

# **October 7th 2017, Saturday**

## **Conference Opening**

### **Chairs:**

- **Welcome address:**
- **Opening address:**
- **Program introduction:**

## **Session Tutorial 1:**

### **Chair:**

## **Session Tutorial 2:**

### **Chair:**

## **Special sessions on Security and Privacy 1:**

### **Chair:**

#### **1. A Study on Securing Software Defined Networks**

*Raihan Ur Rasool, Hua Wang, Wajid Rafique, Jianming Yong, and Jinli Cao*

#### **2. A Verifiable Ranked Choice Internet Voting System**

*Xuechao Yang, Xun Yi, Caspar Ryan, Ron van Schyndel, Fengling Han, Surya Nepal, and Andy Song*

#### **3. Privacy Preserving Location Recommendations**

*Shahriar Badsha, Xun Yi, Ibrahim Khalil, Dongxi Liu, Surya Nepal, and Elisa Bertino*

#### **4. Topic Detection with Locally Weighted Semi-supervised Collective Learning**

*Ye Wang, Yong Quan, Bin Zhou, Yanchun Zhang, and Ming Peng*

## **Special sessions on Security and Privacy 2:**

### **Chair:**

**1. My Face is Mine: Fighting Unpermitted Tagging on Personal/Group Photos in Social Media**

*Lihong Tang, Wanlun Ma, Sheng Wen, Marthie Grobler, Yang Xiang, and Wanlei Zhou*

**2. Cryptographic Access Control in Electronic Health Record Systems: A Security Implication**

*Pasupathy Vimalachandran, Hua Wang, Yanchun Zhang, Hongbo Kuang, and Guangping Zhuo*

**3. SDN-based Dynamic Policy Specification and Enforcement for Provisioning Security as a Service in Cloud**

*Udaya Tupakula, Vijay Varadharajan, and Kallol Krishna Karmakar*

**4. Botnet command and control architectures revisited: Tor Hidden services and Fluxing**

*Marios Anagnostopoulos, Georgios Kambourakis, Panagiotis Drakatos, Michail Karavolos, Sarantis Kotsilitis, and David K. Y. Yau*

## **October 8th 2017, Sunday**

### **Morning Plenary Session**

#### **Keynote Talk 01 :**

**Speaker:** Prof. Beng Chin Ooi

### **Session 01: Microblog Data Analysis**

**1. A Refined Method for Detecting Interpretable and Real-time Bursty Topic in Microblog Stream (id 165)**

*Tao Zhang, Bin Zhou, Jiuming Huang, Yan Jia, Bing Zhang, and Zhi Li*

**2. Connecting Targets to Tweets: Semantic Attention-based Model for Target-specific Stance Detection (id 183)**

*Yiwei Zhou, Alexandra I. Cristea, and Lei Shi*

**3. A Network Based Stratification Approach for Extracting Summary Tweets for News Articles (id 58)**

*Roshni Chakraborty, Maitry Bhavsar, Sourav Dandapat, and Joydeep Chandra*

**4. Interpreting Reputation through Frequent Named Entities in Twitter (id 95) (short paper)**

*Nacéra Bennacer, Francesca Bugiotti, Moditha Hewasinghage, Suela Isaj, and Gianluca Quercini*

**Session 02: Social Network Data Analysis**

**1. Discovering and Tracking Active Online Social Groups**

*Md Musfique Anwar, Chengfei Liu, Jianxin Li, and Tarique Anwar*

**2. Dynamic Relationship Building: Exploitation Versus Exploration on a Social Network**

*Bo Yan, Yang Chen, and Jiamou Liu*

**3. Social Personalized Ranking Embedding For Next POI Recommendation**

*Yan Long, Pengpeng Zhao, Victor S. Sheng, Guanfeng Liu, Jiajie Xu, Jian Wu, and Zhiming Cui*

**4. Assessment of Prediction Techniques: The Impact of Human Uncertainty**

*Kevin Jasberg and Sergej Sizov*

**Session 03: Data mining**

**1. Incremental Structural Clustering for Dynamic Networks**

*Yazhong Chen, Rong-Hua Li, Qiangqiang Dai, Zhenjun Li, Shaojie Qiao, and Rui Mao*

