

DAN ZHANG

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EDUCATION

University of Massachusetts, Amherst, MA *Sep 2014 - Present*
MS/PhD in Computer Science *GPA: 4.0/4.0*
Advisor: Gerome Miklau

Harbin Institute of Technology, Harbin, China *Sep 2010 - Jul 2014*
B.Eng. in Information Security *Rank: 1/33*

PUBLICATION

Challenges of Visualizing Differentially Private Data.
D. Zhang, M. Hay, G. Miklau, B. O'Connor. *TPDP workshop (co-located with ICML 2016)*
Principled Evaluation of Differentially Private Algorithms using DPBench
M. Hay, A. Machanavajjhala, G. Miklau, Y. Chen, **D. Zhang**. *SIGMOD 2016*
Exploring Privacy-Accuracy Tradeoffs using DPComp.
M. Hay, A. Machanavajjhala, G. Miklau, Y. Chen, **D. Zhang**, G. Bissias. *SIGMOD 2016 Demo*

EXPERIENCE

Database Lab, University of Massachusetts *Sep 2014 - Present*
Research Assistant, advised by Gerome Miklau

- Contribute to DPComp.org, a web-based tool designed to help both practitioners and researchers assess the accuracy of state-of-the-art differentially private algorithms.
- Explore key challenges in privacy-preserving data visualization. Propose novel approaches using statistical indistinguishability to deal with uncertainty in private visualization.
- Conduct comprehensive empirical study of 15 published algorithms for 1D and 2D linear range queries on 27 datasets. Based on the study, improved the accuracy of two differential privacy algorithms, MWEM and AHP, with a max factor of 27 by wisely choosing free parameters.

Data and Knowledge Research Center, Harbin Institute of Technology *Sep 2013 - Jul 2014*
Research Assistant, advised by Hongzhi Wang

- Proposed a quality-driven data pricing strategy which assesses multiple data quality dimensions.
- Developed a fairness-assuring quality-based data market framework using cryptographic techniques.

Department of Computer Science, University of Hong Kong *Jul 2012 - Aug 2013*
Research Intern, advised by Lucas C.K. Hui and S.M. Yiu

- Developed an effective server-side attack on a forensic scheme for remote servers.

SELECTED AWARDS

Jim Gray Scholarship *Sep 2014*
Mathematical Contest in Modeling Meritorious Winner *Feb 2012*
China National Scholarship (Top 1% nationwide) *Oct 2012*
Li & Fung Scholarship *Sep 2012*

TECHNICAL STRENGTHS

Python [Pandas, Numpy, Matplotlib]
C++, Matlab, R [ggplot2], L^AT_EX, PHP, Java