

## Q. CHELSEA SONG

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### ACADEMIC EMPLOYMENT

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- 2023 – present    **Indiana University**  
Assistant Professor, Organizational Behavior & Human Resource Management  
Department of Management and Entrepreneurship  
Kelley School of Business
- 2018 – 2023      **Purdue University**  
Assistant Professor, Industrial-Organizational Psychology  
Department of Psychological Sciences

### EDUCATION

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#### University of Illinois at Urbana-Champaign

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| Ph.D. | Industrial-Organizational Psychology<br><i>Minors: Quantitative Psychology, Computer Science</i> | 2018 |
| M.S.  | Statistics (Applied)   | 2016 |
| M.A.  | Industrial-Organizational Psychology   | 2015 |

#### Renmin University

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| B.S. | Applied Psychology | 2013 |
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### RESEARCH INTERESTS

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- Recruitment and selection
- Person-environment fit and vocational interests
- HR analytics (machine learning, multi-objective optimization)

### PUBLICATIONS

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\*primary/corresponding author(s); <sup>1</sup>undergraduate student, <sup>2</sup>graduate student, <sup>3</sup>postdoctoral researcher at the time of study development

#### Published Journal Articles

- Song<sup>\*</sup>, Q. C., Oh<sup>\*</sup>, I.-S., Kim<sup>1</sup>, Y., & So, C. H. (2024). Revisiting the nature and strength of the personality-job performance relations: New insights from interpretable machine learning. *Journal of Applied Psychology*. [doi:10.1037/apl0001218](https://doi.org/10.1037/apl0001218).  
*Selected as Journal of Applied Psychology Editor's Choice, January 2025*

**Song<sup>\*</sup>, Q. C.**, Shin<sup>1</sup>, H. J., Tang<sup>2</sup>, C., Hanna, A., & Behrend, T. S. (2024). Investigating machine learning's capacity to enhance the prediction of career choices. *Personnel Psychology*. 77(2), 295-319. [doi:10.1111/peps.12529](https://doi.org/10.1111/peps.12529).

Alexander<sup>\*2</sup>, L., **Song, Q. C.**, Hickman<sup>2</sup>, L., & Shin<sup>1</sup>, H. J. (2024). Sourcing algorithms: Rethinking fairness in hiring in the era of algorithmic recruitment. *International Journal of Selection and Assessment*. [doi:10.1111/ijsa.12499](https://doi.org/10.1111/ijsa.12499).

**Song<sup>\*</sup>, Q. C.**, Tang<sup>2</sup>, C., Newman, D. A., & Wee, S. (2023). Adverse impact reduction and job performance optimization via Pareto-optimal weighting: A shrinkage formula and regularization technique using machine learning. *Journal of Applied Psychology*. [doi:10.1037/apl0001085](https://doi.org/10.1037/apl0001085).

**Song<sup>\*</sup>, Q. C.**, Tang<sup>2</sup>, C., Alexander III<sup>2</sup>, L., Hickman<sup>2</sup>, L., & Kim<sup>1</sup>, Y. (2023). Multi-objective optimization for personnel selection: A guide, tutorial, and user-friendly tool. *Personnel Psychology*.

As part of a composite article with three separate studies that were each evaluated individually in the traditional peer-review process, accepted independently, and combined into the thematic article:

Zhang<sup>\*</sup>, N., Wang, M., Xu, H., Koenig, N., Hickman<sup>\*</sup>, L., Kuruzovich, J., Ng, V., Arhin, K., Wilson, D., Song<sup>\*</sup>, Q. C., Tang, C., Alexander III, L., & Kim, Y. (2023). Reducing subgroup differences in personnel selection through the application of machine learning. *Personnel Psychology*. [doi:10.1111/peps.12593](https://doi.org/10.1111/peps.12593). <sup>\*</sup>co-leading authors

*Recipient of the 2025 Jeanneret Award for Excellence in the Study of Individual or Group Assessment by the Society for Industrial and Organizational Psychology*

Forbush<sup>\*</sup>, K. T., Swanson, T. J., Gaddy, M., Oehlert, M., Doan, A., Morgan, R., O'Brien, C., Christian, K., **Song, Q. C.**, Watson, D., & Wiese, J. (2023). Design and methods for the Longitudinal Eating Disorders Assessment Project (LEAP) research consortium for veterans. *International Journal of Methods in Psychiatric Research*. 32(2), e1941. [doi:10.1002/mpr.1941](https://doi.org/10.1002/mpr.1941).

Newman<sup>\*</sup>, D. A., Tang<sup>2</sup>, C., **Song, Q. C.**, & Wee, S. (2022). Dropping the GRE, keeping the GRE, or using GRE-optional admissions? Considering tradeoffs and fairness. *International Journal of Testing*. 22(1), 43-71. [doi:10.1080/15305058.2021.2019750](https://doi.org/10.1080/15305058.2021.2019750).

Wu<sup>2</sup>, H., **Song, Q. C.**, Proctor, R. W., & Chen<sup>\*</sup>, Y. (2022). Family relationships under work from home: Exploring the role of adaptive processes. *Frontiers in Public Health*. 10:782217. [doi:10.3389/fpubh.2022.782217](https://doi.org/10.3389/fpubh.2022.782217).

