅)	
15:00 – 15:30	Coffee Break		
15:30 – 17:00	Oral Session 4 (Huijie Hall 6, 2F, 慧杰 6 号厅)	Short Paper Poster Session (Foyer, 2F, 2 楼大厅)	

Keynotes

Keynote 1 Saturday, September 24th, 9:00 - 10:00 (Session Chair: Xiaofang Zhou)



Big Data Incremental Learning

Professor Zhi-Hua Zhou - Nanjing University

Abstract: Traditional learning approaches usually try to collect all available data and then train a model. In big data applications, however, the data usually come in an accumulation or streaming way. Thus, it is more desirable to do incremental learning rather than training a new model from scratch when receiving new data. It is noteworthy that some important losses used in machine learning are quite challenging for incremental optimization. Moreover, in addition to new training samples, new classes may also occur. In this talk we will introduce some studies along this direction.

Short Biography: Zhi-Hua Zhou is a Professor and Founding Director of the LAMDA Group at Nanjing University. He authored the book "Ensemble Methods: Foundations and Algorithms", and published more than 100 papers in top-tier journals and conference proceedings. His work have received more than 22,000 citations, with a h-index of 71. He also holds 14 patents and has good experiences in industrial applications. He has received various awards, including the National Natural Science Award of China, the IEEE CIS Outstanding Early Career Award, the Microsoft Professorship Award, 12 international journal/conference paper/competition awards, etc. He serves as the Executive Editor-in-Chief of Frontiers of Computer Science, Associate Editor-in-Chief of Science China, and Associate Editor of ACM TIST, IEEE TNNLS, etc. He founded ACML (Asian Conference on Machine Learning) and served as General Chair of ICDM'16, PAKDD'14, etc., Program Chair of IJCAI'15 Machine Learning track, SDM'13, etc. He also serves as Advisory Committee member for IJCAI 2015-2016, and Steering Committee Member of PAKDD and PRICAI. He is a Fellow of the AAAI, IEEE, IAPR, IET/IEE, CCF, and an ACM Distinguished Scientist.

Keynote 2 Saturday, September 24th, 13:30 – 14:30 (Session Chair: Kyuseok Shim)**Inference of Social Relationships from Location Data**

Professor Cyrus Shahabi - University of Southern California (USC)

Abstract: For decades, social scientists have been studying people's social behaviors by utilizing sparse datasets obtained by observations and surveys. These studies received a major boost in the past decade due to the availability of web data (e.g., social networks, blogs and review web sites). However, due to the nature of the utilized dataset, these studies were confined to behaviors that were observed mostly in the virtual world. Differing from all the earlier work, here, we aim to study social behaviors by observing people's behaviors in the real world. This is now possible due to the availability of large high-resolution spatio-temporal location data collected by GPS-enabled mobile devices through mobile apps (Google's Map/Navigation/Search/Chrome, Facebook, Foursquare, WhatsApp, Twitter) or through online services, such as geo-tagged contents (tweets from Twitter, pictures from Instagram, Flickr or Google+ Photo), etc.

In particular, we focus on inferring two specific social measures: 1) pair-wise strength -- the strength of social connections between a pair of users, and 2) pair-wise influence - the amount of influence that an individual exerts on another, by utilizing the available high-fidelity location data representing people's movements.

Finally, we argue that due to the sensitivity of location data and user privacy concerns, these inferences cannot be largely carried out on individually contributed data without privacy guarantees. Hence, we discuss open problems in protecting individuals' location information while enabling these inference analyses.

Short Biography: Cyrus Shahabi is a Professor of Computer Science and Electrical Engineering and the Director of the Information Laboratory (InfoLAB) at the Computer Science Department and also the Director of the NSF's Integrated Media Systems Center (IMSC) at the University of Southern California (USC). He is also the director of Informatics at USC' Viterbi School of Engineering. He was the CTO and co-founder of a USC spin-off, Geosemble Technologies, which was acquired in July 2012. Since then, he founded another company, ClearPath (recently rebranded as TallyGo), focusing on predictive path-planning for car navigation systems. He received his B.S. in Computer Engineering from Sharif University of Technology in 1989 and then his M.S. and Ph.D. Degrees in Computer Science from the University of Southern California in May 1993 and August 1996, respectively. He authored two books and more than two hundred research papers in the areas of databases, GIS and multimedia with more than 12 US Patents.

Dr. Shahabi was an Associate Editor of IEEE Transactions on Parallel and Distributed Systems (TPDS) from 2004 to 2009, IEEE Transactions on Knowledge and Data Engineering (TKDE) from 2010-2013 and VLDB Journal from 2009-2015. He is currently on the editorial board of the ACM Transactions on Spatial Algorithms and Systems (TSAS) and ACM Computers in Entertainment. He is the founding chair of IEEE NetDB workshop and also the general co-chair of SSTD'15, ACM GIS 2007, 2008 and 2009. He chaired the nomination committee of ACM SIGSPATIAL for the 2011-2014 terms. He is a PC co-Chair of BigComp'2016 and MDM'2016. In the past, he has been PC co-chair of DASFAA 2015, IEEE MDM 2013 and IEEE BigData 2013, and regularly serves on the program committee of major conferences such as VLDB, ACM SIGMOD, IEEE ICDE, ACM SIGKDD, IEEE ICDM, and ACM Multimedia.

Dr. Shahabi is a fellow of IEEE, and a recipient of the ACM Distinguished Scientist award in 2009, the 2003 U.S. Presidential Early Career Awards for Scientists and Engineers (PECASE), the NSF CAREER award in 2002, and the 2001 Okawa Foundation Research Grant for Information and Telecommunications.

