Tianjun Sun

603 E. Daniel St. Office 236, Champaign, IL 61820
217-979-3881 | tsun5@illinois.edu

EDUCATION

University of Illinois at Urbana-Champaign

Ph.D. in Industrial and Organizational Psychology   Expected: December 2020
Minor in Quantitative Psychology
> **Dissertation:** What do you say about your personality? Examining the psychometric properties of personality insights derived with natural language processing (Chair: Prof. Fritz Drasgow)

M.S. in Applied Statistics   May 2019
M.S. in Industrial and Organizational Psychology   December 2017

B.S. in Psychology and Statistics *(Cum Laude, with Highest Distinctions)*   May 2015

RESEARCH INTERESTS

- Individual differences
- Psychometric theories and modeling
- Research methods and issues in application
- Personnel selection and assessment
- Cross-cultural psychology

REFEREED PUBLICATIONS

Zhang, B., **Sun, T.**, Cao, M., & Drasgow, F. (2020). Using bifactor models to examine the predictive validity of hierarchical constructs: Pros, cons, and solutions. *Organizational Research Methods*.

Sun, T., Zhang. B., Phan, J. W. M., Drasgow, F., & Roberts, B. W. (2019). "Meh!": Examining Midpoint Endorsement Habitude (MEH) in survey research. *Academy of Management Proceedings*.
> *****Paper won the *2019 Sage Publications/Research Methods Division Best Student Paper Award*

Zhang, B., **Sun, T.**, Drasgow, F., Chernyshenko, O. S., Nye, C. D., Stark, S., & White, L. A. (2019). Though forced, still valid: Psychometric similarities between forced choice format and single statement format. *Organizational Research Methods.*

CHAPTERS AND TECHNICAL REPORTS

Sun, T., Zhang, B., Rounds, J. (2019). Reliability, Precision, and Errors or Measurement. In *O*NET Interest Profiler Professional and Technical Manual.* National Center for O*NET Development, Raleigh, NC.

Zhang, B., **Sun, T.**, Rounds, J. (2019). Interest Profiler Link to O*NET Occupations. In *O*NET Interest Profiler Professional and Technical Manual.* National Center for O*NET Development, Raleigh, NC.

Sun, T. & Drasgow, F. (2018). Feasibility of Converting the Paper-and-Pencil ACT Tests to an Adaptive Multi-Stage Format. In *ACT Research Report Series*. ACT, Inc., Iowa City, IA.

MANUSCRIPTS UNDER REVISION AND REVIEW

Sun, T., Zhang, B., Cao, M. & Drasgow, F. (2nd revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. *Organizational Research Methods*.

Sun, T., Fraley, R. C., & Drasgow, F. (2nd revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. *Assessment.*

Sun, T., & Drasgow, F. (2nd revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. *Journal of Cross-Cultural Psychology*.

Sun, T., Schilpzand, P., & Liu, Y. (revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. *Journal of Organizational Behavior*.

Guan, L., **Sun, T.**, & Carter, N. T. (revise & resubmit). TITLE REMOVED FOR BLIND REVIEW. *Applied Psychological Measurement.*

Guo, F., **Sun, T.**, Gallagher, C. M., Tavoosi, S., & Min, H. (under review) TITLE REMOVED FOR BLIND REVIEW. *Human Resource Management Journal*.

SELECTED WORKS IN PROGRESS

Sun, T., Zhang. B., Phan, J. W. M., Roberts, B., & Drasgow, F. (in progress). Examining midpoint endorsement in survey research. [Editing Stage] Target: *Journal of Social and Personality Psychology*.

Sun, T., Zhang, B., Cao, M., & Drasgow, F. (in progress). Reducing response distortions in interest measures with forced choice. [Editing Stage] Target: *Personnel Psychology*.

Sun, T. & Drasgow, F. (in progress). Feasibility of converting passage-based paper-and-pencil tests to adaptive multi-stage tests. [Editing Stage] Target: *Educational and Psychological Measurement*.