Wee<sup>\*</sup>, S., Newman, D. A., **Song, Q. C.**, & Schinka, J. A. (2021). Vocational interests, gender, and job performance: Two person-occupation cross-level interactions. *Personnel Psychology*. 74(2), 323-368. [doi:10.1111/peps.12411](https://doi.org/10.1111/peps.12411).

**Song<sup>\*</sup>, Q. C.**, Tang<sup>2</sup>, C., & Wee, S. (2021) Making sense of model generalizability: A tutorial on cross-validation in R and Shiny. *Advances in Methods and Practices in Psychological Science*. 4(1), 1-17. [doi:10.1177/2515245920947067](https://doi.org/10.1177/2515245920947067).

Hoff\*, K., **Song\*, Q. C.**, Wee\*, J. M. C., Phan, J., & Rounds, J. (2020). Interest fit and job satisfaction: A systematic review and meta-analysis. *Journal of Vocational Behavior*. 123, 103503. [doi:10.1016/j.jvb.2020.103503](https://doi.org/10.1016/j.jvb.2020.103503). \*equal contribution.

*Featured on World Economic Forum (December, 2020), Forbes (November, 2020), and Ladders (November, 2020)*

*Nominated for the Schmidt-Hunter Meta-Analysis Award by the Society for Industrial and Organizational Psychology (pending review)*

Rupp\*, D. C., **Song\*, Q. C.**, & Strah\*<sup>2</sup>, N. (2020). Addressing the so-called validity-diversity trade-off: Exploring the practicalities and legal defensibility of Pareto-optimization for reducing adverse impact within personnel selection. *Industrial and Organizational Psychology: Perspectives on Science and Practice*. 13(2), 246-271. [doi:10.1017/iop.2020.19](https://doi.org/10.1017/iop.2020.19). \*equal contribution.

Stoll\*, G., Einarsdóttir, S., **Song, Q. C.**, Ondish, P., Sun, J. T., & Rounds, J. (2020). The roles of personality traits and vocational interests in explaining what people want out of life. *Journal of Research in Personality*. 84, 103939. [doi:10.1016/j.jrp.2020.103939](https://doi.org/10.1016/j.jrp.2020.103939).

*Featured on Forbes, March, 2020*

Hoff\*, K., **Song, Q. C.**, Einarsdóttir, S., Briley, D. A., & Rounds, J. (2020). Developmental structure of personality and interests: A 4-wave, 8-year longitudinal study. *Journal of Personality and Social Psychology*. 118(5), 1044-1064. [doi:10.1037/pspp0000228](https://doi.org/10.1037/pspp0000228).

Forbush\*, K., **Song, Q. C.**, Tay, L., Gould, S. R., Chapa, D., A., N., Cushing, C., C., & Ptomey, L., T. (2020). Do differences between individuals who are normal weight or obese on self-report measures of disinhibited eating and restrained eating reflect reality or item “bias”? *Psychological Assessment*. 32(6), 553-567. [doi:10.1037/pas0000810](https://doi.org/10.1037/pas0000810).

Cao\*, M., **Song, Q. C.**, & Tay, L. (2018). Detecting curvilinear relationships: A comparison of scoring approaches based on different item response models. *International Journal of Testing*. 18(2), 178-205. [doi:10.1080/15305058.2017.1345913](https://doi.org/10.1080/15305058.2017.1345913).

**Song\*, Q. C.**, Wee, S., & Newman, D. A. (2017). Diversity shrinkage: Cross-validating Pareto-optimal weights to enhance diversity via hiring practices. *Journal of Applied Psychology*. 102(12), 1636-1657. [doi:10.1037/apl0000240](https://doi.org/10.1037/apl0000240).

*Recipient of the James C. Johnson Best Student Paper Award by the International Personnel Assessment Council*

Wee\*, S., Newman, D. A., & **Song, Q. C.** (2015). More than g-factors: Second-stratum factors should not be ignored. *Industrial and Organizational Psychology: Perspectives on Science and Practice*. 8(3), 482-488. [doi:10.1017/iop.2015.66](https://doi.org/10.1017/iop.2015.66).

## **Published Book Chapters and Technical Reports**

**Song\*, Q. C.**, Hernandez, I., Shin<sup>1</sup>, H. J., Tracy<sup>2</sup>, M. M., & Liu, M. Q. (2023). Machine learning algorithms and measurement. *Technology and Measurement around the Globe*. Washington D.

C., APA Books.

**Song<sup>\*</sup>, Q. C.**, Shin<sup>1</sup>, H. J., Upadhyay, N<sup>1</sup>., & Teo, T. (2023). Technology and measurement in Asia. *Technology and Measurement around the Globe*. Washington D. C., APA Books.

Hickman<sup>2\*</sup>, L., **Song<sup>\*</sup>, Q. C.**, & Woo<sup>\*</sup>, S. E. (2022). Evaluating data. *Data, Methods and Theory in the Organizational Sciences* (pp. 99-123). Society of Industrial and Organizational Psychology's Organizational Frontiers Series. <sup>\*</sup>equal contribution.