Keynote 3 Sunday, September 25th 9:00 – 10:00 (Session Chair: Shazia Sadiq)**Small and Sweet MapReduce Algorithms**

Professor Yufei Tao - The University of Queensland

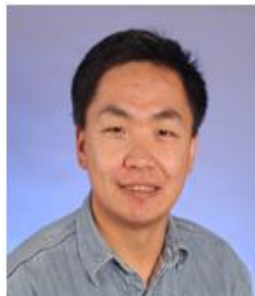
Abstract: MapReduce has grown into a matured and powerful paradigm for large-scaled parallel computing. This keynote will introduce principles for designing algorithms on this paradigm that are both (i) small, i.e., they can be implemented in a real system with reasonable efforts, and (ii) sweet, i.e., they possess strong theoretical performance guarantees. Assuming little prior knowledge, we will start with the definition of the massively parallel computation (MPC) model, which has nowadays become a popular model in the database community for studying MapReduce algorithms. We will then move on to discuss MPC algorithms that can solve several fundamental database problems (particular, sorting and joins) optimally. The talk will end with several open problems exciting in the eyes of the speaker.

Short Biography: Yufei Tao is a Professor at the School of Information Technology and Electrical Engineering, the University of Queensland (UQ). Prior to joining UQ, he held professorial positions at the City University of Hong Kong, the Chinese University of Hong Kong (CUHK), and the Korea Advanced Institute of Science and Technology (KAIST). He served as an associate editor of ACM Transactions on Database Systems (TODS) from 2008 to 2015, and of IEEE Transactions on Knowledge and Data Engineering (TKDE) from 2012 to 2014. He was a PC chair of International Conference on Data Engineering (ICDE) 2014, and of International Symposium on Spatial and Temporal Databases (SSTD) 2011. He was a keynote speaker at International Conference on Database Theory (ICDT) 2016, and a winner of the SIGMOD best paper award in 2013 and 2015.

Distinguished Lecture Series

DLS 1

Saturday, September 24th 10:30 – 12:00 (Session Chair: Xiaochun Yang)



Real-Time Analytics and Visualization on Large-Scale Spatial-Temporal-Textual Data

Professor Chen Li - University of California, Irvine

Abstract: We are developing a system called Cloudberry to support analytics and visualization on large data sets with spatial, temporal, and textual attributes, such as social media data and query logs. It supports aggregation queries on various types of attributes, and allows efficient data exploration at different granularities (e.g., state, county, and city). It also supports real-time analytics, which can allow applications to monitor “what’s happening now.” To achieve a high speed, it includes an intelligent middleware for view materialization and cache management. As a general-purpose solution for large data sets, it uses the Apache AsterixDB big data management system that provides rich features and high performance, such as various indexes and data feeds. In this talk, we will give an overview of the system, our initial results, and open challenges in this direction. A live demonstration using tweets is available at <http://cloudberry.ics.uci.edu/>.

Short Biography: Chen Li is a professor in the Department of Computer Science at UC Irvine. He received his Ph.D. degree in Computer Science from Stanford University, and his M.S. and B.S. in Computer Science from Tsinghua University, China, respectively. His research interests are in the field of data management, including data cleaning, data integration, data-intensive computing, and text analytics. He was a recipient of an NSF CAREER Award, several test-of-time publication awards, and many other grants and industry gifts. He was once a part-time Visiting Research Scientist at Google. He founded a company SRCH2 to develop an open source search engine with high performance and advanced features.

DLS 2

Sunday, September 25th 10:30 – 12:00 (Session Chair: Kai Zheng)



Towards Interactive and Social-Aware Spatial Query Services

Professor Jianliang Xu - Hong Kong Baptist University

Abstract: Location-based service (LBS) have been gaining in prominence, with about 40% of world's population using smartphones today. As such, there is a growing need to continuously advance the spatial database research for emerging LBS applications, which pose new challenges as well as new opportunities. For example, the convergence of location data and social media has enabled a new class of geo-social queries that combine location and social factors in query processing. In addition, to enhance system usability and user experience, it is important to support instantaneous and interactive responses to queries. In this talk, we will present several of our recent efforts on geo-social queries and "why-not"/"what-if" interactive queries that are aimed to improve the functionality, usability, and performance of spatial query services. We will also discuss some possible future research directions.

Short Biography: Jianliang Xu is a Professor in the Department of Computer Science, Hong Kong Baptist University (HKBU). He received the BEng degree from Zhejiang University and the PhD degree from Hong Kong University of Science and Technology. He held visiting positions at Pennsylvania State University and Fudan University. His current research interests include data management, database security & privacy, and location-aware computing. He has published more than 150 technical papers in these areas, most of which appeared in leading journals and conferences including SIGMOD, VLDB, ICDE, TODS, TKDE and VLDBJ, with an h-index of 38 (Google Scholar). He was a recipient of IEEE ICDE Outstanding Reviewer Award (2010) and HKBU Faculty Performance Award for Outstanding Young Researcher (2012). He has served as a program co-chair/vice chair for a number of major international conferences including IEEE ICDCS 2012, IEEE CPSNA 2015 and WAIM 2016. He is an Associate Editor of IEEE Transactions on Knowledge and Data Engineering (TKDE).

Tutorials

Tutorial 1 Saturday, September 24th 10:30 – 12:00



Data Science for Epidemic Computing

Professor Kun-Ta Chuang - National Cheng Kung University

Abstract: The control of epidemic spread is the critical challenge for the authority in recent decades. When people are moving to live in the urban area, the crowded situation inevitably increases the outbreak probability of some contagious diseases such as flu and dengue fever. For the need to prevent the out-of-control infections, it is necessary to develop new technologies, predicting and evaluating the prevention result along with the dynamic deployment of intervention strategies over time.

