

Pengda Wang

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Education

Rice University

Ph.D. in Industrial Organizational Psychology

GPA: Psychology: 4.0/4.0

Houston, TX

Anticipated: May 2028

Rice University

M.A. in Industrial Organizational Psychology; Qualifying Exams

GPA: Psychology: 4.0/4.0

Houston, TX

Oct 2025

Master Thesis: *“I’ve read your stories, I know who you are”: Reliability, validity, and interpretability of generative AI personality ratings*

Committee Members: Dr. Frederick L. Oswald (Chair), Dr. Tianjun Sun, Dr. Hanjie Chen

University of Minnesota – Twin Cities

B.S. in Psychology; B.A. in Computer Science

GPA: Psychology: 3.9/4.0; Computer Science: 4.0/4.0

Minneapolis, MN

Sep 2019 – May 2023

Research Interests

1. Personnel selection (e.g., faking, bias, selection experience, ML applications, responsible AI use).
2. Individual differences (e.g., personality traits and facets, dark personalities, social behaviors).
3. Psychometrics & Research methods (e.g., SEM, IRT, computational measurement, big data approaches).
4. Cross-cultural psychology (e.g., measurement invariance, tech-based/large-scale assessments).

Awards & Honors

Kenneth R. Laughery Award for Best Master’s Thesis (2026)

Rice University

\$300

CIISR Graduate Research Fellowship (2025)

Rice University

\$1,500

Mortensen Research Award & CLA Research Scholarship (2023)

University of Minnesota

\$1,500

Research Grants

Funded

Industry Sponsored Research Grant, Rice University Athletics Partner, 2025–2026

Topic: High-performance sports psychology assessment.

Faculty PI: Tianjun Sun

\$280,394

Student PI

OpenAI Researcher Access Program, OpenAI, 2024–2025

Topic: LLM emulation of human personality traits.

Faculty Co-PIs: Tianjun Sun, Hanjie Chen, Ziang Xiao, Frederick L. Oswald

\$5,000

Student PI

Not Funded

SIOP Small Research Grant, SIOP Foundation, 2026

Topic: Psychometric properties of multimodal large language model-based performance.

Faculty Co-PIs: Lennie Waite, Tianjun Sun

\$10,000

Student PI

Finalist

Google AI for Privacy, Safety, and Security Research Award, Google LLC, 2026

Topic: AI system persuasiveness and addictiveness.

Faculty Co-PIs: Hanjie Chen, Tianjun Sun; Student Co-PIs: Haotian Xia, Pengda Wang

\$100,000

Student Co-PI

NeurIPS AI4Science Dataset Proposal Competition, Renaissance Philanthropy, 2025

Topic: Multimodality individual differences dataset.

Faculty Co-PIs: Tianjun Sun, Ziang Xiao

\$10,000

Student PI

Refereed Publications

1. **Wang, P.**, Zou, H., Jiang, H., Chen, H., Sun, T., Yi, X., Xiao, Z., & Oswald, F. L. (2026). Generative personality simulation via theory-informed structured interview. *European Chapter of the Association for Computational Linguistics (EACL)*. <https://doi.org/10.18653/v1/2026.eacl-long.82>
2. Zou, H., **Wang, P.**, Yan, Z., Sun, T., & Xiao, Z. (2025). Can LLM “self-report”?: Evaluating the validity of self-report scales in measuring personality design in LLM-based chatbots. *Conference on Language Modeling (COLM)*. <https://doi.org/10.48550/arXiv.2412.00207>
3. **Wang, P.**, Loignon, A. C., Shrestha, S., Banks, G. C., & Oswald, F. L. (2025). Advancing organizational science through synthetic data: A path to enhanced data sharing and collaboration. *Journal of Business and Psychology*, 40(4), 771–797. <https://doi.org/10.1007/s10869-024-09997-w> [**Editor Commendation (top 22 out of 1600 articles)**]
4. **Wang, P.**, Myeong, H., & Oswald, F. L. (2024). On putting the horse (raters and criteria) before the cart (variance components in ratings). *Industrial and Organizational Psychology*, 17(3), 309–313. <https://doi.org/10.1017/iop.2024.16>
5. **Wang, P.***, Xiao, Z.*, Chen, H., & Oswald, F. L. (2024). Will the real Linda please stand up. . .To large language models? Examining the representativeness heuristic in LLMs. *Conference on Language Modeling (COLM)*. <https://doi.org/10.48550/arxiv.2404.01461> [**Oral spotlight presentation (top 2%)**]
6. Myeong, H., **Wang, P.**, & King, E. B. (2024). The weight of beauty in psychological research. *Industrial and Organizational Psychology*, 17(1), 111–114. <https://doi.org/10.1017/iop.2023.87>