**Song<sup>\*</sup>, Q. C.**, Liu, M. Q., Tang<sup>2</sup>, C., & Long<sup>1</sup>, L. (2020). Applying principles of big data to the workplace and talent analytics. *Big Data in Psychological Research* (pp. 319-344). Washington D. C., APA books. [doi:10.1037/0000193-015](https://doi.org/10.1037/0000193-015).

Rounds<sup>\*</sup>, J., Wee, J. M. C., Cao, M., **Song, Q. C.**, & Lewis, P. (2016). *Development of an O\*NET Mini Interest Profiler (Mini-IP) for Mobile Devices: Psychometric Characteristics*. National Center for O\*NET Development, Raleigh, NC. [doi:10.13140/RG.2.1.4767.4487](https://doi.org/10.13140/RG.2.1.4767.4487).

**Song<sup>\*</sup>, Q.**, & Hu, P. (2013). Career counseling. *Vocational Psychology*. Beijing, Renmin University Press.

## SELECTED HONORS AND AWARDS

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- 2025 Jeanneret Award for Excellence in the Study of Individual or Group Assessment by the Society for Industrial and Organizational Psychology (AOM) (one award per year, “to the author(s) of a work judged to have the highest potential to further the understanding and practice of individual or group assessment in the workplace, especially when such assessment supports the creation of a diverse workforce.”)
- 2024 Sage Publications/RMD Lawrence R. James Early Career Award, Academy of Management (AOM RM Division) (one award granted per year, to “scholars who have made distinguished contributions to research methods, practice, and education during their early career stage.”)
- 2021 William Hendrix Industrial Psychology Faculty Excellence Award, Purdue University (“for excellence in performing research, teaching, and mentoring graduate students”)
- 2018 SIOP Graduate Student Scholarship, Society for Industrial and Organization Psychology (given “to recognize achievement of a graduate student”)
- 2017 Meredith P. Crawford Fellowship in Industrial-Organizational Psychology, Human Resource Research Organization (HumRRO) [\$12,000] (one award granted per year, “to a graduate student demonstrating exceptional research skills”)

- 2017 James C. Johnson Student Paper Award, the International Personnel Assessment Council (one award granted per year, to “recognize the contributions of students in the field of personnel assessment”)
- 2017 Diversity Research Award, University of Illinois at Urbana-Champaign (one award granted per year, “for outstanding original research that contributes to diversity science”)
- 2017 Charles L. Hulin Fellowship, University of Illinois at Urbana-Champaign (one award granted per year, awarded to a graduate student in Industrial-Organizational Psychology)
- 2015 Social-Personality-Organizational Summer Research Fellowship, University of Illinois at Urbana-Champaign
- 2014 Social-Personality-Organizational Summer Research Fellowship, University of Illinois at Urbana-Champaign

## GRANTS

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|-------------|--|-------------------|-------------|
| 2023 – 2027 | Department of Defense<br><i>Assessment of eating disorder and comorbidity risk and resilience in a nationally representative sample of recent military enlistees</i><br>PI: Kelsie Forbush<br>Status: Funded           | <u>Role: Co-I</u> | \$4,230,958 |
| 2021 – 2023 | National Institute of Health<br><i>Post-acute interventions for the treatment of anorexia nervosa</i><br>PI: Kelsie Forbush<br>Status: Funded  | <u>Role: Co-I</u> | \$340,000   |
| 2019 – 2022 | Department of Defense<br><i>Development of a military-specific transdiagnostic eating-disorder survey and screening tool in a nationally representative sample of veterans</i><br>PI: Kelsie Forbush<br>Status: Funded | <u>Role: Co-I</u> | \$1,721,698 |
| 2013 – 2014 | Robert P. Larson Grant, University of Illinois<br><i>Development of a vocational interests computer adaptive test</i><br>PI: Q. Chelsea Song<br>Status: Funded   | <u>Role: PI</u>   | \$1,500     |

## CONFERENCE PRESENTATIONS

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\*primary/corresponding author(s); <sup>1</sup>undergraduate student, <sup>2</sup>graduate student, <sup>3</sup>postdoctoral researcher

### Chaired Symposia

Tang, C. (Co-Chair), Song, Q. C. (Co-Chair), & Wee, S. (Co-Chair). (2024, April). Multi-objective optimization in the workplace 5.0: Applications in the workplace [Symposium].

