

# Ningxin Su

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PERSONAL INFORMATION	<i>Citizenship</i> Chinese
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RESEARCH INTERESTS	Federated learning, Metaverse, Distributed machine learning, Networking
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EDUCATION	<b>University of Toronto</b> , Toronto, Ontario, Canada ◇ <b>Ph.D. Candidate</b> , Electrical and Computer Engineering, 2020 – now <i>Advisor:</i> Professor <b>Baochun Li</b>  <b>University of Sheffield</b> , Sheffield, South Yorkshire, England ◇ <b>M.Sc.</b> , Master of Science in Engineering, 2020  <b>Beijing University of Posts and Telecommunications</b> , Beijing China (Joint Programme co-held by Queen Mary University of London) ◇ <b>B.Engr. &amp; B.Management</b> , 2019
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HONOURS AND AWARDS	◇ <i>Best Paper Award</i> , the 1st IEEE International Conference on Metaverse Computing, Networking and Applications (MetaCom 2023)
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PUBLICATIONS	◇ <b>Refereed Journal Papers</b>  [J1] <b>Ningxin Su</b> , Baochun Li. “MLOps in the Metaverse: Human-Centric Continuous Integration,” in <i>IEEE Journal on Selected Areas in Communications (JSAC)</i> , Special issue on Human-Centric Communication and Networking for Metaverse over 5G and Beyond Networks.  ◇ <b>Refereed Papers in Conference Proceedings</b>  [C1] Zeyuan Zuo, <b>Ningxin Su</b> , Baochun Li, Teng Zhang. “Pack: Towards Communication-Efficient Homomorphic Encryption in Federated Learning,” in the Proceedings of the <i>ACM Symposium on Cloud Computing (SoCC)</i> , Redmond, WA, USA, November 20 – 22, 2024.  [C2] <b>Ningxin Su</b> , Baochun Li, Bo Li. “Democratizing the Federation in Federated Learning,” in the Proceedings of the <i>IEEE International Conference on Mobile Ad-Hoc and Smart Systems (MASS)</i> , Seoul, South Korea, September 23 – 25, 2024.  [C3] Sijia Chen, <b>Ningxin Su</b> , Baochun Li. “Calibre: Towards Fair and Accurate Personalized
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Federated Learning with Self-Supervised Learning,” in the Proceedings of the *IEEE International Conference on Distributed Computing Systems (ICDCS)*, Jersey City, USA, July 23 – 26, 2024 (acceptance ratio: 21%).

[C4] Sijia Chen, **Ningxin Su**, Baochun Li. “Relic: Federated Conditional Textual Inversion with Prototype Alignment,” in the Proceedings of the *IEEE/ACM International Symposium on Quality of Service (IWQoS)*, Guangzhou, China, June 19 – 21, 2024 (acceptance ratio: 34%).

[C5] **Ningxin Su**, Chenghao Hu, Baochun Li, Bo Li. “Titanic: Towards Production Federated Learning with Large Language Models,” in the Proceedings of the *IEEE International Conference on Computer Communications (INFOCOM)*, Vancouver, Canada, May 20 – 23, 2024 (acceptance ratio: 19%).

[C6] Baochun Li, **Ningxin Su**, Chen Ying, Fei Wang. “Plato: An Open-Source Research Framework for Production Federated Learning,” in the Proceedings of the *ACM Turing Award Celebration Conference (TURC)*, Wuhan, China, July 28 – 30, 2023.

[C7] **Ningxin Su**, Baochun Li, Bo Li. “Multi-Server Stable Rendezvous for the Metaverse,” in the Proceedings of the *IEEE International Conference on Metaverse Computing, Networking and Applications (MetaCom)*, Kyoto, Japan, June 26 – 28, 2023 (**Best Paper Award**).

[C8] **Ningxin Su**, Baochun Li. “Asynchronous Federated Unlearning,” in the Proceedings of the *IEEE International Conference on Computer Communications (INFOCOM)*, New York, USA, May 17 – 20, 2023 (acceptance ratio: 19%).

[C9] **Ningxin Su**, Baochun Li. “How Asynchronous can Federated Learning Be?” in the Proceedings of the *IEEE/ACM International Symposium on Quality of Service (IWQoS)*, Virtual Conference, June 10 – 12, 2022 (acceptance ratio: 24%).

#### PROFESSIONAL EXPERIENCE

##### **Teaching Assistant**

ECE1724: Performant Software Systems with Rust, Fall 2024

APS105: Computer Fundamentals, Winter 2022

##### **Research Assistant**

Hong Kong University of Science and Technology, Summer 2024.

City University of Hong Kong, Summer 2023.

**Web Chair**, *IEEE International Conference on Metaverse Computing, Networking, and Applications (IEEE MetaCom)*, 2024, 2025.

**Artifacts Evaluation Committee Member**, *ACM/IFIP International Middleware Conference (Middleware)*, 2024.

##### **Being Reviewers for**

*IEEE Transactions on Dependable and Secure Computing*

*ACM Transactions on Sensor Networks*

*IEEE Transactions on Big Data*

*IEEE Transactions on Computational Social Systems*

*IEEE Transactions on Cloud Computing*

