

Gabriel Wallin, PhD

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The London School of Economics and Political Science
London, Uk



EDUCATION

Umeå University

Ph.D. in Statistics. Thesis: Extensions of the kernel method of test score equating.

Umeå, Sweden
2015–2020

The London School of Economics and Political Science

Visiting Research Student in Statistics.

London, UK
2019

Umeå University

M.Sc. in Statistics.

Umeå, Sweden
2014–2015

Umeå University

B.Sc. in Statistics

Umeå, Sweden
2011–2014

ACADEMIC POSITIONS

The London School of Economics and Political Science

Visiting Research Fellow and Visiting Teacher, Department of Statistics.

London, UK
2021–Current

Umeå University

Postdoctoral Researcher, Department of Statistics.

Umeå, Sweden
2021–Current

Université Côte d'Azur & Inria

Postdoctoral Researcher, Department of Mathematics.

Nice, France
2020–2021

PUBLICATIONS IN PEER-REVIEWED JOURNALS

1. **Wallin, G.** & Wiberg, M. (2023). Model Misspecification and Robustness of Observed-Score Test Equating Using Propensity Scores. Accepted for publication in *Journal of Educational and Behavioral Statistics*.
2. Liu, X., **Wallin, G.**, Chen, Y., Moustaki, I. (2023). Rotation to Sparse Loadings using L^p Losses and Related Inference Problems. Accepted for publication in *Psychometrika*.
3. **Wallin, G.** & Wiberg, M. (2021). How Important is the Choice of Bandwidth in Kernel Equating? *Applied Psychological Measurement*, 45, 518–535.
4. Altıntaş, Ö. & **Wallin, G.** (2021). Equality of Admission Tests Using Kernel Equating Under the Non-Equivalent Groups With Covariates Design. (2021). *International Journal of Assessment Tools in Education*, 8, 729–743.
5. **Wallin, G.** & Wiberg, M. (2019). Kernel Equating Using Propensity Scores for Nonequivalent Groups. *Journal of Educational and Behavioral Statistics*, 44, 390–414.

PEER-REVIEWED BOOK CHAPTERS

1. González, J. & Wallin, G. (2021). An Illustration on the Quantile-Based Calculation of the Standard Error of Equating in Kernel Equating. In Wiberg, M., Molenaar, D., González, J., Böckenholt, U. & Kim, J-S. (Eds.) (2021). *Quantitative Psychology: The 85th Annual Meeting of the Psychometric Society, virtual, 2021*. New York: Springer.
2. Wallin, G. & Wiberg, M. (2021). Equating Nonequivalent Groups using Propensity Scores – Model Misspecification and Sensitivity Analysis. In Wiberg, M., Molenaar, D., González, J., Böckenholt, U. & Kim, J-S. (Eds.) (2021). *Quantitative Psychology: The 85th Annual Meeting of the Psychometric Society, virtual, 2021*. New York: Springer.
3. Wallin, G. (2020). Extensions of the Kernel Method of Test Score Equating. Statistical Studies, 55. *PhD thesis*. URL: <https://umu.diva-portal.org/smash/get/diva2:1378833/FULLTEXT01.pdf>.
4. Wallin, G. & Wiberg, M. (2020). Model Selection for Presmoothing of Bivariate Score Distributions in Kernel Equating. In Wiberg, M., Molenaar, D., González, J., Böckenholt, U. & Kim, J-S. (Eds.) (2020). *Quantitative Psychology: The 84th Annual Meeting of the Psychometric Society, Santiago, Chile, 2019*. New York: Springer.
5. Wallin, G., Häggström, J. & Wiberg, M. (2018). How to select the bandwidth in kernel equating - An evaluation of five different methods. In Wiberg, M., Culpepper, S., Janssen, R., González, J., & Molenaar, D. (Eds.) (2018). *Quantitative Psychology: The 82nd Annual Meeting of the Psychometric Society, Zurich, Switzerland, 2017*. New York: Springer.
6. Wallin, G., & Wiberg, M. (2017). Non-equivalent groups with covariates design using propensity scores for kernel equating. In L. A. van der Ark, M. Wiberg, S. A. Culpepper, J. A. Douglas, & W.-C Wang (Eds.) (2017), *Quantitative psychology – 81st annual meeting of the psychometric society, Asheville, North Carolina, 2016*. New York: Springer.

GRANTS AND SCHOLARSHIPS

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| • Research Award. Umeå School of Business, Economics and Statistics. 10,000 SEK | 2022 |
| • International Postdoc. Swedish Research Council. 3,150,000 SEK | 2021 |
| • Research Scholarship. Faculty of Social Science, Umeå University. 40,000 SEK | 2019 |
| • Research Scholarship. Kempe Foundation. 25,000 SEK | 2018 |
| • Research Scholarship. Umeå School of Business, Economics and Statistics. 40,000 SEK | 2018 |
| • Travel Grant. Wallenberg Foundation. 4,200 SEK | 2018 |
| • Travel Grant. Kempe Foundation. 5,000 SEK | 2017 |
| • Research Scholarship. The Student union at Umeå University. 8,500 SEK | 2017 |
| • Travel Grant. Wallenberg Foundation. 8,000 SEK | 2017 |
| • Travel Grant. Faculty of Social Sciences at Umeå University. 8,000 SEK | 2016 |
| • Research Scholarship. The Student union at Umeå University. 10,000 SEK | 2016 |