*Society for Industrial and Organizational Psychology Annual Conference, Chicago, IL, United States.*

**Song, Q. C.** (Co-Chair), Chen<sup>2</sup>, T. (Co-Chair), & Campion, M. (Discussant). (2023, April). Multi-objective optimization in the workplace 4.0: Applications in personnel selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Boston, MA, United States.*

**Song, Q. C.** & Wee, S. (2022, April). Multi-objective optimization in the workplace 3.0: Advancing research on adverse impact in personnel selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Seattle, WA, United States.*

Wee, S. & **Song, Q. C.** (2022, April). Implementing Pareto-optimal selection systems in practice [Panel]. *Society for Industrial and Organizational Psychology Annual Conference, Seattle, WA, United States.*

**Song, Q. C.** (2021, April). Multi-objective optimization in the workplace 2.0: Applications in selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Seattle, WA, United States.*

Alexander III<sup>2</sup>, L. & **Song, Q. C.** (2020, June). Interactive tools: Web-based applications in organizational research and practice [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Virtual Conference.*

**Song, Q. C.** & Wee, S. (2020, June). Multi-objective optimization in the workplace: Addressing adverse impact in selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Virtual Conference.*

## **Presentations**

Tang, C. (Co-Chair), Wee, S. (Co-Chair), Drake, M., Dunleavy, E., Gardner, C., Morris, S. B., Rottman, C., & **Song, Q. C.** (2025). Multi-objective optimization 6.0: Challenges and opportunities for HR analytics [Panel]. *Society for Industrial and Organizational Psychology Annual Conference, Denver, CO, United States.*

Finuf, K. D. (Chair), Capman, J. (Panelist), Haig, J. (Panelist), Lipnic, V. A. (Panelist), Locklear, T. S. (Panelist), Nye, C. D. (Panelist), **Song, Q. C.** (Panelist), & Winterberg, C. (Panelist). SIOP Intelligence on AI: Legal, Practice, Science, and Ethics Updates: State of the AI Union Address + Panel Session Combo [Alternative Session Type]. *Society for Industrial and Organizational Psychology Annual Conference, Denver, CO, United States.*

Hunt, L. (Moderator), Johnson, W. (co-chair), Stratton, T. (co-chair), Dornfest, Z. (co-chair), Gonzalez, M. (co-chair), Degefe, E. (Panelist), Johnson, R. (Panelist), **Song, Q. C.** (Panelist), Lukaszewski, K. (co-chair), Stone, D. (co-chair) (2025). Big data ren-AI-ssance: AI and IO psychology research incubator [Research Incubator]. *Society for Industrial and Organizational Psychology Annual Conference, Denver, CO, United States.*

Morgan, R. W., Chen, Y., Forbush, K. T., Thomeczek, M. L., Negi, S., Christensen Pacella, K.



- A., Wendler, A. M., Bottera, A. R., **Song, Q. C.**, Vanzhula, I. A., Doan, A. E, Oehlert, M. E., Mitchell, K. S., & Denning, M. (2024, September). Associations between military-specific traumatic events and inappropriate compensatory behaviors in a nationally representative sample of Veterans [Conference Session]. *Eating Disorders Research Society*, Sitges, ESP.
- Tang<sup>\*2</sup>, C., Newman, D. A., **Song, Q. C.**, & Wee, S. (2024, August). Diversity hiring with local accuracy: Local, meta-analytic, and Bayesian approaches [Paper Session]. *Academy of Management Annual Meeting, Chicago, IL, United States*.
- Song, Q. C.**, Oh, I.-S., So, C. H., & Kim<sup>1</sup>, Y. (2024, April). Revisiting the relations between personality traits and job performance: New insights from interpretable machine learning. In Hickman, L. (Co-Chair) & Liu, M. Q. (Co-Chair). (2024). Machine learning for I-O 6.0: Advances in organizational applications [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Chicago, IL, United States*.
- Campion, E. (Chair), Campion, M. A., Gardner, C., Koenig, N., Schmerling, D., **Song, Q. C.**, Steffensmeier, J., Zhang, N. (2024, April). Will machine learning help or hurt diversity? The evidence to date [Panel]. *Society for Industrial and Organizational Psychology Annual Conference, Chicago, IL, United States*.
- Kim<sup>1</sup>, Y., Chen<sup>2</sup>, T., Upadhy<sup>2</sup>, N., & **Song, Q. C.** (2024, April). Knowing what's going on and what's going wrong: Interpretable machine learning in organizational research and practice. In Yankov, G. (Chair). (2024). Methods for explainable artificial intelligence research [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Chicago, IL, United States*.
- Song, Q. C.**, Tracy<sup>2</sup>, M., Wee, S., & Calderwood, C. (2023, April). Burnout reduction and job performance enhancement via personnel selection: A Pareto-optimization approach. In Fleyshmakher, D. (Chair), Sutphin, D. J. (Chair), Cheban, Y. M. (Co-Chair), & Cohen-Charash, Y. (Co-Chair). (2023). Bridging I & O Psychology II: A two-way street [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Boston, MA, United States*.
- Song, Q. C.**, Tang<sup>2</sup>, C., Alexander III, L., Hickman, L., & Kim<sup>1</sup>, Y. (2023, April). The multi-objective selection tool (MOST). In Song, Q. C. (Co-Chair) & Tang, C. (Co-Chair). Multi-objective optimization 4.0: Applications in personnel selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Boston, MA, United States*.
- Wee, S., Newman, D. A., **Song, Q. C.**, & Tang<sup>2</sup>, C. (2023, April). Reducing adverse impact by hiring on vocational interests: A Pareto-optimal approach [Poster]. *Society for Industrial and Organizational Psychology Annual Conference, Boston, MA, United States*.
- Kell, H. J., Martinez, L. R., McAbee, S. T., Ruggs, E. N., & **Song, Q. C.** (2023, April). Graduate admissions practices: What role can I-O psychologists play? [Panel]. *Society for Industrial and Organizational Psychology Annual Conference, Boston, MA, United States*.
- Pitcher<sup>2</sup>, B. D., Behrend, T. S., **Song, Q. C.** (2023, April). Who is willing to do dirty work? Scale development and an examination of initial evidence. In Pitcher, B. D. (Co-Chair), Ravid,

