

# Curriculum vitae

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## Personal information

Name	Dr. Manuel Elias Rademaker; born Steiner
Date of Birth	March 13, 1987 in Filderstadt
Citizenship	German
Marital status	married; father of one daughter
Languages	German, English

## Work experience

- 09/2021 – **Data Scientist**, *Fürstlich Castell'sche Bank, Credit-Cassa AG, Würzburg.*
- 11/2014 – 11/2020 **Research Assistant**, *Chair of Econometrics, Julius-Maximilians-Universität Würzburg.*
- o Lectures: Econometrics, Advanced Econometrics, Computer Lab in Regression Analysis, Microeconometrics, Econometrics of Financial Markets, Introductory Statistics, Probability Theory.
  - o > 40 supervised bachelor, master and seminar theses. Excerpt of topics: Multiple regression (e.g., prediction and explanation of house prices or salaries), panel data analysis, classification algorithms (e.g., logistic regression, random forests), comparison of "classical" and "modern" methods of classification, neural networks, time series analysis (e.g., volatility modeling, value-at-risk modeling, prediction of security prices), structural equation modeling.
- 03/2018 – 05/2020 **Lecturer in Statistics**, *Duale Hochschule Baden-Württemberg, Bad Mergentheim.*
- o Course (concept and implementation): "Introduction to Statistics".
  - o 30 semester hours per course à 2-3 courses every summer semester (March to May)
- 10/2012 – 10/2014 **Assistant & Tutor**, *Chair of Econometrics, Julius-Maximilians-Universität Würzburg.*
- o Supporting the Chair of Econometrics
  - o Weekly statistics tutorial (for Bachelor students)

## Education

- 11/2014 – 11/2020 **Doctorate at the Chair of Econometrics**, *Julius-Maximilians-Universität Würzburg, Degree: Dr. rer. pol..*
- o Title of the thesis: Composite-based Structural Equation Modeling
  - o Grade: *summa cum laude*
- 04/2012 – 10/2014 **Master – Economics**, *Julius-Maximilians-Universität Würzburg, Degree: Master of Science; Grade: 1.6.*
- o Title of the masters thesis: Dealing with Heteroskedasticity, Autocorrelation and Endogeneity in Panel Data (Grade: 1.0)
  - o Majors: Research methods (statistics and econometrics), money and currency.
- 09/2008 – 02/2012 **Bachelor – Economics**, *Université de Fribourg, Fribourg, Switzerland, Degree: Bachelor of Arts; Grade: 1.9.*
- o Title of the bachelor thesis: The relationship between income relative deprivation and health (Grade: 1.0)
  - o Majors: Statistics, probability theory and econometrics

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## Courses & certificates

- 04/2021 Coursera: [Python for Everybody Specialization](#) (Taught by Charles Severance)  
01/2021 Coursera: [Machine Learning](#) (Taught by Andrew Ng)

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## IT skills

### Expert

- R More than 8 years of theoretical (i.e., software engineering) and practical experience. Active development of own packages for about 3 years: [cSEM](#), [cSEM.DGP](#).

Miscellaneous tools  $\LaTeX$ , TikZ, (R)Markdown & knitr

### Advanced

Version control Git & GitHub

Continuous integration & deployment Travis-CI, GitHub Actions, Shiny server

Dashboards Shiny (R), Dash (Python)

Python numPy, scikit-learn, webscraping (bs4), Jupyter notebook

MS Office Word, Excel, PowerPoint, VBA

### Basic

Databases SQL (SQLite)

Web HTML, CSS, JSON, XML, Hugo, Google Analytics

Programming / Scripting Bash/Shell, C++,

Statistical software Gretl, Stata, Mathematica, Matlab, EViews, Julia, Octave

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## Methodological skills

Structural equation modeling (SEM) Factor- and composite-based (SEM), latent variable analysis, partial least squares algorithm, hierarchical SEM modeling, model fit evaluation

Theoretical statistics Frequentist and Bayesian inference, asymptotics, maximum likelihood, generalized method of moments, generalized linear models.

Machine Learning / Predictive modeling Supervised learning, regression, classification, random forests, boosting, support vector machines, neural networks

Causal analysis Instrumental variable regression, Difference-in-Difference analysis

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## Awards & honors

- 05/2021 „Promotionspreis der Unterfränkischen Gedenkjahrstiftung für Wissenschaft und der Universität Würzburg“

06/2018 Best lecturer (by student evaluation) of the Faculty of Business Administration and Economics of the University of Würzburg

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## Community involvement

02/2007 – 05/2008 **Anderer Dienst im Ausland (ADiA)**, Camphill Special School, Beaver Run, Pennsylvania, USA

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## Publications & conferences

- forthcoming Schuberth, F., Rademaker, M. E., Henseler, J., **Assessing the overall fit of composite models estimated by partial least squares path modeling**, *European Journal of Marketing*
- 2020 Rademaker, M. E., **Composite-based Structural Equation Modeling**, *doctoral thesis*, Würzburg, DOI: <https://doi.org/10.25972/OPUS-21593>
- 2020 Schuberth, F., Rademaker, M. E., Henseler, J., **Estimating and assessing second-order constructs using PLS-PM: the case of composites of composites**", *Industrial Management & Data Systems*, Vol. 120(12), pp. 2211-2241, DOI: <https://doi.org/10.1108/IMDS-12-2019-0642>
- 2019 Rademaker, M. E., Schuberth, F. and Dijkstra, T., **Measurement error correlation within blocks of indicators in consistent partial least squares**, *Internet Research*, Vol. 29(3), pp. 448-463. DOI: <https://doi.org/10.1108/IntR-12-2017-0525>
- 2019 Rademaker, M. E., Schuberth, F., **cSEM: An R-package for composite-based SEM**, *Conference presentation: Meeting of the Working Group Structural Equation Modeling*, Tübingen
- 2014 Hoehn, B., Schuberth, F., Steiner, M. E., **Dealing with Heteroskedasticity, Autocorrelation and Endogeneity in German Audit Fee Panel Data – Comparing Approaches**, *Working paper*, DOI: <http://dx.doi.org/10.2139/ssrn.2756338>

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## Projects

- cSEM R package for composite-based SEM. Available on CRAN as version 0.4.0 Developed on GitHub: <https://github.com/M-E-Rademaker/cSEM>; Website: <https://m-e-rademaker.github.io/cSEM/>
- cSEM.DGP R package to generate simulated data for use in composite-based SEM. Developed on GitHub: <https://github.com/M-E-Rademaker/cSEM.DGP>
- Shiny distributions Interactive website illustrating basic statistical distributions. Code on GitHub: <https://github.com/wue-econometrics/shiny-distributions-eng>

**Last change: 2021-08-20**