

Cheng Tan

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PROFESSIONAL EXPERIENCE

Northeastern University, Khoury College of Computer Sciences
Assistant Professor

Boston, MA
Aug 2021 – Present

ByteDance Inc, AI Lab
Research Scientist

Bellevue, WA
Oct 2020 – Aug 2021

EDUCATION

New York University
Ph.D. in Computer Science
Dissertation: “Auditing Outsourced Services”
Advisor: Michael Walfish

New York, NY
Sep 2014 – Aug 2020

Fudan University
M.S. in Software Engineering
Advisor: Haibo Chen and Binyu Zang

Shanghai, China
Sep 2011 – Jun 2014

Nanjing University
B.E. in Software Engineering

Nanjing, China
Sep 2007 – Jun 2011

PUBLICATIONS

- [8] **Cheng Tan**, Yibo Zhu, and Chuanxiong Guo. *Building Verified Neural Networks with Specifications for Systems*. 12th ACM SIGOPS Asia-Pacific Workshop on Systems (**APSys 2021**).
- [7] Mingyu Li, Jinhao Zhu, Tianxu Zhang, **Cheng Tan**, Yubin Xia, Sebastian Angel, and Haibo Chen. *Bringing Decentralized Search to Decentralized Services*. 15th USENIX Symposium on Operating Systems Design and Implementation (**OSDI 2021**).
- [6] **Cheng Tan**, Changgeng Zhao, Shuai Mu, and Michael Walfish. *Cobra: Making Transactional Key-Value Stores Verifiably Serializable*. 14th USENIX Symposium on Operating Systems Design and Implementation (**OSDI 2020**).
- [5] **Cheng Tan**, Ze Jin, Chuanxiong Guo, Tianrong Zhang, Haitao Wu, Karl Deng, Dongming Bi, and Dong Xiang. *NetBouncer: Active Device and Link Failure Localization in Data Center Networks*. 16th Symposium on Networked Systems Design and Implementation (**NSDI 2019**).
- [4] **Cheng Tan**, Lingfan Yu, Joshua B. Leners, and Michael Walfish. *The Efficient Server Audit Problem, Deduplicated Re-execution, and the Web*. 26th Symposium on Operating Systems Principles (**SOSP 2017, Best paper award**).

- [3] Yubin Xia, Yutao Liu, **Cheng Tan**, Mingyang Ma, Haibing Guan, Binyu Zang, and Haibo Chen. *TinMan: Eliminating Confidential Mobile Data Exposure with Security-oriented Offloading*. 10th European Conference on Computer Systems (**EuroSys 2015**).
- [2] **Cheng Tan**, Haibo Li, Yubin Xia, Binyu Zang, Cheng-Kang Chu, and Tieyan Li. *PreCrime to the Rescue: Defeating Mobile Malware One Step Ahead*. 5th Asia-Pacific Workshop on Systems (**APSys 2014**).
- [1] **Cheng Tan**, Yubin Xia and Haibo Chen, and Binyu Zang. *TinyChecker: Transparent Protection Of VMs Against Hypervisor Failures With Nested Virtualization*. The Second International Workshop on Dependability of Clouds, Data Centers and Virtual Machine Technology (**DCDV 2012**).

HONORS AND AWARDS

- 2020 Janet Fabri Prize for Outstanding Dissertation, Courant Institute
- 2017 SOSP Best Paper
- 2014 MacCracken Fellowship, NYU
- 2014 Outstanding Graduate Student, Software School, Fudan University
- 2011 Outstanding Graduate Award, Nanjing University

TEACHING EXPERIENCE

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|---------------------------------------------------------------------------|--------------------------------------------------------|
| Operating Systems (CSCI-UA.0202) Teaching Assistant | Spring 2015 NYU |
| Computer System Design and Implementation (X037514) Teaching Assistant | Spring 2013 Shanghai Jiao Tong University, China |

CONFERENCE AND WORKSHOP TALKS

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| Cobra: Making Transactional Key-Value Stores Verifiably Serializable. Conference talk at OSDI | Nov 2020 |
| NetBouncer: Active Device and Link Failure Localization in Data Center Networks. Conference talk at NSDI | Feb 2019 |
| The Efficient Server Audit Problem, the Web, the Database, and more. Invited talk at Shanghai Jiao Tong University, Future Information Technology International Forum for Young Scholars | May 2018 |
| The Efficient Server Audit Problem, Deduplicated Re-execution, and the Web. Conference talk at SOSP | Oct 2017 |
| PreCrime to the Rescue: Defeating Mobile Malware One-step Ahead. Workshop talk at APSys | Jun 2014 |