

BJÖRN S. SIEPE

✉ bjoernsiepe@gmail.com | 🌐 bsiepe.github.io | 🔗 bsiepe | 🆔 ORCID: 0000-0002-9558-4648

Marburg, Germany

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RESEARCH INTERESTS

- Metascience of methodological research
- Design of research software and infrastructure
- Multivariate time series methods for intensive longitudinal data
- Applied experience sampling research

EDUCATION

Marburg University <i>Doctoral Student</i>	10/2022 - present
Goethe University Frankfurt <i>M.Sc. Psychology</i>	11/2020 - 09/2022
Heidelberg University <i>B.Sc. Psychology</i>	10/2017 - 09/2020
Mannheim University <i>B.Sc. Economics</i>	10/2014 - 08/2017
Hölderlin-Gymnasium Heidelberg <i>Abitur (A-levels)</i>	09/2005 - 06/2013

WORK EXPERIENCE

Marburg University <i>Scientific Assistant, Psychological Methods Lab (PI: Daniel Heck)</i>	10/2022 - present
LOEWE Center DYNAMIC <i>Statistical Consultant</i> Consulting on conceptualization, study planning, statistical analyses, and statistical programming.	02/2025 - present
Marburg University <i>Statistical Consultant, Center for Translational Clinical Psychology</i> Consulting on conceptualization, study planning, statistical analyses, and statistical programming.	02/2024 - present
Freelance Work <i>Statistical Consultant</i> Consulting on conceptualization, study planning, statistical analyses, and statistical programming for clinical psychological researchers from multiple research groups and clinics.	11/2022 - present
Goethe University Frankfurt <i>Student Assistant, Departments for Psychological Methods</i>	11/2021 - 08/2022
University Hospital Frankfurt <i>Student Assistant, Horizon 2020-funded Eat2BeNice project (PI: Silke Matura)</i>	10/2020 - 10/2021
Institute for Psychosocial Prevention Heidelberg <i>Student Assistant</i>	10/2019 - 12/2019

INTERNSHIPS & VISITS

National University of Singapore <i>Visiting Doctoral Student (PI: Sacha Epskamp)</i> (Planned) research visit in the Department of Psychology	02/2026 - 03/2026
University of Groningen <i>Visiting Doctoral Student (PI: Laura Bringmann)</i> Research visit in the Psychometrics and Statistics Department	09/2024 - 10/2024
Leiden University <i>Research Intern, ERC-funded WARN-D Project (PI: Eiko Fried)</i> Working with experience sampling and passive sensor data in a project aiming to build an early-warning system for depression	03/2022 - 06/2022
German Depression Foundation, Research Centre <i>Research Intern, STEADY project (PI: Ulrich Hegerl)</i>	03/2021 - 04/2021
PZN Nordbaden (psychiatric clinic) <i>Clinical Intern</i>	02/2020 - 03/2020

TEACHING EXPERIENCE

Marburg University Modelling and data analysis in R (master's level course statistical programming course)	2025
Marburg University Critical reading of research papers (bachelor's level course about methodological criteria of research)	2023 & 2024 & 2025
Marburg University Multivariate Statistics (bachelor's level course about regression and latent variable modeling)	2022 & 2023 & 2024
Brainhack School Introduction to git/GitHub, Introduction to Machine Learning in Python, Introduction to Open Data, Introduction to Data Visualization in Python	2023
Goethe University Frankfurt Research Methods and Evaluation II (master's level course about latent variable modeling)	2022

PUBLICATIONS

Preprints

2025

6. Haslbeck, J. M. B., Jongerling, J., **Siepe, B. S.**, Epskamp, S., & Waldorp, L. (2025). Model Checking for Vector Autoregressive Models. *PsyArXiv Preprint*
https://doi.org/10.31234/osf.io/k6uz4_v2
5. **Siepe, B.S.**, Haslbeck, J.M.B., Kloft, M., Büchner, A., Zhang, Y., Fried, E.I.F., Heck, D.W. (2025). Introducing openESM: A database of openly available experience sampling datasets. *PsyArXiv preprint*.
https://osf.io/qfdtb_v1
4. Bartoš, F., Pawel, S., **Siepe, B. S.** (2025). Living synthetic benchmarks: A neutral and cumulative framework for simulation studies. *arXiv preprint*.
<https://doi.org/10.48550/arXiv.2510.19489>

