

# Chen Luo

School of Software, Tsinghua University – Beijing – China

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## Education

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**Tsinghua University**, China

*Sept. 2013–July 2016 (Expected)*

M.Eng. in Software Engineering

GPA: 94.1/100, Ranking: 2 out of 136

Thesis: Policy-Based Privacy Checking for Big Data Analytics Systems

**Tongji University**, China

*Sept. 2009–July 2013*

B.Eng. in Software Engineering

GPA: 4.72/5, Ranking: 2 out of 169

Thesis: Design and Implementation of a Distributed Key-Value Storage System

## Research Experience

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**PSpec-SQL**, Tsinghua University

*July 2014–Present*

- Tsinghua–Intel Joint Research Project
- Built a privacy-integrated data analytics system on top of Spark-SQL, which:
  - Provides a high-level privacy language for specifying privacy policies
  - Enforces privacy compliances against submitted queries using program analysis techniques
  - Integrates with differential privacy to offer provable privacy guarantees

**Large-Scale Software Model Inference**, Tsinghua University

*Mar. 2014–July 2014*

- Independent Research Project
- Proposed a MapReduce-based approach for inferring software models from large logs
- Demonstrated efficiency and scalability with extensive experiments on AWS cloud

**DQCup**, Tsinghua University

*Sept. 2013–Dec. 2013*

- Course Project for *Advanced Topics in Data Quality*
- Developed a data cleaning tool integrating various data cleaning techniques for a given task
- Ranked 1st among 15 teams in terms of detection accuracy, repairing accuracy, and performance

**KVStore**, Tongji University

*Dec. 2012–June 2013*

- Bachelor Thesis Project
- Built a distributed key-value storage system with in-memory/persistent engines
- Key features include fault tolerance and automatic load balancing

## Work Experience

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**Research Assistant**, Tsinghua University

*Mar. 2014–Present*

- Led a group in conducting research on privacy-preserving data analytics systems
- Conducted independent research on formal methods

**Software Developer Intern**, eBay China Development Center

*July 2012–Mar. 2013*

- Participated in the development of eBay's web application framework
- Redeveloped the internal web traffic analytics system with MapReduce

**Research Assistant**, Tongji University

*Mar. 2011–June 2012*

- Participated in the development of a customer service and support system

## Teaching Experience

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**Teaching Assistant**, Tsinghua University

Mar. 2015–July 2015

- o Course: Modeling and Verification of Software Systems
- o Designed and marked course projects, delivered lectures, and Q&A

**Teaching Assistant**, Tongji University

Mar. 2011–July 2011

- o Course: Object-Oriented Programming C++
- o Designed and marked course assignments, tutored laboratory classes, and Q&A

## Honors & Awards

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- o First Class Scholarship, Tsinghua University (top 10%) 2014, 2015
- o Graduate with Honor of Shanghai, Tongji University (top 5%) 2013
- o Outstanding Student, Tongji University (top 5%) 2010, 2011
- o First Class Scholarship, Tongji University (top 5%) 2011

## Presentation

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- o Inferring Software Behavioral Models with MapReduce. *International Symposium on Dependable Software Engineering: Theories, Tools and Applications (SETTA)*, Nanjing, China, November 2015

## Publication

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- [1] **Chen Luo**, Fei He, and Carlo Ghezzi. Inferring Software Behavioral Models with MapReduce. In *Proceedings of the 1st International Symposium on Dependable Software Engineering: Theories, Tools and Applications (SETTA)*, LNCS 9409, pages 135–149, November 2015  
Available at: [http://luochen01.github.io/papers/model\\_2015.pdf](http://luochen01.github.io/papers/model_2015.pdf)

## Papers Submitted

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- [1] **Chen Luo**, Fei He, Fei Peng, Dong Yan, Dan Zhang, and Xin Zhou. PSpec-SQL: Enforcing Privacy Policies in Big Data Analytics. Submitted to *the 32nd International Conference on Data Engineering (ICDE)*, 2016  
Available at: [http://luochen01.github.io/papers/pspec-sql\\_2015.pdf](http://luochen01.github.io/papers/pspec-sql_2015.pdf)
- [2] **Chen Luo**, Fei He, Fei Peng, Dong Yan, Dan Zhang, Xin Zhou, and Bow-Yaw Wang. PSpec: A Formal Privacy Language for Data Analytics. Submitted to *the 37th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI)*, 2016  
Available at: [http://luochen01.github.io/papers/pspec\\_2015.pdf](http://luochen01.github.io/papers/pspec_2015.pdf)
- [3] **Chen Luo** and Fei He. SMT-Based Query Tracking for Differentially Private Data Analytics Systems. Submitted to *Frontiers of Computer Science*  
Available at: [http://luochen01.github.io/papers/tracking\\_2015.pdf](http://luochen01.github.io/papers/tracking_2015.pdf)

## Technical Skills

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- o **Programming Languages**: Java, C/C++, Scala, Python, SQL, R, Bash
- o **Databases and Systems**: MySQL, Hadoop, Spark, Spark-SQL, Hive
- o **Software Tools**: Eclipse, LaTeX, Visual Studio, Matlab