

# Bo Li

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## Education

**Graduate: Institute of Computing Technology, Chinese Academy of Sciences** Sep. 2018 – Jan. 2025

*PhD in Computer Science*

*Beijing, Beijing*

**Undergraduate: University of Science and Technology of China**

**Aug. 2014 – June. 2018**

*B.S in Mathematics*

*Hefei, Anhui*

## Research Interest

### Blockchain

- Specific performance and security modeling for different blockchains using stochastic processes to improve the architecture and algorithms.
- Interoperability architectures and protocols between blockchains (distributed database and Zero-Knowledge proof).

### Data Pricing

- Making pricing strategies for requirements in different scenarios.

## Publications

- **Li, B.**, Duan, T., Zhao, q., Song, Z., Guo, Y., Zhang, H., Li, Z., & Sun, Y. Performance Modeling of Relay Chain. IEEE/ACM, Transactions on Networking, vol. 33, no. 1, pp. 194-209, Feb. 2025 (the best journal in computer network)
- **Li, B.**, Wu, M., Li, Z., & Sun, Y. (2022). A pricing model for subscriptions in data transactions. Connection Science, 34(1), 529–550. <https://doi.org/10.1080/09540091.2021.2024146>
- **Li, B.**, Zhang, H., Jiang, C., Li, Z., & Sun, Y. (2023) Performance Modeling of Blockchains with Fixed Block Intervals, 2023 42nd IEEE International Performance Computing and Communications Conference (IPCCC), Anaheim, CA, USA, 2023, pp. 66-73, doi: 10.1109/IPCCC59175.2023.10253823.
- **Li, B.**, Jiang, C., Zhang, H., Li, Z., & Sun, Y. (2023) Performance Modeling of Blockchains of BFT-type Consensus, 2023 29th IEEE International Conference on Parallel and Distributed Systems (ICPADS), Hainan, China, 2023.
- **Li, B.**, Jiang, C., Zhang, H., Li, Z., & Sun, Y. (2024) What's the best packaging rule to improve blockchains' performance? IEEE Transactions on Parallel and Distributed Systems (TPDS). (Writing)
- Wang, X., **Li, B.**, Jia, L., Sun, Y., (2024). Orbit: A Dynamic Account Allocation Mechanism In Sharding Blockchain System. 43rd IEEE International Conference on Distributed Computing Systems(ICDCS).
- Duan,T., Zhang, H., **Li, B.**, Song, Z., Li, Z., Zhang, J., Sun, Y., Survey on Blockchain Interoperability. Ruan Jian Xue Bao/Journal of Software (in Chinese). <http://www.jos.org.cn/1000-9825/6950.htm>
- Duan,T., **Li, B.**, Zhang, H., Song, Z., Li, Z., Sun, Y., A verification method for cross-chain transactions protecting privacy.(Writing)
- Duan, T., Guo, Yi., **Li, B.**, Zhang, H., Song, Z., Li, Z., Zhang, J., Sun, Y., PieBridgeAn On-Demand Scalable Cross-Chain Architecture[J]. Journal of Computer Research and Development, 2023, 60(11): 2520-2533. DOI: 10.7544/issn1000-1239.202230284

## Patents

- Sun, Y., Li, B., Jia, L., Zhang, H., Li, Z. & Zhang, J. (2020). A machine learning-based dynamic pricing method for data sets. CN112132639A.
- Sun, Y., Li, B., Duan, T., & Li, Z. (2020). A pricing optimization method, medium and electronic device for data subscriptions. CN112116146A.
- Sun, Y., Li, B., Long, B., Jiang, S., Li, Z., Zhang, H., & Yu, L. (2020). A pricing method, system, media and equipment for data update service. CN112116383A.

## Skills

**Languages:** Python, C++, Solidity, Matlab

**English:** Toefl: 101 (L: 26, R: 26, S: 23, W:26)

**Others:** Legal Profession Qualification Certification

## Honor

- Chinese Academy of Sciences Academic Scholarship, 2020, 2021, 2022.
- Director's Outstanding Student Scholarship, 2021
- 2020 17th National Post-Graduate Mathematical Contest in Modeling, Second National Prize