PAKDD 2014 Technical Program at-a-glance (Draft)

May 13 – 16, 2014

May 13, 2014 (Full-day Workshops)						
8:30 - 9:30	An Ping Room (B2) **DANTH / DMDA-Health**	Fu Cheng Room (B2) **BigEC / MSMV-MBI**	South Gate Room (B1) **ALSIP**	West Gate Room (B1) **DMBIH**	East Gate Room (B1) **BDM**	North Gate Room (B1) **BigPMA**
Coffee Break (B2) (Time: 9:30 - 10:00)						
10:00 - 12:00	An Ping Room (B2) **DANTH / DMDA-Health**	Fu Cheng Room (B2) **BigEC / MSMV-MBI**	South Gate Room (B1) **ALSIP**	West Gate Room (B1) **DMBIH**	East Gate Room (B1) **BDM**	North Gate Room (B1) **BigPMA**
Far Eastern Grand Ballroom (B2) Lunch (Time: 12:00 - 13:30)						
13:00 - 14:30	An Ping Room (B2) **MobiSocial**	Fu Cheng Room (B2) **SDA**	South Gate Room (B1) **ALSIP**	West Gate Room (B1) **SocNet**	East Gate Room (B1) **PAISI**	North Gate Room (B1) **BigPMA / CloudSD**
Coffee Break (B2) (Time: 14:30 - 15:00)						
15:00 - 17:30	An Ping Room (B2) **MobiSocial**	Fu Cheng Room (B2) **SDA**	South Gate Room (B1) **ALSIP**	West Gate Room (B1) **SocNet**	East Gate Room (B1) **PAISI**	North Gate Room (B1) **BigPMA / CloudSD**
(Dinner on your own)						

May 14, 2014 (Main Conference)					
8:30 - 9:00	Auditorium (9F)				
	Conference Opening				
9:00 - 10:00	Auditorium (9F)				
	Keynote Speech I Speaker: Dr. Jian Pei Title: Being a Happy Dwarf in the Age of Big Data Chair: Arbee L. P. Chen				
	Coffee Break (B2) (Time: 10:00 - 10:20)				
10:20 - 12:20	An Ping Room (B2)	Fu Cheng Room (B2)	South Gate Room (B1)	West Gate Room (B1)	East Gate Room (B1)	Auditorium (9F)
	Session 1A Pattern Mining	**Session 1B** Social Network and Social Media (I)	**Session 1C** Classification (I)	**Session 1D** Graph and Network Mining (I)	**Session 1E** Applications (I)	**Tutorial 1** Non-IIDness Learning in Big Data
	Far Eastern Grand Ballroom (B2) Lunch (Time: 12:20 - 13:45)				
13:45 - 14:45	Auditorium (9F)				
	Keynote Speech II Speaker: Dr. Ming-Syan Chen Title: On Information Extraction for Social Networks Chair: Tu Bao Ho				
	Coffee Break (B2) (Time: 14:45 - 15:15)				
15:15 - 17:15	An Ping Room (B2)	Fu Cheng Room (B2)	South Gate Room (B1)	West Gate Room (B1)	East Gate Room (B1)	Auditorium (9F)
	Session 2A Privacy Preserving	**Session 2B** Recommendation	**Session 2C** Feature Selection and Reduction	**Session 2D** Machine Learning	**Session 2E** PAKDD 14 Contest	**Tutorial 2** Social Media and Network Mining - Models, Systems and Applications
18:30 - 21:00	Far Eastern Grand Ballroom (B2)				
	Reception				

May 15, 2014 (Main Conference)

	An Ping Room (B2)	Fu Cheng Room (B2)	South Gate Room (B1)	West Gate Room (B1)	East Gate Room (B1)	Auditorium (9F)
8:45 - 9:45	Auditorium (9F)					
	Keynote Speech III Speaker: Dr. Vipin Kumar Title: Understanding Climate Change: Opportunities and Challenges for Data Driven Research Chair: Zhi-Hua Zhou					
	Coffee Break (B2) (Time: 9:45 - 10:10)					
10:10 - 12:10	**Session 3A** Temporal and Spatial Data	**Session 3B** Social Network and Social Media (II)	**Session 3C** Classification (II)	**Session 3D** Graph and Network Mining (II)	**Session 3E** Applications (II)	**Tutorial 3** Research Issues and Challenges on Brain Informatics
	Lunch (Time: 12:10 - 13:30)					
13:30 - 18:00	Excursion					
18:30 - 21:30	Far Eastern Grand Ballroom (B2)					
	Banquet					

May 16, 2014 (Main Conference)					
8:30 - 10:30	An Ping Room (B2) **Session 4A** Novel Algorithms	Fu Cheng Room (B2) **Session 4B** Clustering	South Gate Room (B1) **Session 4C** Biomedical Data Mining	West Gate Room (B1) **Session 4D** Stream Mining	East Gate Room (B1) **Tutorial 4** Managing the Quality of Crowdsourced Databases	Auditorium (9F) **Tutorial 5** Mining Spammers in Social Media: Techniques and Applications
Coffee Break (B2) (Time: 10:30 - 10:50)					
10:50 - 12:20	Auditorium (9F)					
	Panel : Data Mining in Big Data Era - Opportunities, Challenges and Practice					
	Chair: Dr. Huan Liu					
Far Eastern Grand Ballroom (B2)					
Lunch (Time: 12:20 - 14:00)					
14:00 - 16:00	An Ping Room (B2) **Session 5A** Outlier and Anomaly Detection	Fu Cheng Room (B2) **Session 5B** Multi-Sources Mining	South Gate Room (B1) **Session 5C** Unstructured Data and Text Mining	West Gate Room (B1) **Tutorial 6** Towards Building Analytical Models for Monitoring Large-scale Systems	East Gate Room (B1) **Tutorial 7** Feature Engineering in Health Informatics
16:15 - 16:45	Far Eastern Grand Ballroom (B2)					
	Closing Ceremony					

Notice

- Paper Sessions:
    - Full presentation: 20 minutes presentation + 5 minutes Q&A
    - Short presentation: 15 minutes presentation + 5 minutes Q&A

PAKDD 2014 Technical Program
Tutorial

Tutorial 1: Non-IIDness Learning in Big Data

Time: May 14th, 10:20-12:20

Lecturer: Longbing Cao

Venue: Auditorium (9F)

Tutorial 2: Social Media and Network Mining - Models, Systems and Applications

Time: May 14th, 15:15-17:15

Lecturers: Ee-Peng Lim and Freddy Chong Tat Chua

Venue: Auditorium (9F)

Tutorial 3: Research Issues and Challenges on Brain Informatics

Time: May 15th, 10:10-12:10

Lecturer: Ning Zhong

Venue: Auditorium (9F)