In this tutorial, we will introduce some mechanisms from data science and discuss their extension applied in the outbreak control during the spread of dengue fever in Taiwan 2015. We will also discuss the intervention procedure in Taiwan and show the way to incorporate data mining idea for epidemic computing into the process of decision making in the government side. The audience will know the basic concept of public health and learn the way to devise new computational algorithms for this critical challenge.

Short Biography: Kun-Ta Chuang currently serves as an assistant professor in Department of Computer Science and Information Engineering in National Cheng Kung University. He was a senior engineer at EDA giant Synopsys during 2006-2011. He received the Ph.D. degree from Graduate Institute of Communication Engineering, National Taiwan University, Taipei, Taiwan in 2006. His research interests include data mining, web technology, mobile data management, and cloud computing.



Workload-Aware Resource Management Technologies for Improving Server Performance

Professor Hyeonsang Eom - Seoul National University

Abstract: Datacenters where various sorts of servers may run have been becoming larger and more heterogeneous, possibly being highly distributed. It is crucial to manage many heterogeneous resources effectively to efficiently and cost-effectively provide services; it is necessary to allocate “right” resources to Virtual Machines (VMs) in virtualized datacenters in order to decrease the cost of the operation while meeting the SLAs (Service Level Agreements) such as meeting the latency requirement. One of the most effective ways to allocate “right” resources to a VM would be to do it considering the characteristics of the VM such as the memory intensiveness of the workload executed in the VM. However, the existing schedulers do not consider these kinds of characteristics, including the NOVA scheduler of OpenStack and DRS (Distributed Resource Scheduler) of VMWare. In this tutorial, I explain some workload-aware schedulers, and our workload-aware one that schedules VMs on OpenStack clusters of nodes, considering the characteristics of workload executed in the VMs. Our experimental study with Redis and Memcached possibly caching the data and links of Web servers shows that our memory-intensiveness-aware scheduler may outperform the default scheduler of OpenStack and DRS as well in terms of throughput and latency.

Short Biography: Hyeonsang Eom received the BS degree in computer science and statistics from Seoul National University (SNU), Seoul, Korea, in 1992, and the MS and PhD degrees in computer science from the University of Maryland at College Park, Maryland, USA, in 1996 and 2003, respectively. He is currently an associate professor in the Department of Computer Science and Engineering at SNU, where he has been a faculty member since 2005. He was an intern in the data engineering group at Sun Microsystems, California, USA, in 1997, and a senior engineer in the Telecommunication R&D Center at Samsung Electronics, Korea, from 2003 to 2004. His research interests include distributed systems, cloud computing, operating systems, high performance storage systems, energy efficient systems, fault-tolerant systems, security, and information dynamics.

Panel Session

Panel (Saturday, September 24th 15:00 – 16:30)

Web Data Management: Retrospection and Prospection

Panel Coordinator: Prof Ji-Rong Wen (Renmin University, China)

Panelist:

Prof. Xiaoyong Du (Renmin University, China)

Prof. Chen Li (University of California, Irvine)

Prof. Qing Li (City University of Hong Kong)

Prof. Jeffrey Yu (Chinese University of Hong Kong)

Prof. Xiaofang Zhou (The University of Queensland)

Workshop Sessions

Workshop on Web Data Mining and Applications (Friday, September 23rd 9:00 – 12:00)

Maximizing the Cooperative Influence Spread in a Social Network Oriented to Viral Marketing

Hong Wu, Zhijian Zhang, Kun Yue, Binbin Zhang, Weiyi Liu

A Multi-Model Based Approach for Big Data Analytics: the Case on Education Grant Distribution

Weiqiang Li, Wusi Ci, Jintao Yang, Wenhan Wu, Jie He

Sentiment Target Extraction Based on CRFs with Multi-features for Chinese Microblog

Bingfeng Chen, Zhifeng Hao, Ruichu Cai, Wen Wen, Shenzhi Du

EMD-DSJoin: Efficient Similarity Join over Probabilistic Data Streams Based on Earth Mover's Distance

Jia Xu1, Jiazhen Zhang, Chao Song, Qianzhen Zhang, Pin Lv, Taoshen Li, Ningjiang Chen

Sentiment Analysis on User Reviews through Lexicon and Rule-based Approach

Sobh Zeb, Usman Qamar, Faiza Hussain

Social Link Prediction Based on the Nodes' Information Transfer

Chen Yunfang, Wang Tongli, Zhang Wei

An Improved ML-kNN Approach Based on Coupled Similarity

Xiaodan Yang, Lihua Zhou, Lizhen Wang

A Novel Recommendation Method Based on User's Interest and Heterogeneous Information

Jiatong Wang, Zhenqian Fei, Shuyu Qiao, Wei Sun, Xiaoxin Sun, BangZuo Zhang

Knee Point-driven Bottleneck Detection Algorithm For Cloud Service System

Xiao-Long Liu, Xue-Bai Zhang, Hsiang Chao and Shyan-Ming Yuan

Confirmatory Analysis on Influencing Factors When Mention Users in Twitter

Yueyang Li, Zhaoyun Ding, Xin zhang, Bo Liu, Weice Zhang

A Stock Recommendation Strategy Based On M-Ilda Model

Min-fan He

Short-term Forecasting and Application about Indoor Cooling Load Based on EDA-PSO-BP Algorithm

ZhiWei Huang, Li Yan, XinYi Peng, Jia Tan

Workshop on Graph Analytics and Query Processing (Friday, September 23rd 13:30 – 14:20)

Identifying Relevant Subgraphs in Large networks

Zheng Liu, Shuting Guo, Tao Li, Wenyan Chen

User-dependent Multi-relational Community Detection in Social Networks

Peizhong Yang, Lihua Zhou, Hongmei Chen

Compressing Streaming Graph Data Based on Triangulation

Liang Zhang, Ming Gao, Weining Qian, Aoying Zhou

Workshop on Spatio-temporal Data Management and Analytics (Friday, September 23rd 14:30 – 17:30)