3. Pfadt, J. M., Bartoš, F., Godmann, H. R., . . . , **Siepe, B. S.**, . . . , de Wit, K., Wuth, J., & Wagenmakers, E.-J. (2025). A methodological metamorphosis: The rapid rise of Bayesian inference and open science practices in psychology. *PsyArXiv Preprint*.
https://doi.org/10.31234/osf.io/ck3js_v1
2. **Siepe, B.S.**, Kloft, M., Zhang, Y., Petersen, F., Bringmann, L.F., & Heck, D.W. (2025). Using features of dynamic networks to guide treatment selection and outcome prediction: The central role of uncertainty. *PsyArXiv Preprint*
https://doi.org/10.31234/osf.io/2c8xf_v1
1. **Siepe, B. S.**, Kloft, M., Aktepe, S. C., & Heck, D. W. (2025). A Robustness Reproduction of Cox et al. (2023). *I4R Discussion Paper Series No. 196*.
<https://hdl.handle.net/10419/308794>

Peer-Reviewed Articles

2025

14. Hehlmann, M. I., **Siepe, B.**, Mink, F., Peña Loray, J. S., Gomez Penedo, J. M., Fritz, J., Moggia, D., Rubel, J. A., & Lutz, W. (2025). Exploring the predictive value of different affect dynamics for psychological treatment outcome. *Psychological Assessment*, 37(11), 656–669
<https://doi.org/10.1037/pas0001384>
13. Kloft, M., **Siepe, B. S.** & Heck, D. W. (2025). The Interval Consensus Model: Aggregating Continuous Bounded Interval Responses. *Psychometrika*, Advance Online Publication.
<https://doi.org/10.31234/osf.io/dzvw2>
12. Pawel, S., Bartoš, F.[†], **Siepe, B. S.**[†] & Lohmann, A.[†](2024). Handling missingness, failures, and non-convergence in simulation studies: A review of present practices and recommendations. *The American Statistician*.
<https://doi.org/10.1080/00031305.2025.2540002>
11. **Siepe, B. S.**, Tutunji, R., Rieble, C. L., Proppert, R. K. K., & Fried, E. I. (2025). Associations between ecological momentary assessment and passive sensor data in a large student sample. *Journal of Psychopathology and Clinical Science*, 134(8), 912–925.
<https://psycnet.apa.org/doi/10.1037/abn0001013>
10. **Siepe, B. S.**, & Heck, D. W. (2025). Multiverse analysis for dynamic network models: Investigating the influence of plausible alternative modeling choices. *Methodology*. 21(2), 123–143,
<https://doi.org/10.5964/meth.15665>
9. Cloos, Leonie[‡], **Siepe, B.S.**[‡], Piccirillo, M., Fried, E.I., Wang, S.B., Helmich, M.A., Johnson, S.U., Hoffart, A. & Ebrahimi, O.V. (2025). Accuracy and Consistency of Visual Analog Scales in Ecological Momentary Assessment and Digital Studies. *Collabra: Psychology*, 11 (1): 142735.
<https://doi.org/10.1525/collabra.142735>
8. **Siepe, B. S.**, Rieble, C. L., Tutunji, R., Rimpler, A., März, J., Proppert, R. K. K., & Fried, E. I. (2025). Understanding EMA Data: A Tutorial on Exploring Item Performance in Ecological Momentary Assessment Data. *Advances in Methods and Practices in Psychological Science*, 8(1).
<https://doi.org/10.1177/25152459241286877>

2024

7. **Siepe, B.S.**, Bartoš, F., Morris, T. P., Boulesteix, A., Heck, D. W., & Pawel (2024). Simulation Studies for Methodological Research in Psychology: A Standardized Template for Planning, Pre-

[†]Shared second authorship

[‡]Shared first authorship

registration, and Reporting. *Psychological Methods*. Advance Online Publication.
<https://doi.org/10.31234/osf.io/ufgy6>