Tutorial 4: Managing the Quality of Crowdsourced Databases

Time: May 16th, 8:30-10:30

Lecturer: Reynold Cheng

Venue: East Gate Room (B1)

Tutorial 5: Mining Spammers in Social Media: Techniques and Applications

Time: May 16th, 08:30-10:30

Lecturers: Xia Hu and Huan Liu

Venue: Auditorium (9F)

Tutorial 6: Towards Building Analytical Models for Monitoring Large-scale Systems

Time: May 16th, 14:00-16:00

Lecturer: Jian Cao

Venue: West Gate Room (B1)

Tutorial 7: Feature Engineering in Health Informatics

Time: May 16th, 14:00-16:00

Lecturer: Fei Wang

Venue: East Gate Room (B1)

PAKDD 2014 Technical Program

PAKDD 2014 Conference Sessions

May 14, 2014

SESSION 1A: Pattern Mining

Session Chair: Philippe Fournier-Viger

Time: 10:20 – 12:20   **Venue:** An Ping Room (B2)

1. Ching-Hao Mao, Chung-Jung Wu, Evangelos E. Papalexakis, Christos Faloutsos, Kuo-Chen Lee, Tien-Cheu Kao. MalSpot: Multi^2 Malicious Network Behavior Patterns Analysis **(Regular)**

2. M. Kumara Swamy, P. Krishna Reddy, Somya Srivastava. Extracting Diverse Patterns with Unbalanced Concept Hierarchy **(Short)**

3. Arnaud Soulet, François Rioult. Efficiently Depth-First Minimal Pattern Mining **(Short)**

4. Philippe Fournier-Viger, Antonio Gomariz, Manuel Campos, Rincy Thomas. Fast Vertical Mining of Sequential Patterns Using Co-occurrence Information **(Short)**

5. Arnaud Giacometti, Dominique H. LI, Arnaud Soulet. Balancing the Analysis of Frequent Patterns **(Short)**

SESSION 1B: Social Network and Social Media (I)

Session Chair: Jian Pei

Time: 10:20 – 12:20   **Venue:** Fu Cheng Room (B2)

1. Shuo Han, Fuzhen Zhuang, Qing He, Zhongzhi Shi. Balanced Seed Selection for Budgeted Influence Maximization in Social Networks **(Regular)**

2. Siyuan Liu, Shuhui Wang, Ramayya Krishnan. Persistent Community Detection in Dynamic Social Networks **(Short)**

3. Fang Zhang, Jun Luo, Chao Li, Xin Wang, Zhongying Zhao. Detecting and Analyzing Influenza Epidemics with Social Media in China **(Short)**

4. Defu Lian, Yin Zhu, Xing Xie, Enhong Chen. Analyzing Location Predictability on Location-Based Social Networks **(Short)**

5. Jianguang Du, Dandan Song, Lejian Liao, Xin Li, Li Liu, Guoqiang Li, Guanguo Gao, Guiying Wu. ReadBehavior: Reading Probabilities Modeling of Tweets via the Users' Retweeting Behaviors **(Short)**

SESSION 1C: Classification (I)

Session Chair: Min-Ling Zhang

Time: 10:20 – 12:20	**Venue:** South Gate Room (B1)

1. Josif Grabocka, Erind Bedalli, Lars Schmidt-Thieme. Supervised Nonlinear Factorizations Excel In Semi-supervised Regression **(Regular)**

2. Qingyang Hu, Qinming He, Hao Huang, Kevin Chiew, Zhenguang Liu. Learning from Crowds under Experts' Supervision **(Short)**

3. Sori Kang, Kotagiri Ramamohanarao. A Robust Classifier for Imbalanced Datasets **(Short)**

4. Henrik Linusson, Ulf Johansson, Tuve Löfström. Signed-Error Conformal Regression **(Short)**

5. Jia Wu, Xingquan Zhu, Chengqi Zhang, Zhihua Cai. Multi-Instance Learning from Positive and Unlabeled Bags **(Short)**

SESSION 1D: Graph and Network Mining (I)

Session Chair: Wei Wang

Time: 10:20 – 12:20	**Venue:** West Gate Room (B1)

1. Ryan A. Rossi. Fast Triangle Core Decomposition for Mining Large Graphs **(Regular)**

2. Ting Guo, Xingquan Zhu. Super-Graph Classification **(Regular)**

3. Hai-Tao Yu, Fuji Ren. Subtopic Mining via Modifier Graph Clustering **(Short)**

4. U. Kang, Jay-Yoon Lee, Danai Koutra, Christos Faloutsos. Net-Ray: Visualizing and Mining Billion-Scale Graphs **(Short)**

5. Jeffrey Chan, Nguyen Xuan Vinh, Wei Liu, James Bailey, Christopher A. Leckie, Kotagiri Ramamohanarao, Jian Pei. Structure-aware Distance Measures for Comparing Clusterings in Graphs **(Short)**

SESSION 1E: Applications (I)

Session Chair: Yuh-Jye Lee

Time: 10:20 – 12:20	**Venue:** East Gate Room (B1)

1. Swapna Gottipati, Minghui Qiu, Liu Yang, Feida Zhu, Jing Jiang. An Integrated Model for User Attribute Discovery: A Case Study on Political Affiliation Identification **(Regular)**

2. Xiang Li, Devin Guan. Programmatic Buying Bidding Strategies with Win Rate and Winning Price Estimation in Real Time Mobile Advertising **(Short)**

3. Cheng Luo, Xiongcai Cai, Nipa Chowdhury. Self-Training Temporal Dynamic Collaborative Filtering **(Short)**

4. Liang Chen, Yilun Wang, Tingting Liang, Lichuan Ji, Jian Wu. Data Augmented Maximum Margin Matrix Factorization for Flickr Group Recommendation **(Short)**

5. Zhichun Fu, Peter Christen, Jun Zhou. A Graph Matching Method for Historical Census Household Linkage **(Regular)**

SESSION 2A: Privacy Preserving

Session Chair: Gang Li

Time: 15:15 – 17:15   **Venue:** An Ping Room (B2)

1. Tianqing Zhu, Gang Li, Wanlei Zhou, Ping Xiong, Cao Yuan. Deferentially Private Tagging Recommendation based on Topic Model **(Regular)**

2. David Vallet, Arik Friedman, Shlomo Berkovsky. Matrix Factorization without User Data Retention **(Regular)**

3. Sarah M. Erfani, Yee Wei Law, Shanika Karunasekera, Christopher A. Leckie, Marimuthu Palaniswami. Privacy-Preserving Collaborative Anomaly Detection for Participatory Sensing **(Regular)**