Guan, L., **Sun, T.**, Carter, N. T., Conway, J. S., Boyce, A. S., & Mead, A. D. (in progress) Muppscore: An R program for Expected A Posteriori scoring of multidimensional pairwise preference items. [Editing Stage] Target: *Applied Psychological Measurement.*

Kern, J., Zhang, S., **Sun, T.**, Zhang, B., Hanna, A., Amrhein, R., & Lee, A. (in progress). Innovating personality assessment: New approaches to computerized adaptive tests. [Editing Stage] Target: *Educational and Psychological Measurement*.

Zhang, B., Luo, J., **Sun, T.**, & Drasgow, F. (in progress). Using bifactor models to examine the predictive validity of hierarchical constructs: Augmented Bayesian structural equation modeling wins. [Editing Stage] Target: *Organizational Research Methods*.

Sun, T., Song, Q. C., Wee, J. M. C., Amrhein, R., Lee, A., & Rounds, J. (in progress). Contextualizing interest items. [Writing Stage] Target: *Journal of Applied Psychology*.

Liu, M., **Sun, T.**, & Oswald, F. (in progress). Interpretable machine learning: How to build an explainable machine learning model. [Writing Stage] Target: *Organizational Research Methods*.

Zhang, B., Anderson, C. J., Angrave, L., **Sun, T.**, & Drasgow, F. (in progress). Modeling applicant faking: A Bayesian approach to the Retrieve-Edit-Select Model. [Writing Stage] Target: *Journal of Applied Psychology*.

Sun, T., Zhang, B., Roberts, B., & Drasgow, F. (in progress). A measurement focused approach on examining the general factor of personality. [Data Analyzed] Target: *Journal of Personality*.

GRANTS

Graduate College Dissertation Travel Grant, University of Illinois, 2020.
Amount: $2880. *Topic: Psychometric properties of artificial intelligence aided personality assessment*.

Robert P. Larson Grant for Research in Career Development, University of Illinois, 2016.
Amount: $1440. *Topic: Development of a Vocational Interest Forced Choice Measure.*

James Scholar Preble Research Support, University of Illinois, 2014.
Amount: $350. *Topic: Forced Choice for Cross-cultural Response Style Bias.*

AWARDS AND HONORS

Psychology Alumni Board Travel Award, University of Illinois, 2018-2020
Graduate College Conference Travel Award, University of Illinois, 2017
Charles L. Hulin Fellowship, University of Illinois, 2015-2016

Class of 2015 Senior 100 Honorary, University of Illinois, 2015
Edmund J. James Scholar, University of Illinois, 2011-2015
James E. Spoor Award, University of Illinois, 2014
Preble Research Award, University of Illinois, 2014
College of LAS Conference Travel Award, University of Illinois, 2014

CONFERENCE PRESENTATIONS

Sun, T., Zhang, B., Cao, M., & Drasgow, F. (April 2020). Detecting faking in personality tests with the tree process model. In G. P. Yankov (Chair), Novel approaches for detecting and preventing applicant faking. *Symposium accepted for the 35th Annual Conference of the Society for Industrial and Organizational Psychology*, Austin, TX.

Sun, T. (April 2020). Machine learning models to score personality items and predict health and job outcomes. In **T. Bartkoski** (Chair), Modern problems require modern solutions: New approaches to personality assessment. IGNITE/*Panel hybrid session accepted for the 35th Annual Conference of the Society for Industrial and Organizational Psychology*, Austin, TX.

Zhang, B., Luo, J., **Sun, T.**, & Drasgow, F. (April 2020). Using bifactor models to examine the predictive validity of hierarchical constructs. *Poster accepted for the 35th Annual Conference of the Society for Industrial and Organizational Psychology*, Austin, TX.

Sun, T., Zhang, B., Phan, W. M. J., Roberts, B. W., & Drasgow, F. (August 2019). "Meh!": Examining Midpoint Endorsement Habitude (MEH) in survey research. In **T. Sun** (Chair), Challenges and Applications of Survey-Based Research. *Paper presented at the 79th Annual Meeting of the Academy of Management*, Boston, MA.

Sun, T., Zhang, B., & Drasgow, F. (April 2019). Much ado about everything: Consequences of measurement model misspecification. In **T. Sun** & F. Drasgow (Co-chairs), Item Response Theory II: New Developments in Research and Applications. *Symposium presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology*, Washington, DC.