Chapters & Technical Reports

1. Sun, T., Xi, M., Sylvara, A., **Wang, P.**, & Ortiz, N. (forthcoming). Artificial intelligence conversational agents at work. In L. Tay, S. E. Woo, & Chekili, A. (Eds.), *AI and the future of work: Insights from organizational psychology and beyond*. Wiley.
2. Pitcher, B. D., & **Wang, P.** (forthcoming). Explainable AI and candidate reactions to AI systems. In Thompson, I., Yankov, G., & Hernandez, I. (Eds.), *AI for IO psychologists: Research and applications*. Oxford University Press.

Manuscripts Under Revision & Review

1. **Wang, P.**, Chen, H., Luo, J., Oswald, F. L., & Sun, T. (under review). TITLE REMOVED FOR BLIND REVIEW. [Topic: Linking life narratives to dispositional traits via AI]. *Journal of Personality and Social Psychology*.
2. **Wang, P.**, Ortiz, N., Zou, H., Yan, Z., Guo, F., Sun, T., Xiao, Z., & Zhang, B. (1st revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. [Topic: Compare large language models vs. human respondents for psychometric research]. *Psychological Methods*.
3. Jia, Z., Lee, P., & **Wang, P.** (under review). TITLE REMOVED FOR BLIND REVIEW. [Topic: Automatic scale development]. *Organizational Research Methods*.
4. **Wang, P.**, Chen, H., Oswald, F. L., & Sun, T. (1st revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. [Topic: Personalized augmented data generation]. *Assessment*.
5. Sylvara, A., **Wang, P.**, Sun, T., Heimann, A. L., & Ingold, P. V. (2nd revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. [Topic: AI chatbot personality-based employment interview]. *Journal of Occupational and Organizational Psychology*.
6. Xuan, K., **Wang, P.**, Yu, H., August, T., & You, J. (under review). TITLE REMOVED FOR BLIND REVIEW. [Topic: High fidelity social interaction environment for multi-agents evaluation]. *COLM 2026*.

7. Yan, Z., Li, Y., **Wang, P.**, Chu, C., Sun, T., Zhang, B., & Xiao, Z. (under review). TITLE REMOVED FOR BLIND REVIEW. [Topic: Reliability and validity in Human-Computer Interaction research measurements]. *ACM Transactions on Computer-Human Interaction*.

Selected Pre-prints

1. Xuan, K., **Wang, P.**, Ye, C., Yu, H., August, T., & You, J. (2026). SocialVeil: Probing social intelligence of language agents under communication barriers. *arXiv (Cornell University)*. <https://doi.org/10.48550/arXiv.2602.05115>
2. Yan, Z., Sylvara, A., **Wang, P.**, Sun, T., & Xiao, Z. (2025). Personality auto-scoring with large language models using a realistic accuracy model of behavioral cues in chatbot interviews. *PsyArXiv*. https://doi.org/10.31234/osf.io/rtsm5_v1
3. Jiang, H.*, **Wang, P.***, Yi, X., Xie, X., & Xiao, Z. (2025). The incomplete bridge: How AI research (mis)engages with psychology. *arXiv (Cornell University)*. <https://doi.org/10.48550/arXiv.2507.22847>
4. Sylvara, A., **Wang, P.**, Sun, T., Heimann, A. L., & Ingold, P. V. (2025). Automating personality-based employment interviews: Development and validation of an artificial intelligence chatbot. *PsyArXiv*. https://doi.org/10.31234/osf.io/9ktmf_v3
5. Yang, Y.*, **Wang, P.***, Plonsky, L. D., Oswald, F. L., & Chen, H. (2024). From babbling to fluency: Evaluating the evolution of language models in terms of human language acquisition. *arXiv (Cornell University)*. <https://doi.org/10.48550/arXiv.2410.13259>
6. **Wang, P.**, Zou, H., Yan, Z., Guo, F., Sun, T., Xiao, Z., & Zhang, B. (2024). Not yet: Large language models cannot replace human respondents for psychometric research. *PsyArXiv*. <https://doi.org/10.31219/osf.io/rwy9b>