4. Jun Luo, Jinfei Liu, Li Xiong. Privacy Preserving Publication of Locations Based on Delaunay Triangulation **(Short)**

5. Changyu Dong, Liqun Chen. A Fast Secure Dot Product Protocol with Application to Privacy Preserving Association Rule Mining **(Short)**

SESSION 2B: Recommendation

Session Chair: Guandong Xu

Time: 15:15 – 17:15   **Venue:** Fu Cheng Room (B2)

1. Kaisong Song, Daling Wang, Shi Feng, Yifei Zhang, Wen Qu, Ge Yu. CTROF: A Collaborative Tweet Ranking Framework for Online Personalized Recommendation **(Regular)**

2. Ke Ji, Hong Shen, Hui Tian, Yanbo Wu, Jun Wu. Two-Phase Layered Learning Recommendation via Category Structure **(Regular)**

3. Fan-Kai Chou, Meng-Fen Chiang, Yi-Cheng Chen, Wen-Chih Peng. Dynamic Circle Recommendation: A Probabilistic Model **(Regular)**

4. Evangelia Christakopoulou, George Karypis. HOSLIM: Higher-Order Sparse LInear Method for Top-N Recommender Systems **(Short)**

5. Peifeng Yin, Mao Ye, Wang-Chien Lee, Zhenhui Li. Mining GPS Data for Trajectory Recommendation **(Short)**

SESSION 2C: Feature Selection and Reduction

Session Chair: Guozhu Dong

Time: 15:15 – 17:15   **Venue:** South Gate Room (B1)

1. Xinwei Jiang, Junbin Gao, Xia Hong, Zhihua Cai. Gaussian Processes Autoencoder for Dimensionality Reduction **(Regular)**

2. Xiaojun Chang, Haoquan Shen, Sen Wang, Jiajun Liu, Xue Li. Semi-supervised Feature Analysis for Multimedia Annotation by Mining Label Correlation **(Regular)**

3. Shenglei Chen, Ana M. Martinez, Geoffrey I. Webb. Highly Scalable Attribute Selection for Averaged One-Dependence Estimators **(Short)**

4. Wenhao Shu, Hong Shen, Yingpeng Sang, Yidong Li, Jun Wu. A New Evaluation Function for Entropy-Based Feature Selection from Incomplete Data **(Short)**

SESSION 2D: Machine Learning

Session Chair: Carson K. Leung

Time: 15:15 – 17:15   **Venue:** West Gate Room (B1)

1. Bo Liu, Liping Jing, Jian Yu, Jia Li. Constrained Least Squares Regression for Semi-Supervised Learning **(Regular)**

2. Yu-Cheng Chou, Hsuan-Tien Lin. Machine Learning Approaches for Interactive Verification **(Regular)**

3. Xinhui Tu, Jing Luo, Bo Li, Tingting He, Jinguang Gu. Positional Translation Language Model for Ad-hoc Information Retrieval **(Regular)**

4. Elnaz Delpisheh, Aijun An. Topic Modeling Using Collapsed Typed Dependency Relations **(Short)**

5. Yang Wang, Jian Pei, Xuemin Lin, Qing Zhang, Wenjie Zhang. An Iterative Fusion Approach to Graph-Based Semi-Supervised Learning from Multiple Views **(Short)**

May 15, 2014

SESSION 3A: Temporal and Spatial Data

Session Chair: Wei Ding

Time: 10:10 – 12:10   **Venue:** An Ping Room (B2)

1. Chung-Hsien Yu, Wei Ding, Ping Chen, Melissa Morabito. Crime Forecasting Using Spatio-temporal Pattern with Ensemble Learning **(Regular)**

2. Meng Chen, Yang Liu, Xiaohui Yu. NLPMM: A Next Location Predictor with Markov Modeling **(Regular)**

3. Da-Cheng Juan, Lei Li, Huan-Kai Peng, Diana Marculescu, Christos Faloutsos. Beyond Poisson: Modeling Inter-Arrival Time of Requests in a Datacenter **(Short)**

4. Miao Lin, Wen-Jing Hsu. Brownian Bridge Model for High Resolution Location Predictions **(Short)**

5. Yi-Cheng Chen, Chien-Chih Chen, Wen-Chih Peng, Wang-Chien Lee. Mining Correlation Patterns among Appliances in Smart Home Environment **(Short)**

SESSION 3B: Social Network and Social Media (II)

Session Chair: Huan Liu

Time: 10:10 – 12:10   **Venue:** Fu Cheng Room (B2)

1. Meng Jiang, Peng Cui, Alex Beutel, Christos Faloutsos, Shiqiang Yang. Inferring Strange Behavior from Connectivity Pattern in Social Networks **(Regular)**

2. Cong Wang, Andrei A. Bulatov. Inferring Attitude in Online Social Networks Based on Quadratic Correlation **(Short)**

3. Anton Slutsky, Xiaohua Hu, Yuan An. Hash-Based Stream LDA: Topic Modeling in Social Streams **(Short)**

4. Peifeng Yin, Nilam Ram, Wang-Chien Lee, Conrad Tucker, Shashank Khandelwal, Marcel Salathé. Two Sides of a Coin: Separating Personal Communication and Public Dissemination Accounts in Twitter **(Short)**

5. Ming-Chu Chen, Hung-Yu Kao. Latent Features Based Prediction on New Users' Tastes **(Short)**

SESSION 3C: Classification (II)

Session Chair: Raymond CW Wong

Time: 10:10 – 12:10   **Venue:** South Gate Room (B1)

1. Lei Duan, Guanting Tang, Jian Pei, James Bailey, Guozhu Dong, Akiko Campbell, Changjie Tang. Mining Contrast Subspaces **(Regular)**

2. Peng Wang, Peng Zhang, Yanan Cao, Li Guo, Bingxing Fang. Forward Classification on Data Streams **(Regular)**

3. Richard Wartell, Yan Zhou, Kevin W. Hamlen, Murat Kantarcioglu. Shingled Graph Disassembly: Finding the Undecideable Path **(Short)**

4. Lucas Rego Drumond, Lars Schmidt-Thieme, Christoph Freudenthaler, Artus Krohn-Grimberghe. Collective Matrix Factorization of Predictors, Neighborhood and Targets for Semi-supervised Classification **(Short)**

5. Zhankun Huang, Shenghua Liu, Pan Du, Xueqi Cheng. Ranking Tweets with Local and Global Consistency Using Rich Features **(Short)**

SESSION 3D: Graph and Network Mining (II)

Session Chair: Feida Zhu

Time: 10:10 – 12:10   **Venue:** West Gate Room (B1)

1. Xuehua Zhao, Bo Yang, Hechang Chen. Efficiently and Fast Learning a Fine-grained Stochastic Blockmodel from Large Networks **(Regular)**