**2. Extractive Summarization Via Overlap-based Optimized Picking**

*Gaokun Dai and Zhendong Niu*

**3. Spatial Information Recognition on Web Documents using a Semi-Supervised Machine Learning Method**

*Hendi Lie, Richi Nayak, and Gordon Wyeth*

#### **4. When Will A Repost Cascade Settle Down?**

*Chi Chen, HongLiang Tian, Jie Tang, and ChunXiao Xing*

#### **Session 04: Event Detection**

##### **1. Event Cubea Conceptual Framework for Event Modeling and Analysis**

*Qing Li, Yun Ma, and Zhenguo Yang*

##### **2. Cross-Domain and Cross-Modality Transfer Learning for Multi-Domain and Multi-Modality Event Detection (short paper)**

*Zhenguo Yang, Min Cheng, Qing Li, Yukun Li, Zehang Lin, and Wenyin Liu*

##### **3. Determining Repairing Sequence of Inconsistencies in Content-related Data**

*Yuefeng Du, Derong Shen, Tiezheng Nie, Yue Kou, and Ge Yu*

##### **4. Efficient Approximate Entity Matching Using Jaro-Winkler Distance (id 104) (short paper)**

*Yaoshu Wang, Jianbin Qin, and Wei Wang*

#### **Session 05: Cloud Computing**

##### **1. Long-term Multi-Objective Task Scheduling with Diff-Serv in Hybrid Clouds**

*Puheng Zhang, Chuang Lin, Wenzhuo Li, and Xiao Ma*

##### **2. Online Cost-aware Service Requests Scheduling in Hybrid Clouds for Cloud Bursting**

*Yanhua Cao, Li Lu, Jiadi Yu, Shiyong Qian, Yanmin Zhu, Minglu Li, Jian Cao, Zhong Wang, Juan Li, and Guangtao Xue*

##### **3. Adaptive Deployment of Service-Based Processes into Cloud Federations**

*Chahrazed Labba, Nour Assy, Narjs Bellamine Ben Saoud, and Walid Gaaloul*

##### **4. Towards a Public Cloud Services Registry (short paper)**

*Ahmed Mohammed Ghamry, Asma Musabah Alkalbani, Vu Tran, Yi-Chan Tsai, My Ly Hoang, and Farookh Khadeer Hussain*

#### **Session 06: Query Processing**

**1. Location-based Top-k Term Querying over Sliding Window**

*Ying Xu, Lisi Chen, Bin Yao, Shuo Shang, Shunzhi Zhu, Kai Zheng, and Fang Li*

**2. A Kernel-based Approach to Developing Adaptable and Reusable Sensor Retrieval Systems for the Web of Things**

*Nguyen Khoi Tran, Quan Z. Sheng, M. Ali Babar, and Lina Yao*

**3. Reliable Retrieval of Top-k Tags**

*Yong Xu, Reynold Cheng, and Yudian Zheng*

## **October 9th 2017, Monday**

### **Morning Plenary Session**

**Keynote Talk 02:**

**Speaker: by Prof. Lei Chen**

### **Session 07: Spatial and Temporal Data**

**1. DTRP: A Flexible Deep Framework For Travel Route Planning**

*Jie Xu, Chaozhuo Li, Senzhang Wang, Feiran Huang, Zhoujun Li, Yueying He, and Zhonghua Zhao*

**2. Taxi Route Recommendation Based on Urban Traffic Coulomb's Law**

*Zheng Lyu, Yongxuan Lai, Kuan-Ching Li, Minghong Liao, and Xing Gao*

**3. Efficient Order-sensitive Activity Trajectory Search**

*Kaiyang Guo, Rong-Hua Li, Shaojie Qiao, Zhenjun Li, Weipeng Zhang, and Minhua Lu*

