

# Pengda Wang

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## Education

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### 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*

GPA: Psychology: 4.0/4.0

Houston, TX

*Anticipated: Aug 2025*

**Thesis:** *Personality inferred from large language models: Reliability, validity, and interpretability*

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

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1. Personnel selection (e.g., faking, bias, machine learning applications, responsible artificial intelligence use).
2. Individual differences (e.g., bright and dark personalities, social behaviors).
3. Psychometrics & Research methods (e.g., SEM, computational measurement, big data approaches).
4. Cross-cultural psychology (e.g., multi-group variability and invariance, tech-based/large-scale assessments).

## Publications

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1. Zou, H., **Wang, P.**, Yan, Z., Sun, T., & Xiao, Z. (2024). Can LLM “self-report”? Evaluating the validity of self-report scales in measuring personality design in LLM-based chatbots. *The Conference on Language Modeling (COLM 2025)*. <https://doi.org/10.48550/arXiv.2412.00207>
2. **Wang, P.**, Loignon, A. C., Shrestha, S., Banks, G. C., & Oswald, F. L. (2024). Advancing organizational science through synthetic data: A path to enhanced data sharing and collaboration. *Journal of Business and Psychology*. <https://doi.org/10.1007/s10869-024-09997-w> [**Editor Commendation (22/over 1600)**]
3. **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*, 1–5. <https://doi.org/10.1017/iop.2024.16>
4. **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. *The Conference on Language Modeling (COLM 2024)*. <https://doi.org/10.48550/arxiv.2404.01461> [**Oral spotlight presentation (top 2%)**]
5. 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>

## Pre-prints

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1. 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>
2. **Wang, P.**, Zou, H., Chen, H., Sun, T., Xiao, Z., & Oswald, F. L. (2025). Personality structured interview for large language model simulation in personality research. *arXiv (Cornell University)*. <https://arxiv.org/abs/2502.12109>

3. 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>
4. 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>
5. **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>

## Manuscripts Under Revision and Review

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1. **Wang, P.**, Zou, H., Yan, Z., Guo, F., Sun, T., Xiao, Z., & Zhang, B. (1<sup>st</sup> revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. [Topic: Compare large language models vs. human respondents for psychometric research]. *Psychological Methods*.
2. **Wang, P.**, Zou, H., Chen, H., Sun, T., Yi, X., Xiao, Z., & Oswald, F. L. (under review). TITLE REMOVED FOR BLIND REVIEW. [Topic: Personality structured interview data for large language model personality simulation] *NIPS 2025*.
3. 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*.
4. Yang, Y.\*, **Wang, P.\***, Plonsky, L. D., Oswald, F. L., & Chen, H. (under review). TITLE REMOVED FOR BLIND REVIEW. [Topic: Linguistic theory and psycholinguistic theory view of language model development]. *Transactions of the Association for Computational Linguistics*.
5. Sylvara, A., **Wang, P.**, Sun, T., Heimann, A. L., & Ingold, P. V. (1<sup>st</sup> revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. [Topic: AI chatbot personality-based employment interview]. *Journal of Occupational and Organizational Psychology*.

## Conference Presentations

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1. **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.
2. **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.
3. **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.
4. **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, D. 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.

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 [Oral presentation]. The Conference on Language Modeling (COLM 2024), Philadelphia, PA, United States. [**Oral spotlight presentation (top 2%)**]
6. **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.
7. 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

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1. **Wang, P.**, Sylvara, A., Sun, T., Hebl, M. R., & Oswald, F. L. (experiment stage). Differential embedding dimension functioning in natural language processing for psychological assessment. Target: *Journal of Applied Psychology*.
2. **Wang, P.**, Su, J., Sun, T., & Oswald, F. L. (writing stage). Synthetic text, real insights: Generation, evaluation, and trade-offs in synthetic textual data for organizational research. Target: *Organizational Research Methods*.
3. **Wang, P.**, Chen, H., Sun, T., & Oswald, F. L. (writing stage). Personality inferred from large language models: Reliability, validity, and interpretability. [Master Thesis]
4. Sylvara, A., **Wang, P.**, Sargent, M., Gregg, E., Heron, X., & Sun, T. (experiment stage). Examining the faking resistance of an AI chatbot personality interview. Target: *Journal of Applied Psychology*.
5. **Wang, P.**, Xia, H., Chen, H., Sun, T., Behrend, T. S., & Oswald, F. L. (experiment stage). When models miss the shot: Bias in vision-language model performance evaluation. Target: *Science*.

## Research Grants Funded

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Rice University, CIISR Graduate Research Fellowship (2025).	\$1,500
OpenAI, Researcher Access Program (2024).	\$5,000
University of Minnesota, Mortensen Research Award & CLA Research Scholarship (2023).	\$1,500

## Teaching Experience

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<b>Teaching Assistant</b> <i>Rice University</i>	Advanced Psychological Statistics <i>Houston, TX</i>
<b>Teaching Assistant</b> <i>University of Minnesota-Twin Cities</i>	Computational Linear Algebra <i>Minneapolis, MN</i>

## Internship, Research and Work Experience

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<b>ML/AI PhD Resident</b> <i>Midjourney, Inc</i>	May 2025 – Present <i>San Francisco, CA</i>
<b>Chili Lab Research Assistant</b> <i>Rice University</i>	August 2024 – Present <i>Houston, TX</i>
<b>SMART Lab Research Assistant</b> <i>Rice University</i>	August 2024 – Present <i>Houston, TX</i>
<b>Organization &amp; Workforce Lab Research Assistant</b> <i>Rice University</i>	August 2023 – Present <i>Houston, TX</i>
<b>CFL Lab Research Assistant</b> <i>University of Minnesota-Twin Cities</i>	May 2022 – May 2023 <i>Minneapolis, MN</i>

**TNT Lab Research Assistant**

*University of Minnesota-Twin Cities*

**Ones' Green Lab Research Assistant**

*University of Minnesota-Twin Cities*

Apr 2021 – May 2023

*Minneapolis, MN*

June 2020 – July 2022

*Minneapolis, MN*

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## Service

Conference on Neural Information Processing Systems (NIPS) 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

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## Professional Affiliations

Academy of Management, *Member*

American Psychological Association, *Member*

Association for Psychological Science, *Member*

Society for Industrial and Organizational Psychology, *Member*

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## Skills

**Languages:** Java, Python, C, JavaScript, HTML/CSS, R

**Developer Tools:** Git, Google Cloud Platform, VS Code, PyCharm, IntelliJ, Eclipse

**Software:** Microsoft Word, Excel, PowerPoint, Access, Google Workspace

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## Professional References

**Dr. Frederick L. Oswald**

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Rice University

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