- D. M. (Co-Chair), & Blustein, D. L. (Discussant). Examining practical challenges in stigmatized work [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Boston, MA, United States.*
- Song, Q. C.**, Shin<sup>1</sup>, H. J., Tang<sup>2</sup>, C., Hanna, A. & Behrend, T. S., (2022, April). Machine learning enhances the prediction of career choices. In Chris Nye (Chair), The power of vocational interests: Understanding choices, attitudes, and behavior [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Seattle, WA, United States.*
- Tang<sup>2</sup>, C., Newman, D. A., **Song, Q. C.** & Wee, S. (2022, April). Shrinkage of diversity tradeoff curves in personnel selection: A comparison of local validity studies, meta-analysis, and empirical Bayes-analysis. In **Q. C. Song** (Co-Chair) & Wee, S. (Co-Chair), Multi-objective optimization in the workplace 3.0: Advancing research on adverse impact in personnel selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Seattle, WA, United States.*
- Tang<sup>2</sup>, C., Newman, D. A., **Song, Q. C.** & Wee, S. (2021, April). Pareto-optimal tradeoffs for three notions of test fairness: Equality, test equity, performance equity. In **Q. C. Song** (Chair), Multi-objective optimization in the workplace 2.0: Applications in selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Virtual Conference.*
- De Corte, W. & **Song, Q. C.** (2021, April). Pareto-optimal (PO) designs for two-stage complex selection/assignment. In **Q. C. Song** (Chair), Multi-objective optimization in the workplace 2.0: Applications in selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Virtual Conference.*
- Tang<sup>2</sup>, C., Hickman<sup>2</sup>, L., & **Song, Q. C.**, Alexander III<sup>2</sup>, L. (2021, April) Comparing item-level and scale-level predictive models: A simulation [Poster]. *Society for Industrial and Organizational Psychology Annual Conference, Virtual Conference.*
- Song, Q. C.** & Tang, C. (2020, June). Adverse impact reduction for multiple subgroups: A Pareto-optimization approach. In **Q. C. Song** (Co-Chair) and S. Wee (Co-Chair), Multi-objective optimization in the workplace: Addressing adverse impact in selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Virtual Conference.*
- Tang, C., Newman, D. A., & **Song, Q. C.** (2020, June). Addressing diversity-validity trade-offs via orthogonalized criteria weighting. In **Q. C. Song** (Co-Chair) and S. Wee (Co-Chair), Multi-objective optimization in the workplace: Addressing adverse impact in selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Virtual Conference.*
- Tang, C., Chen, Y., **Song, Q. C.**, & Newman, D. A. (2019, April). Effects of predictor weighing considering adverse impact and shrinkage: Reply to Sackett et al. (2017) [Poster]. *Society for Industrial and Organizational Psychology Annual Conference, Washington, D.C., United States.*



- Hoff, K. A., Wee, C. J. M., **Song, Q. C.**, Phan, J., & Rounds, J. (2018, July). Meta-analysis of vocational interests and job satisfaction: Challenging a common belief [Symposium]. *Academy of Management Annual Meeting, Chicago, IL, United States.*
- Einarsdóttir, S., Hoff, K. A., **Song, Q. C.**, & Rounds, J. (2018, July). Interests and personality codevelopment during adolescence and young adulthood in Iceland. In J. Rounds (Chair), Continuity and change in interests [Symposium]. *European Conference on Personality, Zadar, Croatia.*
- Song, Q. C.**, Wee, S., & Newman, D. A. (2018, April). Enhancing diversity: Pareto-optimal weighting algorithm with regularization. In Thompson, I. (Chair), Machine learning techniques for multiple criteria optimization [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Chicago, IL, United States.*
- Einarsdóttir, S., & **Song, Q. C.** (2017, August). Longitudinal development of interests and personality traits in emerging adulthood. In J. Rounds (Chair), Continuity and change in interests [Symposium]. *Annual Convention of American Psychological Association, Washington D.C., United States.*
- Song, Q. C.**, Tay, L., & Liu, Y. (2017, April). Assessing the sample size requirements for accurately estimating dichotomous and polytomous item response theory model item parameters. In G. J. Gray (Chair), Continuing to broaden the scope of IRT in organizational research [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Orlando, FL, United States.*
- Song, Q. C.**, Newman, D. A., & Wee, S. (2017, April). Approximation of diversity shrinkage from Pareto weights for diversity-performance tradeoffs. In S. B. Morris (Chair), Optimizing validity/diversity tradeoffs in employee selection [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Orlando, FL, United States.*
- Song, Q. C.**, & Rounds, J. (2017, April). The predictive power of values for work outcomes [Poster]. *Society for Industrial and Organizational Psychology Annual Conference, Orlando, FL, United States.*
- Wee, S., Newman, D. A., **Song, Q. C.**, & Heffner, T. (2017, April). Sex and vocational interest congruence predicting job performance. In C. D. Nye & A. Ion (Co-chairs), New advances in research on the validity of vocational interests [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Orlando, FL, United States.*
- Einarsdóttir, S., & **Song, Q. C.** (2017, March). Longitudinal development of interests and personality traits in emerging adulthood. In J. Rounds (Chair), Continuity and change in interests [Symposium]. *International Convention of Psychological Science, Vienna, Austria.*
- Song, Q. C.**, Wee, S., & Newman, D. A. (2016, April). Cross-validating Pareto-optimal weights for reducing adverse impact. In P. J. Hanges & J. Y. Park (Co-Chairs), New insights into adverse impact: Origination, motivation, and scale weighting [Symposium]. *Society for Industrial and Organizational Psychology Annual Conference, Anaheim, CA, United States.*