**4. Effective Caching of Shortest Travel-Time Paths for Web Mapping Mashup Systems**

*Detian Zhang, An Liu, Gangyong Jia, Fei Chen, Qing Li, and Jian Li*

### **Session 08: Graph Theory**

**1. Discovering Hierarchical Subgraphs of K-Core-Truss**

*Zhen-jun Li, Wei-Peng Zhang, Rong-Hua Li, Jun Guo, Xin Huang, and Rui Mao*

**2. Efficient Subgraph Matching on Non-volatile Memory**

*Yishu Shen and Zhaonian Zou*

**3. Influenced Nodes Discovery in Temporal Contact Network**

*Jinjing Huang, Tianqiao Lin, An Liu, Zhixu Li, Hongzhi Yin, and Lei Zhao*

**4. Tracking Clustering Coefficient on Dynamic Graph via Incremental Random Walk (short paper)**

*Qun Liao, Lei Sun, Yunpeng Yuan, and Yulu Yang*

**Session 09: Interchange session**

**Chair: Stanislav Klimenko**

**1. BERYL: a System for Web Block Classification**

*Andrey Kravchenko*

**2. Mining Co-Location Patterns with Dominant Features (id 20)**

*Yuan Fang, Lizhen Wang, Xiaoxuan Wang, and Lihua Zhou (absent?)*

**3. Maximal Sub-Prevalent Co-location Patterns and Efficient Mining Algorithms (id 134)**

*Lizhen Wang, Xuguang Bao, Lihua Zhou, and Hongmei Chen (absent?)*

**4. Overlapping Communities Meet Roles and Respective Behavioral Patterns in Networks with Node Attributes (id 143)**

*Gianni Costa and Riccardo Ortale (absent)*

**5. Time Series Classification by Modeling the Principal Shapes (id 170)**

*Zhenguo Zhang, Yanlong Wen, Ying Zhang, and Xiaojie Yuan (absent?)*

**6. Estimating Support Scores of Autism Communities in Large-Scale Web Information Systems (id 226) (short paper)**

*Nguyen, Hung Nguyen, Svetha Venkatesh, and Dinh Phung (absent?)*

**7. Cross-Cultural Web Usability Model (id 145)**

*Rukshan Alexander, David Murray, and Nik Thompson (absent?)*

**8. A Robust and Fast Reputation System for Online Rating Systems (id 207) (short paper)**

*Mohsen Rezvani and Mojtaba Rezvani (absent?)*

**9. Exploring the Impact of Co-Experiencing Stressor Events for Teens  
Stress Forecasting (id 255)**

*Qi Li, Liang Zhao, Yuanyuan Xue, Li Jin, and Ling Feng (absent?)*

**Session 10: Crowdsourcing and Crowdsensing**

**1. Real-time Target Tracking through Mobile Crowdsensing**

*Jinyu Shi and Weijia Jia*

**2. Crowdsourced Entity Alignment: A Decision Theory Based Approach**

*Yan Zhuang, Guoliang Li, and Jianhua Feng*

**3. A QoS-aware Online Incentive Mechanism for Mobile Crowd Sensing  
(short paper)**

*Hui Cai, Yanmin Zhu, and Jiadi Yu*

**4. Iterative Reduction Worker Filtering for Crowdsourced Label  
Aggregation (short paper)**

*Jiyi Li and Hisashi Kashima*

**Session 11: Web data model**

**1. Semantic Web Datatype Inference: Towards Better RDF Matching**

*Irvin Dongo, Yudith Cardinale, Firas Al-Khalil, and Richard Chbeir*

**2. How fair is your network to new and old objects? : A modelling of object  
selection in web based user-object networks (short paper)**

*Anita Chandra, Himanshu Garg, and Abyayananda Maiti*

**3. Modeling Complementary Relationships of Cross-Category Products for  
Personal Ranking (short paper)**

*Wenli Yu, Li Li, Fei Hu, Fan Li, and Jinjing Zhang*

**Session 12: Language Processing and Web Protocols**

**1. Eliminating Incorrect Cross-Language Links in Wikipedia (short paper)**

*Nacéra Bennacer, Francesca Bugiotti, Jorge Galicia, Mariana Patricio, and  
Gianluca Quercini*

**2. Combining Local and Global Features in Supervised Word Sense**

### **Disambiguation**

*Xue Lei, Yi Cai, Qing Li, Haoran Xie, Ho-fung Leung, and Fu Lee Wang*

### **3. A Concurrent Interdependent Service Level Agreement Negotiation Protocol in Dynamic Service-oriented Computing Environments**

*Lei Niu, Fenghui Ren, and Minjie Zhang*

### **4. A New Static Web Caching Mechanism based on Mutual Dependency between Result Cache and Posting List Cache (short paper)**

