Chen Luo

Department of Computer Science, University of California, Irvine – Irvine – CA

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Education

University of California, Irvine, CA   *Sept. 2016–Present*
Ph.D. in Computer Science
Supervisor: Prof. Michael Carey

Tsinghua University, China   *Sept. 2013–July 2016*
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

Logic-based Enforcement of SQL Data Use Policies, Tsinghua University   *Aug. 2015–May 2016*
o Proposed a logic-based approach for enforcing SQL data use policies
o Defined a novel specification logic combining LTL and CTL for SQL query sequences
o Implemented the approach on top of Spark-SQL, and demonstrated practicality with a case study comprising 106 real world policies

PSpec-SQL, Tsinghua University   *July 2014–Dec. 2015*
o Tsinghua–Intel Joint Research Project
o 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*
o Independent Research Project
o Proposed a MapReduce-based approach for inferring software models from large logs
o Demonstrated efficiency and scalability with extensive experiments on AWS cloud

KVStore, Tongji University   *Dec. 2012–June 2013*
o Bachelor Thesis Project
o Built a distributed key-value storage system with in-memory/persistent engines
o Key features include fault tolerance and automatic load balancing

Publications

[1] **Chen Luo**, Fei He, and Carlo Ghezzi. Inferring Software Behavioral Models with MapReduce. *International Symposium on Dependable Software Engineering: Theories, Tools and Applications (SETTA)*, November 2015

[2] **Chen Luo**, Fei He, Dong Yan, Dan Zhang, Xin Zhou, and Bow-Yaw Wang. PSpec: A Formal Privacy Language for Data Analytics (Poster). *International Conference on Software Engineering (ICSE)*, May 2017. *To appear*

[3] **Chen Luo**, Fei He. SMT-Based Query Tracking for Differentially Private Data Analytics Systems. *Frontiers of Computer Science*. *To appear*

[4] **Chen Luo**, Fei He, Fei Peng, Dong Yan, Dan Zhang, and Xin Zhou. PSpec-SQL: Enforcing Privacy Policies in Big Data Analytics. *Under Submission*

[5] Ning Liu, **Chen Luo**, Fei He. A Logical Approach to Enforcing SQL Data Use Policies. *Under Submission*

Presentation

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

Work Experience

Research Assistant, Tsinghua University   *Mar. 2014–May 2016*
o Led a group in conducting research on security and privacy aspects of data analytics systems
o Conducted independent research on formal methods

Software Developer Intern, eBay China Development Center   *July 2012–Mar. 2013*
o Participated in the development of eBay's web application framework
o Redeveloped the internal web traffic analytics system with MapReduce

Research Assistant, Tongji University   *Mar. 2011–June 2012*
o Participated in the development of a customer service and support system

Teaching Assistant

o Programming in C++ as a Second Language, University of California, Irvine   *Fall 2016*
o Modeling and Verification of Software Systems, Tsinghua University   *Spring 2015*
o Object-Oriented Programming C++, Tongji University   *Spring 2011*

Honors & Awards

o Graduate with Honor of Beijing, Tsinghua University (top 5%)   *2016*
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*

Technical Skills

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