
PERSONAL INFORMATION	Address: Room 417, Chow Yei Ching BLDG, Department of Computer Science, The University of Hong Kong Mobile phone: +852-68786771
EDUCATION	Ph.D. in Computer Science, The University of Hong Kong. <i>Hong Kong, China, Sept. 2014 - July 2018 (Expected)</i> Advisor: Dr. Reynold C.K. Cheng M.Eng. in Software Engineering, Institute of Software, University of Chinese Academy of Sciences <i>Beijing, China, Sept. 2011 - Jul. 2014</i> Advisor: Prof. Beihong Jin B.Eng. in Software Engineering, Jilin University <i>Changchun, Jilin, China, Sept. 2007 - Jun. 2011</i>
RESEARCH INTERESTS	Spatio-Temporal Data Management, Graph data management and mining, Community Search, Uncertain Graph Embedding
INTERNSHIPS	Software Engineering Intern at Google, Brand Ads Group, Los Angeles, US <i>supervised by Dr. Josh Bao</i> May 2017 - Aug. 2017 Work on Hyperloglog based deduped reach reporting (cardinality estimation), i.e., using approximate methods to report on how many unique users have been reached by a specific Ad. Technology involved: C++, Python, HyperLogLog, Flume (map-reduce), etc. Reference: Josh Bao (jbao@google.com). Software Engineering Intern at Google, Street View Group, Mountain View, US <i>supervised by Dr. Chunhui Gu</i> May 2016 - Sept. 2016 Objective: design, implementation and evaluation of a neural network based framework to predict turn restrictions at intersections from GPS data. Technology involved: Python, C++, TensorFlow, Flume, etc. Reference: Chunhui Gu (chunhui@google.com). Research Intern at Microsoft Research Asia (MSRA) Web Search and Mining Group <i>supervised by Dr. Yu Zheng</i> Dec. 2011 - May 2012 Main achievements: propose a novel two-step mining and optimization framework for explaining anomalous patterns that appear in road traffic data. After modeling road traffic as a time-dependent flow on a network, we first apply principal component analysis (PCA) to identify link anomalies. Then, use optimization techniques to infer route (path) flows which may have caused the anomalies to occur. An academic paper has been accepted for publication in ICDM 2012. Reference: Yu Zheng (now Vice President and Chief Data Scientist at JD Finance Group msyuzheng@outlook.com).

PUBLICATIONS

1. Yixiang Fang, Zheng Wang, Reynold Cheng, Xiaodong Li, Siquang Luo, **Jiafeng Hu**, Xiaojun Chen. *On Spatial-Aware Community Search*. In **TKDE 2018**.
2. Siquang Luo, Ben Kao, Guoliang Li, **Jiafeng Hu**, Reynold Cheng, and Yudian Zheng. *TOAIN: A Throughput Optimizing Adaptive Index for Answering Dynamic k NN Queries on Road Networks*. In **VLDB 2018**.
3. Xiaodong Li, Reynold Cheng, Yixiang Fang, **Jiafeng Hu** and Silviu Maniu. *Scalable Evaluation of k -NN Queries on Large Uncertain Graphs*. In **EDBT 2018**.
4. **Jiafeng Hu**, Reynold Cheng, Zhipeng Huang, Yixiang Fang, and Siquang Luo. *On Embedding Uncertain Graphs*. In **CIKM 2017**.
5. Siquang Luo, **Jiafeng Hu**, Reynold Cheng, Jing Yan and Ben Kao. *SEQ: Example-based Query for Spatial Objects* (short paper). In **CIKM 2017**.
6. **Jiafeng Hu**, Xiaowei Wu, Reynold Cheng, Siquang Luo and Yixiang Fang. *On Minimal Steiner Maximum-Connected Subgraph Queries*. In IEEE Transactions on Knowledge and Data Engineering (**TKDE**), 2017.
7. Yixiang Fang, Reynold Cheng, Yankai Chen, Siquang Luo and **Jiafeng Hu**. *Effective and Efficient Attributed Community Search*. To appear in **VLDBJ**, 2017.
8. Yixiang Fang, Reynold Cheng, Siquang Luo, **Jiafeng Hu** and Kai Huang. *C-Explorer: Browsing Communities in Large Graphs*. In **VLDB 2017**.
9. Yixiang Fang, Reynold Cheng, Xiaodong Li, Siquang Luo and **Jiafeng Hu**. *Effective Community Search over Large Spatial Graphs*. In **VLDB 2017**.
10. **Jiafeng Hu**, Xiaowei Wu, Reynold Cheng, Siquang Luo and Yixiang Fang. *Querying Minimal Steiner Maximum-Connected Subgraphs in Large Graphs*. In **CIKM 2016**.
11. Yixiang Fang, Reynold Cheng, Siquang Luo, and **Jiafeng Hu**. *Effective Community Search for Large Attributed Graphs*, In **VLDB 2016**.
12. Fusang Zhang, Beihong Jin, Zhaoyang Wang, Hai Liu, **Jiafeng Hu** and Lifeng Zhang. *On Geocasting over Urban Bus based Networks by Mining Trajectories*. In IEEE Transactions on Intelligent Transportation Systems (TITS), 2016.
13. **Jiafeng Hu**, Beihong Jin, Fusang Zhang, Zhaoyang Wang and Yuwei Yang. *Towards Connectivity-Aware Deployment and Adjustment for Roadside Units*. International Journal of Autonomous and Adaptive Communications Systems, 9, no. 1-2 (2016): 119-135.
14. **Jiafeng Hu**, Reynold Cheng, Dingming Wu and Beihong Jin. *Efficient Top- k Subscription Matching for Location-Aware Publish/Subscribe*. International Symposium on Spatial and Temporal Databases (SSTD), pp. 333-351. Springer International Publishing, 2015.
15. Fusang Zhang, Beihong Jin, Zhaoyang Wang, **Jiafeng Hu**, Lifeng Zhang. *A Routing Mechanism over Bus-Based VANETs by Mining Trajectories*. Chinese Journal of Computers, 2015, Vol. 38, No. 3. (In Chinese)