*Thanh Trinh, Dingming Wu, and Joshua Zhexue Huang*

## **October 10th 2017, Tuesday**

### **Keynote Talk 03:**

**Speaker: Prof. Jie Lu**

### **Session 13: Web-based Applications**

#### **1. A Large-Scale Visual Check-In System for TV Content-Aware Web with Client-Side Video Analysis Offloading**

*Shuichi Kurabayashi and Hiroki Hanaoka*

#### **2. The Automatic Development of SEO-friendly Single Page Applications Based on HIJAX Approach (short paper)**

*Siamak Hatami*

#### **3. Towards Effective web crawling - A theme weight and Bayesian Page Rank based approach (short paper)**

*Yan Tang, Lei Wei, Wangsong Wang, and Pengcheng Xuan*

### **Session 14: Data Storage and Generator**

#### **1. Efficient Multi-Version Storage Engine for Main Memory Data Store**

*Jinwei Guo, Bing Xiao, Peng Cai, Weining Qian, and Aoying Zhou*

#### **2. WeDGem: A Domain-specific Evaluation Dataset Generator for**



**Multilingual Entity Linking Systems (short paper)**

*Emrah Inan and Oguz Dikenelli*

**3. Extracting Web Content by Exploiting Multi-Category Characteristics**

*Qian Wang, Qing Yang, Jingwei Zhang, Rui Zhou, and Yanchun Zhang*

**Session 15: Security and Privacy**

**1. PrivacySafer: Privacy Adaptation for HTML5 Web Applications**

*Georgia M. Kapitsaki and Theodoros Charalambous*

**2. Anonymity-based Privacy-preserving Task Assignment in Spatial Crowdsourcing**

*Yue Sun, An Liu, Zhixu Li, Guanfeng Liu, Lei Zhao, and Kai Zheng*

**3. Understanding Evasion Techniques that Abuse Differences among JavaScript Implementations**

*Yuta Takata, Mitsuaki Akiyama, Takeshi Yagi, and Takeo Hairu, Shigeki Goto*

**4. Mining Representative Patterns Under Differential Privacy (short paper)**

*Xiaofeng Ding, Long Chen, and Hai Jin*

**5. A Survey on Security as a Service (short paper)**

*Wenyuan Wang and Sira Yongchareon*

**Session 16: Sentiment Analysis**

**1. SGMR: Sentiment-aligned Generative Model for Reviews (short paper)**

*He Zou, Litian Yin, Dong Wang, and Yue Ding*

**2. An Ontology-Enhanced Hybrid Approach to Aspect-Based Sentiment Analysis (short paper)**

*Daan de Heij, Artiom Troyanovsky, Cynthia Yang, Milena Zychlinsky Schar, Kim Schouten, and Flavius Frasincar*

**3. DARE to Care: A Context-Aware Based Framework to Track Suicidal Ideation on Social Media (short paper)**

*Bilel Moulahi, J'érôme Az'e, and Sandra Bringay*

## Session 17: Recommender Systems 1

1. **Local Top-N Recommendation via Rened Item-User Bi-Clustering**  
*Yuheng Wang, Xiang Zhao, Yifan Chen, Wenjie Zhang, and Weidong Xiao*
2. **HOMMIT: A Sequential Recommendation for Modeling Interesttransferring via High-order Markov Model**  
*Yang Xu, Xiaoguang Hong, Zhaohui Peng, Yupeng Hu, and Guang Yang*
3. **Modeling Implicit Communities in Recommender Systems**  
*Xiao Lin and Zhaoquan Gu*
4. **Coordinating Disagreement and Satisfaction in Group Formation for Recommendation**  
*Xiao Lin and Zhaoquan Gu*

## Session 18: Recommender Systems 2

1. **Factorization Machines Leveraging Lightweight Linked Open Data-enabled Features for Top-N Recommendations**  
*Guangyuan Piao and John G. Breslin*
2. **A Fine-grained Latent Aspects Model for Recommendation: Combining Each Rating with Its Associated Review**  
*Xuehui Mao, Shizhong Yuan, Weimin Xu, and Daming Wei*
3. **Auxiliary Service Recommendation for Online Flight Booking (short paper)**  
*Hongyu Lu, Jian Cao, Yudong Tan, and Quanwu Xiao*
4. **How does Fairness matter in Group Recommendation (short paper)**  
*Xiao Lin and Zhaoquan Gu*
5. **Exploiting Users' Rating Behaviour to Enhance the Robustness of Social Recommendation (short paper)**  
*Zizhu Zhang, Weiliang Zhao, Jian Yang, Surya Nepal, Cecile Paris, and Bing Li*