

Peizhu “Pam” Qian

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Education

Ph.D., Computer Science May 2025 (Expected)
Rice University, Houston, Texas USA

Thesis Title: Interactive AI Tutors for Human Task Learning
Committee: Vaibhav Unhelkar (chair), Lydia Kavraki, Marcie O'Malley



George R. Brown School of Engineering Future Faculty Fellow

Schmit Science Fellow Nominee (~500 worldwide)
Rice University Pollard Fellowship in Engineering
Rice University Jill Pitman Jones Award for Club Sports Leadership

B.S., Computer Science and Mathematics May 2019
Simmons University, Boston, Massachusetts USA
Summa Cum Laude



Winner of the 2018 SIGHPC Computing4Change Competition (worldwide)

Simmons University Presidential Scholarship
Student-athlete of the Year (NCAA D3 Rowing)

Journal Papers

IF = Impact Factor.

TPAMI **Towards Human-centered Explainable AI: User Studies for Model**
[J1] **Explanations.** [[PDF from IEEE](#)]

Yao Rong, Tobias Leemann, Thai-trang Nguyen, Lisa Fiedler, Tina Seidel,
Peizhu Qian, Vaibhav Unhelkar, Gjergji Kasneci, and Enkelejda Kasneci.

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI).
2023 November issue, pp. 1-20. IF: 24.3.

Conference Papers

AR = Acceptance Rate. * indicates equal contribution.

AIES'24 **PPS: Personalized Policy Summarization for Explaining Sequential**
[C6] **Behavior of Autonomous Agents.**

Peizhu Qian,* Harrison Huang,* and Vaibhav Unhelkar.

In Proceedings of the AAAI/ACM Conference on Artificial Intelligence, Ethics,
and Society (AIES). San Jose, California USA. Oct 21-23, 2024. AR: 31.8%.

HRI'24
[C5] **Interactively Explaining Robot Policies to Humans in Virtual and Physical Training Environments.** [[PDF from ACM](#)]

Peizhu Qian and Vaibhav Unhelkar.

In Companion of the ACM/IEEE International Conference on Human Robot Interaction (HRI), pp. 847–851. Denver, Colorado USA, Mar 11-15, 2024.

AAAI'24
[C4] **I-CEE: Tailoring Explanations of Image Classifications Models to User Expertise.** [[PDF from AAAI](#)]

Yao Rong, **Peizhu Qian**, Vaibhav Unhelkar, and Enkelejda Kasneci.

In Proceedings of the AAAI Conference on Artificial Intelligence (AAAI). Vancouver, Canada. Feb 20-27, 2024. AR for the SRRAI Special Track: 21.3%.

RO-MAN'23
[C3] **Robotic Tutors for Nurse Training: Opportunities for HRI Researchers.** [[PDF from IEEE](#)]

Carlos Quintero-Pena,* **Peizhu Qian**,* Nicole M. Fontenot, Hsin-Mei Chen, Shannan K. Hamlin, Lydia E. Kavraki, Vaibhav Unhelkar.

In Proceedings of IEEE International Conference on Robot and Human Interactive Communication (RO-MAN). Busan Korea, Aug 28-31, 2023.

AAMAS'22
[C2] **Evaluating the Role of Interactivity on Improving Transparency in Autonomous Agents.** [[PDF from IFAAMAS](#)]

Peizhu Qian and Vaibhav Unhelkar.



In Proceedings of the International Conference on Autonomous Agents and Multiagent Systems (AAMAS). **Best Video Demonstration Award**. Online, May 9–13, 2022, IFAAMAS, 9 pages. AR: 23.3%.

SCiP'18
[C1] **Life in the Semantic Space: Structures of the Language Network.**

Peizhu Qian, Zhiqiang Cai, and Xiangen Hu.



Society for Computers in Psychology 48th Annual Meeting (SCiP). **Runner-up winner of the Castellan Award for best student paper with special recognition**. New Orleans, Louisiana USA. November 15, 2018.

Workshop Papers

AAMAS'22
[W4] **Evaluating the Role of Interactivity on Improving Transparency in Autonomous Agents.**

Peizhu Qian and Vaibhav Unhelkar. Workshop on Rebellion and Disobedience of Artificial Agents (RaD-AI). International Conference on Autonomous Agents and Multiagent Systems (AAMAS). Online. May 9, 2022.

HRI'22
[W3] **On the Role of Interactivity in Improving Transparency in Robot Behavior.**

Peizhu Qian and Vaibhav Unhelkar. Workshop on Fairness and Transparency in HRI. ACM/IEEE International Conference on Human-Robot Interaction (HRI). Online. March 7, 2022.