16. Beihong Jin, Wei Zhuo, **Jiafeng Hu**, Haibiao Chen and Yuwei Yang. *Specifying and Detecting Spatio-Temporal Events in the Internet of Things*. Decision Support Systems 55 (2013).
17. Sanjay Chawla, Yu Zheng and **Jiafeng Hu**. *Inferring the Root Cause in Road Traffic Anomalies*. In **ICDM 2012**.
18. Beihong Jin and **Jiafeng Hu**. *Towards Scalable Processing for a Large-Scale Ride Sharing Service*. UIC Workshops 2012.
19. **Jiafeng Hu**, Beihong Jin, Wei Zhuo, Haibiao Chen and Lifeng Zhang. *Spatial Event Detection and Optimization*. Journal of Software, 2011, 22(Suppl.(2)):147-156. (In Chinese)
20. **Jiafeng Hu**, Beihong Jin, Haibiao Chen. *On Speed-up Strategies for Detecting Spatial Events*. The 7th Joint Conference on Harmonious Human Machine Environment (HHME2011), Beijing China, Sep. 2011.(In Chinese)

SELECTED AWARDS	• Hong Kong and China Gas Company Limited Postgraduate Prize	2017-18
	• SIGIR Travel Grant	2016
	• Postgraduate Scholarship, The University of Hong Kong	2014 - Present
	• National Scholarship , University of Chinese Academy of Sciences	2013
	• Merit student of University of Chinese Academy of Sciences	2012 & 2013
	• Outstanding Bachelor Graduate of Jilin University	2011
	• 1st Award , Jilin Provincial Collegiate Programming Contest	2009 & 2010
	• Silver Medal, ACM-ICPC, Asia Regional(Harbin site)	2009
	• Samsung Scholarship, Jilin University	2009
	• National Scholarship , Jilin University	2008

PROFESSIONAL SERVICES	Teaching Assistant (TA)	
	• Securities Transaction Banking	2014/09-2014/12
	• The Age of Big Data	2017/01-2017/06

Talks

- East China Normal University (host: Prof. Xiaoling Wang), June 2018

External Reviewer

- Conference:
VLDB'17/16, SIGMOD'18/17, ICDE'18/16, EDBT'18/16, KDD'18/17/16/15, ICDM'18, GIS'16/15, CIKM'18/17/16/15, DASFAA'18/17, BIGDATA'16/15, SSTD'17/15, WAIM'15
- Journal:
TKDD'18, VLDBJ'15, Information Systems'16/14

Reviewer

- Journal:
TKDE'18, DMKD'18, IEEE Access'18

SKILLS

- C, C++, Java, C#, Python, L^AT_EX, Matlab

LAST MODIFIED IN
JULY, 2018.