6. Langener, A., **Siepe, B. S.**, Elsherif, M. M., Niemeijer, K., Andresen, P. K., Akre, S., . . . Jacobson, N. C. (2024). A Template and Tutorial for Preregistering Studies Using Passive Smartphone Measures. *Behavior Research Methods*. Advance Online Publication.
<https://doi.org/10.3758/s13428-024-02474-5>
5. **Siepe, B.S.**, Sander, C., Schultze, M., Kliem, A., Ludwig, S., Hegerl, U., & Reich, H. (2024). Time-Varying Network Models for the Temporal Dynamics of Depressive Symptomatology in Patients With Depressive Disorders: Secondary Analysis of Longitudinal Observational Data. *JMIR Mental Health*, 11:e50136.
<https://doi.org/10.2196/50136>
4. **Siepe, B.S.**, Kloft, M., Heck, D.W. (2024). Bayesian Estimation and Comparison of Idiographic Network Models. *Psychological Methods*. Advance Online Publication.
<https://doi.org/10.31234/osf.io/uwfjc>
3. Westhoff, M., Heshmati, S., **Siepe, B. S.**, Vogelbacher, C., Ciarrochi, J., Hayes, S. C., & Hofmann, S. G. (2024). Psychological flexibility and cognitive-affective processes in young adults' daily lives. *Scientific Reports* 14, 8182.
<https://doi.org/10.1038/s41598-024-58598-3>
2. Rimpler, A., **Siepe, B. S.**, Rieble, C. L., Proppert, R. K., & Fried, E. I. (2024). Introducing FRED: Software for Generating Feedback Reports for Ecological Momentary Assessment Data. *Administration and Policy in Mental Health and Mental Health Services Research*, 1-11.
<https://doi.org/10.1007/s10488-023-01324-4>

2022

1. Talia, A., Georg, A., **Siepe, B.S.**, Gullo, S., Miller-Bottom, M., Volkert, J., ... & Taubner, S. (2022). An exploratory study on how attachment classifications manifest in group psychotherapy. *Research in Psychotherapy: Psychopathology, Process and Outcome*, 25(3), 286-298.
<https://doi.org/10.4081/ripppo.2022.653>

BOOK CHAPTERS

2025

2. Freeborn, L., **Siepe, B. S.** (2025). Unravelling the dynamics of language learning: Insights from temporal network analysis. In Lowie, Rosmawati, & De Wilde (Eds.), *Research Methods in Applied Linguistics* (Vol. 14, pp. 143–166). John Benjamins Publishing Company.
<https://doi.org/10.1075/rmal.14.08fre>

2021

1. Talia, **Siepe, B.S.**(2021). Von der Wiege bis in den Behandlungsraum: Zur Manifestation von Bindungsmustern in der Psychotherapie . In Brisch (Ed.), *Bindung und psychische Störungen: Ursachen, Behandlung und Prävention* (pp.230–247). Klett Cotta.

INVITED TALKS

2025

8. *Introducing openESM: A database of openly available experience sampling datasets*. Group Meeting of the Oxford Emotional Disorder Genesis and Evolution (EDGE) Lab, University of Oxford (November 2025), online.

7. *Simulation Studies for Methodological Research: State of the Art, Issues, and Potential Solutions*. Colloquium of the Statistics and Psychological Methods Working Unit, University of Münster (June 2025).
6. *Simulation Studies for Methodological Research: State of the Art, Issues, and Potential Solutions*. With Samuel Pawel, Colloquium of the Methods and Evaluation / Quality Assurance Unit, Freie Universität Berlin (April 2025), online.
5. *Why, when, and how (not) to preregister*. Neurophysics Group Meeting, Department of Physics, Marburg University (February 2025).

2024

4. *Exploration of Ecological Momentary Assessment Data*. Measurement is the new black consortium meeting (May 2024), online.
3. *Historical and Recent Trends in the Forecasting Literature*. WARN-D Group Friday Science Meeting, Leiden University (February 2024), online.

2023

2. *Good Practices for Simulation Studies*. ReproducibiliTea Frankfurt (November 2023), online.

2021

1. *Journal of European Psychology Students & Academic Writing Primer*. EFPSA Research Summer School (July 2021), online.

