



Zhemin Zhang *(Hisen)*

PhD Student

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

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 <i>Z Zhang</i>	UHF 25'
P. A Minimal Software-Defined Radio VHF/UHF/SHF Transceiver <i>Z Zhang</i>	MUD 23'
P. Preliminary Analysis of an AI-powered Transcription Bot for FM Transmissions <i>Z Zhang, B Callahan</i>	DCC 22'
M. An AI-powered transcription bot for FM transmissions <i>B Callahan, Z Zhang</i>	QEX 23'

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