R:SS'21
[W2] **Towards Interactively Improving Human Users' Understanding of Robot Behavior.**

Peizhu Qian and Vaibhav Unhelkar. Workshop on Robotics for People (R4P). Robotics: Science and Systems (R:SS). Online. July 15, 2021.

MIT URC'18
[W1] **Data Mining in Sports: the Relationship between Anthropometric Characteristics of Collegiate Female Rowers and Pacing Strategies on a 2000-meter Ergometer Test.**

Peizhu Qian. 2018 IEEE MIT Undergraduate Research Conference. Cambridge, Massachusetts USA. Oct 5-7, 2018.

Doctoral Consortiums

CHIL'24
[DC1] **Interactive Tutor for Human Task Learning.**

Peizhu Qian. Conference on Health, Inference, and Learning (CHIL). New York City, New York USA. June 27-28, 2024.

Invited Talks

WPI **Preparing Humans for a Safe Future around Robots. Guest Lecture** at RBE 550 Motion Planning, invited by Dr. Constantinos Chamzas. Department of Robotics Engineering, Worcester Polytechnic Institute (WPI), Worcester, Massachusetts USA. November 30, 2023.

UT Austin **AI TEACHER: An Interactive XAI Framework for Explaining Robot Behavior.** Human-Centered Robotics Laboratory at the University of Texas Austin. PI: Dr. Luis Sentis. Austin, Texas USA. April 21, 2023.

Rice **Preparing Humans for a Safe Future around Robots. Guest Lecture** at PSYC 441/541 Human-Computer Interaction, invited by Dr. Jing Chen. Rice University. Houston, Texas USA. April 4, 2023.

Westlake (China) **Preparing Humans for a Safe Future around Robots.** Machine Intelligence Lab at Westlake University. PI: Dr. Donglin Wang. Hangzhou, Zhejiang China. November 24, 2022.

Rice **Preparing Humans for a Safe Future around Robots.** Center for Transforming Data to Knowledge at Rice University. PI: Dr. Xia Hu. Houston, Texas USA. October 18, 2022.

Pi Mu Epsilon **Human-Robot Interaction: Robot Transparency through Guided Interaction. Keynote** at the 2021 Pi Mu Epsilon Mathematics Honor Society Induction Ceremony, invited by Dr. Donna Beers. Boston, Massachusetts USA. Mar 11, 2021.

Computing Competitions

C4C **SIGHPC Computing4Change (C4C) Competition** at SC18, the International Conference for High-Performance Computing, Networking, Storage, and Analysis. **Winner.** Dallas, Texas USA. November 11-14, 2018.

Project: Resisting Cultural Acceptance of Violence.
Teammates: Claire Fiorino, Nilo Espinoza, and Hoano Rosario.

Teaching

Evaluation scores indicate an average of all metrics.

COMP 182 Algorithmic Thinking, Rice University, Sp'24
Role: **Instructor**
Enrolled: 28

Course Evaluation: **1.54** (1 = Outstanding, 5 = Poor) [[PDF of full evaluation](#)]
Instructor Evaluation: **1.14** (1 = Outstanding, 5 = Poor) [[PDF of full evaluation](#)]

COMP 600 Graduate Seminar, Rice University, Fall'21, Sp'22, Fall'22, Sp'23, Fall'23
Role: Co-instructor
Enrolled: 100+

COMP 642 Machine Learning, Rice University, Sp'23
Role: Teaching Assistant (TA)
Enrolled: 61

COMP 480/580 Probabilistic Algorithms and Data Structures, Rice University, Fall'22
Role: Teaching Assistant (TA)
Enrolled: 59

Web Design, IGDVS Girls Summer Camp, Ukiah, California USA, Summer'19
Role: **Instructor**
Enrolled: 35

Service to the Field

Conference Organizer

- Texas Regional Robotics Symposium (TEROS 2023) [[website](#)]

Workshop Organizer

- Workshop on Explainability for Human Robot Collaboration at ACM/IEEE International Conference on Human-Robot Interaction (HRI 2025)

Reviewer

- ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2021, 2022, 2023, 2024
- International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2021, 2022, 2023, 2024

Student Organizations

- **President**, Rice University Computer Science Graduate Student Association, 2023-2024

External Internships

Institute for Intelligent Systems at the University of Memphis, Memphis, Tennessee USA, May 2018 - August 2018

- Built an NLP semantic space for the intelligent tutoring system AutoTutor on Google App Engine.
- Implemented AutoTutor in GIFT (Generalized Intelligent Framework for Tutoring), and wrote the software requirements specification documents for the AutoTutor authoring tool.
- AutoTutor simulates the discourse patterns of human tutors and has been used extensively for research and in classrooms since 1999.

Google, Cambridge, Massachusetts USA, January 2018

- Created Android mobile apps for games using Java, Android Studio, and SDK tools.
- Designed the UI for the applications with Android Studio.