



Zhemin Zhang (*Hisen*)

PhD Student

Electrical, Computer & Systems Engineering Department
Rensselaer Polytechnic Institute

Troy, NY, USA

zhangz29@rpi.edu

0009-0001-3742-6027

EDUCATION

Rensselaer Polytechnic Institute	Dec 2025
M.S. in Quantum Computer System Engineering	
Rensselaer Polytechnic Institute	May 2023
B.S. in Computer Science dual Computer and System Engineering	

SCHOLARLY PUBLICATION

- Conference, Workshop, Pending -

C3. Can Classical Initialization Help Variational Quantum Circuits Escape the Barren Plateau?	QCE 25'
Y Peng, X Li, Z Zhang, S Chen, Z Liang, Y Wang	
C2. Breaking Through Barren Plateaus: Reinforcement Learning Initializations for Deep Variational Quantum Circuits	QCE 25'
Y Peng, X Li, Z Zhang, S Chen, Z Liang, Y Wang	
W2. Quantum-classical Hybrid Approach to Temporal-probabilistic Semi-structured Search Problems	HPCA 25'
Z Zhang, M Roberts, Z Liang	
<i>HPC/AI Integration with Quantum Computing (HAIQ) Workshop</i>	
W1. MAPLE: Memory-Aware Predict and Load for Efficient LLM Inference	NIPS 24'
Z Liu, Z Zhang, Z Zhang, Y Qin, J Luo, Z Gu, L Liu	
<i>Workshop on Machine Learning and Compression</i>	
C1. Retrocomputing in Contemporary Integrative STEM Education	ISEC 23'
Z Zhang	

GRANTS AND AWARDS

NSF Student Travel Grant, Q-Core@QCE'25	2025
IEEE International Conference on Quantum Computing and Engineering (QCE). 12 selected.	
Electronics Packaging Society Student Travel Grant	2025
IEEE International Conference on Quantum Computing and Engineering (QCE). 9 selected.	
DAC Young Fellow	2025
62nd Design Automation Conference (DAC). 172 selected.	
Jerry Dziuba ECSE Graduate Student Service Award	2025
In recognition of altruistic graduate student service. 2 selected.	
The ARRL Scholarship to Honor Barry Goldwater	2023
1 selected.	
Wynant James William Prize	2023
Awarded to seniors for outstanding scholarship, personality, and promise. 2 selected.	

RESEARCH EXPERIENCE

Research Assistant supervised by Dr. Zhiding Liang & Liu Liu, Part-time	Jan25-Dec25
Improving quantum computing system reliability, by:	
1) Identifying and modelling the hardware inhomogeneity, then	
2) Designing hardware-aware system-level mitigations.	
<i>Laboratory for Innovative and Advanced Next-Gen Computing, Rensselaer Polytechnic Institute</i>	
Research Assistant supervised by Dr. Liu Liu, Part-time	Jan23-Dec24
Elastic Memory Pool Architecture for Classification at Scale using CXL	
In-memory accelerator co-design for Large Language Model	
<i>Efficient, Parallel, and Intelligent Computing (EPIC) Lab, Rensselaer Polytechnic Institute</i>	
Undergraduate Researcher supervised by Dr. Luigi Vanfretti, Part-time	Jan22-Jan23
Parameter estimation via ML models on edge computing devices	
<i>Analysis Laboratory for Synchrophasor and Electrical energy Technology, Rensselaer Polytechnic Institute</i>	
Undergraduate Researcher supervised by Dr. Hui Su, Part-time	Feb20-May21
NLP for immersive language learning experience	
<i>Cognitive and Immersive Systems Lab, Rensselaer Polytechnic Institute</i>	

TEACHING EXPERIENCE

Teaching Assistant , ECSE 6700 - Computer Architecture Prototyping	Spring 2024
Teaching Assistant , ECSE 1010 - Introduction to ECSE	Fall 2023
Teaching Assistant , ECSE 2610 - Computer Components and Operations	Fall 2023
Course Assistant , CSCI 4210 - Operating Systems	Spring 2023
Undergraduate Mentor , CSCI 4210 - Operating Systems	Summer 2022
Undergraduate Mentor , ENGR 2350 - Embedded Control	Spring 2020

NON-SCHOLARLY ARTICLES

- Magazine, Proceeding -

P. Quantum Computing: RF Applications in Superconducting Qubit Control Systems	UHF 25'
<u>Z Zhang</u>	
P. A Minimal Software-Defined Radio VHF/UHF/SHF Transceiver	MUD 23'
<u>Z Zhang</u>	
P. Preliminary Analysis of an AI-powered Transcription Bot for FM Transmissions	DCC 22'
<u>Z Zhang, B Callahan</u>	
M. An AI-powered transcription bot for FM transmissions	QEX 23'
<u>B Callahan, Z Zhang</u>	

ACADEMIC SERVICE

Topic Co-Chair , CADathlon	ICCAD 2026
Organizing Committee , QCAS Workshop	ICCAD 2026
Reviewer	DAC, TCAD, ICML, ICCAD, QCE, QMI, NIPS, ASP-DAC 2025

UNIVERSITY SERVICE

Private Pilot , Rensselaer Flying Club, RPI	2025-
Secretary , Department Graduate Student Council, RPI	2024-2025
Representative , Department Graduate Student Council, RPI	2023-2024
President , W2SZ Amateur Radio Club, RPI	2022-2024

HONOR SOCIETIES

ACM Upsilon Pi Epsilon , Rensselaer's Chapter	2022
IEEE Eta Kappa Nu , Chapter Beta Nu	2020

REFERENCE

Professor Zhiding Liang	The Chinese University of Hong Kong
Ph.D. advisor, Professor	
Professor Liu Liu	Rensselaer Polytechnic Institute
Ph.D. co-advisor, Professor	
Professor Koushik Kar	Rensselaer Polytechnic Institute
Undergraduate advisor, Professor	