Sun, T., Zhang, B., Liu, Y., Sun, Y., & Oh, K-J. (April 2019). Spilling the tea: Motives and consequences of workplace gossip. In **T. Sun** & Y. Liu (Co-chairs), Letting You in on a Secret: New Perspectives of Workplace Gossip. *Symposium presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology*, Washington, DC.

Sun, T., Zhang, B., Hanna, A., Kern, J., Zhang, S., Amrhein, R., & Lee, A. (April 2019). Innovating personality assessment: New approaches to computerized adaptive tests. In S. Morris (Chair), Advances in Computer Adaptive Testing. *Symposium presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology*, Washington, DC.

Chen, Y., **Sun, T.**, Zhang, B., Roberts, B. W., & Drasgow, F. (April 2019). Anchoring vignette application on cross-cultural personality assessment. In D. S. Ones & B. K. Mercado (Co-chairs), Cross-Cultural and Criterion-Related Validity of New Generation Personality Measures. *Symposium presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology*, Washington, DC.

Zhang, B., **Sun, T.**, Drasgow, F., Chernyshenko, O. S., Nye, C., Stark, S., & White, L. A. (April 2019). Though forced, still valid: Equivalence between FC format and single statement scale. In P. Lee (Chair), Examining the Effectiveness of MFC Personality Assessments from Diverse Perspectives. *Symposium presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology*, Washington, DC.

Zhang, B., **Sun, T.**, & Drasgow, F. (April 2019). Improving the performance of bifactor predictive model: One more item suffices. *Poster presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology*, Washington, DC.

Chen, Y., Zhang, B., **Sun, T.**, & Drasgow, F. (April 2019). Negative wording effect through the lens of local structural equation modeling. *Poster presented at the 34th Annual Conference of the Society for Industrial and Organizational Psychology*, Washington, DC.

Sun, T., Zhang, B., Cao, M., & Drasgow, F. (April 2018). Faking classification accuracy improved: adopting the tree-process model. *Poster presented at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology*, Chicago, IL.

Zhang, B., **Sun, T.**, Cao, M., & Drasgow, F. (April 2018). Enhancing predictive validity of multidimensional measures: a bifactor perspective. *Poster presented at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology*, Chicago, IL.

Zhang, B., **Sun, T.**, Drasgow, F., Chernyshenko, O. S., Nye, C., Stark, S., & White, L. A. (April 2018). Reliability of unfolding rating scales and multidimensional forced choice measures. In J. A. DeSimone (Chair), What Should We Do about Alpha II: Alternatives to Alpha? *Symposium presented at the 33rd Annual Conference of the Society for Industrial and Organizational Psychology*, Chicago, IL.

Sun, T., Zhang, B., Stark, S., & Drasgow, F. (April 2017). Do questionnaire formats and scoring models change the construct measured? In H. Min & M. Zickar (Co-chairs), Item Response Theory: New Directions for Research and Practice. *Symposium presented at the 32nd Annual Conference of the Society for Industrial and Organizational Psychology*, Orlando, FL.

Sun, T., & Drasgow, F. (April 2017). Cross-cultural response style bias is real: Adapting the Tree-Process Model. *Poster presented at the 32nd Annual Conference of the Society for Industrial and Organizational Psychology*, Orlando, FL.

Sun, T., Cao, M., & Drasgow, F. (April 2016). Overcoming cross-cultural response style bias: forcing improved measurement. *Poster presented at the 31st Annual Conference of the Society for Industrial and Organizational Psychology*, Anaheim, CA.

PROFESSIONAL EXPERIENCE

American College Testing (ACT), Inc.   Iowa City, IA
PhD Intern | Center for Social, Emotional, and Academic Learning   June 2020 - August 2020
- Examined the construct structure and assessment validity of socio-emotional skills
- Leveraged assessment data and item response theory to evaluate and improve test performance
- Developed research and technical report to contribute to ACT Research Series and publications

Amazon.com Services, Inc.   Seattle, WA
Research Scientist Intern | Talent Assessment   May 2019 - August 2019
- Leveraged assessment data and machine learning to optimally score multiple criteria
- Identified key assessment components and improved test efficiency for various functions
- Facilitated content development and validation for several personnel and selection assessments

