


HAN SU

(+86) 19801173297  suhan@ios.ac.cn

Institute of Software, Chinese Academy Sciences

No. 4 South Fourth Street, Zhong Guan Cun, Beijing, P.R.China  100190

EDUCATION

Ph.D in Computer Software and Theory

Sep.2019 - present

State Key Laboratory of Computer Science, Institute of Software, CAS

Advisor: Prof. Naijun Zhan HomePage: <https://lcs.ios.ac.cn/znj/>

Visiting Scholar

Mar. 2024 - Jun. 2024

Precision Timed Research Group, The University of Auckland,

Advisor: Prof. Partha Roop

B.S. in Control Science and Engineering

Sep. 2015 - Jun. 2019

College of Control Science and Engineering, Shandong University




Overall GPA: 4.37/5 Rank: 1/20

RESEARCH INTERESTS



My primary research focus is on the **formal design of Cyber-Physical Systems**, particularly when these systems interact with complex environments, such as those characterized by **delays** and **stochastic**, or when the control objectives are intricately defined, such as those specified using **Signal Temporal Logic**. I also have a keen interest in **lightweight formal methods (runtime monitoring/enforcement)** and **verification of probabilistic programs**. Currently, I am actively engaged in research dedicated to synthesizing enforcers for reactive systems against Signal Temporal Logic.

RESEARCH PUBLICATIONS

Published Articles

- **Han Su**, Shenghua Feng, Naijun Zhan and Simon Sinong Zhan “Switching Controller Synthesis for Hybrid Systems Against STL Formulas.” In International Symposium on Formal Methods, pp. 229-247. Cham: Springer Nature Switzerland, 2024. 
- **Han Su**, Saumya Shankar, Srinivas Pinisetty, Partha S. Roop, Naijun Zhan. “Runtime Enforcement of CPS against Signal Temporal Logic.” Proceedings of the 28th ACM International Conference on Hybrid Systems: Computation and Control (2025) 
- Shenghua Feng, Mingshuai Chen, **Han Su**, Benjamin Lucien Kaminski, Joost-Pieter Katoen, and Naijun Zhan. “Lower Bounds for Possibly Divergent Probabilistic Programs.” Proceedings of the ACM on Programming Languages 7, no. OOPSLA1 (2023): 696-726. 
- Naijun Zhan, **Han Su**, Mengfei Yang, Bin Gu. “Reset Controller Synthesis: A Correct-by-Construction Way to the Design of CPS.” Research Directions: Cyber-Physical-Systems

Under Review Articles

- **Han Su**, Jiyu Zhu, Shenghua Feng, Yunjun Bai, Bin Gu, Jiang Liu, Mengfei Yang, and Naijun Zhan. “Reset Controller Synthesis by Reach-avoid Analysis for Delay Hybrid Systems” 
- Liu Jiang, **Han Su**, Yunjun Bai, Bin Gu, Bai Xue, Mengfei Yang, and Naijun Zhan. “Correct-by-Construction for Hybrid Systems by Synthesizing Reset Controller” arXiv preprint arXiv:2309.05906 (2023). 

REFERENCES

Naijun Zhan, Professor

znj@ios.ac.cn

School of Computer Science, Peking University

Zhenjiang Hu, Professor and Dean

huzj@pku.edu.cn

School of Computer Science, Peking University

Partha Roop, Professor and Associate Dean

p.roop@auckland.ac.nz

Department of Electrical, Computer and Software Engineering, The University of Auckland