Max Welz

PhD Candidate in Econometrics and Statistics
Erasmus University Rotterdam

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Research Statement

I develop statistical methods for the analysis of datasets in economics, health sciences, and management. My research is motivated by situations in which standard assumptions often fail to hold, for instance in discrete and/or noisy data of possibly high dimensionality. I currently work on methods for robust estimation and inference in large rating-scale datasets subject to measurement error.

Employment

Erasmus University, Dept. of Econometrics   **Rotterdam, NL**
PhD Candidate   *Since May 2020*
Supervisors: Prof. Patrick Groenen and Dr. Andreas Alfons

Erasmus Medical Center, Dept. of Public Health   **Rotterdam, NL**
Researcher   *Since Jun. 2019*
- Master thesis on causal inference in lung cancer research
- Involvement in analyses of medical trials

Erasmus University, Dept. of Econometrics   **Rotterdam, NL**
Research Assistant   *Aug. 2018 – Nov. 2019*
Assisted Prof. Philip Hans Franses for 10 hours a week

Education

Erasmus University   **Rotterdam, NL**
MSc Econometrics   *Aug. 2017 – Apr. 2020*
University of Mannheim   **Mannheim, DE**
BSc Economics (*specialization in Econometrics*)   *Sep. 2014 – Jul. 2017*
Spent Fall 2016 at the Erasmus University in Rotterdam, NL

Publications

Working Papers

Welz, M. and Alfons, A. *I don't care anymore: Identifying the onset of careless responding.* Draft available upon request.

Alfons, A. and Welz, M. *Open Science Perspectives on Machine Learning for the Identification of Careless Responding: A New Hope or Phantom Menace?* [Preprint | GitHub]

Articles in Peer-Reviewed Journals

Franses, P. H. and Welz, M. Evaluating heterogeneous forecasts for vintages of macroeconomic variables. *Journal of Forecasting*, 41(4), 829–839. [Open Access] [GitHub]

Franses, P. H. and Welz, M. Forecasting real GDP growth for Africa. *Econometrics*, 10(1):3. [Open Access] [GitHub]

Software

Welz, M., Alfons, A., Demirer, M., & Chernozhukov, V. *GenericML: Generic machine learning inference.* R package. [GitHub | CRAN]

Work in Progress

Bergh, D., Gallegos Quezada, J., Moelijker, R., Tang, Y., & Welz, M. *Matching in management research: Overview, recommendations, and guidelines.* In preparation for submission.

Presentations

Conference Presentations

- CMStatistics, December 16–19, 2022, London, UK (invited)
- Conference of the Dutch/Flemish Classification Society, October 14, 2022, Tilburg, Netherlands
- International Conference on Robust Statistics, July 5–8, 2022, Waterloo, ON, Canada
- Society for the Improvement of Psychological Science, June 27–29, 2022, Victoria, BC, Canada
- useR! 2022, June 20–23, 2022 (online, also session chair)
- International Conference on Robust Statistics, September 21–24, 2021, Vienna, Austria (also session chair)

Seminars

- Seminar at the *Department of Methodology and Statistics*, April 4, 2023, Tilburg University, Netherlands (invited & scheduled)
- Social AI Seminar, June 16, 2022, Rotterdam, Netherlands
- Tinbergen Institute PhD Seminar, October 21, 2021, Amsterdam, Netherlands (online)
- Econometric Institute Internal Seminar, October 5, 2021, Rotterdam, Netherlands (online)
- Research Group Statistics at Econometric Institute, June 22, 2021, Rotterdam, Netherlands (online)
- Econometric Institute Internal Seminar, July 21, 2020, Rotterdam, Netherlands (online)

Miscellaneous Presentations and Outreach

- Lecture to econometrics undergraduate students about econometrics in the health sciences. Invited by the econometrics study association at Erasmus University (FAECTOR). January 2023 (scheduled).
- Various Presentations in the reading group "Mathematical Statistics" at the math department of TU Delft. Since November 2021.

Grants and Awards

Grants

- *Open Mind Call 2021 Health and Technology* (€19,995.70)
  - Joint with Andreas Alfons (Erasmus University) and Kevin ten Haaf (Erasmus MC);
  - Issued by the Dutch *Convergence Alliance* (acceptance rate of $22/124 \approx 18\%$)
  - Awarded for the *CITRUS* project

Awards

- *2021 Convergence Health and Technology Open Research Award* [link]
  - Awarded for *"great commitment to open research"*
  - Issued by the Dutch *Convergence Alliance* and several open science initiatives
  - One of 12 recipients from various Dutch scientific institutions
- *Best PhD Student Presentation* at the Annual Meeting of the Dutch/Flemish Classification Society on October 14, 2022, in Tilburg, NL

Organization Service

Local Organization Committee
- *Data Science, Statistics & Visualization and European Conference on Data Analytics 2021* (joint conference). July 7–9, 2021. Erasmus University Rotterdam, NL (online)
- *Data Science, Statistics & Visualization 2020*. July 29–31, 2020. Duke University, USA (online)

Teaching

Erasmus University Rotterdam
- FEB22004X: *Econometrics 1* (2022; undergraduate). Role: Teacher.
- FEB23020: *Seminar in Machine Learning* (2022; undergraduate). Role: Teacher.
- FEM31002X: *Machine Learning* (2022; graduate). Role: Teacher.
- FEB22015X: *Academic Skills* (*Econometrics*) (2020, 2021; undergraduate). Role: Teacher.
- FEB23012: *Seminar in Econometrics* (2020, 2021; undergraduate). Role: Teacher.
- FEB21018X: *Introduction to Statistics* (2020; undergraduate). Role: Tech support for online teaching.
- FEB2003X: *Introduction to Multivariate Statistics* (2019; undergraduate). Role: Teacher.
- Thesis supervision:
  - 22 student theses for *BSc Econometrics* (8 as main supervisor)
  - 4 student theses for *MSc Econometrics* (all as second assessor)

More information such as teaching evaluations can be found on my teaching webpage.

Scientific Organizations

I am a member of the following organizations:
- *Institute of Mathematical Statistics*
- *International Association for Statistical Computing*
- *Open Science Community Rotterdam*

Skills

Software: C, C++, Java, Julia, LaTeX, Matlab, Python, R, Stata, Bash, Zsh, Windows, macOS, Linux (e.g. Ubuntu, Fedora)

Human languages: German (native), English (fluent), Dutch (advanced), French (beginner)

References

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