

**EUROPASS
CURRICULUM VITAE**



PERSONAL INFORMATION

Name MICHELA BATTAUZ
Address Dipartimento di Scienze Economiche e Statistiche, Università degli Studi di Udine, via Tomadini 30/A, 33100, Udine (Italia)
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WORK EXPERIENCE

- Dates 16 June 2017 – present
- Organization University of Udine
- Role Associate Professor in Statistics

- Dates 2 April 2007 – 15 June 2017
- Organization University of Udine
- Role Assistant Professor in Statistics

EDUCATION AND TRAINING

- Dates 21 February 2006
- Organization University of Padua
- Title PhD in Statistics, defending the thesis Educational System Assessment: Measurement Errors and Model Specifications (supervisor prof. Nicola Torelli, co-supervisor prof. Enrico Gori).

- Date 4 April 2002
- Organization University of Udine
- Title Master degree in Economics, defending the thesis Il servizio infermieristico domiciliare e i suoi effetti sull'uso delle risorse (supervisor prof. Enrico Gori)

**PERSONAL SKILLS AND
COMPETENCES**

MOTHER TONGUE Italian

OTHER LANGUAGES

Inglese
Speaking Good
Writing Good
Understanding Good

Tedesco
Speaking Basic
Writing Basic
Understanding Basic

NATIONAL SCIENTIFIC
HABILITATION

In 2022 acquired the habilitation for full professorship in Statistics.

INSTITUTIONAL POSITIONS HELD
IN UNIVERSITY

- May 2022- present
component of *Presidio della qualità di Ateneo*
- 2021 – present
Component of the board of professors of the PhD in Mathematics and Physics of the University of Udine
- June 2018 – November 2022
Component of the commission *Assicurazione Qualità della Ricerca del Dipartimento di Scienze Economiche e Statistiche*
- November 2015 - March 2022
Component of the commission *Assicurazione Qualità del corso di laurea triennale in Economia Aziendale ed Economia e Commercio*
- 2013-2014
component of the commission of the department of Economics and Statistics for the analysis of the students' careers
- 2011-2012
component of the commission for the Ahelo (Assessment of Higher Education Learning Outcomes) project
- January 2009 - February 2011
Component of the board of the Library

PROJECTS

- Component of PRIN 2008 Verosimiglianze approssimate per strutture di dipendenza complesse: approfondimenti teorici e aspetti computazionali, PI professor Paolo Vidoni.
- Component of PRIN 2015 Likelihood-free methods of inference, unit coordinator professor Paolo Vidoni.
- Component of PRID 2017 Advances in Item Response Theory: equating, invariance and model selection, PI professor Ruggero Bellio.

CONFERENCES ORGANIZATION

- Component of the programme committee of UseR!2017, Bruxelles.
- Component of the scientific committee of UseR!2019, Toulouse.
- Component of the scientific committee of CLADAG 2023, Salerno (Italy)
- Organizer of the session “New developments in latent variable models” for SIS 2021, online.
- Organizer of the session “Latent variable and psychometric modelling” for COMPSTAT 2022, online.

CONFERENCES PARTICIPATION

- Presentation “A Multilevel Measurement Error Model for Value-Added Assessment in Education”, at the conference 5th International Amsterdam Multilevel Conference, March 2005, Amsterdam.
- Presentation “Combining interval and ordinal measures in the assessment of student achievement”, at the conference Classification and Data Analysis, June 2005, Parma.
- Presentation “A Multilevel Measurement Error Model for Value-Added Assessment in Education”, at the conference Valutazione e Customer satisfaction per la qualità dei servizi, September 2005, Rome.
- Presentation “A Multilevel Measurement Error Model for Value-Added Assessment in Education”, at the conference Modelli complessi e metodi computazionali intensivi per la stima e la previsione, September 2005, Bressanone.
- Presentation “A Random Effects Model for Longitudinal Data with Measurement Errors” at the conference 43th Scientific Meeting of the Italian Statistical Society, June 2006, Torino.
- Presentation “La valutazione in presenza di variabili affette da errore di misura” at the conference Valutazione e Customer satisfaction per la qualità dei servizi, April 2007, Rome.
- Presentation “Educational assessment in presence of heteroschedastic measurement errors” at the conference Classification and Data Analysis, September 2007, Macerata.
- Presentation “Covariate measurement error correction for multilevel models with application to educational data” at the workshop Nuovi metodi di verosimiglianza per modelli statistici complessi, June 2008, Udine
- Presentation “Laplace approximation for measurement error correction in generalized linear (mixed) models” at the conference XLV Riunione Scientifica della della Società Italiana di Statistica, June 2010, Padova.
- Presentation “Measurement error in covariates estimated with the Rasch model” at the Workshop Rasch Models: Theory & Applications, January 2011, Brescia.
- Presentation “IRT Test Equating in Complex Linkage Plans” at the conference Workshop SUNOVA: Statistics with Unobservable Variables, May 2012, Brescia.
- Presentation “On Wald Tests for Differential Item Functioning Detection” at the conference Psychoco, February 2017, Vienna.
- Presentation “Simultaneous equating of multiple forms” at the conference 82nd Annual Meeting of the Psychometric Society, July 2017, Zurich.
- Presentation “IRT Test Equating with the R package equateIRT” at the conference UseR!, July 2017, Brussels.
- Presentation “equateMultiple: An R Package for Equating Multiple Forms” at the conference Psychoco, February 2018, Tubingen, Germany.
- Presentation “Testing for the Presence of Scale Drift: An Example” at the conference 49th Scientific Meeting of the Italian Statistical Society, June 2018, Palermo.
- Invited presentation “A Regularized Estimation Approach for the Three-Parameter Logistic Model” at the conference 11th International Conference of the ERCIM WG on Computational and Methodological Statistics, December 2018, Pisa.
- Presentation “Regularized estimation of the nominal response model” at the conference Psychoco, February 2019, Prague.
- Presentation “Regularized estimation of the nominal response model” at the conference Smart Statistics for Smart Applications, June 2019, Milan.
- Presentation “Regularized estimation of the nominal response model” at the conference UseR!, July 2019, Toulouse, France.
- Presentation “Shrinkage estimation of the three-parameter logistic model” at the conference Psychoco, February 2020, Dortmund, Germany (online).
- Invited presentation “Boosting multidimensional IRT models” at the conference Classification and Data Analysis, September 2021, Florence (online).
- Invited presentation “Boosting methods for latent variable models” at the conference International Meeting of the Psychometric Society, July 2022, Bologna.
- Poster “Boosting for variance components in mixed models” al conference IWSM, July 2022, Triest.
- Invited presentation “A fused lasso penalization for the nominal response model” at the conference COMPSTAT, August 2022, online.

