

## Merve Sarac

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CONTACT INFORMATION	1025 West Johnson Street Madison, WI 53706	Voice: (608) 419-1053 E-mail: sarac@wisc.edu Linkedin: www.linkedin.com/in/mrvsarac/
RESEARCH INTERESTS	Quantitative Research Methodology, Item Response Theory (IRT), Test Security, and Psychometrics	
EDUCATION	<b>University of Wisconsin-Madison</b> , Madison, Wisconsin Ph.D. Candidate, Quantitative Methods, May, 2023 (expected graduation) <i>Minor in Statistics</i> <ul style="list-style-type: none"><li>• Advisor: Dr. James Wollack</li></ul> <b>University of Connecticut</b> , Storrs, Connecticut M.A., Research Methods, Measurement, and Evaluation, August, 2018 <ul style="list-style-type: none"><li>• Masters Thesis: “English as a Second Language Proficiency: An IRT Approach to Scoring”</li><li>• Advisor: Dr. Eric Loken</li></ul> <b>Bogazici University</b> , Istanbul, Turkey M.S., Secondary School Mathematics Education, August, 2016 <ul style="list-style-type: none"><li>• Masters Thesis: “A Prospective Secondary Mathematics Teacher’s Development of the Meaning of the Cartesian Form of Complex Numbers”</li><li>• Advisor: Dr. Gulseren Karagoz Akar</li></ul> B.S., Integrated B.S. and M.S. Program in Teaching Mathematics, May, 2014	
ACADEMIC APPOINTMENTS	Lecturer, University of Wisconsin-Madison (08/19 - 05/20) –Ed Psych 773: Factor Analysis, Multidimensional Scaling & Cluster Analysis (Spring 2020) –Ed Psych 771: Test Construction (Fall 2019)  Teaching Assistant, University of Wisconsin-Madison (08/18 - 05/19) –Ed Psych 761: Statistical Methods Applied to Education II (Spring 2019) –Ed Psych 760: Statistical Methods Applied to Education I (Fall 2018)	
AWARDS & HONORS	Early Excellence in Teaching Award, University of Wisconsin-Madison (03/20): \$1,000 Turkish Ministry of National Education Fellowship for Graduate Studies (02/14): \$110,000 Prof. Dr. Hikmet Sebuktekin Education Grant Award, Bogazici University (11/13): \$900 Turkish Ministry of National Education Scholarship for Undergraduate Studies: \$7,200 International Student Exchange Program Grant in the United States: \$20,000 High Honors Graduation Certificate, Bogazici University (06/14)	
PROFESSIONAL & RESEARCH APPOINTMENTS	Project Assistant, The Office of Testing and Evaluation Services, University of Wisconsin-Madison (09/20 - present)  Statistical Consulting, The Office of Testing and Evaluation Services, University of Wisconsin-Madison (11/21 - 03/22)  Research Intern, Office of Research Strategies, National Board of Medical Examiners (NBME) (06/21-07/21)  Project Assistant, The Institute of Education Sciences (IES; #R305D190053) project <i>Bayesian dynamic borrowing: A method for utilizing historical data in education research</i> . Principal Investigators: David Kaplan, University of Wisconsin-Madison & Jianshen Chen, College Board (07/20)	

	Research Intern, The American Institute of Certified Public Accountants (AICPA) (06/20-08/20)
	Project Assistant, The Office of Testing and Evaluation Services, University of Wisconsin-Madison (09/18 - 09/19)
	Research Assistant, The Scientific and Technological Research Council of Turkey (10/15 - 09/16)
	Research Assistant, Bogazici University (10/13 - 05/14)
LEADERSHIP & COMMUNITY SERVICES	<p>Graduate Student Representative, Diversity Issues and Testing Committee (CODIT), National Council on Measurement in Education (2022-present)</p> <p>Event Organizer, <i>We're here too! An Exciting Networking Event for Historically Marginalized Researchers &amp; Students</i>, Diversity Issues and Testing Committee (CODIT), National Council on Measurement in Education (04/2022)</p> <p>Panel Session Organizer, <i>Not There Yet: Addressing Differential Educational Outcomes for Marginalized Populations in the Era of COVID-19</i>, Diversity Issues and Testing Committee (CODIT), National Council on Measurement in Education (04/2022)</p> <p>Panel Session Organizer, <i>Intersectional Career Panel</i>, Diversity and Inclusion Association (DIA) Leadership, Department of Educational Psychology, University of Wisconsin-Madison (03/2022)</p> <p>Quantitative Methods Area Student Representative, Diversity and Inclusion Association (DIA) Steering Committee, Department of Educational Psychology, University of Wisconsin-Madison (2022-present)</p> <p>National Council on Measurement in Education-Graduate Student Issues Committee Standards Study Group (2021-present)</p> <p>Educational Psychology Graduate Student Mentoring Program, University of Wisconsin-Madison (2019-present)</p>
PUBLICATIONS	<p>Sarac, M. &amp; Loken, E. (<i>in press</i>). Examining Patterns of Omitted Responses in a Large-Scale English Language Proficiency Test. <i>International Journal of Testing</i>.</p> <p>Sarac, M. &amp; Feinberg, R. (<i>in press</i>). Exploring the Utility of Nonfunctional Distractors. In M. Wiberg, D. Molenaar, J. González, J.-S. Kim, &amp; H. Hwang (Eds.), <i>Quantitative Psychology: The 86<sup>th</sup> Annual Meeting of the Psychometric Society, Virtual</i>. Springer.</p> <p>Murphy, D., Sarac, M., &amp; Sedivy S. (<i>in press</i>). Why U.S. undergraduate students are (not) studying languages other than English. <i>Second Language Research &amp; Practice</i>.</p>
MANUSCRIPTS IN PREPARATION	<p>Sarac, M. &amp; Wollack, J. (in preparation). Reducing Score Bias Through Real-Time Rerouting of Examinees with Anomalous Responses.</p> <p>Sarac, M. &amp; Wollack, J. (in preparation). Real-Time Anomalous Response Detection for Computer-Based Linear Tests.</p> <p>Karagoz Akar, G., Sarac, M. &amp; Belin, M. (in preparation). Reconstructing Rectangular Form of Complex Numbers.</p>

Karagoz Akar, G. & Sarac, M. (in preparation). Development of Complex Numbers Through Quantitative Reasoning: The Case of Esra.