**Song, Q. C.**, Wee, C. J. M., Earl, K., & Rounds, J. (2016, April). Revisiting interest congruence and job satisfaction: Fourth time's the charm. In C. D. Nye (Chair), *Advancing the validity of vocational interests in the workplace. Society for Industrial and Organizational Psychology Annual Conference, Anaheim, CA, United States.*

Cao, M., Phan, J., **Song, Q.**, Cho, S., & Drasgow, F. (2015, April). Do job applicants fake on vocational interest measures? [Poster] *Society for Industrial and Organizational Psychology Annual Conference, Philadelphia, PA, United States.*

*Featured on SIOP.org, September 30, 2015*

Cao, M., **Song, Q.**, Drasgow, F., & Rounds, J. (2014, May). Testing cross-cultural measurement equivalence of an ideal-point-based vocational interest scale. In G. Sawhney & K. P. Cigularov (Co-chairs), *Measurement equivalence of personality measures across different methods and cultures [Symposium]. Society for Industrial and Organizational Psychology Annual Conference, Honolulu, HI, United States.*

Cai, J., Hu, P., Wei, Q., Rong, T., & **Song, Q.** (2013, August). The restoration of modern urban environment [Poster]. *American Psychological Association Annual Convention, Honolulu, HI, United States.*

Song, Q., & **Hu, P.** (2012, December). Career choice in emerging adulthood [Paper Session]. *Chinese National Convention of Psychology, Guangdong, China.*

Song, Q., & **Hu, P.** (2012, July). The development of career compromise during university stage [Paper Session]. *International Congress of Psychology, Cape Town, South Africa.*

## INVITED TALKS

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**Song, Q. C.** (2024, September). [Invited Paper and Panel Session] Artificial intelligence and organizational research. *2024 Data and Artificial Intelligence Symposium, Jacksonville, FL, United States.*

**Song, Q. C.** (2024, May). Best practices for using predictive analytics to inform job and career outcomes. *2024 Predictive Analytics Summit, Alexandria, VA, United States.*

**Song, Q. C.** (2024, February). The relation between gender composition and employee job performance. *Kinsey-Kelley Center Gender Research Workshop, Bloomington, IN, United States.*

**Song, Q. C.** (2023, June). Multi-Objective Optimization: Applications in Organizational Science. *2023 AOM Research Methods Division-CARMA Doctoral Student and Junior Faculty Consortium, Virtual Presentation.*

**Song, Q. C.** (2022, April). Machine learning enhances the prediction of career choices. *2022 Midwest Psychological Association Annual Meeting, Chicago, IL, United States.*

**Song, Q. C.** (2022, February). Pareto-optimization in personnel selection: Addressing adverse

impact and enhancing diversity in the workplace. *Industrial-Organizational Psychology Learning Series, George Mason University, Virtual Presentation.*

**Song, Q. C.** (2021, June). Technology and measurement in Asia. *Technology and Measurement around the Globe Symposium, Virtual Presentation.*

**Song, Q. C.** (2021, April). Pareto-optimization in personnel selection: Addressing adverse impact and enhancing diversity in the workplace. *Industrial and Organizational Psychology Colloquium, Virginia Institute of Technology, Virtual Presentation.*

**Song, Q. C.** (2020, November). Cross-validation. CARMA Topic Interest Group (TIG): Advanced Regression Methods. *Consortium for the Advancement for Research Methods and Analysis, Virtual Presentation.*

**Song, Q. C.** (2020, October). Vocational interests and person-environment fit in the workplace. *Industrial and Organizational Psychology Colloquium, Rice University, Virtual Presentation.*

**Song, Q. C.** (2020, February). Vocational interests and person-environment fit in the workplace. *Social Psychology Colloquium, Purdue University, West Lafayette, IN, United States.*

**Song, Q. C.** (2019, November). Multi-objective optimization in personnel selection: Addressing validity-diversity trade-off and further potentials of the technique. *Industrial-Organizational Psychology Brownbag, Bowling Green University, Bowling Green, OH, United States.*

**Song, Q. C.** (2019, November). Multi-objective optimization in personnel selection: Addressing validity-diversity trade-off and further potentials of the technique. *Industrial-Organizational Psychology Brownbag, Purdue University, West Lafayette, IN, United States.*

