Tianren Liu

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EDUCATION

JUL. 2016 ∼ *Current*	**Massachusetts Institute of Technology**, Cambridge Ph.D. in ELECTRICAL ENGINEERING & COMPUTER SCIENCE Advised by Prof. *Vinod Vaikuntanathan*
SEP. 2014 ∼ JUN. 2016	**Massachusetts Institute of Technology**, Cambridge M.Sc. in ELECTRICAL ENGINEERING & COMPUTER SCIENCE Thesis: On Basing Private Information Retrieval on NP-Hardness Advised by Prof. *Vinod Vaikuntanathan*
SEP. 2010 ∼ JUN. 2014	**Tsinghua University**, Beijing B.Eng. in COMPUTER SCIENCE AND TECHNOLOGY, GPA: 92.1/100 Thesis: Indifferentiability of Confusion-Diffusion Networks Advised by Prof. *John P. Steinberger*

ACADEMIC EXPERIENCE

DEC. 2017 ∼ JAN. 2018	**Technion**, Haifa Research visit, hosted by *Yuval Ishai*
JUN. 2017 ∼ JUL. 2017	**École Normale Supérieure**, Paris Research visit, hosted by *Hoeteck Wee*
MAY. 2015 ∼ AUG. 2015	**University of California, Berkeley**, Berkeley Summer program "Cryptography" in Simons Institute
JAN. 2013 ∼ MAY. 2013	**Massachusetts Institute of Technology**, Cambridge Exchange semester in EECS department, GPA: 5.0/5.0
MAR. 2012 ∼ SEP. 2012	**Microsoft Research Asia**, Beijing Natural linguistic programming, Mentor: *Eric Chang*

PUBLICATIONS

Author names in theoretical computer science are listed in alphabetical order.

- **On Basing Search SIVP on NP-Hardness**.
  Tianren Liu. The 16th Theory of Cryptography Conference (TCC 2018). **Best Student Paper**.

- **Breaking the Circuit-Size Barrier in Secret Sharing**.
  Tianren Liu, Vinod Vaikuntanathan. 50th Annual ACM Symposium on the Theory of Computing (STOC 2018).

- **Towards Breaking the Exponential Barrier for General Secret Sharing**.
  Tianren Liu, Vinod Vaikuntanathan, Hoeteck Wee. 37th Annual International Conference on the Theory and Applications of Cryptographic Techniques (EUROCRYPT 2018).

- **Conditional Disclosure of Secrets via Non-Linear Reconstruction**.
  Tianren Liu, Vinod Vaikuntanathan, Hoeteck Wee. 37th International Cryptology Conference (CRYPTO 2017).

- **Indifferentiability of Confusion-Diffusion Networks**.
  Yevgeniy Dodis, Tianren Liu, Martijn Stam, John P. Steinberger. 35th Annual International Conference on the Theory and Applications of Cryptographic Techniques (EUROCRYPT 2016).

- **On Basing Private Information Retrieval on NP-Hardness**.
  Tianren Liu, Vinod Vaikuntanathan. The 13th Theory of Cryptography Conference (TCC 2016-A).

- **An End-to-end System to Identify Temporal Relation in Discharge Summaries: 2012 i2b2 Challenge**.
  Yan Xu, Yining Wang, Tianren Liu, Junichi Tsujii, Eric I-Chao Chang. Journal of the American Medical Informatics Association (JAMIA), 2013.

- **Joint Segmentation and Named Entity Recognition using Dual Decomposition in Chinese Discharge Summaries**.
  Yan Xu, Yining Wang, Tianren Liu, Jiahua Liu, Yubo Fan, Yi Qian, Junichi Tsujii, Eric I Chang. Journal of the American Medical Informatics Association (JAMIA), 2013.

Manuscripts

- **Reusable Non-interactive Secure Computation**.
  Melissa Chase, Yevgeniy Dodis, Yuval Ishai, Daniel Kraschewski, Tianren Liu, Rafail Ostrovsky, Vinod Vaikuntanathan. ePrint Archive

Talks

- On Basing Search SIVP on NP-Hardness. TCC 2018.

- Secret Sharing and Conditional Disclosure of Secrets (CDS).

  - China Theory Week, Tsinghua University, 2018 and
  - ITCS, Shanghai University of Finance and Economics, 2018 and
  - Tokyo Crypto Day, Tokyo, 2018.

- Breaking the Circuit-Size Barrier in Secret Sharing.

  - Charles River Crypto Day, Cambridge, 2018 and
  - STOC 2018.

- Towards Breaking the Exponential Barrier for General Secret Sharing.

  - NY Crypto Day, Columbia University, 2017 and
  - CIS seminar, MIT, 2017 and
  - EUROCRYPT 2018.

- Conditional Disclosure of Secrets via Non-Linear Reconstruction. CRYPTO 2017.

- Indifferentiability of Confusion-Diffusion Networks. EUROCRYPT 2016.

- On Basing Private Information Retrieval on NP-Hardness. TCC 2016-A.

Awards and Honors

Nov. 2018	Theory of Cryptography Conference Best Student Paper Award
Jul. 2013	Yao Award (Bronze Medal, Tsinghua University)
Sep. 2012	National Scholarship
Jan. 2010	Chinese Mathematical Olympiad (Gold Medal)