Peng Jia

Mobile : +86-15619302413

Email : pengjia@sei.xjtu.edu.cn

Homepage : https://www.pengjia.top

Address: #28, Xianning West Rd., Shaanxi, Xi'an, China

Education

- **Xi'an Jiaotong University** — Xi'an, Shaanxi, China
  *Ph.D. Candidate of Control Science and Engineering (Supervised by **Pinghui Wang**)* — *2016 – present (3rd year)*

- **Xi'an Jiaotong University** — Xi'an, Shaanxi, China
  B.Eng. of Automation Science and Technology — *2012 – 2016*

Awards and Honors

- Top-Class Scholarship for Doctoral Students – 2020

- National Scholarship for Doctoral Students – 2019

- Excellent Graduate Student in Xi'an Jiaotong Universtity – 2019

- ICDE 2019 CCF TCDB Student Travel Awards – 2019

- Entrance Scholarship – 2016

- National College Student Information Security Contest, 3rd Prize – 2016

- "Challenge Cup" National Undergraduate Curricular Academic Science and Technology, 2nd Prize – 2015

- China National College Student "Innovation, Originality and Entrepreneurship" Challenge, 3rd Prize in Shaanxi – 2015

- "Si Yuan" Schorlarship – 2013

Research Interests

- Graph Mining

- Sketch-based and Sampling-based Streaming Algorithms

- Large Scale Graph Analysis

- Online Social Network Measurement

- High Speed Traffic Analysis

- Anomaly Detection

Publications

- **Peng Jia**, Pinghui Wang, Junzhou Zhao, Ye Yuan, Jing Tao, Xiaohong Guan. "LogLog Filter: Filtering Cold Items within a Large Range over High Speed Data Streams". IEEE International Conference on Data Engineering (**ICDE**) 2021.

- Rundong Li, Pinghui Wang, **Peng Jia**, Xiangliang Zhang, Junzhou Zhao, Jing Tao, Ye Yuan, Xiaohong Guan. "Approximately Counting Butterflies in Large Bipartite Graph Streams". IEEE Transactions on Knowledge and Data Engineering (**TKDE**) 2021.

- **Peng Jia**, Pinghui Wang, Junzhou Zhao, Jing Tao, Ye Yuan, Xiaohong Guan. "Erasable Virtual HyperLogLog for Approximating Cumulative Distribution over Data Streams". IEEE Transactions on Knowledge and Data Engineering **(TKDE)** 2021.

- **Peng Jia**, Pinghui Wang, Junzhou Zhao, Shuo Zhang, Yiyan Qi, Min Hu, Chao Deng, Xiaohong Guan. "Bidirectionally Densifying LSH Sketches with Empty Bins". ACM SIGMOD International Conference on Management of Data **(SIGMOD)** 2021.

- **Peng Jia**, Pinghui Wang, Yuchao Zhang, Xiangliang Zhang, Jing Tao, Jianwei Ding, Xiaohong Guan, Don Towsley. "Accurately Estimating User Cardinalities and Detecting Super Spreaders over Time". IEEE Transactions on Knowledge and Data Engineering **(TKDE)** 2020.

- **Peng Jia**, Pinghui Wang, Jing Tao, Xiaohong Guan. "A Fast Sketch Method for Mining User Similarities over Fully Dynamic Graph Streams". IEEE International Conference on Data Engineering **(ICDE)** 2019, 4-page short paper.

- Pinghui Wang, **Peng Jia**, Yiyan Qi, Sun Yu, Jing Tao, Xiaohong Guan. "REPT: A Streaming Algorithm of Approximating Global and Local Triangle Counts in Parallel". IEEE International Conference on Data Engineering **(ICDE)** 2019.

- Pinghui Wang, **Peng Jia**, Xiangliang Zhang, Jing Tao, Xiaohong Guan, Don Towsley. "Utilizing Dynamic Properties of Sharing Bits and Registers to Estimate User Cardinalities over Time". IEEE International Conference on Data Engineering **(ICDE)** 2019.

- Pinghui Wang, **Peng Jia**, Jing Tao, Xiaohong Guan. "Detecting a Variety of Long-Term Stealthy User Behaviors on High Speed Links". IEEE Transactions on Knowledge and Data Engineering **(TKDE)** 2019.

- Pinghui Wang, **Peng Jia**, Jing Tao, and Xiaohong Guan. "Mining Long-Term Stealthy User Behaviors on High Speed Links". IEEE International Conference on Computer Communications **(INFOCOM)** 2018.

Activities

Reviewer

- ACM Transactions on Knowledge Discovery from Data (**TKDD**)

- IEEE Transactions on Dependable and Secure Computing (**TDSC**)

Intern

- Alibaba Group (Research Intern) – 2020.07-2020.10

Research Experience

- 2019 VLDB Summer School (in Beijing)

Projects

Sandbox of Dynamic Analysis for Android Application Security –2015

- Redesigned Android framework to monitor application behaviors on Framework layer during runtime.

- Focus on monitoring dynamic behaviors such as network communications, file operations, database operations.

- Automatically install and uninstall applications, smart touch of application interfaces, application analysis in parallel.

- URL: http://sanddroid.xjtu.edu.cn

Detection of Android Root Behaviors Based on Kernel –2016

- Redesigned framework to monitor application behaviors on Linux kernel during runtime.

- Detect root behaviors with significant system destruction patterns.

- Generate application behavioral graphs.

Programming Skills

- **Languages**: Python, C, C++, Java, Javascript, SQL

- **Technologies**: Web Development, Android Application Development