

What is Psychometrics? Program 2023

Coordinator

Dylan Molenaar
University of Amsterdam
D.Molenaar@uva.nl

Course Summary:

This course is designed to give an overview of psychometrics as an academic research field. The lectures cover general topics that are relevant to many subfields of psychometrics. They are intended to provide an overview of the field and highlight issues that are important to the role of psychometrics in science and society. Course credits are awarded for active participation.

Location

Roeterseilandcampus (REC), building L, room L0.15
You can find the address and a map [here](#)

Literature

Each lecture is based on a key article, see the program below. You can prepare for the lecture using these key articles which can be found [here](#)

Program

Wednesday 27 September

10:00-13:00: Willem Heiser, Leiden University

Title: The Evolution of Psychometrics

Literature:

Heiser, W.J. (2023). Early Roots of Psychometrics Before Francis Galton. In: van der Ark, L.A., Emons, W.H.M., Meijer, R.R. (eds) *Essays on Contemporary Psychometrics. Methodology of Educational Measurement and Assessment*. Springer, Cham.
https://doi.org/10.1007/978-3-031-10370-4_1

13:00-14:00: Lunch

14:00-17:00: Marjolein Fokkema, Leiden University
Title: Psychometrics meets machine learning

Literature:

de Rooij, M., et al. (2023). SEM-based out-of-sample predictions. *Structural Equation Modeling: A Multidisciplinary Journal*, 30(1), 132-148. <https://doi.org/10.1080/10705511.2022.2061494>

Feel free to skip:

- Section "2. Covariance Based Structural Equation Modeling", unless you are specifically interested in SEM matrices.
- Section "4. Simulation Studies."

Fokkema, M., et al. (2015). Connecting clinical and actuarial prediction with rule-based methods. *Psychological Assessment*, 27(2), 636. <https://doi.org/10.1080/10705511.2022.2061494>

Feel free to skip:

- Section "RuleFit Algorithm" on pages 638-639.
- Subsections "Sample", "Outcome and Predictor Variables", "Analytic Models and Software", "Evaluation of Performance" on page 639-641.

Thursday 28 September

10:00-13:00: Noémi Schuurman, Utrecht University

Title: The Within/Between Problem

Literature:

Molenaar, P. C. (2004). A manifesto on psychology as idiographic science: Bringing the person back into scientific psychology, this time forever. *Measurement*, 2(4), 201-218.

https://doi.org/10.1207/s15366359mea0204_1

13:00-14:00: Lunch

14:00-17:00: Leonie Vogelsmeier & Joran Jongerling, Tilburg University

Title: Psychometric Evaluation of (Intensive) Longitudinal Data

Literature:

Chapter 4 of Myin-Germeys, I., & Kuppens, P. (Eds.). (2022) *The open handbook of experience sampling methodology: A step-by-step guide to designing, conducting, and analyzing ESM studies* (2nd ed.). Leuven: Center for Research on Experience Sampling and Ambulatory Methods Leuven.

Available at: <https://www.kuleuven.be/samenwerking/real/real-book/index.htm>

Friday 29 September

10:00-13:00: Denny Borsboom, University of Amsterdam

Title: Network Approaches, Models, and Theories in Psychometrics

Literature:

Borsboom, D. et al. (2021). Network analysis of multivariate data in psychological science. *Nature Reviews Methods Primers*, 1(1).

<https://doi.org/10.1038/s43586-021-00055-w>

13:00-14:00: Lunch

14:00-17:00 Rob Meijer, Groningen University

Title: Psychometrics in Practice

Literature: Niessen, A. S. M, & Meijer, R. R. (2017). On the use of broadened selection criteria in higher education. *Perspectives on Psychological Science*.

<https://doi.org/10.1177/1745691616683050>