Scene Classification in High Resolution Remotely Sensed Images based on PCANet

Dongmei Huang, Yanling Du, Qi He, Wei Song and Kefu Liu

Finding Top-k Places for Group Social Activities

Xiaosheng Feng, Nikos Armenatzoglou, Hao Xu, Xiang Zhao, Pan Hui

Temporal Spatial-Keyword Search On Databases Using SQL

Jingru Wang, Jiajia Hou, Feiran Huang, Wei Lu, Xiaoyong Du

Features of Rumor Spreading on WeChat Moments

Wangchun Jiang, Bin Chen, Lingnan He, Yichong Bai, Xiaogang Qiu

Distance-Based Continuous Skylines On Geo-Textual Data

Jialiang Chen, Jiping Zheng, Shunqing Jiang, and Xianhong Qiu

Improving Urban Traffic Evacuation Capability in Emergency Response by Using Smart Phones

Ping Zhang, Yi Liu, Rui Yang, Hui Zhang, and Zengli Gong

Context Enhanced Keyword Extraction for Sparse Geo-entity Relation from Web Texts

Li Yu, Feng Lu, Xueying Zhang, Xiliang Liu

A Stacked Generalization Framework for City Traffic Related Geospatial Data Analysis

Xiliang Liu, Li Yu, Peng Peng, Feng Lu

Detection of Statistically Significant Bus Delay Aggregation by Spatial-Temporal Scanning

Xia Wu, Lei Duan, Tinghai Pang, Jyrki Nummenmaa

Acquisition and Representation of Knowledge for Academic Field

Jie Yu, Haiqiao Wu, Chao Tao, Lingyu Xu

Using Learning Features to Find Similar Trajectories

Peiguo Fu, Haozhou Wang, Kuiwen Liu, Xiaohui Hu, Hui Zhang

An Algorithm for Mining Moving Flock Patterns from Pedestrian Trajectories

Yang Cao, Jia Zhu, Fang Gao

Oral Sessions

Oral Session 1 (Saturday, September 24th 15:00 – 16:30, Session Chair: Zhifeng Bao)

Probabilistic Nearest Neighbor Query in Traffic-Aware Spatial Networks

*Shuo Shang**, *Zhewei Wei*, *Ji-Rong Wen*, *Shunzhi Zhu*

FTS: A Practical Model for Feature-based Trajectory Synthesis

Jiapeng Li, *Wei Chen*, *An Liu*, *Zhixu Li*, *Lei Zhao**

Efficient Group Top-k Spatial Keyword Query Processing

*Kai Yao**

Flexible and Adaptive Stream Join Algorithm

*Junhua Fang**, *Xiaotong Wang*, *Rong Zhang*, *Aoying Zhou*

Finding Frequent Items in Time Decayed Data Streams

Shanshan Wu, *Huaizhong Lin**, *Leong Hou U*, *Yunjun Gao*, *Dongming Lu*

Oral Session 2 (Saturday, September 24th 16:30 – 18:00, Session Chair: Yunjun Gao)

Distributed Text Representation with Weighting Scheme Guidance for Sentiment Analysis

Zhe Zhao, *Tao Liu**, *Xiaoyun Hou*, *Bofang Li*, *Xiaoyong Du*

Practical Study of Subclasses of Regular Expressions in DTD and XML Schema

Yeting Li, *Xiaolan Zhang*, *Feifei Peng*, *Haiming Chen**

NERank: Bringing Order to Named Entities from Texts

*Chengyu Wang**, *Rong Zhang*, *Xiaofeng He*, *Guomin Zhou*, *Aoying Zhou*

Latent Semantic Diagnosis in Traditional Chinese Medicine

Wendi Ji, *Ying Zhang**, *Xiaoling Wang*, *Yiping Zhou*

Scalable Private Blocking Technique for Privacy-Preserving Record Linkage

*Shumin Han**, *Rong Shen*

Oral Session 3 (Sunday, September 25th 13:30 – 15:00 Session Chair: Lei Zou)

When a Friend Online is More Than a Friend in Life: Intimate Relationship Prediction in Microblogs

*Lan Yunshi**, Zhang Mengqi, Feida Zhu, Jiang Jing, Lim Ee-Peng

Learn To Recommend Local Event Using Heterogeneous Social Networks

*Shaoqing Wang**, Zheng Wang, Cuiping Li, Kankan Zhao, Hong Chen

Psychological Stress Detection from Online Shopping

*Liang Zhao**, Hao Wang, yuanyuan Xue, Qi Li, Ling Feng

Top-k Temporal Keyword Query over Social Media Data

*Fan Xia**, chengcheng Yu, Weining Qian, Aoying Zhou

Online Prediction for Forex with an Optimized Experts Selection Model

*Jia Zhu**, Jing Yang, Jing Xiao, Changqin Huang, Gansen Zhao, Yong Tang

Oral Session 4 (Sunday, September 25th 15:30 – 17:00 Session Chair: Zhewei Wei)

Classifying Relation via Bidirectional Recurrent Neural Network based on Local Information

*Xiaoyun Hou**, Zhe Zhao, Tao Liu, Xiaoyong Du

Correlation-based Weighted k-Labelsets for Multi-Label Classification

*Jingyang Xu, Ma Jun**

Fast Rare Category Detection Using Nearest Centroid Neighborhood

*Song Wang, Hao Huang**, Yunjun Gao, Tieyun Qian, Liang Hong, Zhiyong Peng

Forecasting Career Choice for College Students Based on Campus Big Data

*Min Nie, Hu Xia, Defu Lian**

A Real Time Wireless Interactive Multimedia System

*Hong Li, Wei Yang**, Yang Xu, Jianxin Wang, Liusheng Huang

Full Paper Poster Sessions

Full Paper Poster Session 1 (Saturday, September 24th 15:00 – 16:30)