2. Yibin Lin, Agha Ali Raza, Jay-Yoon Lee, Danai Koutra, Roni Rosenfeld, Christos Faloutsos. Influence Propagation: Patterns, Model and a Case Study **(Short)**

3. Farnaz Moradi, Tomas Olovsson, Philippas Tsigas. Overlapping Communities for Identifying

Misbehavior in Network Communications **(Short)**

4. Tobias Kötter, Stephan Günnemann, Michael R. Berthold, Christos Faloutsos. Fault-Tolerant Concept Detection in Information Networks **(Short)**

5. N.N.R. Ranga Suri, M. Narasimha Murty, G. Athithan. Characterizing Temporal Anomalies in Evolving Networks (Short)

SESSION 3E: Applications (II)

Session Chair: Jun Juo

Time: 10:10 – 12:10   **Venue:** East Gate Room (B1)

1. Santu Rana, Sunil Kumar Gupta, Dinh Phung, Svetha Venkatesh. Intervention-Driven Predictive Framework for Modeling Healthcare Data (Regular)

2. Lu Lu, Nan Cao, Siyuan Liu, Lionel Ni, Xiaoru Yuan, Huamin Qu. Visual Analysis of Uncertainty in Trajectories **(Short)**

3. Heidar Davoudi, Xiao-Li Li, Nguyen Minh Nhut, Shonali Priyadarsini Krishnaswamy. Activity Recognition Using a Few Label Samples **(Short)**

4. Daisaku Yokoyama, Masahiko Itoh, Masashi Toyoda, Yoshimitsu Tomita, Satoshi Kawamura, Masaru Kitsuregawa. A Framework for Large-Scale Train Trip Record Analysis and Its Application to Passengers' Flow Prediction after Train Accidents **(Short)**

5. Sooyoung Oh, Zhen Lei, Wang-Chien Lee, John Yen. Patent Evaluation Based on Technological Trajectory Revealed in Relevant Prior Patents **(Short)**

May 16, 2014

SESSION 4A: Novel Algorithms

Session Chair: Hsuan-Tien Lin

Time: 8:30 – 10:30   **Venue:** An Ping Room (B2)

1. Yang Wang, Xuemin Lin, Qing Zhang, Lin Wu. Shifting Hypergraphs by Probabilistic Voting **(Regular)**

2. Nguyen Thanh Tung, Joshua Zhexue Huang, Imran Khan, Mark Junjie Li, Graham Williams. Extensions to Quantile Regression Forests for Very High-Dimensional Data **(Regular)**

3. Laurence Park, Glenn Stone. Inducing controlled error over variable length ranked lists **(Short)**

4. Miguel Araujo, Spiros Papadimitriou, Stephan Günnemann, Christos Faloutsos, Prithwish Basu, Ananthram Swami, Evangelos E. Papalexakis, Danai Koutra. Com2: Fast Automatic Discovery of Temporal ('Comet') Communities **(Regular)**

5. Farhan Khawar, Zengchang Qin. A Graphical Model for Collective Behavior Learning Using Minority Games **(Short)**

SESSION 4B: Clustering

Session Chair: Junbin Gao

Time: 8:30 – 10:30   **Venue:** Fu Cheng Room (B2)

1. Xiaona Wu, Jia Zeng, Jianfeng Yan, Xiaosheng Liu. Finding Better Topics: Features, Priors and Constraints **(Regular)**
2. Chuanren Liu, Tianming Hu, Yong Ge, Hui Xiong. Finding Well-Clusterable Subspaces for High Dimensional Data: A Numerical One-Dimension Approach **(Short)**
3. Lydia Boudjeloud-Assala, Ta Minh Thuy. Determine Optimal Number of Clusters with an Elitist Evolutionary Approach **(Short)**
4. Toshiko Matsui, Yukino Baba, Toshihiro Kamishima, Hisashi Kashima. Crowdordering **(Short)**
5. Zunyan Xiong, Yizhou Zang, Xingpeng Jiang, Xiaohua Hu. Document Clustering with an Augmented Nonnegative Matrix Factorization Model **(Short)**

SESSION 4C: Biomedical Data Mining

Session Chair: Xiaoli Li

Time: 8:30 – 10:30   **Venue:** South Gate Room (B1)

1. Wan-Tze Vong, Patrick Hang Hui Then. Visualization of PICO Elements for Information Needs Clarification and Query Refinement **(Regular)**
2. Chih-Ping Wei, Kuei-An Chen, Lien-Chin Chen. Mining Biomedical Literature and Ontologies for Drug Repositioning Discovery **(Regular)**
3. Xiaofei Yang, Jiming Liu, William Kwok Wai Cheung, Xiao-Nong Zhou. Inferring Metapopulation Based Disease Transmission Networks **(Regular)**
4. Bui Thang Ngoc. A Novel Framework to Improve siRNA Efficacy Prediction **(Short)**

SESSION 4D: Stream Mining

Session Chair: George Karypis

Time: 8:30 – 10:30   **Venue:** West Gate Room (B1)

1. Dandan Zhang, Hong Shen, Tian Hui, Yidong Li, Jun Wu, Yingpeng Sang. A Selectively Re-train Approach Based on Clustering To Classify Concept-Drifting Data Streams with Skewed Distribution **(Regular)**
2. Mohammad Raihanul Islam. Recurring and Novel Class Detection in Concept-Drifting Data Streams Using Class-Based Ensemble **(Short)**
3. David Tse Jung Huang, Yun Sing Koh, Gillian Dobbie, Russel Pears. Detecting Changes in Rare Patterns from Data Streams **(Short)**
4. Huizhi Liang, Yanzhe Wang, Peter Christen, Ross Gayler. Noise-Tolerant Approximate

Blocking for Dynamic Real-Time Entity Resolution **(Short)**

5. Mahsa Salehi, Christopher A. Leckie, Masud Moshtaghi, Tharshan Vaithianathan. A Relevance Weighted Ensemble Model for Anomaly Detection in Switching Data Streams **(Short)**

SESSION 5A: Outlier and Anomaly Detection

Session Chair: Hung-Yu Kao

Time: 14:00 – 16:00   **Venue:** An Ping Room (B2)

1. Koji Maruhashi, Nobuhiro Yugami. MultiAspectSpotting: Spotting Anomalous Behavior within Count Data Using Tensor **(Regular)**
2. Takuro Kutsuna, Akihiro Yamamoto. Outlier Detection Based on Leave-One-Out Density Using Binary Decision Diagrams **(Regular)**
3. Zhenguang Liu, Hao Huang, Qinming He, Kevin Chiew, Lianhang Ma. Rare Category Detection on O(dN) Time Complexity **(Regular)**
4. Sunil Aryal, Kai Ming Ting, Jonathan R. Wells, Takashi Washio. Improving iForest with Relative Mass **(Regular)**