- SEMINARS
- Invited seminar “Reducing measurement errors in student achievement estimation”, Groningen University, Faculty of Behavioural and Social Sciences, October 2004.
 - Invited seminar “IRT Test Equating of Multiple Forms”, Zurich University, Department of Psychology Psychological Methods, Evaluation and Statistics, May 2016.
 - Invited seminar “Item Response Theory Equating Methods for Multiple Forms”, Czech Academy of Sciences Of Prague, April 2021 (online).
 - Invited seminar “Equating and DIF detection in the IRT framework”, Czech Academy of Sciences of Prague, March 2022 (online).

REVIEW ACTIVITY

Referee for the journals: *Advances in Data Analysis and Classification*, *Applied Psychological Measurement*, *British Journal of Mathematical and Statistical Psychology*, *Computational Statistics & Data Analysis*, *Educational Assessment, Evaluation and Accountability*, *Educational and Psychological Measurement*, *Educational Sciences: Theory & Practice*, *Electronic Journal of Applied Statistical Analysis*, *International Journal of Testing*, *Journal of Educational and Behavioral Statistics*, *Journal of Educational Measurement*, *Journal of the American Statistical Association*, *Metron*, *Multivariate Behavioral Research*, *Personality And Individual Differences*, *Psych*, *Psychometrika*, *Quality & Quantity*, *Scandinavian Journal of Statistics*, *Statistica Sinica*, *Statistical Methods & Applications*.

- SELECTED PUBLICATIONS
- Battaaz, M., Leôncio, W. (2023). A likelihood approach to IRT equating of multiple forms. *Applied Psychological Measurement*.
- Leôncio, W., Wiberg, M., Battaaz, M. (2022). Evaluating equating transformations in IRT observed-score and kernel equating methods. *Applied Psychological Measurement*.
- Battaaz, M. (2022). Testing for differences in chain equating. *Statistica Neerlandica*, 1-12.
- Battaaz, M., Vidoni, P. (2022). A Likelihood-Based Boosting Algorithm for Factor Analysis Models with Binary Data. *Computational Statistics & Data Analysis*, 168, 107412.
- Battaaz, M., Bellio, R. (2021). Shrinkage estimation of the three-parameter logistic model. *British Journal of Mathematical and Statistical Psychology*, 74, 591-609.
- Battaaz, M. (2020). Regularized estimation of the nominal response model. *Multivariate Behavioral Research*, 55, 811-824.
- Battaaz, M. (2019). On Wald tests for differential item functioning detection. *Statistical Methods & Applications*, 28, 103-118.
- Battaaz, M. (2017). Multiple Equating of Separate IRT Calibrations. *Psychometrika*, 82, 610-636.
- Battaaz, M. (2015). equateIRT: An R package for IRT test equating. *Journal of Statistical Software*, 68, 1-22.
- Battaaz, M. (2015). Factors affecting the variability of IRT equating coefficients. *Statistica Neerlandica*, 69, 85-101.
- Battaaz, M. (2013). IRT test equating in complex linkage plans. *Psychometrika*, 78, 464-480.
- Battaaz, M. (2011). Laplace approximation in measurement error models. *Biometrical Journal*, 53, 411-425.
- Battaaz, M., Bellio, R. e Gori, E. (2011). Covariate measurement error adjustment for multilevel models with application to educational data. *Journal of Educational and Behavioural Statistics*, 36, 283-306.
- Battaaz, M. e Bellio, R. (2011). Structural modelling of measurement error in generalized linear models with Rasch measures as covariates. *Psychometrika*, 76, 40-56.
- Battaaz, M., Bellio, R. e Gori, E. (2008). Reducing measurement errors in student achievement estimation. *Psychometrika*, 73, 289-302.

PRIVACY

I authorize the processing of my personal data in accordance with Article 13 of Legislative Decree No. 196 of June 30, 2003 – “Code regarding the protection of personal data” and Article 13 of the GDPR 679/16 – “European Regulation on the protection of personal data”

12 April 2023