**Song, Q. C.** (2019, September). Introduction to exploratory factor analysis in R. CARMA OverView SeRies: Introduction to R for Organizational Research. *Consortium for the Advancement for Research Methods and Analysis, Virtual Presentation.*

**Song, Q. C.** (2019, September). Multi-objective optimization in the workplace. *Advanced Methods at Purdue, Purdue University, West Lafayette, IN, United States.*

**Song, Q. C.** (2018, September). Diversity shrinkage of Pareto-optimal solutions in hiring practice: Simulation, shrinkage formula, and a regularization technique. *Mathematical Computational and Cognitive Science Colloquium, Purdue University, West Lafayette, IN, United States.*

**Song, Q. C.** (2017, August). Diversity shrinkage: Cross-validating Pareto-optimal weights to enhance diversity via hiring practices. *Invited presentation, recipient of IPAC James C. Johnson Student Paper Award. The International Personnel Assessment Council 2017 Annual Conference, Birmingham, AL, United States.*

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## **PUBLISHED COMPUTER PROGRAMS AND WEB APPLICATIONS**

**rMOST** (R package) <https://cran.r-project.org/web/packages/rMOST/index.html>

- The R package accompanies Song, Tang, Alexander III, Hickman, and Kim (in press) to provide predictor weighting solutions for multi-objective optimization applications with three objectives. The R package contributes to various organizational practices, including personnel selection practices to enhance both diversity and job performance.

**CrossValTutorial** (R Shiny app) <https://qchelseasong.shinyapps.io/CrossValTutorial/>

- The web application accompanies Song, Tang, and Wee (2021) to help users to understand model generalizability and cross-validation methods.

**ParetoR** (R package) <https://github.com/Diversity-ParetoOptimal/ParetoR>

- Provides Pareto-optimal predictor weights to simultaneously optimize both diversity and criterion validity in personnel selection, accompanies Song, Wee, & Newman, 2017.
- Implements shrinkage adjustment to the Pareto-optimal predictor weights and regularized tradeoff curve algorithm, both proposed by Song, Tang, Newman, & Wee, 2023.

**Pareto-Optimal Tradeoff Solutions** (R Shiny app) <https://qchelseasong.shinyapps.io/ParetoR/>

- Point-and-click web application to help make selection decisions in hiring and admissions. It provides Pareto-optimal predictor weights that simultaneously optimize both diversity and job performance criterion validity (Song, Wee, & Newman, 2017).

**MetaInd** (R package) <https://github.com/qcsong/MetaInd>

- R program that provides meta-analytic estimates using Hunter and Schmidt (2014) method with independent correction for each individual effect size.

## **MEDIA COVERAGE**

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What drives job satisfaction? Researchers think this is the answer. *World Economic Forum*, Dec. 2020. [Link](#).

Your job satisfaction may have more to do with who you work with than what you do. *Forbes*, Nov. 2020. [Link](#).

Turns out you don't have to find the perfect job to be happy. *Ladders*, Nov. 2020. [Link](#).

Job interests predict life goals better than personality, according to a new psychology study. *Forbes*, March 2020. [Link](#).

Feigning interest: Will job applicants fake what they love to get a job? *SIOP.org*, Sept. 2015.

## TEACHING EXPERIENCE

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### Assistant Professor, Kelley School of Business, Indiana University

*Z596 Leading Organizations* Fall 2023 – present

- Kelley Direct Online MBA course, 40 students per section, 3 sections

*Z615 Seminar in Human Resource Management* Fall 2024 – present

- Ph.D.-level seminar, 10 students

### Assistant Professor, Purdue University

*PSY680 Survey of Industrial Psychology* Fall 2021 – Fall 2022

- Ph.D.-level seminar, 5 students

*PSY610 Multivariate Analysis in the Behavioral Sciences* Fall 2018 – Fall 2022

- Ph.D.-level statistics seminar, 20 students

*PSY473 Personnel Selection and Performance Appraisal* Spring 2020 – Spring 2023

- Undergraduate-level course, 30 students

*PSY272 Introduction to Industrial-Organizational Psychology* Spring 2019

- Undergraduate-level course, 150 students

### Instructor, Consortium for the Advancement of Research Methods and Analysis (CARMA)

*Advanced Data Analysis with R* April 2022

- Graduate-level statistics course, 20 students

### Instructor, University of Illinois at Urbana-Champaign

*PSY245 Introduction to Industrial and Organizational Psychology* Fall & Spring 2017

- Undergraduate-level course, 150 students

### Teaching Assistant, University of Illinois at Urbana-Champaign

*PSY350 Social Psychology Methods Lab* Spring 2014 – 2015

- Undergraduate-level methods course, 50 students

*PSY332 Personality Psychology Methods Lab* Fall 2013 – 2014

- Undergraduate-level methods course, 50 students

## STUDENT MENTORING

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### Doctoral Dissertation Committee

Chen Tang (2023; Chair: Dr. Daniel A. Newman; Univ. of Illinois at Urbana-Champaign)  
Diversity tradeoff curves in personnel selection: Evaluating local study, meta-analysis,

