Network psychometrics

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Publication date
2017
Document Version
Other version
License
Other

Citation for published version (APA):
Epskamp, S. (2017). *Network psychometrics*. [Thesis, fully internal, Universiteit van Amsterdam].

Contributed Work

This appendix contains a list of the contributed publications and software packages until the completion of this PhD project. The PDF version of the dissertation contains links to all publications and software repositories, which can also be found on my website at:

<p style="text-align:center"><code>www.sachaepskamp.com</code></p>

B.1 Publications

This section lists all manuscripts that are submitted or accepted for publication at the time of submission of this dissertation. As such, some of the titles and journals of yet unpublished work might change before publications as a result of the review process.

Main Author Publications

- **Epskamp, S.**, and Fried, E.I. A Tutorial on Regularized Partial Correlation Networks.

    - Chapter 2
    - Under review at *Psychological Methods*

- **Epskamp, S.** , Regularized Gaussian Psychological Networks: Brief Report on the Performance of Extended BIC Model Selection.

    - Section 2.6

- **Epskamp, S.**, Borsboom, D., and Fried, E.I. (in press). Estimating Psychological Networks and their Accuracy: A Tutorial Paper. *Behavior Research Methods.*

    - Chapter 3 and Chapter 1

- **Epskamp, S.**, Kruis, J., and Marsman, M. (in press). Estimating psychopathological networks: be careful what you wish for. *PlosOne*.

    – Chapter 4

- **Epskamp, S.**, van Borkulo, C.D., van der Veen, D.C., Servaas, M.N., Isvoranu, A.M., Riese, H., and Cramer, A.O.J. Personalized Network Modeling in Psychopathology: The Importance of Contemporaneous and Temporal Connections.

    – Chapter 5

    – Submitted to *Psychological Medicine*

- **Epskamp, S.**, Waldorp, L.J., Mõttus, R., and Borsboom, D. Discovering Psychological Dynamics: The Gaussian Graphical Model in Cross-sectional and Time-series Data.

    – Chapter 6

    – Under review at *Multivariate Behavioral Research*

- **Epskamp, S.**, Rhemtulla, M., and Borsboom, D. (in press). Generalized Network Psychometrics: Combining Network and Latent Variable models. *Psychometrika*.

    – Chapter 7

- **Epskamp, S.**, Maris, G., Waldorp, L. J., and Borsboom, D. (in press). Network Psychometrics. To appear in: Irwing, P., Hughes, D., and Booth, T. (Eds.), *Handbook of Psychometrics*. New York: Wiley.

    – Chapter 8

- **Epskamp, S.**, Cramer, A.O.J., Waldorp, L.J., Schmittmann, V.D. and Borsboom, D. (2012) qgraph: Network Visualizations of Relationships in Psychometric Data. *Journal of Statistical Software, 48(4)*, 1-18.

    – Chapter 9

- Costantini, G., **Epskamp, S.** (the first two authors contributed equally to this work), Borsboom, D., Perugini, M., Mõttus, R., Waldorp, L. J., and Cramer, A. O. (2014). State of the aRt personality research: A tutorial on network analysis of personality data in R. *Journal of Research in Personality, 54*, 13-29.

    – Chapter 10

- **Epskamp, S.** (2015). semPlot: Unified visualizations of Structural Equation Models. *Structural Equation Modeling, 22*, 747-757.

    – Chapter 11

- Van Bork, R., **Epskamp, S.** (the first two authors contributed equally to this work), Rhemtulla, M., Borsboom, D., and Van der Maas, H.L.J. What is P? Some Risks of General Factor Modeling.

  - Under review at *Theory and Psychology*

Collaborations

- Golino, H., **Epskamp, S.** (in press). Exploratory graph analysis: a new approach for estimating the number of dimensions in psychological research. *PlosOne.*

- Wagenmakers, E-J., Marsman, M., Jamil T., Ly, A., Verhagen, J., Love, J., Selker, R., Gronau, Q.F., Smirna, M., **Epskamp, S.**, Matzke, D., Rouder, J.N., Morey, R.D. Bayesian Inference for Psychology. Part I: Theoretical Advantages and Practical Ramifications

  - Under review at *Psychonomic Bulletin & Review*

- Mõttus, R., **Epskamp, S.**, and Francis, A. (2016). Within-and between individual variability of personality characteristics and physical exercise. *Journal of Research in Personality.*

- Tio, P., **Epskamp, S.**, Noordhof, A., and Borsboom, D. (2016). Mapping the manuals of madness: Comparing the ICD-10 and DSM-IV-TR using a network approach. *International Journal of Methods in Psychiatric Research, 25 (4)*, 267-276.

