

Minxin Du

Department of Information Engineering
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Research Interests Applied Cryptography, Searchable Encryption, Differential Privacy, etc.

Education

The Chinese University of Hong Kong Hong Kong, China
Ph.D., Department of Information Engineering 08/2018-present
Advisor: Prof. Sherman S. M. Chow

Wuhan University Wuhan, Hubei, China
M.Eng., Information Security 09/2015-06/2018
Advisor: Prof. Qian Wang

Wuhan University Wuhan, Hubei, China
B.Eng., Computer Science and Technology 09/2011 - 07/2015
HongYi (from university motto) Elite Class, GPA: 3.52/4.0, Rank: top 10%

Honors and Awards

- Postgraduate Second-class Academic Innovation Award (2019) (Bonus: 15,000 RMB)
- Student Stipend for Crypto Innovation School 2018 (Amount: 500 USD)
- Scholarship of Cyber Security, China Internet Development Foundation (Bonus: 50,000 RMB)
- Postgraduate National Scholarship (2017-2018) (Rank top 24 out of 344, bonus: 20,000 RMB)
- Postgraduate Second-class Scholarship (2017-2018) (Rank: top 30%, bonus: 2,000 RMB)
- China Graduate Contest on Application, Design and Innovation of Mobile-Terminal. **First Prize** (Oct. 2016) (Rank 4th out of 473 teams in the preliminary contest, and rank top 8 out of 160 teams in the final contest)
- Postgraduate First-class Scholarship (2015-2016) (Rank: top 10%, bonus: 4,000 RMB)
- Honor Graduate Award of HongYi School (Jun. 2015)
- The Wanyun Cup National Competition of Application Design in Cloud Computing Environment. **Second Award** (Apr. 2013)

Publications

Refereed Conferences Papers (in chronological order)

1. **Minxin Du**, Sherman S. M. Chow, Qian Wang, and Xiang Yue. "Private Genomic Diagnosis Retrieval with SGX". *Manuscript, in submission to IEEE INFOCOM'22*.
2. Xiang Yue, **Minxin Du***, Tianhao Wang, Yaliang Li, Huan Sun, and Sherman S. M. Chow. "Differential Privacy for Text Analytics via Natural Text Sanitization". *Findings of ACL-IJCNLP'21, online, (Co-first author)*.
3. Jiafan Wang, **Minxin Du***, and Sherman S. M. Chow. "Stargazing in the Dark: Secure Skyline Queries with SGX". *DASFAA'20, Jeju, Korea, 2020 (Co-first author)*.
4. Minghui Li, Mingxue Zhang, Qian Wang, Sherman S. M. Chow, **Minxin Du**, Yanjiao Chen, and Chenliang Li. "InstantCryptoGram: Secure Image Retrieval Service". *IEEE INFOCOM'18, Honolulu, HI, USA, April 15-19, 2018*.

5. Qian Wang, Kui Ren, **Minxin Du**, Qi Li, and Aziz Mohaisen. “SecGDB: Graph Encryption for Exact Shortest Distance Queries with Efficient Updates”. *FC’17, Malta, April 3-7, 2017*. (Main Contributor)
6. Qian Wang, Shengshan Hu, **Minxin Du**, Jingjun Wang, and Kui Ren. “Learning Privately: Privacy-Preserving Canonical Correlation Analysis for Cross-Media Retrieval”. *IEEE INFOCOM’17, Atlanta, GA, USA, May 1-4, 2017*.
7. Qian Wang, Shengshan Hu, Kui Ren, Jingjun Wang, Zhibo Wang, and **Minxin Du**. “Catch Me in the Dark: Effective Privacy-preserving Outsourcing of Feature Extractions over Image Data”. *IEEE INFOCOM’16, San Francisco, CA, USA, April 10-15, 2016*.
8. Qian Wang, Shengshan Hu, Kui Ren, Meiqi He, **Minxin Du**, and Zhibo Wang. “CloudBI: Practical Privacy-Preserving Outsourcing of Biometric Identification in the Cloud”. *EsoRICS’15, Vienna, Austria, September 21-25, 2015*.

Refereed Journal Papers (in chronological order)

1. **Minxin Du**, Peipei Jiang, Qian Wang, Sherman S. M. Chow, and Lingchen Zhao. “Shielding Graph for eXact Analytics with SGX”. *Manuscript, in submission to IEEE Transactions on Dependable and Secure Computing*.
2. **Minxin Du**, Shuangke Wu, Qian Wang, Dian Chen, Peipei Jiang, and Aziz Mohaisen. “GraphShield: Dynamic Large Graphs for Secure Queries with Forward Privacy”. *IEEE Transactions on Knowledge and Data Engineering, 2020*. (Extension of FC’17)
3. **Minxin Du**, Qian Wang, Meiqi He, and Jian Weng. “Privacy-preserving Indexing and Query Processing for Secure Dynamic Cloud Storage”. *IEEE Transactions on Information Forensics and Security, Vol. 13, No. 11, pp. 2320-2332, 2018*.
4. Qian Wang, **Minxin Du**, Xiuying Chen, Yanjiao Chen, Pan Zhou, Xiaofeng Chen, and Xinyi Huang. “Privacy-Preserving Collaborative Model Learning: The Case of Word Vector Training”. *IEEE Transactions on Knowledge and Data Engineering, Vol. 30, No. 12, pp. 2381 - 2393, 2018*. (Main Contributor)
5. Yanjiao Chen, Xin Tian, Qian Wang, Minghui Li, **Minxin Du**, and Qi Li. “ARMOR: A Secure Combinatorial Auction for Heterogeneous Spectrum”. *IEEE Transactions on Mobile Computing, Vol. 18, No. 10, pp. 2270-2284, 2019*.
6. Qian Wang, Meiqi He, **Minxin Du**, Sherman S. M. Chow, Russell W. F. Lai, and Qin Zou. “Searchable Encryption over Feature-Rich Data”. *IEEE Transactions on Dependable and Secure Computing, Vol. 15, No. 3, pp. 496 - 510, 2018*. (Main Contributor)
7. Shengshan Hu, Minghui Li, Qian Wang, Sherman S. M. Chow, and **Minxin Du**. “Outsourced Biometric Identification with Privacy”. *IEEE Transactions on Information Forensics and Security, Vol. 13, No. 10, pp. 2448 - 2463, 2018*.

Professional Experience

- External Reviewer for Usenix Security’21, TheWeb’20, ICDCS’20, CRYPTO’19, ESORICS’20,19, IEEE INFOCOM’18, *etc.*
- Reviewer for IEEE Transactions on Dependable and Secure Computing
- Reviewer for IEEE Transactions on Information Forensics and Security
- Reviewer for SCIENCE CHINA Information Science
- Reviewer for KSII Transactions on Internet and Information System
- Reviewer for Frontiers of Computer Science
- Reviewer for Ad Hoc Networks

Extracurricular Activities

- Monitor of the HongYi Elite Class (2013.3-2015.6)
 - HongYi Class (“HongYi” is from the university motto and means perseverance) is set for talented and outstanding undergraduate students.
 - Responsible for leading the class to participate in most the extracurricular activities and managing daily affairs.

Foreign Language Abilities

- **IELTS:** 6.5 (Reading-7.5, Listening-8.0, Speaking-5.5, Writing-5.5, Oct. 2017)
- **CET-6:** 493