Bayes-analysis, and machine learning

Stuti Thapa (2023; Chair: Dr. Louis Tay; Purdue University)  
Taxonomy of short-term within-person variability in job performance

Stephen McBride (2023; Chair: Dr. Levon Esters; Purdue University)  
Perceptions of Black professionals in agricultural careers toward current recruitment and retention practices

Vera Du (2022; Chair; Dr. Donald Lynam; Purdue University)  
Momentary assessment of the relation between narcissistic traits, interpersonal behaviors, and aggression

Nicole (Nikki) Strah (2021; Chairs: Dr. Deborah Rupp, Dr. Q. Chelsea Song; Purdue Univ.)  
Gender and fairness perception formulation: Consideration of rule importance and temporal ordering

Louis Hickman (2021; Chair: Dr. Louis Tay; Purdue University)  
Algorithmic cognitive ability prediction in video interviews

Rachel Saef (2019; Chair: Dr. Sang Eun Woo; Purdue University)  
The role of personality in construing and reacting to work situations

### **Master's Thesis Committee**

Shabeba Islam (2024; Chair: Dr. David Rollock; Purdue University)  
Properties of the tension scale for Bangladeshi immigrant women

Meaghan M. Tracy (2023; Chair: Dr. Q. Chelsea Song; Purdue University)  
Does context matter? Understanding the role of remote work and in-person work on the relation between personality and job satisfaction

Samantha Dashineau (2023; Chair: Dr. Susan South; Purdue University)  
Socioeconomic status and marital satisfaction: A meta-analysis

Caroline Balling (2023; Chair: Dr. Douglas Samuel; Purdue University)  
Comparing the reliability of discrete and continuous measures in clinical practice: A meta-analysis

Sharon Lee (2020; Chair: Dr. Franki Kung; Purdue University)  
A needs framework for refugee integration in the workplace

### **JOURNAL AND GRANT REVIEWS**

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#### **Editorial Board**

Journal of Applied Psychology (2020 – present)

Organizational Research Methods (2020 – present)



## **Ad-Hoc Reviewer**

Academy of Management Journal  
Personnel Psychology  
Journal of Vocational Behavior  
Advances in Methods and Practices in Psychological Science  
Journal of Research in Personality  
Computers & Education: Artificial Intelligence  
Academy of Management  
Society for Industrial and Organizational Psychology

## **Grant Review Panel**

National Science Foundation (NSF)

## **LEADERSHIP AND SERVICE**

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### **Society for Industrial-Organizational Psychology**

Member, Student Travel Award Committee 2023 – 2025

### **Indiana University**

Member, Virtual Department of Advanced Business Technologies    Fall 2024 – Spring 2027  
*Kelley School of Business*

Member, Kinsey-Kelley Gender in Business Conference Committee    Fall 2023 – Spring 2025  
*Kelley School of Business*

Member, OBHR Faculty Search Committee    Fall 2024 – Spring 2025  
*Department of Management and Entrepreneurship*

Coordinator, M&E Assistant Professor Lunch    Fall 2024  
*Department of Management and Entrepreneurship*

Instructor, Master of Science in Management Launch Week    Summer 2024  
*Master of Science in Management Program, Kelley School of Business*

Coach, Kelley on Campus    Summer 2024  
*Kelley Direct MBA Program, Kelley School of Business*

Judge, Kelley on Campus    Summer 2024  
*Kelley Direct MBA Program, Kelley School of Business*

Judge, CEW&T Women's Research Hackathon    Spring 2024  
*Kelley School of Business*

Member, Doctoral Committee    Fall 2023 – Spring 2024  
*Department of Management and Entrepreneurship, Kelley School of Business*

## **Purdue University**

Member, Diversity, Equity, Inclusion Committee <i>Department of Psychological Sciences</i>	Fall 2021 – Spring 2023
Coordinator, CARMA Institutional Membership	Spring 2022 – Spring 2023
Member, Department Head Administrative Review Committee <i>Department of Psychological Sciences</i>	Spring 2023
Reviewer, HHS DEI Science Consortium Paper Award <i>College of Health and Human Sciences</i>	Spring 2023
Member, Computational Cognitive Science Search Committee <i>Department of Psychological Sciences</i>	Fall 2021
Co-Organizer, Ernest J. McCormick Lecture <i>Department of Psychological Sciences</i>	Spring 2021
Member, Diversity Council <i>College of Health and Human Sciences</i>	Fall 2018 – Spring 2020
Member, I-O Psychology Job Search Committee <i>Department of Psychological Sciences</i>	Fall 2019
Speaker, PSY100 Introduction to career in I-O psychology <i>Department of Psychological Sciences</i>	Fall 2018

## **OTHER PROFESSIONAL EXPERIENCES**

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### **Google Inc.**

Ph.D. Intern, Hiring Innovation (People Operations) May, 2017 – August, 2017

### **Google Inc.**

Ph.D. Intern, Hiring Innovation (People Operations) May, 2016 – August, 2016

## **PROFESSIONAL AFFILIATIONS**

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Academy of Management

Society for Industrial and Organizational Psychology

Last updated: 01/20/2025