Making Cold Data Identification Efficient in Non-Volatile Memory Systems

*Binbin Wang**, *Jiwu Shu*

Measuring Directional Semantic Similarity with Multi-Features

Bo Liu, *Xuanhua Shi*, *Hai Jin** (Huazhong Uni. of Sci. & Tech.) <hjin@hust.edu.cn>*

Towards Efficient Influence Maximization for Evolving Social Networks

*Xiaodong Liu**, *Xiangke Liao*, *Shanshan Li*, *Bin Lin*

A Topic-Specific Contextual Expert Finding Method in Social Network

*YiJia Li**, *Xiaoqin Xie*

B-mine: Frequent Pattern Mining and Its Application to Knowledge Discovery from Social Networks

*Carson Kai-Sang Leung**, *Fan Jiang*, *Hao Zhang*

Preference Join on Heterogeneous Data

Changping Wang, *Chaokun Wang**, *Hao Wang*, *Jun Chen*, *Xiaojun Ye*

Finding Latest Influential Research Papers through Modeling Two Views of Citation Links

*Jun He**, *Lu Huang*

Detecting Community Pacemakers of Burst Topic in Twitter

*Guozhong Dong**, *Wu Yang*, *Feida Zhu*, *Wei Wang*

An Adaptive Partition-Based Caching Approach for Efficient Range Queries on Key-value Data

*Wei Ge**, *Min Chen*, *Chunfeng Yuan*, *Yihua Huang*

A Secure and Robust Covert Channel Based on Secret Sharing Scheme

*Xiaorong Lu**, *Yang Wang*, *Liusheng Huang*, *Wei Yang*, *Yao Shen*

An Efficient Online Event Detection Method for Microblogs via User Modeling

Weijing Huang, *Wei Chen**, *Lamei Zhang*, *Tengjiao Wang*

Confidence-learning based collaborative filtering with heterogeneous implicit feedbacks

*Jing Wang**, *Lanfen Lin*, *Heng Zhang*, *Jiaqi Tu*

A Hybrid Method for POI Recommendation: Combining Check-in Count, Geographical Information and Reviews

Xiefeng Xu, *Pengpeng Zhao**, *Guanfeng Liu*, *Jiajie Xu*, *Jian Wu*, *Zhiming Cui*, *Caidong Gu*

Time-Constrained Sequenced Route Query in Indoor Spaces

Wenyi Luo, *Peiquan Jin**, *Lihua Yue*

Dynamic User Attribute Discovery on Social Media

Xiu Huang, Yang Yang, Yue Hu, Fumin Shen, Jie Shao*

A Label Inference Method based on Maximal Entropy Random Walk over Graphs

Jing Pan, Yajun Yang, Qinghua Hu, Hong Shi*

A Data Grouping CNN Algorithm for Short-term Traffic Flow Forecasting

Donghai Yu, Yang Liu, Xiaohui Yu*

Context-aware Chinese Microblog Sentiment Classification with Bidirectional LSTM

Yang Wang, Shi Feng, Daling Wang, Yifei Zhang, Ge Yu*

Mining Recent High Expected Weighted Itemset from Uncertain Databases

Wensheng Gan, Jerry Chun-Wei Lin, Philippe Fournier-Viger, Han-Chieh Chao*

Handling Estimation Inaccuracy in Query Optimization

Chiraz Moumen, Franck Morvan, Abdelkader Hameurlain*

Accelerating Time Series Shapelets Discovery with Key Points

Zhenguo Zhang, Haiwei Zhang, Yanlong Wen, Xiaojie Yuan*

Real-time Anomaly Detection over ECG Data Stream Based on Component Spectrum

*Meng Wu, Zhen Qiu, Shenda Hong, Hongyan Li**

EPLA:Efficient Personal Location Anonymity

Dapeng Zhao, Kai Zhang, Yuanyuan Jin, Xiaoling Wang, Patrick C. K. Hung, Wendi Ji*

Improving Recommendation Accuracy for Travelers by Exploiting POI Correlations

Kai Zhang, Dapeng Zhao, Xiaoling Wang*

Multi-label Chinese Microblog Emotion Classification via Convolutional Neural Network

Yaqi Wang, Shi Feng, Daling Wang, Ge Yu*

Mechanism Analysis of Competitive Information Synchronous Dissemination in Social Networks

Yuan Lu, Yuanzhuo Wang, Jianye Yu, Jingyuan Li, li Liu*

Maximizing the influence ranking under limited Cost in social network

XiaoGuang Hong, Ziyang Liu, Zhaohui Peng, Zhiyong Chen, Hui Li*

FHSM: Factored Hybrid Similarity Methods for Top-N Recommender Systems

XIN XIN, Dong Wang, Yue Ding, Lini Chen*

Combo-Recommendation based on Potential Relevance of Items (Industry Paper)

Pan Yanhong, Rong Zhang, Yanfei Zhang*

Full Paper Poster Session 2 (Saturday, September 25th 13:30 – 15:00)

Personalized Resource Recommendation Based on Regular Tag and User Operation

*Sisi Liu, Yongjian Liu, Qing Xie**

A Workload-Driven Vertical Partitioning Approach Based on Streaming Framework

*Guo Mengyu, Kang Hong, Yuan Xiaojie**

Discovering Companion Vehicles from Live Streaming Traffic Data

Chen Liu, Xiongbin Wang, Meiling Zhu, Yanbo Han*

Online Streaming Feature Selection using Sampling Techniques and Correlations between Features