SESSION 5B: Multi-Sources Mining

Session Chair: De-Nian Yang

Time: 14:00 – 16:00   **Venue:** Fu Cheng Room (B2)

1. Shaofeng Hu, Jiangtao Ren, Changshui Zhang, Chaogui Zhang. Domain Transfer via Multiple Sources Regularization **(Short)**
2. Guozhu Dong, Qian Han. Mining Diversified Shared Decision Tree Sets for Discovering Cross Domain Similarities **(Short)**
3. Chen Luo, Wei Pang, Zhe Wang. Semi-supervised Clustering on Heterogeneous Information Networks **(Short)**
4. Chia-Jen Lin, Tsung-Ting Kuo, Shou-De Lin. A Content-Based Matrix Factorization Model for Recipe Recommendation **(Regular)**

SESSION 5C: Unstructured Data and Text Mining

Session Chair: Chih-Ping Wei

Time: 14:00 – 16:00   **Venue:** South Gate Room (B1)

1. Yi Shen, Jianjun Yu, Kejun Dong, Kai Nan. Automatic Fake Followers Detection in Chinese Micro-blogging System **(Short)**
2. Minoru Yoshida, Kazuyuki Matsumoto, Kenji Kita, Hiroshi Nakagawa. Unsupervised Analysis of Web Page Semantic Structures by Hierarchical Bayesian Modeling **(Regular)**
3. Wei Jiang, Haibin Ruan, Li Zhang, Philip Lew, Jing Jiang. For User-Driven Software

Evolution: Requirements Elicitation Derived from Mining Online Reviews **(Regular)**

4. Wei Wang, Hua Xu, Weiwei Yang, Xiaoqiu Huang. Constrained-hLDA for Topic Discovery in Chinese Microblogs **(Short)**

PAKDD 2014 Technical Program
Workshops

Workshop List	
DANTH	Data Analytics for Targeted Healthcare
BDM	Biologically Inspired Techniques for Data Mining
MobiSocial	Mobile Data Management, Mining, and Computing on Social Networks
BigEC	Big Data Science and Engineering on E-Commerce
CloudSD	Cloud Service Discovery
MSMV-MBI	Mobile Sensing, Mining and Visualization for Human Behavior Inference
SDA	Scalable Data Analytics: Theory and Applications
DMDA-Health	Data Mining and Decision Analytics for Public Health and Wellness
ALSIP	Algorithms for Large-Scale Information Processing in Knowledge Discovery
PAISI	Pacific Asia Workshop on Intelligence and Security Informatics
SocNet	Data Mining in Social Networks
DMBIH	Data Mining in Biomedical informatics and Healthcare
BigPMA	Pattern Mining and Application of Big Data

Data Analytics for Targeted Healthcare & Data Mining and Decision Analytics for Public Health and Wellness	
Time	**Presentation**
08:30 - 08:40	**Workshop Opening** General Chair: Prof. Osmar Zaïane
08:40 - 09:40	**Keynote I - Medical Big Data: Medical Data Mining and Innovative Applications** Prof. Yanchun Zhang (Chair: Dr. Ji Zhang)
Coffee Break (B2) (Time: 09:40 — 10:00)	
10:00 - 11:00	**Keynote II - Finding the Real Patterns** Prof. Geoff Webb (Chair: Dr. Guandong Xu)
Presentation Session I (Chair: Dr. Benyun Shi)	
11:00 - 11:15	**Mining typical order sequences from EHR for building clinical pathways** Shoji Hirano and Shusaku Tsumoto
11:15 - 11:30	**An empirical algorithm for bias correction based on GC estimation for single cell sequencing** Bo Xu, Tengpeng Li, Yi Luo and Ruotao Xu, Hongmin Cai
11:30 - 11:45	**Aspect-Based Sentiment Analysis of Amazon Reviews for Fitness Tracking Devices** Alaa Shafaee, Hassan Issa, Stefan Agne, Stephan Baumann
Presentation Session II (Chair: Dr. Yidong Li)	
11:45 - 12:00	**Conversation Intention Perception based on Knowledge Base** Yizheng Chen, Huakang Li and Minyi Guo
12:00 - 12:15	**An optimization method of fusing multiple decisions in object detection** Zhu Teng and Baopeng Zhang
12:15 - 12:30	**Joint tree of combinatorial maps** Tao Wang, Congyan Lang and Songhe Feng

Biologically Inspired Techniques for Data Mining	
Time	Presentation
Session I Session Chair: Yun Sing Koh	
08:30 - 09:00	**Opening and introduction to Bio-inspired data mining** Yun Sing Koh
09:00 - 09:20	**Detecting the Data Group most Prone to a Specific Disguise Value** Wen-Yang Lin, Wen-Yu Feng
Coffee Break (B2) (Time: 09:20 — 09:50)	
09:50 - 10:10	**Privacy Preserving Association Rule Mining Using Binary Encoded NSGA-II** Peng Cheng, Jeng-Shyang Pan, Chun-Wei Lin
10:10 - 10:30	**An Efficient Drug-Target Interaction Mining Algorithm in Heterogeneous Biological Networks** Congcong Li, Jing Sun, Yun Xiong, Guangyong Zheng
10:50 - 11:10	**Comparison of Hemagglutinin and Neruaminidase of Influenza A Virus Subtype H1N1, H5N1, H5N2, and H7N9 using Apriori Algorithm** Dae Young Kim, Hye-Jun Kim, Junhyeok Bae, Taeseon Yoon
11:10 - 11:30	**rRNA of Alphaproteobacteria Rickettsiales and mtDNA Pattern Analyzing with Apriori & SVM** Seung Jae Lim, Shin Hyo Bang, Dae Seop Kim, Taeseon Yoon
Best Paper Award Conclusions and Closing(Time: 11:30)	
Mobile Data Management, Mining, and Computing on Social Networks	
Time	Presentation
Mining in Social Networks Session chair: Prof. Wang-Chien Lee in Pennsylvania State University	