PROFESSIONAL ACTIVITIES

- **Journal Reviewer**
Annals of Applied Statistics
British Journal of Mathematical and Statistical Psychology
Applied Psychological Measurement
TEST
Educational and Psychological Measurement
- **Reviewer** 2023
National Council on Measurement in Education, Annual Meeting. Chicago, United States.
- **Local Organizing Committee Member** 2022

Institute of Mathematical Statistics (IMS), Annual Meeting. London, UK.

- **Reviewer for PhD travel award** 2022
International Meeting of the Psychometric Society
- **Member of the jury for best poster presentation** 2022
International Meeting of the Psychometric Society
- **Conference Chair** 2020–2023
International Meeting of the Psychometric Society
National Council on Measurement in Education
- **Board Member** 2018–2020
Umeå School of Business, Economics and Statistics
The Graduate Student Association at the Faculty of Social Sciences at Umeå University
- **Committee member** 2018–2019
The Graduate Student Committee of the Psychometric Society

AWARDS AND NOMINATIONS

- **Recipient of the Umeå School of Business, Economics and Statistics Research Award** 2022
Umeå University
- **Recipient of the LSE Class Teacher Award** 2022
London School of Economics and Political Science
- **Pedagogical Prize Nomination** 2017
Umeå School of Business, Economics and Statistics

CONFERENCE TALKS AND INVITED PRESENTATIONS

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| Social Statistics Research Seminar
Invited talk: Fairness and Interpretability in Educational Testing and Psychological Surveys. | London, LSE
2022 |
| Computational Psychometrics Research Seminar
Invited talk: A Flexible IRT Framework For Latent DIF Detection. | Prague, Czech Republic
2022 |
| International Meeting of the Psychometric Society
Contributed talk: On Multivariate Outlier Detection. | Bologna, Italy
2022 |
| Cramér Society Research Seminar
Invited talk: Two-way outlier detection for item response data. | Sweden (Virtual)
2022 |
| Social Statistics Research Seminar
Invited talk: Test score equating of nonequivalent groups using propensity scores. | London, LSE
2022 |
| International Meeting of the Psychometric Society
Contributed talk: Simultaneous Clustering of Test-takers and Items for Item Response Data. | Virtual
2021 |
| Computational Psychometrics Research Seminar
Invited talk: Equating non-equivalent test groups using covariates. | Prague, Czech Republic (Virtual)
2021 |
| International Meeting of the Psychometric Society
Contributed talk: Equating non-equivalent groups using propensity scores. | Virtual
2020 |
| MAASAI Research Seminar
Invited talk: Comparability of nonequivalent test groups in large-scale assessments. | Nice, France
2020 |

International Meeting of the Psychometric Society Invited talk: Presmoothing method and model selection in kernel equating.	Santiago, Chile 2019
Frontier Research in Educational Measurement Contributed talk: Revisiting the Bahadur representation of sample quantiles for equating.	Oslo, Norway 2018
International Meeting of the Psychometric Society Contributed talk: Optimal bandwidth selection in kernel equating for different test types.	Zürich, Switzerland 2017
Annual Meeting of the National Council on Measurement in Education Contributed talk: Bandwidth selection in kernel equating.	San Antonio, the US 2017
The Winter Conference in Statistics Contributed talk: Selecting bandwidths in kernel equating with different tests and test distributions.	Åre, Sweden 2017
International Meeting of the Psychometric Society Contributed talk: Propensity scores in kernel equating for non-equivalent groups.	Asheville, the US 2016

TEACHING

- **Lecturer and Teaching Assistant** at The London School of Economics and Political Science 2021-2024
MY455/MY555: Multivariate Analysis and Measurement (Lecturer)
ST201: Statistical Models and Data Analysis (TA)
ST205: Sample Surveys and Experiments (TA)
ST109: Elementary Statistical Theory I (TA)
- **Lecturer and Course Responsible** at Umeå University 2018
Sampling: Design and Analysis
- **Lecturer** at Umeå University 2017–2019
Probability and Statistical Inference
- **Lecturer** at Umeå University 2017–2019
Basic Statistics
- **Teaching Assistant** at Umeå University 2017
Statistics for Journalists
- **Teaching Assistant** at Umeå University 2014–2017
Basic Statistics

SUPERVISION

- **Bachelor Thesis Supervisor** Spring 2018
Thesis topic: Kernel smoothing techniques with applications to educational testing.
- **Master Thesis Supervisor** 2015 –2020
Yearly quantitative advisor to business students writing their master's thesis.

PEDAGOGICAL COURSES

- **Teaching in higher education** at Umeå University
3 ECTS (2 weeks)
- **Learning in higher education** at Umeå University
4.5 ECTS (3 weeks)
- **Didactics for university teachers** at Umeå University
3 ECTS (2 weeks)