JD.com, Inc.   Champaign-Urbana, IL
Personnel Assessment Consultant   December 2018 - May 2019
- Designed tailored scales for assessing various skills and traits to for hiring and promotion
- Analyzed selection and performance data to identify problems in current evaluation system
- Assisted on development for company-wide 360-degree feedback and performance review

University of Illinois Leadership Center   Champaign-Urbana, IL
Statistical Consultant   January 2019 - May 2019
- Analyzed data on multi-institutional leadership studies and solved problems on measurement
- Examined patterns on campus leadership and commitment development over past 10 years
- Made recommendations for future leadership assessment procedures and instruments

Human Resources Research Organization (HumRRO)   Champaign-Urbana, IL
Research Associate (Contractor)   October 2018 - March 2019
- Analyzed data on various forms of interest profiler to examine their psychometric properties
- Linked existing forms of interest profilers to O*NET occupations
- Participated in writing technical reports and book chapters for the O*NET Interest Profiler

The Organization for Economic Co-operation and Development (OECD)   Champaign-Urbana, IL
Research Assistant   February 2018 - August 2018

- Designed scales for socioemotional skills to be administered on teenagers around the globe
- Analyzed item trials data to evaluate scale performance and global applicability
- Assisted on the initial phase of the large project effort

American College Testing (ACT) Inc.   Champaign-Urbana, IL
Research Assistant   January 2017 - February 2018
- Investigated latent structure of mixed format tests
- Analyzed dimensionality of passage and item based tests
- Designed and applied methods of multistage adaptive testing

Anheuser Busch InBev   Champaign, IL
People Analytics Intern   October 2014 - August 2016
- Researched and designed personnel excellence assessment instruments as performance indicators
- Analyzed internal metrics, trends and causes to create solutions balancing risks and management
- Conducted analyses to support business decisions, make predictions, and assess practicality

TEACHING EXPERIENCE

Online Course Developer, Intro to Industrial and Organizational Psychology   Fall 2018 - Summer 2019
Instructor, Intro to I/O Psychology, *Excellence rating: 4.8/5.0 (25 students)*   Summer 2018
       Recognized among Teachers Ranked as Excellent
Teaching Assistant, Intro to I/O Psychology *(155 students)*   Spring 2018
Teaching Assistant, Social Cognition *(150 students)*   Fall 2016
Instructor, Freshman Seminar, *Excellence rating: 4.4/5.0 (24 students)*   Fall 2013
Discussion Leader, Social Issues Group Dialogues, *Excellence rating: 4.3/5.0 (20 students)*   Fall 2012

SKILLS

Language: English (fluent), Mandarin Chinese (fluent)
IRT Software: GGUM2004, GGUM MCMC, flexMIRT, BILOG, MULTILOG, PARSCALE, TESTFACT, IRTPRO, Winsteps, MCMC GGUM, MCMC ZG
Statistical and Programming Tools: R, Python, Mplus, SPSS, SAS, Mathematica, SQL, VBA, LaTex
Certification: SAS Advanced Programmer, SAS Base Programmer, NREMT-B, PADI AOW, USPA A

SERVICES

Ad Hoc Reviewer, Society for Industrial and Organizational Psychology Annual Meeting   2019 - present
Ad Hoc Reviewer, Academy of Management Annual Meeting   2019 - present

SELECTED COURSEWORK

- Organizational Psychology
- Personnel Psychology
- Foundations of Organizational Behavior
- Measurement and Test Development
- Item Response Theory
- Computerized Adaptive Testing
- Multivariate Statistics
- Categorical Data Analysis
- Covariance Structure and Factor Modeling (SEM)
- Advanced Structural Equation Modeling
- Hierarchical Linear Modeling
- Multilevel Modeling and Network Analysis
- Social Research Methods
- Bayesian Research Methods

- Bayesian Statistical Inference and Modeling
- Data Science Foundations
- Advanced Date Science
- Statistical Learning
- Mathematical Statistics
- Applied Regression and Design
- Methods of Applied Statistics
- Statistical Data Management
- Advanced Data Analysis
- Survival Analysis
- Real Analysis

PROFESSIONAL AFFILIATION

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