Time	
13:30 - 13:50	**Information Diffusion Pattern Mining over Online Social Media** Hsueh-Chan Lu (National Taitung University) and Hui-Ju Hung (Academia Sinica)
13:50 - 14:10	**Mining Uncertain Sequences on Hadoop Platfom** Zi-Yun Sun (National Chung Hsing University), Ming-Che Tsai (National Chung Hsing University), Hsiao-Ping Tsai (National Chung Hsing University)
14:10 - 14:30	**Mining similar users using semantic properties of annotation tags** Oleksii Vedernikov (National Chiao Tung University), Wen-Yuan Zhu (National Chiao Tung University), Wen-Chih Peng (National Chiao Tung University)
	Coffee Break (B2) (Time: 14:30 - 14:40)
	Mobile Social Networks Session chair: Dr. De-Nian Yang in Academia Sinica
14:40 - 15:00	**Predicting Locations of Mobile Users Based on Behavior Semantic Mining** Huei-Yu Lung (National Taiwan University of Science and Technology), Chih-Heng Chung (National Taiwan University of Science and Technology), Bi-Ru Dai (National Taiwan University of Science and Technology)
15:00 - 15:20	**Mining Frequent Progressive Usage Patterns across Multiple Mobile Broadcasting Channels** Bijay Prasad Jaysawal (National Cheng Kung University) and Jen-Wei Huang (National Cheng Kung University)
15:20 - 15:40	**Efficient Gossiping Dissemination in Mobile Peer-to-Peer Environment Based on Neighborhood Detection** Yu-Jen Lin (National Cheng Kung University), Bo-Heng Chen (National Cheng Kung University), Kun-Ta Chuang (National Cheng Kung University), Chao-Chun Chen (National Cheng Kung University)
	Coffee Break (B2) (Time: 15:40 - 15:50)
	Social Network Applications Session Chair: Prof. Chih-Hua Tai in National Taipei University
15:50 - 16:10	**Team Formation with the Communication Load Constraint in Social Networks** Yui-Chieh Teng (National Chiao Tung University), Jun-Zhe Wang (National Chiao Tung University), Jiun-Long Huang (National Chiao Tung University)
16:10 - 16:30	**Query Prediction by Currently-Browsed Web Pages and Its Applications** Hui-Ju Hung (Academia Sinica), Pu-Jen Cheng (National Taiwan University)

Time	Presentation
16:30 - 16:50	**An Emergency System in Mobile Devices** Chung-Hua Chu (National Taichung University Of Science And Technology) and Wen-Hsiang Chang (National Taichung University Of Science And Technology)
16:50 - 17:10	**Study of Mobile Value-Added Services with Augmented Reality** Chung-Hua Chu (National Taichung University Of Science And Technology), Shu-Lin Wang (National Taichung University Of Science And Technology), and Bi-Chi Tseng (National Taichung University Of Science And Technology)
Big Data Science and Engineering on E-Commerce & Mobile Sensing, Mining and Visualization for Human Behavior Inference
Time	**Presentation**
08:30 - 09:20	**Keynote talk** Dr. Nic Lane, Microsoft Research Asia (Chair: Dr. Fang-Jing Wu)
09:20 - 09:35	**A Differential Approach for Identifying Important Student Learning Behavior Patterns with Evolving Usage over Time** John Kinnebrew (Vanderbilt University), Daniel Mack (Vanderbilt University), Gautam Biswas (Vanderbilt University), and Chih-Kai Chang (National University of Tainan)
Break (Time: 09:35 — 09:45)
09:45 - 10:00	**Mining Top-k Relevant Stay Regions from Historical Trajectories** Yung-Hsiang Lin (National Chiao Tung University), Chien-Hsiang Lai (National Chiao Tung University), and Po-Ruey Lei (ROC Naval Academy)
10:00 - 10:15	**Associative Classification for Human Activity Inference on Smart Phones** Yu-Hsiang Peng (National Chiao Tung University), Gunarto Sindoro Njoo (National Chiao Tung University), Shou-Chun Li (National Chiao Tung University), and Wen-Chih Peng (National Chiao Tung University)
10:15 - 10:30	**Personalized Smartphone Wearing Behavior Analysis** Yen-Hsuan Lin (National Chiao Tung University) and Yi-Ta Chuang (National Chiao Tung University)
10:30 - 10:45	**Activity Recognition Using Discriminant Sequence Patterns in Smart Environments** Been-Chian Chien (National University of Tainan) and Rong-Sing Huang (National University of Tainan)
10:45 - 11:35	**Keynote - Search Query Recommendation on e-Commerce Sites** Dr. Chu-Cheng Hsieh (Chair: Dr. Chih-Chieh Hung)

Presentation Session (Chair: Dr. Chih-Chieh Hung)	
11:35 - 11:50	**Two Algorithms under Statistic Gradient Descent Framework for Recommendation Systems** Tian-Hsiang Huang (National Sun Yat-sen University, Taiwan) and Vladimir Nikulin (Vyatka State University, Kirov, Russia)
11:50 - 12:05	**Scalable Textual Similarity Search on Large Document Collections through Random Indexing and K-means Clustering** Ali Cevahir (Rakuten Institute of Technology, Japan)
12:05 - 12:20	**Complementary Product Selection in E-commerce** Yian Chen, Yuh-Ming Chiu (Yahoo! Inc., Taiwan) and Song Han (Yahoo! Labs, China)
12:20 - 12:35	**A short-term bookmarking system for collecting user-interest data** Chu-Cheng Hsieh, Yoni Medoff and Naren Chittar (Ebay Inc.)

Cloud Service Discovery & Pattern Mining and Application of Big Data	
Time	**Presentation**
Session I Session Chair: Jiun-Long Huang	
08:20 - 08:40	**Mining Time-aware Transit Patterns for Route Recommendation in Big Check-in Data** Hsun-Ping Hsieh, Cheng-Te Li (National Taiwan University)
08:40 - 09:00	**QRM:A Probabilistic Model for Search Engine Query Recommendation** JianGuo Wang (Chinese Academy of Sciences), Joshua Huang (Shenzhen University)
09:00 - 09:20	**BigSAM: mining interesting patterns from probabilistic databases of uncertain Big data** Fan Jiang, Carson Leung, Richard Kyle MacKinnon (University of Manitoba)
09:20 - 09:40	**Toward Mining User Traversal Patterns in the Indoor Environment** Shan-Yun Teng, Tzu-Yuan Chung, Kun-Ta Chuang (National Cheng Kung University), Wei-Shinn Ku (Auburn University)
Coffee Break (B2) (Time: 09:40 — 10:00)	
Session II Session Chair: Yi-Cheng Chen	

