Qian **Lou**

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Education

Indiana University Bloomington	*Bloomington, IN*
Ph.D. candidate in Computer Engineering	*Aug. 2017 - Aug. 2021*
Shandong University	*Jinan, China*
B.S. in Computer Science and Engineering	*Mar. 2013 - Aug. 2017*

Work Experience

Research Assistant — *Bloomington, Indiana*
Indiana University — *Aug. 2017 - Present*
- Implemented fast and accurate deep neural networks on encrypted data. (4 first-author papers on NeurIPS)
- Proposed a kernel-wise neural network quantization method. (1 first-author paper on ICLR)
- Accelerated intelligent systems using emerging hardwares. (2 first-author papers on ICCAD and PACT with best paper nominee)

Research Intern — *Mountain View, Califonia*
Samsung Research America — *May. 2020 - Aug. 2020*
- Implemented a Secure, Fast, and Accurate neural network using Homomorphic Encryption and Multi-Party Computation techniques.

Selected Publications

[C08] Qian Lou, Wen-je Lu, Cheng Hong, and Lei Jiang. "Faclon: Fast Spectral Inference on Encrypted Data", *Thirty-fourth Conference on Neural Information Processing Systems (**NeurIPS 2020**)*. Acceptance rate: 20.1%

[C07] Qian Lou, Song Bian, and Lei Jiang. "AutoPrivacy: Automated Layer-wise Parameter Selection for Secure Neural Network Inference", *Thirty-fourth Conference on Neural Information Processing Systems (**NeurIPS 2020**)*. Acceptance rate: 20.1%

[C16] Qian Lou, Bo Feng, Geoffrey C. Fox, and Lei Jiang. "Glyph: Fast and Accurately Training Deep Neural Networks on Encrypted Data", *Thirty-fourth Conference on Neural Information Processing Systems (**NeurIPS 2020**)*. Acceptance rate: 20.1%

[C05] Qian Lou, Sarath Janga and Lei Jiang. "Helix: Algorithm/Architecture Co-design for Accelerating Nanopore Genome Base-calling", *29th International conference on Parallel Architectures and Compilation Techniques (**PACT 2020, Best paper nomina.**)*. Acceptance rate: $\frac{4}{137}$=2.9%

[C04] Qian Lou, Feng Guo, Kim Minje, Lantao Liu and Lei Jiang. "AutoQ: Automated Kernel-Wise Network Quantization", *International Conference on Learning Representations (**ICLR 2020**)*. Acceptance rate: 26.5%

[C03] Qian Lou, Wenyang Liu, Weichen Liu and Lei Jiang "MindReading: An Ultra Low-Power Nanophotonic Accelerator for EEG-based Intention Recognition", *IEEE/ACM Asia and South Pacific Design Automation Conference (**ASP-DAC 2020**)*. Acceptance rate: 32.6%

[C02] Qian Lou, Lei Jiang "SHE:A fast and accurate deep neural networks for encrypted data", *Thirty-third Conference on Neural Information Processing Systems (**NeurIPS 2019**)*. Acceptance rate: 21.6%

[C01] Qian Lou, Wujie Wen, and Lei Jiang "3DICT: A Reliable and QoS Capable Mobile Process-In-Memory Architecture for Lookup-based CNNs in 3D XPoint ReRAMs", *IEEE/ACM International Conference On Computer Aided Design (**ICCAD 2018**)*. Acceptance rate: 24.7%

Honors & Awards

2020	**Best paper nomination**, 29th International conference on Parallel Architectures and Compilation Techniques (PACT 2020)	*Virtual*
2020	**DAC young fellowship**, 57th Design Automation Conference (DAC 2020)	*Virtual*

Committee Services

2020	**AAAI 2021 Program Committee**, 35th AAAI Conference on Artificial Intelligence (AAAI 2021)	*Canada*
2020	**NeurIPS 2020 Reviewer**, 34th Conference on Neural Information Processing Systems (NeurIPS 2020)	*Canada*
2020	**ICML 2020 Reviewer**, 37th International Conference on Machine Learning (ICML 2020)	*Australia*
2019	**JETC Reviewer**, ACM Journal on Emerging Technologies in Computing Systems (JETC 2019)	*United States*