Conference Presentations

1. **Wang, P.**, Zou, H., Jiang, H., Chen, H., Sun, T., Yi, X., Xiao, Z., & Oswald, F. L. (2026). Generative personality simulation via theory-informed structured interview. [Oral Presentation]. The 19th Conference of the European Chapter of the Association for Computational Linguistics (EACL 2026), Rabat, Morocco.
2. Zou, H., **Wang, P.**, Yan, Z., Sun, T., & Xiao, Z. (2025). Can LLM “self-report”? : Evaluating the validity of self-report scales in measuring personality design in LLM-based chatbots. [Poster]. Conference on Language Modeling (COLM 2025), Montreal, QC, Canada.
3. **Wang, P.**, Sylvara, A., Sun, T., Hebl, M. R., & Oswald, F. L. (2025). Differential embedding dimension functioning in natural language processing for psychological assessment. [Oral Presentation]. International Meeting of the Psychometric Society (IMPS 2025), Minneapolis, MN, United States.
4. **Wang, P.**, & Oswald, F. L. (Co-Chairs) (2025). Bridging Disciplines: How Computer Science and I-O Psychology Benefit Each Other. [Alternative Session Type]. Society for Industrial and Organizational Psychology Annual Conference (SIOP 2025), Denver, CO, United States.
5. **Wang, P.**, Zou, H., Yan, Z., Guo, F., Sun, T., Xiao, Z., & Zhang, B. (2025). Not yet: Large language models cannot replace human respondents for psychometric research. In Hickman, L., & Liu, M.(Co-Chairs) (2025). Machine learning for I-O 7.0: Large language models for assessments. [Symposium]. Society for Industrial and Organizational Psychology Annual Conference (SIOP 2025), Denver, CO, United States.
6. **Wang, P.**, Sylvara, A., Sun, T., Hebl, M. R., & Oswald, F. L. (2025). Differential embedding dimension functioning in natural language processing for psychological assessment. In Hou, X., & Sun, T. (Co-Chairs) (2025). Innovations in AI assessment of individual differences: Improving validity and equity. [Symposium]. Society for Industrial and Organizational Psychology Annual Conference (SIOP 2025), Denver, CO, United States.

7. **Wang, P.***, Xiao, Z.*, Chen, H., & Oswald, F. L. (2024). Will the real Linda please stand up. . .To large language models? Examining the representativeness heuristic in LLMs. [Oral Presentation]. Conference on Language Modeling (COLM 2024), Philadelphia, PA, United States. [**Oral spotlight presentation (top 2%)**]
8. **Wang, P.**, & Oswald, F. L. (2024). Leveraging synthetic data for advancements in organizational research. In Liou, G., & Tay, L. (Co-Chairs) (2024). Future of performance prediction and evaluation: Artificial intelligence and big data. [Symposium]. Society for Industrial and Organizational Psychology Annual Conference (SIOP 2024), Chicago, IL, United States.
9. Wu, F., **Wang, P.**, & Oswald, F. L. (2024). The influence of disability and career challenges on vocational interests. In Hoff, K. A. (Chair) (2024). To RIASEC and beyond: Advances in vocational interest research. [Symposium]. Society for Industrial and Organizational Psychology Annual Conference (SIOP 2024), Chicago, IL, United States.