Hai-tao Zheng, Haiyang Zhang*

Efficient Evaluation of Shortest Travel-time Path Queries in Road Networks by Optimizing Waypoints in Route Requests through Spatial Mashups

Detian Zhang, Chi-Yin Chow, Qing Li, An Liu*

An Adaptive kNN Using Listwise Approach for Implicit Feedback

Jing Xiao, Bu-Xiao Wu, Jia Zhu, Chen Ding*

An Approach for Cross-Community Content Recommendation: A Case Study on Docker

Yong Yang, Ying LI, Hongyan Tang, Tong Jia, Wenlong Shao*

Fuzzy Keywords Query

Shanshan Han, Hongzhi Wang, Hong Gao, Jianzhong Li, Shenbin Huang*

A Context-aware Method for Top-k Recommendation in Smart TV

Peng Liu, Ma Jun, Yongjin Wang, Lintao Ma, Shanshan Huang*

Discovering Approximate Functional Dependencies from distributed big data

*Weibang Li**

Spica: A Path Bundling Model for Rational Route Recommendation

*Lei Lv, Yang Liu, Xiaohui Yu**

Near-Duplicate Web Video Retrieval and Localization Using Improved Edit Distance

Hao Liu, Qingjie Zhao, Hao Wang, Cong Zhang*

Improving Temporal Recommendation Accuracy and Diversity via Long and Short-Term Preference Transfer and Fusion Models

*Bei Zhang, Yong Feng**

Modeling for Noisy Labels of Crowd Workers

Qian Yan, Hao Huang, Yunjun Gao, Chen Ying, Qingyang Hu, Tieyun Qian, Qinming He*

Man-O-Meter: Modeling and Assessing the Evolution of Language Usage of Individuals on Microblogs

Kuntal Dey, Saroj Kaushik, Hemank Lamba, Seema Nagar*

Repair Singleton IDs on the Fly

Xingcan Cui, Xiaohui Yu, De Guo*

CoDS:Co-training with Domain Similarity for Cross-domain Image Sentiment Classification

Linlin Zhang, Meng Chen, Xiaohui Yu, Yang Liu*

Feature Selection via Vectorizing Feature's Discriminative Information

Jun Wang, Hengpeng Xu, Jinmao Wei*

Star-Scan : A Stable Clustering by Statistically Finding Centers and Noises

Nan Yang, Qing Liu, Yaping Li, Lin Xiao, Xiaoqing Liu*

The Competition of User Attentions Among Social Network Services: a Social Evolutionary Game Approach

Jingyuan Li, Yuanzhuo Wang, Yuan Lu*

A Target-dependent Sentiment Analysis Method for Micro-blog Streams

Yongheng Wang, Hui Gao, Shaofeng Geng*

Incomplete Data Classification Based on Multiple Views

Ming Sun, Hongzhi Wang, Fanshan Meng, Jianzhong Li, Hong Gao*

Community Inference with Bayesian Symmetric Non-Negative Matrix Factorization

Xiaohua Shi, Hongtao Lu*

An Online Approach for Direction-Based Trajectory Compression with Error Bound Guarantee

Bingqing Ke, Jie Shao, Yi Zhang, Dongxiang Zhang, Yang Yang*

Academic Paper Recommendation Based on Community Detection in Citation-Collaboration Networks

Qisen Wang, Wenzhong Li, Xiao Zhang, Sanglu Lu*

Budget Minimization with Time and Influence Constraints in Social Network

Peng Dou, Sizhen Du, Guojie Song*

Quantifying the Effect of Sentiment on Topic Evolution in Chinese Microblog

Peng Fu, Zheng Lin, Hailun Lin, Fengcheng Yuan, Weiping Wang, Dan Meng*

Mining Co-locations from Continuously Distributed Uncertain Spatial Data

Bozhong Liu, Ling Chen, Chunyang Liu, chengqi Zhang, Weidong Qiu*

Aggregating Crowd Wisdom with Instance Grouping Methods

Li'ang Yin, Zhengbo Li, Jianhua Han, Yong Yu*

Short Paper Poster Session

Short Paper Poster Session (Sunday, September 25th 15:30 – 17:00)

Similarity Recoverable, Format-preserving String Encryption

*Yijin Li, Hui Wang**

A Collaborative Join Scheme on a MIC-based Heterogeneous Platform

Kailai Zhou, Hui Sun, Hong Chen, Tianzhen Wu, Cuiping Li*

RORS: Enhanced Rule-based OWL Reasoning on Spark

Zhihui Liu, Zhiyong Feng, Xiaowang Zhang, Xin Wang, Guozheng Rao*

Efficient Community Maintenance for Dynamic Social Networks

Qin Hongchao, Yuan Ye, Feida Zhu, Wang Guoren*

User Occupation Prediction on Microblogs

Xia Lv, Peiquan Jin, Lihua Yue*

A Hadoop-based Database Querying Approach for Non-expert Users

Yale Chai, Chao Wang, Yanlong Wen, Xiaojie Yuan*

Historical Geo-Social Query Processing

Xiaoying Chen, Chong Zhang, Yanli Hu, Bin Ge, Weidong Xiao*

A Distributed Frequent Itemsets Mining Algorithm Using Sparse Boolean Matrix on Spark

Yonghong Luo, Zhifan Yang, Huike Shi, ying Zhang*

FVBM: A Filter-Verification-Based Method for Finding Top-k Closeness Centrality on Dynamic Social Networks

*Yiyong Lin, Jinbo Zhang, Yuanxiang Ying, Shenda Hong, Hongyan Li**

Purchase and Redemption Prediction based on Multi-task Gaussian Process and Dimensionality Reduction

