

Baohua Yang

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PROFILE

- 15+ years of R&D experience on AI, Fintech and distributed system.
- Strong background with high-performance system and algorithm design.
- Highly Acknowledged expert on in academia, industry and open-source community.

EXPERIENCE

Principal Architect, Oracle **2017.8 – Present**
Lead the R&D team to design and implement Oracle's enterprise products including Blockchain and AI features for Tuxedo, and help Oracle towards leadership in AI and Fintech area.

Technical Steering Committee Member, Hyperledger Foundation **17.8~19.9 20.10– 21.9**
Lead the technical direction of all Hyperledger (Renamed to Linux Foundation Decentralized Trust) projects, and contribute code as core designer and developers.

Research Scientist, IBM **2013.1 – 2017.8**
Design and develop system for enterprise solutions, and research on emerging innovative technologies (e.g., Blockchain, Bigdata and Cloud) to resolve critical technical issues.

EDUCATION

Ph.D. of Control Science and Engineering, Tsinghua University **2007.9 – 2013.1**
Research on key topics with distributed systems and high-performance algorithms.
Win the 1st-class scholarship and IBM Ph.D. Fellowship Award (9 winners in China) in 09 and 11.

Visiting Scholar, EECS, University of California, Berkeley **2010.9 – 2011.9**
Research the advanced distributed system topics including SDN and DCN.

Bachelor of Science and Engineering, Tsinghua University **2003.8 – 2007.7**
Win the university 1st-class scholarship in 2006.

PATENTS

- [Methods and System to Support Large Context in AI Agentic System](#), 2026
- [Enhanced NL2SQL AI Query System and Method](#), Baohua Yang, 2025
- [Methods and System to Enhance the AI RAG based System](#), Baohua Yang, 2024
- [Methods and system of ID generation for transaction based system](#), Baohua Yang, 2020
- [Methods and system of tracking transactions for distributed ledger](#), Baohua Yang, 2019
- [Systems and methods of providing ledger as a service](#), Baohua Yang, 2019
- [Dag based methods and systems of transaction processing in a distributed ledger](#), Baohua Yang, 2018
- [Self-adaptive building container images](#), Baohua Yang, Lin Yang, Tiancheng Liu, Jingmin Xu, Pengfei Chen, 2016 (published)
- [Managing task in mobile device](#), Chao Xue, Yue Zhang, Yu Wang, Baohua Yang, Junchi Yan, Fan Yang, 2014
- [Data packet processing in SDN](#), Tian Cheng Liu, Baohua Yang, Yue Zhang, Kai Zheng, 2014
- [Techniques for realizing service chaining](#), Baohua Yang, Kai Zheng, Yue Zhang, Tiancheng Liu, 2014

- [Processing resource access request in network](#), Baohua Yang, Yue Zhang, Kai Zheng, Tiancheng Liu, 2014
- [Data Packet Processing](#), Yue Zhang, Kai Zheng, Tiancheng Liu, Hang Liu, Baohua Yang, 2013

SELECTED PUBLICATIONS

Papers

- *LazyCtrl: A Scalable Hybrid Network Control Plane Design for Cloud Data Centers*, Kai Zheng, Lin Wang, Baohua Yang, Yi Sun, and Steve Uhlig, IEEE Trans. Parallel Distrib. Syst., vol. 28, no. 1, pp. 115–127, 2017.
- *BitCuts: Towards Fast Packet Classification for Order-independent Rules*. Zhi Liu, Xiang Wang, Baohua Yang and Jun Li, ACM Special Interest Group on Data Communication (ACM SIGCOMM) poster, London, UK, August 2015.
- *LazyCtrl: Scalable Network Control for Cloud Data Centers*. Kai Zheng, Lin Wang, Baohua Yang, Yi Sun, Yue Zhang and Steve Uhlig, 35th International Conference on Distributed Computing Systems (ICDCS) poster, Columbia, Ohio, June 2015.
- *Algorithms to speedup pattern matching for network intrusion detection systems*, Kai Zheng, Zhiping Cai, Xin Zhang, Zhijun Wang, Baohua Yang, Comput. Commun., vol. 62, pp. 47–58, 2015.
- *Tualatin: Towards network security service provision in cloud datacenters*, Xiang Wang, Zhi Liu, Jun Li, Baohua Yang, and Yaxuan Qi, International Conference on Computer Communications and Networks (ICCCN), 2014.
- *Keep Forwarding: Towards K-link Failure Resilient Routing*. Baohua Yang, Junda Liu, Scott Shenker, Jun Li and Kai Zheng, 33rd IEEE International Conference on Computer Communications (INFOCOM 2014), Toronto, Canada, April 2014.
- *Practical Multi-tuple Packet Classification using Dynamic Discrete Bit Selection*. Baohua Yang, Jeffrey Fong, Weirong Jiang, Yibo Xue and Jun Li, IEEE Transactions on Computers, pp 424-434, Vol. 63, No. 2, Feb 2014.
- *Data-Driven Network Connectivity*. Junda Liu, Baohua Yang, Scott Shenker and Michael Schapira, 10th ACM Workshop on Hot Topics in Networks (HotNets-X), Cambridge, MA, November 2011.
- *SMILER: Towards Practical Online Traffic Classification*. Baohua Yang, Guangdong Hou, Lingyun Ruan, Yibo Xue and Jun Li, 7th ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS 2011), Brooklyn, NY, October 2011.
- *Scalable NIDS via Negative Pattern Matching and Exclusive Matching*. Kai Zheng, Xin Zhang, Zhiping Cai, Zhijun Wang and Baohua Yang, 29th IEEE International Conference on Computer Communications (INFOCOM 2010), San Diego, CA, USA, March 2010.
- *Packet classification algorithms: From theory to practice*, Yaxuan Qi, L. Xu, Baohua Yang, Yibo Xue, and Jun Li, in Proceedings - IEEE INFOCOM, 2009, pp. 648–656.
- *DBS: A bit-level heuristic packet classification algorithm for high speed network*, Baohua Yang, X. Wang, Yibo Xue, and Jun Li, in Proceedings of the International Conference on Parallel and Distributed Systems (ICPADS 2009), 2009, pp. 260–267.
- *Towards effective network algorithms on multi-core network processor*, Yaxuan Qi, Z. Zhou, Baohua Yang, Fei He, Yibo Xue, and Jun Li, “s,” in Proceedings of the 4th ACM/IEEE Symposium on Architectures for Networking and Communications Systems, ANCS '08, 2008, pp. 125–126.
- *Towards high-performance flow-level packet processing on multi-core network processors*, Yaxuan Qi, Bo Xu, Fei He, Baohua Yang, Jianming Yu, and Jun Li, in ANCS'07 - Proceedings of the 2007 ACM Symposium on Architecture for Networking and Communications, 2007, pp. 17–26.

Books

- *Blockchain: Principal, Design and Applications*, China Machine Press, Sep 2017. (2 editions, best award).
- *Docker Container Technology in Action*, China Machine Press, Jan 2015. (4 editions)