Time	Content
10:00 - 10:20	**MBPD: Motif-Based Period Detection** Rasaq Otunba, Jessica Lin (George Mason University), Pavel Senin (University of Hawaii)
10:20 - 10:40	**Comparative expression analysis of 3D-culture system for murine neonatal heart regeneration: a systematic approach** Julia T.-Y. Weng, Pei-Chann Chang, Shin-Ping Huang (Yuan Ze University), Yu-Wei Chiu (Far-Eastern Memorial Hospital)
10:40 - 11:00	**A Model-based Multivariate Time Series Clustering Algorithm** Pei-Yuan Zhou, Keith C.C. Chan (The Hong Kong Polytechnic University)
11:00 - 11:20	**Human Action Recognition in Video under Clutter and Moving Background** Der-jyh Duh (Chien Hsin Universitry), Cheng-Chung Kan, Shu-Yuan Chen, Chia-Ming Lu (Yuan Ze University)
11:20 - 11:40	**Automatic Restaurant Information and Keyword Extraction by Mining Blog Data for Chinese Restaurant Search** Chien-Li Chou, Min-Ho Tsai, Chien-Ho Chao, Hsiao-Jung Lin, Hua-Tsung Chen, Suh-Yin Lee (National Chiao Tung University)
11:40 - 12:00	**Data Collection and Analysis from Social network – Profile Analyzer System (PAS)** WeiHao Chang, Bing Li, Xin Fang (SIGI Technologies Inc.)
Lunch(Time: 12:00 - 13:20)	
Session III Session Chair: Julia T.-Y. Weng	
13:20 - 13:40	**A Comparison of Feature-Combination for Example-Based Super Resolution** Shwu-Huey Yen, Jen-Hui Tsao, Wan-Ting Liao (Tamkang University)
13:40 - 14:00	**Big Data Generation：Application of Mobile Healthcare** Huan-Chao Keh, Lin Hui (TamKang University), Kuang-Yi Chou (National Taipei University of Nursing and Health Sciences), Yuan Cheng Cheng, Po-Yuan Yu, Nan-Ching Huang (TamKang University)
14:00 - 14:20	**The Application of Association Rules in Clinical Disease:The Relationship between Recovery after Operation of Endovascular Aneurysm Repairing and Chronic** Lin Hui (TamKang University), Chun Che Shih (National Yang-Ming University), Huan-Chao Keh, Po-Yuan Yu, Yuan Cheng Cheng, Nan-Ching Huang (TamKang University)

Time	Presentation
14:20 - 14:40	**Myocardial Infarction Classification by Morphological Feature Extraction from 12-Lead ECG** Julia T.-Y. Weng, Jyun-Jie Lin, Pei-Chann Chang (Yuan Ze University)
Coffee Break (B2)(Time: 14:40 - 15:00)	
Session IV Session Chair: Liang Chen	
15:00 - 15:20	**Analyzing Personality Traits based on User Behavoirs of using Microblogging** Xin Fang, Bing Li, WeiHao Chang (SIGI Technologies Inc.)
15:20 - 15:40	**Automatic Self-Suspended Task for a MapReduce System on Cloud Computing** Tzu-Chi Huang (Lunghwa University of Science and Technology), Ce-Kuen Shieh, Sheng-Wei Huang, Chui-Ming Chiu (National Cheng Kung University), Tyng-Yeu Liang (National Kaohsiung University of Applied Science)
15:40 - 16:00	**Tag Completion and Refinement for Web Service via Low-Rank Matrix Completion** Lei Chen, Geng Yang, Zhengyu Chen, Fu Xiao, Xuxia Li (Nanjing University of Posts and Telecommunications)

Scalable Data Analytics: Theory and Applications	
Time	**Presentation**
13:30 - 14:30	**Invited Talk: Distributed data classification** Prof. Chih-Jen Lin (National Taiwan University)
Coffee Break (B2) (Time: 14:30 — 15:00)	
15:00 - 15:15	**Using Knowledge Graph to Handle Label Imperfection** Yi Liu (Shanghai Jiao Tong University) and Huakang Li (Nanjing University of Posts and Telecommunications)
15:15 - 15:30	**Learning to Display in Sponsored Search** Xin Xin (Beijing Institute of Technology) and Heyan Huang (Beijing Institute of Technology)
15:30 - 15:45	**Models for Distributed, Large Scale Data Cleaning** Vincent Maccio (McMaster University), Fei Chiang (McMaster University) and Douglas Down (McMaster University)

Time	
15:45 - 16:00	**A Study of Rumor Spreading with Epidemic Model Based on Network Topology** Dawei Meng (Graduate School at Shenzhen,Tsinghua University), Lizhi Wan (Tsinghua University) and Lei Zhang (Graduate School at Shenzhen,Tsinghua University)
16:00 - 16:15	**GS4: Generating Synthetic Samples for Improving Semi-Supervised Nearest Neighbor Classification Accuracy** Panagiotis Moutafis(University of Houston) and Ioannis Kakadiaris(University of Houston)
16:15 - 16:30	**A scalable data analytics algorithm for mining frequent patterns from uncertain data** Carson K. Leung (University of Manitoba)
16:30 - 16:45	**Parallel Time Series Modeling - A Case Study of In-Database Big Data Analytics** Hai Qian (Pivotal Inc.), Rahul Iyer (Pivotal Inc.), Xixuan Feng (Pivotal Inc.), Caleb Welton (Pivotal Inc.) and Shengwen Yang (Pivotal Inc.)
16:45 - 17:00	**A Biclustering-based Classification Framework for Microarray Analysis** Baljeet Malhotra(SAP Research & Innovation), Daniel Dahlmeier(SAP Research & Innovation) and Naveen Nandan(SAP Research & Innovation)
17:00 - 17:15	**Parallel Implementation of a Density-based Stream Clustering Algorithm over a GPU Scheduling System** Marwan Hassani (RWTH Aachen University), Ayman Tarakji (RWTH Aachen University), Lyubomir Georgiev (RWTH Aachen University) and Thomas Seidl (RWTH Aachen University)

Algorithms for Large-Scale Information Processing in Knowledge Discovery	
Time	**Presentation**
08:45 - 08:50	**Workshop Opening**
Session I Session Chair: TBA	
08:50 - 09:15	**On the Size of the Zero-Suppressed Binary Decision Diagram that Represents All the Subtrees in a Tree** Norihito Yasuda, Masaaki Nishino, and Shin-ichi Minato
09:15 - 09:40	**Compact Tree Representations for Frequent Itemset Mining** Andreas Poyias and Rajeev Raman
Coffee Break (B2) (Time: 09:40 — 10:10)	