Selected Works in Progress

1. **Wang, P.**, Hou, X., Tay, L., & Sun, T. (experiment stage). Watching, inferring, advising: MLLMs for vocational interest discovery. Target: *Journal of Vocational Behavior*.
2. **Wang, P.**, Guzzo, R. R., Nalbantian, R. H., & Oswald, F. L. (experiment stage). Lessons from organic organizational data: How synthetic data can help, what we should take care of. Target: *Personnel Psychology*.
3. Luo, J., Sun, T., & **Wang, P.** (writing stage). Prospective associations between experiences in different life domains and changes in personality traits: Using a machine learning approach. Target: *Journal of Personality and Social Psychology*.
4. **Wang, P.**, Sylvara, A., Oswald, F. L., Hebl, M. R., & Sun, T. (internal review stage). Differential embedding dimension functioning in natural language processing for psychological assessment. Target: *Journal of Applied Psychology*.
5. Sylvara, A., **Wang, P.**, Sargent, M., Gregg, E., Heron, X., & Sun, T. (internal review stage). Examining the faking resistance of an AI chatbot personality interview. Target: *Journal of Applied Psychology*.

Invited Talks

1. *Modeling individual language patterns and psychological constructs to generate AI-augmented data for scalable psychological assessment*. Industrial-Organizational Psychology Research Seminar, Department of Psychological Sciences, **Rice University**, Houston, TX. March 9, 2026.
2. *Psychometric AI: Differential embedding dimension functioning in natural language processing for psychological assessment*. Industrial-Organizational Psychology Research Seminar, Department of Psychological Sciences, **Rice University**, Houston, TX. March 10, 2025.

Media Coverage

1. "SMART lab students share research and industry experiences." *Rice News*. February 17, 2026. <https://socialsciences.rice.edu/news/-rice-university-social-sciences-smart-lab-students-share-experiences-i-o-psychology>
2. "Could your next job interview be with a chatbot? New study seeks to help bring fairness into AI-powered hiring." *Rice News*. September 29, 2025. <https://news.rice.edu/news/2025/could-your-next-job-interview-be-chatbot-new-study-seeks-help-bring-fairness-ai-powered>
3. "Are AI chatbot 'personalities' in the eye of the beholder?" *ScienceNews*. February 5, 2025. <https://www.sciencenews.org/article/ai-chatbot-personalities>

Applied Experience

- Google LLC** (Incoming Intern) May 2026 – August 2026
Research Scientist, People Analytics Team *Boulder, CO*
- Incoming Research Scientist Intern with the People Analytics Team, focusing on quantitative and applied research at the intersection of people data, behavioral science, and organizational decision-making.
- HITE EQ** (Contract) January 2026 – Present
Research Scientist, Individual Differences AI/ML Assessment *Chicagoland, IL*
- Developing AI-driven high-performance sports psychology assessments to measure and predict individual differences relevant to athletic performance, mental skills, and team dynamics.
 - Built an end-to-end assessment pipeline, including data processing, psychometric modeling, score generation, and automated report production for scalable delivery of athlete- and team-level insights.
 - Trained and evaluated predictive models for psychological and behavioral assessment, integrating psychometric methods with AI/ML approaches to improve reliability, interpretability, and practical utility.
 - Collaborated on the translation of assessment outputs into clear, decision-oriented reports for coaches, athletes, and organizational stakeholders.
- Midjourney, Inc** (Intern) May 2025 – November 2025
ML/AI Ph.D. Resident, Psychometric Team *San Francisco, CA*
- Conducted applied research on methods for measuring, predicting, and taxonomizing psychological and behavioral traits, including personality, values, vocational interests, humor, habits, and workplace behavior.
 - Developed modeling frameworks spanning both classical statistical methods and modern AI/ML approaches.
 - Worked on AI methodologies, including multi-agent systems and post-train/reinforcement learning approaches such as PPO, DPO, and GRPO, to support trait inference, behavioral prediction, and assessment design.
 - Contributed to applied psychometric research in an industry setting under non-disclosure constraints, with work oriented toward real-world deployment and product use cases.