CONFERENCE  
PRESENTATIONS

Sarac, M., Feinberg, R., O'Donnell, F., Ong, T. Q. (2022, April). Interactive Score Reporting Dashboard Improvement through NLP Analysis of Focus Group Feedback. *National Council on Measurement in Education*, San Diego, CA.

Sarac, M. & Xu, T. (2021, December). Two-Step Detection of Examinees with Preknowledge and Exposed Items. *Conference on Test Security*, Virtual.

Sarac, M. & Feinberg, R. (2021, November). The Utility of Nonfunctioning Distractors for Credentialing Tests. *Conference on Test Security*, Virtual.

Sarac, M. & Feinberg, R. (2021, November). Topic Modeling and Sentiment Analysis of User Feedback: Improving a Score Reporting Dashboard. *Natural Language Processing (NLP) in Assessment*, National Board of Medical Examiners Educational Virtual Conference.

Sarac, M. & Wollack, J. (2021, October). Reducing Score Bias Through Real-Time Rerouting of Examinees with Anomalous Responses: Impact of Relaxing the Assumption of Identical Forms. *Conference on Test Security*, Virtual.

Feinberg, R. & Sarac, M. (2021, July). Exploring the Utility of Nonfunctioning Distractors. *International Meeting of the Psychometric Society 2021*, Virtual.

Sarac, M. & Wollack, J. (2021, June). Reducing Score Bias Through Real-Time Rerouting of Examinees with Anomalous Responses. *National Council on Measurement in Education*, Virtual.

Sarac, M. & Xu, T. (2021, June). Preknowledge Detection in Multiple-Format Testing. *National Council on Measurement in Education*, Virtual.

Sarac, M. & Wollack, J. (2020, September). Real-Time Anomalous Response Detection for Computer-Based Linear Tests. *National Council on Measurement in Education*, Virtual.

Sarac, M. & Loken, E. (2020, September). An Empirical Study of Omitted Answers on a Language Proficiency Test. *National Council on Measurement in Education*, Virtual.

Sarac, M. & Wollack, J. (2020, July). A Score Differencing Method for Item Preknowledge Detection in Real-time. *International Meeting of the Psychometric Society 2020*, Virtual.

Sarac, M. & Wollack, J. (2019, November). A Score Differencing Index for Real-Time Anomalous Response Detection for Computer-Based Linear Tests. *Ideas in Testing*, Chicago, IL.

Sarac, M. & Wollack, J. (2019, October). A Method for Real-Time Anomalous Response Detection for Computer-Based Linear Tests. *Conference on Test Security*, Miami, FL.

Sarac, M. & Karagoz Akar, G. (2017, October). A Prospective Secondary Mathematics Teachers Development of the Meaning of Complex Numbers Through Quantitative Reasoning. *39th Annual Meeting of the International Group for the Psychology of Mathematics Education North American Chapter (PME-NA 39)*, Indianapolis, IN.

INVITED  
PRESENTATIONS &  
WORKSHOPS

Writing Test Questions (2019, November). *Nursing Professional Development Fall Workshop*. South Central Wisconsin Affiliate of the Association for Nursing Professional Development, Madison, WI.

PROFESSIONAL TRAINING	Creating an Individual Development Plan (2021, March). University of Wisconsin-Madison Graduate School Professional Development, Madison, WI.
	Working Effectively in Teams: Fundamentals of Team Dynamics and From Conflict to Collaboration in Teams (2021, March). University of Wisconsin-Madison Graduate School Professional Development, Madison, WI.
	Modern Meta-analysis Research Workshop (2021, February). The AERA-ICPSR PEERS Data Hub.
	Grant Writing (2021, January). University of Wisconsin-Madison Graduate School Professional Development, Madison, WI.
	A Practical Approach to Project Management for Graduate Students (2021, January). University of Wisconsin-Madison Graduate School Professional Development, Madison, WI.
	Learning Environment and Pedagogics Workshop (2021, January). <i>Teaching Academy</i> . University of Wisconsin-Madison, Madison, WI.
PROFESSIONAL MEMBERSHIPS	Inclusive Teaching Workshop (2020, November). <i>Inclusive Teaching in a Difficult Semester Series</i> . Delta Program in partnership with the UW-Madison Collaborative for Advancing Learning and Teaching, Madison, WI.
	Workshop by Scott Long (2018, January). <i>Reproducible Results and the Workflow of Data Analysis</i> . University of Connecticut, Storrs, CT.
	Psychometric Society
	National Council on Measurement in Education
	American Educational Research Association
COMPUTER SKILLS	American Psychological Association
	American Evaluation Association
COMPUTER SKILLS	Programming Languages & Software: R, <i>Mplus</i> , OpenBUGS, HLM, SPSS, G*Power, AMOS
	Applications: R Shiny, L <sup>A</sup> T <sub>E</sub> X, R Markdown