	Session II
	Session Chair: TBA
10:10 - 10:35	**Broadword Implementation of Excess Search for Parenthesis Queries** Yusaku Kaneta
10:35 - 11:00	**Three-way Indexing ZDDs for Large-scale Sparse Datasets** Hiroshi Aoki, Takahisa Toda, Shin-ichi Minato
	Short Break (Time: 11:00 — 11:10)
	Invited Talk
	Session Chair: TBA
11:10 - 12:00	**Invited Talk: Matching problems for uncertain sequences: Algorithms and Applications** James Bailey
	Lunch (Time: 12:00 — 13:15)
	Session III
	Session Chair: TBA
13:15 - 13:40	**Ensemble Clustering of High Dimensional Data With FastMap Projection** Imran Khan, Joshua Z. Huang, Thanh-Tung Nguyen
13:40 - 14:05	**A General Framework for Parallel Unary Operations on ZDDs** Shogo Takeuchi, Takahisa Toda, Shin-ichi Minato
14:05 - 14:30	**Local Feature Selection by Formal Concept Analysis for Multi-class Classification** Madori Ikeda and Akihiro Yamamoto
	Coffee Break (B2) (Time: 14:30 — 15:00)
	Session IV
	Session Chair: TBA
15:00 - 15:25	**Generating Permutations under Pattern Occurrence Constraints Using PiDDs** Yuma Inoue, Takahisa Toda, and Shin-ichi Minato

Time	Presentation
15:25 - 16:25	**Tutorial Talk: Succinct Data Structures for Data Mining** Rajeev Raman
16:25 - 16:35	**Closing**

Pacific Asia Workshop on Intelligence and Security Informatics	
Time	**Presentation**
	Opening and Keynote Speech Session Chair: Jau-Hwang Wang
13:30 - 14:30	**Security Informatics Using Social Media Data** Professor Ee-Peng Lim, Singapore Management University
	Coffee Break (B2) (Time: 14:30 — 15:00)
	Session I: Cybercrime and Malware Session Chair: Michael Chau
15:00 - 15:20	**A Rational Choice of Malware Authors in Taiwan** Dayu Kao
15:20 - 15:40	**Study of Cybercrime Investigation Knowledge Management** Weiping Chang and Peifang Chung
	Session II: Information Security Engineering Session Chair: Weiping Chang
15:40 - 16:00	**User Management in Information Security Engineering Environment ISEE** Liqing Xu, Ning Zhang, Yuichi Goto and Jingde Cheng
16:00 - 16:20	**Active and Personalized Services in An Information Security Engineering Cloud Based on ISO/IEC 15408** Liqing Xu, Ning Zhang, Yuichi Goto and Jingde Cheng
	Session Break (B2) (Time: 16:20 — 16:30)
	Session III: Text Mining Session Chair: Joshua Huang

Time	Presentation
16:30 - 16:50	**Identify the Online Product Comments with Suspicious Chinese Content** Ping Han Lei, Pingyu Hsu and Ming Shien Cheng
16:50 - 17:10	**Automatically Explore Inter-Discipline Technology from Chinese Patent Documents** Ming Shien Cheng and Pingyu Hsu
17:10 - 17:30	**A LDA Feature Grouping Method for Subspace Clustering of Text Data** Yeshou Cai, Xiaojun Chen, Patrick Peng and Joshua Huang

Data Mining in Social Networks	
Time	**Presentation**
Session I Session Chair: Cheng-Te Li (National Taiwan University, Taiwan)	
13:00 - 13:05	**Opening remarks** Carson Leung (University of Manitoba, Canada)
13:05 - 13:25	**STC: a joint sentiment-topic model for community identification** Baoguo Yang and Suresh Manandhar (University of York, UK)
13:25 - 13:45	**Social network community detection using strongly connected components** W. Lee, James J. Lee, and Jinho Kim (Kangwon National University, South Korea)
Session II Session Chair: Carson Leung (University of Manitoba, Canada)	
13:45 - 14:05	**Toward automatic censorship detection in microblogs** Donn Morrison (Norwegian University of Science and Technology, Norway)
14:05 - 14:30	**Multi-group-based user perceptions for friend recommendation in social networks** Trung L.T. Nguyen and Tru H. Cao (Ho Chi Minh City University of Technology, Vietnam)
Coffee Break (B2) (Time: 14:30 — 15:00)	
Session III Session Chair: Wookey Lee (Inha University, South Korea)	

15:00 - 15:25	**Competition component identification on twitter** Cheng-Huang Yang, Ji-De Chen and Hung-Yu Kao (National Cheng Kung University, Taiwan)"
15:25 - 15:50	**Considerations about multistep community detection** Antonio A. Gentile, Angelo Corallo, Cristian Bisconti and Laura Fortunato (University of Salento, Italy)
<td colspan="1" align="center">**Session IV** Session Chair: Guandong Xu (University of Technology - Sydney, Australia)</td>
15:50 - 16:15	**A unified fusion framework for time-related rank in threaded discussion communities** Qiang You, Weiming Hu, Ou Wu and Haiqiang Zuo (Chinese Academy of Sciences, China)
16:15 - 16:40	**An edge-centric approach for change point detection in dynamic networks** Yongsheng Cheng and Xiaokang Lin (Tsinghua University, China)
<td colspan="1" align="center">**Panel Discussion Session** Chair: Ee-Peng Lim (Singapore Management University, Singapore)(Time: 16:40 — 17:30)</td>
<td colspan="1" align="center">**Data Mining in Biomedical informatics and Healthcare**</td>
Time	**Presentation**
08:30 - 09:30	**Invited Talk：Extracting Clinical Evidence from Medical Literature** Prof. Jung-Hsien Chiang (National Cheng Kung University, Taiwan)
<td colspan="1" align="center">Coffee Break (B2) (Time: 09:30 — 10:00)</td>
10:00 - 10:30	**An Author Topic Analysis of Tobacco Regulation Investigators** Dingcheng Li, Janet Okamoto, Scott Leischow, Hongfang Liu (United States Mayo Clinic), and Feichen Shen (University of Missouri Kansas City)
10:30 - 11:00	**Cancer Based Pharmacogenomics Network for Drug Repurposing: Case studies** Liwei Wang (China Jilin University), Hongfang Liu, Christopher Chute, and Qian Zhu (United States Mayo Clinic)
11:00 - 11:30	**Automatic Segmentation and Quantitative Analysis of Gray Matter on MR Images of Patients with Epilepsy Based on Unsupervised Learning Methods** Rui Wang, Jie Wang (Shanghai Jiao Tong University, China), Jing Ding (Zhongshan Hospital, Fudan University, China), and Su Zhang (Shanghai Jiao Tong University, China)

11:30 - 12:00	**Linked Vaccine Adverse Event Data Representation from VAERS for Biomedical Informatics Research** Cui Tao (United States University of Texas Health Science Center at Houston), Puqiang Wu (United States University of Wisconsin-Madison), and Yuji Zhang (United States Mayo Clinic)
12:00 - 12:30	**Mining Severe Drug-Drug Interaction Adverse Events Using Semantic Web Technologies: A Case Study** Guoqian Jiang, Hongfang Liu, Harold Solbrig, and Christopher Chute(United States Mayo Clinic College of Medicine)