Chao Wang, Xiangrui Cai, Zhenguo Zhang, Yanlong Wen*

WS-Rank: Bringing Sentences into Graph for Keyword Extraction

Fan Yang, YueSheng Zhu, Yu-Jia Ma*

Pairwise Expansion: A New Topdown Search for mCK Queries Problem over Spatial Web

Yuan Qiu, Tadashi Ohmori, Takahiko Shintani, Hideyuki Fujita*

A Graph Clustering Algorithm for Citation Networks

Bo Zhang, Tiezheng Nie, Derong Shen, Yue Kou, Ge Yu, ziwei Zhou*

Online Hot Topic Detection from Web News Based on Bursty Term Identification

Chao Wang, Xue Zhao, Ying Zhang, Xiaojie Yuan*

Ontology-Based Interactive Post-Mining of Interesting Co-location Patterns

Xuguang Bao, Lizhen Wang, Hongmei Chen*

Profit Maximizing Route Recommendation for Vehicle Sharing Requests

Zhiqiang Zhao, Jianbin Huang, Hua Gao, Heli Sun, Xiaolin Jia*

Grouped Team Formation in Social Networks

Ze Lv, Jianbin Huang, Zhou Yu, Heli Sun, Xiaolin Jia*

AALRSMF: An Adaptive Learning Rate Schedule for Matrix Factorization

Feng Wei, Shaoyin Cheng, Fan Jiang, Hao Guo*

Reasoning with Large Scale OWL 2 EL Ontologies based on MapReduce

Zhangquan Zhou, Guilin Qi, Chang Liu, Raghava Mutharaju, Pascal Hitzler*

Mentioning the optimal users in the appropriate time on Twitter

*Zhaoyun Ding**

A K-Motifs Discovery Approach for Large Time-Series Data Analysis

Yupeng Hu, Cun Ji, Ming Jing, Xueqing Li*

K-th Order Skyline Queries in Bicriteria Networks

Shunqing Jiang, Jiping Zheng, Jialiang Chen, Wei Yu*

A Simple Stochastic Gradient Variational Bayes for the Correlated Topic Model

Tomonari Masada, Atsuhiko Takasu*

Open Sesame! Web Authentication Cracking via Mobile App Analysis

Hui Liu, Yuanyuan Zhang, Juanru Li, Hui Wang, Dawu Gu*

Microblog Sentiment Analysis Based on Sentiment Features

Weiwei Li, Yuqiang Li, Yan Wang*

Demo Session

Demonstration Session (Sunday, September 24th 16:40 – 18:10)

Factorization Machine Based Business Credit Scoring By Leveraging Internet Data

*Ge Zhu, Lin Li**

A Text Retrieval System Based on Distributed Representations

Zhe Zhao, Tao Liu, Jun Chen, Bofang Li, Xiaoyong Du*

An Alarming and Prediction System for Infections Disease Baced on Combined Modles

Li Jiahong, Hongzhi Wang, zhang Shengqiang, Qu Ziqi, gao Xiangyu, Shenbin Huang*

CB-CAS: a CAS-Based Cross-Browser SSO System

*Peng Gao, Yongjian Liu, Qing Xie**

TagTour: a Personalized Tourist Resource Recommendation System

*Tian Han, Yongjian Liu, Qing Xie**

ADDS: An Automated Disease Diagnosis-aided System

Zhentuan Xu, Xiaoli Wang, Yating Chen, Yangbin Pan, Mengsang Wu, Mengyuan Xiong*

KEIPD:Knowledge Extraction and Inference System for Personal Documents

*Zhaoyang Lv, Yuanyuan Liu, Xiaohui Yu**

A Demonstration of Encrypted Logistics Information System

Huakang Li, Xinwen Zhang, Yitao Yang, Guozi Sun*

OPGs-Rec: Organized-POI-Groups Based Recommendation

*Jiapeng Li, Yanxia Xu, Lei Zhao**

PCMiner:An Extensible Framework for Analysing and Detecting Protein Complexes

Danyang Xiao, Jia Zhu, Yong Tang, Lingxiao Chen, Wei Jingmin*

Co-location Detector: A System to Find Interesting Spatial Co-locating Relationships

Xuguang Bao, Lizhen Wang, Qing Xiao*

OICRM: An Ontology-based Interesting Co-location Rule Miner

Xuguang Bao, Lizhen Wang, Meijiao Wang*

A Demonstration of QA System based on Knowledge Base

Zhenjiang Dong, Hong Chen, Jingqiang Chen, Huakang Li, Tao Li*

A Chronic Disease Analysis System Based on Dirty Data Mining

Ming Sun, Hongzhi Wang, Jianzhong Li, Hong Gao, Shenbin Huang*

Indoor Map Service System Based On Wechat Two-dimensional Code

Chen Guo, Qingwu HU*

MASM:A Novel Movie Analysis System based on Microblog

Xingcheng Wu, Jia Zhu, Yong Tang, Rui Ding, Xueqin Lin, Chuanhua Xu*

A System for Searching Renting Houses Based on Relaxed Query Answering

Jianfeng Du, Kunxun Qi, Can Lin*

About Suzhou

Suzhou is a city with a long history on the lower reaches of the Yangtze River and on the shores of Lake Taihu in the province of Jiangsu, China. With High Speed Train stations and neighboring Shanghai International Airports, Suzhou is well served by public transportation and easily reached from all over the world.

The long history of Suzhou City has left behind many attractive scenic spots and historical sites with beautiful and interesting legends. The elegant classical gardens, the old-fashioned houses and delicate bridges hanging over flowing waters in the drizzling rain, the beautiful lakes with undulating hills in lush green, and the exquisite arts and crafts, etc. have made Suzhou a renowned historical and cultural city full of eternal and poetic charm.