- Fried, E. I., van Borkulo, C. D., **Epskamp, S.**, Schoevers, R. A., Tuerlinckx, F., and Borsboom, D. (2016). Measuring Depression Over Time. . . or not? Lack of Unidimensionality and Longitudinal Measurement Invariance in Four Common Rating Scales of Depression. *Psychological Assessment, 28 (11)*, 1354-1367.

- **Open Science Collaboration**. (2015). Estimating the reproducibility of psychological science. *Science, 349 (6251).*

  - I setup and coordinated the "analysis audit" in which a team of students worked on replicating all analyses done in R.

- Wichers, M., Groot, P.C., **Psychosystems**, ESM Group, EWS Group (2016). *Psychotherapy and Psychosomatics, 85*: 114-116.

- Nuijten, M.B., Hartgerink, C. H. J., van Assen, M. A. L. M., **Epskamp, S.**, and Wicherts, J. M. (2016). The prevalence of statistical reporting errors in psychology (1985-2013). *Behavior Research Methods, 48*: 1205.

- Fried, E. I., **Epskamp, S.**, Nesse, R.M., Tuerlinckx, F., and Borsboom, D. (2016). What are 'good' depression symptoms? Comparing the centrality of DSM and non-DSM symptoms of depression in a network analysis. *Journal of Affective Disorders, 189*: 314-320.

- Kossakowski, J. J., **Epskamp, S.**, Kieffer, J. M., van Borkulo, C. D., Rhemtulla, M., and Borsboom, D. (2015). The application of a network approach to health-related quality of life (HRQoL): Introducing a new method for assessing HRQOL in healthy adults and cancer patient. *Quality of Life Research, 0962-9343*, 1-12.

- Langley, D. J., Wijn, R., **Epskamp, S.**, and Van Bork, R. (2015). Should I Get That Jab? *ECIS 2015 Research-in-Progress Papers*, Paper 64.

- Wigman, J. T. W., Van Os, J., Borsboom, D., Wardenaar, K. J., **Epskamp, S.**, Klippel, A, MERGE, Viechtbauer, W., Myin-Germeys, I., and Wichers, M. (2015). Exploring the underlying structure of mental disorders: cross-diagnostic differences and similarities from a network perspective using both a top-down and a bottom-up approach. *Psychological Medicine, 45*, 2375-2387.

- Fried, E. I., Bockting, C., Arjadi, R., Borsboom, D., Amshoff, M., Cramer, A. O. J., **Epskamp, S.**, Tuerlinckx, F., Carr, D., and Stroebe, M. (2015). From loss to loneliness: The relationship between depressive symptoms and bereavement. *Journal of Abnormal Psychology, 124*, 256-65.

- van Borkulo, C. D., Borsboom, D., **Epskamp, S.**, Blanken, T. F., Boschloo, L., Schoevers, R. A., and Waldorp, L. J. (2014). A new method for constructing networks from binary data. *Scientific Reports, 4*, 5918.

- Borsboom, D., Cramer, A.O.J., Schmittmann, V.D., **Epskamp, S.** and Waldorp L.J. (2011) The Small World of Psychopathology. *PLoS ONE 6*, e27407.

- Borsboom, D., **Epskamp, S.**, Kievit, R.A., Cramer, A.O.J., and Schmittmann,V.D. (2011). Transdiagnostic networks. *Perspectives on Psychological Science, 6*, 610-614.

- Schmittmann, V.D., Cramer, A.O.J., Waldorp, L.J., **Epskamp, S.**, Kievit, R.A. and Borsboom, D. (2011). Deconstructing the construct: Anetwork perspective on psychological phenomena. *New Ideas in Psychology, 31*, 43-53.

B.2 Software

Stable R packages

- **qgraph**
  - Network drawing, construction and estimation and network-based data visualization (Link to CRAN repository)

- **semPlot**
  - Path diagrams and visual analysis of various SEM packages' output (Link to CRAN repository)

- **IsingSampler**

    - Sampling methods and distribution functions for the Ising model (Link to CRAN repository)

- **lisrelToR**

    - Import output from LISREL into R (Link to CRAN repository)

- **graphicalVAR**

    - Estimate temporal and contemporaneous effects on $N = 1$ longitudinal data (Link to CRAN repository)

- **mlVAR**

    - Multi-level vector autoregression (Link to CRAN repository)

- **bootnet**

    - General robustness tests and plots for network models (Link to CRAN repository)

- **elasticIsing**

    - Ising model estimation using elastic net regularization (Link to CRAN repository)

- **lvnet**

    - Latent variable network modeling (Link to CRAN repository)

Collaborations

- **IsingFit**

    - Fitting Ising models using the eLasso method (Link to CRAN repository)

- **statcheck**

    - Fitting Ising models using the eLasso method (Link to CRAN repository)

- **JASP**

    - A low fat alternative to SPSS, a delicious alternative to R. (Link to website)