Research Experience

- Chili Lab Research Assistant** August 2024 – Present
Rice University, with Dr. Hanjie Chen *Houston, TX*
- SMART Lab Research Assistant** August 2024 – Present
Rice University, with Dr. Tianjun Sun *Houston, TX*
- OWLab Research Assistant** August 2023 – Present
Rice University, with Dr. Frederick L. Oswald *Houston, TX*
- CFL Lab Research Assistant** May 2022 – May 2023
University of Minnesota-Twin Cities, with Dr. Gail M. Ferguson *Minneapolis, MN*
- TNT Lab Research Assistant** April 2021 – May 2023
University of Minnesota-Twin Cities, with Dr. Richard N. Landers *Minneapolis, MN*
- Ones' Green Lab Research Assistant** June 2020 – July 2022
University of Minnesota-Twin Cities, with Dr. Deniz S. Ones *Minneapolis, MN*

Teaching Experience

- Teaching Assistant** Memory (Undergraduate Level)
Rice University *Houston, TX*
- Supported undergraduate instruction in memory-related psychological concepts through discussion facilitation, grading, and student guidance.
 - Held office hours and provided individualized support to help students understand core theories, research findings, and course materials.
- Teaching Assistant** Advanced Psychological Statistics (Graduate Level)
Rice University *Houston, TX*
- Assisted with an advanced statistical methods course for graduate students, including leading discussion sections, grading assignments, holding office hours, and providing one-on-one support for statistical concepts and methodologies.
 - Delivered a comprehensive guest lecture on Analysis of Variance (ANOVA), covering one-way and factorial ANOVA designs, assumption testing, post-hoc comparisons, and practical implementation in R.

- Designed hands-on exercises demonstrating how ANOVA can be applied to analyze group differences in psychological research.

Teaching Assistant

Computational Linear Algebra (Undergraduate Level)

University of Minnesota–Twin Cities

Minneapolis, MN

- Supported students in computational approaches to linear algebra through lab instruction, grading programming assignments, and office hours covering both theoretical concepts and practical implementation.
- Led an interactive workshop on advanced matrix decomposition methods, including eigenvalue decomposition and singular value decomposition (SVD), with applications in machine learning and data science.
- Guided students in implementing algorithms in Python and MATLAB, with practical examples in dimensionality reduction, image compression, and principal component analysis (PCA).

Service

International Journal of Selection and Assessment (IJSA) – Reviewer	2026 – Present
Journal of Personality and Social Psychology (JPSP) – Reviewer	2026 – Present
Industrial and Organizational Psychology (IOP) – Reviewer	2026 – Present
ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT) – Reviewer	2026 – Present
Association for Computational Linguistics Rolling Review (ARR) – Reviewer	2025 – Present
Conference on Language Modeling (COLM) – Reviewer	2025 – Present
Conference on Neural Information Processing Systems (NeurIPS) – Reviewer	2025 – Present
Society for Industrial and Organizational Psychology Annual Conference (SIOP) – Reviewer	2024 – Present
Conference on Human Factors in Computing Systems (CHI) – Reviewer	2024 – Present

Professional Affiliations

Academy of Management, *Member*
 American Psychological Association, *Member*
 Association for Psychological Science, *Member*
 Society for Industrial and Organizational Psychology, *Member*

Skills

Languages: Python, R, JavaScript, HTML/CSS, SQL, Java, C
Developer Tools: Git, Google Cloud Platform, VS Code, PyCharm, IntelliJ, Eclipse
Software: Microsoft Word, Excel, PowerPoint, Access, Google Workspace

Professional References

Dr. Frederick L. Oswald

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 Rice University
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Dr. Tianjun Sun

Assistant Professor of Psychological Sciences
 Rice University
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Dr. Hanjie Chen

Assistant Professor of Computer Science
 Rice University
 Email: hc86@rice.edu

Dr. Ziang Xiao

Assistant Professor of Computer Science
 Johns Hopkins University
 Email: ziang.xiao@jhu.edu