

PINHUAN WANG

Email: pinhuan.wang@rutgers.edu

EDUCATION

Ph.D. Student in Computer Engineering

Sep 2024 – Present

Department of Electrical & Computer Engineering, Rutgers University, USA

Additional Coursework (Department of Mathematics): Graph Theory, Combinatorics II

Current GPA: 4.00/4.00

B.Sc. in Computer Science

Sep 2020 – Jul 2024

Tang Aoqing Honors Program in Science, Jilin University, China

Overall GPA: 3.79/4.00 (91.37/100)

PUBLICATIONS

[1] **P. Wang**, Z. Xia, C. Liao, F. Wang, H. Liu.

REALM: Recursive Relevance Modeling for LLM-based Document Re-Ranking.

EMNLP(Oral), 2025, to appear.

[2] **P. Wang**, C. Huan, Z. Wang, C. Tian, Y. Ji, H. Liu.

BINGO: Radix-based Bias Factorization for Random Walk on Dynamic Graphs.

EuroSys, 2025.

[3] Z. Wang, X. Lin, X. Li, **P. Wang**, Z. Meng, H. Liu, C. Tian, S. Zhong.

Swift Unfolding of Communities: GPU-Accelerated Louvain Algorithm.

PPoPP, 2025.

SELECTED AWARDS AND HONORS

Student Travel Grant, ACM SIGPLAN PPoPP 2025

Jan 2025

First Prize, 2021–2022 TAQ Honors Program of Research & Practice, Jilin University

May 2022

Champion, 15th Northeast China Collegiate Programming Contest

Jun 2021

Gold Medal (9th overall), 2020 China Collegiate Programming Contest **Finals**

May 2021

Gold Medal, 2020 ICPC Asia Shanghai Regional Contest

Dec 2020

Silver Medal, 36th China National Olympiad in Informatics Winter Camp (NOI Winter Camp)

Jan 2019

Bronze Medal, 35th China National Olympiad in Informatics (NOI)

Jul 2018

PROJECTS

LLM-based Academic Research Assistant System

Nov 2024 – Present

Designed and implemented an LLM-powered academic discovery system that integrates hybrid retrieval, tool-augmented LLM inference, and automated survey drafting. The system supports full automation from user query to paper analysis and summarization via tool-use chains.

High-Performance Graph Computing on GPUs

Nov 2023 – Oct 2024

Developed GPU-parallel algorithms for scalable graph computation and graph machine learning tasks, such as random walk sampling and community detection. Exploited memory coalescing and warp-level parallelism to optimize performance on CUDA architectures.

SERVICES

Artifact Evaluation Committee, ACM Symposium on Operating Systems Principles (SOSP)

2025

External Reviewer, ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC)

2025

Problem Setter, Heilongjiang Provincial Collegiate Programming Contests (17th, 18th, 19th)

2022 – 2024

Assistant Coach, ACM-ICPC Programming Team, Jilin University

Mar 2022 – Mar 2023