

Silu Huang

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Curriculum Vitae

Education

- 2014–2018.12 **PhD in Computer Science (Area: Data Management and Analytics)**,
(Expected) *University of Illinois at Urbana-Champaign, Illinois, USA, GPA – 3.95/4.*
Advisor: Prof. Aditya Parameswaran
- 2012–2014 **M.Phil in Computer Science and Engineering**,
The Chinese University of Hong Kong, Hong Kong, GPA – 3.92/4.
Advisor: Prof. James Cheng and Prof. Ada Fu
- 2008–2012 **B.Eng in Information Engineering**,
Shanghai Jiao Tong University, Shanghai, China, GPA – 90.8/100.
Outstanding Graduate, Ranking 7/255

Research Experiences

- 2014–
Present **University of Illinois at Urbana-Champaign, USA**,
Group: Database and Information Systems(DAIS) Group
Advisor: Prof. Aditya Parameswaran.
- Data Management for Collaborative Data Analytics (DataHub)
 - build compact storage engine for versioned datasets
 - develop a rich query language for version manipulation and reasoning
 - OrpheusDB: bolt on versioning for relational database like Postgres
 - Interactive Data Exploration
 - propose algorithms for fast identification of discriminative features
- 2017.May–
2017.Aug **Microsoft Research, Redmond, WA, USA**,
Group: Data Management, Exploration & Mining(DMX) Group
Mentor: Bolin Ding, Chi Wang.
- Auto Model Selection/Hyperparameter Tuning for Machine Learning
 - build a layer on top of Microsoft ML toolkit and Scikit-Learn in Python
 - derive plateau estimator for the learning curve
 - propose scheduling algorithm among different models with hyperparameters
- 2015.May–
2015.Aug **Microsoft Research, Redmond, WA, USA**,
Group: Data Management, Exploration & Mining(DMX) Group
Mentor: Bolin Ding.
- Approximate Query Processing for Aggregates
 - design sophisticated sampling and indexing strategy
 - achieve fast query processing with accuracy guarantee
- 2012–2014 **The Chinese University of Hong Kong, Hong Kong**,
Advisor: Prof. James Cheng and Prof. Ada Fu.
- Large-Scale Graph Data Management and Mining
 - design indexing for fast reachability query in massive graph
 - study path and tree problems in temporal graphs
 - Workload Balancing for Sorting and Skew Join in MPI and MapReduce
 - propose deterministic and stochastic scheduling algorithms

Technical Skills

OS Linux, Mac OS, Windows
Languages C, C++, C#, SQL, Python, Java, Matlab
Platform MPI, Hadoop

Awards & Honors

2017-2019 Microsoft Research PhD Fellowship
2015-2017 3M Fellowship Award
2014-2015 Wing Kai Cheng Fellowship Award
2013,2016 SIGMOD Travel Award
2012-2014 CUHK Postgraduate Studentship
2012 SJTU Outstanding Graduate
2011 2nd Prize in National Electronic Design Contest, 1st Prize in Shanghai Devison
2011,10,09 National Scholarship (**top 1%**)
2011,10,09 SJTU Academic Excellent Scholarship

Selected Publications

1. **Silu Huang**, Liqi Xu, Jialin Liu, Aaron Elmore, and Aditya Parameswaran
OrpheusDB: Bolt-on Versioning for Relational Databases. (PVLDB), 2017
2. Liqi Xu, **Silu Huang**, Sili Hui, Aaron J. Elmore, and Aditya Parameswaran
OrpheusDB: Bolt-on Versioning for Relational Databases. (SIGMOD DEMO), 2017
3. Bolin Ding, **Silu Huang**, Surajit Chaudhuri, Kaushik Chakrabarti, Chi Wang
Sample + Seek: Approximating Aggregates with Distribution Precision Guarantee.
International Conference on Management of Data (SIGMOD), 2016
4. **Silu Huang**, Ada Fu and Ruifeng Liu
Minimum Spanning Trees in Temporal Graphs. *International Conference on Management of Data (SIGMOD)*, 2015
5. Souvik Bhattacharjee, Amit Chavan, **Silu Huang**, Amol Deshpande, Aditya G. Parameswaran
Principles of Dataset Versioning: Exploring the Recreation/Storage Tradeoff. *Proceedings of the Very Large Database Endowment (PVLDB)*, 2015
6. Amit Chavan, **Silu Huang**, Amol Deshpande, Aaron Elmore, Samuel Madden, Aditya Parameswaran
Towards a unified query language for provenance and versioning. *International Workshop on Theory and Practice of Provenance (TaPP)*, 2015
7. **Silu Huang**, Ada Fu
k-balanced sorting and skew join in MPI and MapReduce. *IEEE International Conference on Big Data (IEEE BigData)*, 2014
8. Huanhuan Wu, James Cheng, **Silu Huang**, Yiping Ke, Yi Lu, Yanyan Xu
Path Problems in Temporal Graphs. *Proceedings of the Very Large Database Endowment (PVLDB)*, 2014
9. James Cheng, **Silu Huang**, Huanhuan Wu, and Ada Fu
TF-Label: a Topological-Folding Labeling Scheme for Reachability Querying in a Large Graph. *International Conference on Management of Data (SIGMOD)*, 2013