The Humble Administrator's Garden (拙政园)

The Humble Administrator's Garden is the only has four titles in scenic spots in China: a national key cultural relics protection units, the national 5A level scenic spots, national special visited, UNESCO (UNESCO) listed as world cultural heritage.

The garden's site was a scholar garden during the Tang Dynasty, and later a monastery garden for the Dahong Temple during the Yuan Dynasty. In 1513, during the Ming Dynasty reign of Emperor Zhengde, an administrator named Wang Xianchen appropriated the temple and converted it into a private villa with gardens, which were constructed by digging lakes and piling the resultant earth into artificial islands. The garden was designed in collaboration with the renowned Ming artist Wen Zhengming, and was as large as today's garden, with numerous trees and pavilions. The Wang family sold the garden several years later, and it has changed hands many times since.

The garden was split up in the later Ming dynasty, and it remained neglected until the Qing Dynasty reigns of Emperors Shunzhi and Kangxi, when the garden was extensively rebuilt with major modifications to its earlier plan. During Emperor Qianlong's reign the gardens were again divided into the Shu Yuan (Book of Study Garden) and the Fu Yuan (Restored Garden).

Today's garden is only very loosely related to its earliest version, but closely resembles its late Qing appearance, with numerous pavilions and bridges set among a maze of connected pools and islands. It consists of three major parts set about a large lake: the central part (Zhuozheng Yuan), the eastern part (once called Guitianyuanju, Dwelling Upon Return to the Countryside), and a western part (the Supplementary Garden). The house lies in the south of the garden.

In total, the garden contains 48 different buildings with 101 tablets, 40 stelae, 21 precious old trees, and over 700 Suzhou-style penjing/penzai.



The Lion Forest Garden (狮子林)

The Lion Forest Garden is one of the four great gardens of Suzhou and is admired for the incredible collection of pitted, eroded rocks that were greatly appreciated by classical Chinese scholars.

It was originally a part of a Buddhist monastery. The gardens are a reminder of the Buddhist story of the lions. The layout of the garden follows many twists and turns. It is quite easy to get lost in these winding paths.

Covering an area of about 10,000 square meters (two and a half acres), Lion Forest Garden is an ideal sightseeing site as it has richly ornamental pavilions and towers in different styles and each of them has its own history and story. The Lion Forest Garden is reputed as the "Kingdom of Rockery". The rocks were piled up skillfully and ingeniously, and most of them look like lions in different postures and verves: playing, roaring, fighting, sleeping, or even dancing.



Tiger Hill (虎丘)

With a history of more than 2,500 years, **the Huqiu or Tiger Hill** has been known as No. 1 Sight of Suzhou. It is a must for tourists. The great Song literary man Su Dongpo said, "It would be a pity if you had been to Suzhou but didn't get to visit the Huqiu." As a showcase of Suzhou and one of the first ten exemplary civilized tourist attractions of China, it receives over 1,500,000 Chinese and foreign tourists every year, and has taken over the lead in the tourism industry of Suzhou for ten years running.

In spite of the fact that it has an elevation of over 30 m. and covers about 49.41ac., the Huqiu boasts impressive rocks, deep dales, 3 matchless scenes, 9 suitable occasions for enjoyment, 18 scenic spots, and changing scenery at all times. No wonder it has been an awe-inspiring sight in the area south of the Lower Yangtze. The Yunyan Temple Pagoda and the Sword Pool are most famous on the hill.

Making historic events and landscapes, cultural heritage and natural scenery into one whole, the picturesque Huqiu possesses unique charms and is a rare cultural gem of mankind.



Hanshan Temple (寒山寺)

Hanshan Temple right on the Grand Canal. It has become the city's most important landmark. The temple was first built between the years 502-519. It was named after Han Shan, a Tang-dynasty monk who lived there. Through the years, the temple had undergone several rounds of destruction and restoration.

The temple has been immortalized by the famous poem *Mooring at Night by Maple Bridge* written by the prominent Tang Dynasty poet, Zhangji.



Li Gongdi (李公堤)

In Suzhou there is no a street like **Li Gongdi**. It is the only with scenery and historical and modern commercial elements so skillfully together.

On December 23, 2009, a gilded signboard was put up by China Commercial Walking Street Committee, which made it become the first Chinese characteristics of commercial street of Suzhou. Li Gongdi is located in Long Beach which covers a total length of 1,400 meters and belongs to the Chinese largest city like Jinji Lake. Li Gongdi was built by the magistrate Li Chaoqiong in Qin Dynasty. Li Gongdi is exquisite and elegant. The merchants gathered highlights from ancient inscriptions.

After hundreds of years of culinary development, Suzhou cuisine has developed a unique flavor and a famed reputation. The Suzhou fish, noodles and hairy crabs are well known throughout China and some of the best local dishes to try are: Stewed and Fried Mandarin Fish (松鼠桂鱼), Pork Noodles of Maple Town (枫镇大肉面), Yangcheng Hairy Crabs (阳澄湖大闸蟹).



Sweet and Sour Mandarin Fish (松鼠桂鱼)

Sweet and Sour Mandarin Fish is a traditional dish in Suzhou area, which has been classified as top grade food banquet.



Pork Noodles of Maple Town (枫镇大肉面)

Pork Noodles of Maple Town are slightly toothsome with the fragrant broth and a massive piece of pork, which are warmly recommend by “A Bite of China”.



Yangcheng Hairy Crabs (阳澄湖大闸蟹)

Yangcheng Hairy Crabs, famous in China for their unique and delicious taste, derive their name from the mossy, brown hair that hangs from their claws. Hairy crabs are one of the most sought-after ingredients in autumn of year and those caught in Yangcheng Lake are considered to be the tastiest.

Heaven
Memory
Water Town

江南水乡·绝美

苏州