WORKSHOPS

2025

8. *Reproducible research in R and Quarto*. 6h workshop for the Graduate School of Education, University of Wuppertal (June 2025).
7. *Research on research methods*. 3h workshop on simulation studies for German students and PhD candidates, with Susanne Frick & Julien Irmer, online (May 2025).
6. *Preregistration in psychology and related fields*. 4h Workshop, with Anabel Büchner, Berlin University Alliance (January 2025).

2024

5. *Introduction to Data Visualization in R*. 1h Interactive Session, Correlaid R Learning Program, Online (November 2024).
4. *Introduction to Dynamic Network Analysis*. 2h Workshop, DYNAMIC Centre ECR Day, Goethe University Frankfurt (October 2024).
3. *Analysis of Pre-Post Designs*. 1.5h Workshop, Department of Clinical Psychology and Psychotherapy, Marburg University (March 2024).

2023

2. *Dynamic Network Analysis in R*. 3h Workshop, Department of Clinical Psychology and Psychotherapy, Goethe University Frankfurt (June 2023).
1. *Introduction to Dynamic Network Analysis*. 1.5h Workshop, Department of Clinical Psychology and Psychotherapy, Goethe University Frankfurt (March 2023).

CONFERENCE PRESENTATIONS

2025

15. *Simulation studies for methodological research: Status quo, problems, and potential solutions*. Symposium talk, Conference of the DGPs Methods and Evaluation Section 2025, Berlin, Germany.
14. *Combining machine learning with mixed effects models*. Symposium organizer and chair, Conference of the DGPs Methods and Evaluation Section 2025, Berlin, Germany.
13. *Panel Discussion: Quality Standards for Simulation Studies*. Panel discussion organizer and panelist, Conference of the DGPs Methods and Evaluation Section 2025, Berlin, Germany.
12. *Associations between ecological momentary assessment and passive sensor data in a large student sample*. Symposium Presentation, Annual Meeting of the Society for Ambulatory Assessment 2025, Leuven, Belgium.
11. *GIMME, GIMME more (network models): Multiverse analysis for dynamic network models*. Symposium Presentation and Co-Chair of the Symposium, Annual Meeting of the Society for Ambulatory Assessment 2025, Leuven, Belgium.
10. *Simulation Studies for Methodological Research in Psychology*. Symposium Presentation, 7th Joint Statistical Meeting of the German Statistical Working Group (DAGStat), Berlin, Germany.

2024

9. *Bayesian Estimation and Comparison of Idiographic Network Models*. Symposium Presentation, International Meeting of the Psychometric Society (IMPS), Prague, Czech Republic.
8. *Quality Standards for Simulation Studies in Psychometrics*. Panel Discussion Participant, International Meeting of the Psychometric Society (IMPS), Prague, Czech Republic.
7. *Simulation Studies for Methodological Research in Psychology*. Lightning Talk, Virtual Meeting of the Society for the Improvement of Psychological Science (SIPS), online.
6. *Simulation Studies for Methodological Research in Psychology*. Presentation, Virtual Meeting of the Society for Mathematical Psychology, online.

2023

5. *Bayesian Estimation and Comparison of Idiographic Network Models*. Symposium Presentation, Meeting of the German Society for Methods & Evaluation in Psychology (FGME), Konstanz, Germany.
4. *Augmenting Self-Reports with Passive Sensor Data to Understand Changes in Mental Health*. Symposium Presentation, Annual Convention of the American Psychological Society (APS), Washington D.C., US.*
3. *Developing EMA Items to Build an Early Warning System for Depression (WARN-D Study)*. Symposium Presentation, Annual Convention of the American Psychological Society (APS), Washington D.C., US.
2. *Using passive sensor data to understand changes in mental health outcomes*. Symposium Presentation, International Convention of Psychological Science (ICPS), Brussels, Belgium.*

2022

1. *Temporal Dynamics of Depressive Symptomatology*. Presentation, Annual Meeting of the German Society for Psychiatry and Psychotherapy (DGPPN), Berlin, Germany.

POSTER PRESENTATIONS

2025

*Shared first-authorship or coauthor with significant contributions to presentation

2. *Taking uncertainty into account is central when using dynamic network features as predictors.* Poster Presentation, Conference of the DGPs Methods and Evaluation Section 2025, Berlin, Germany.
1. *Taking uncertainty into account is central when using dynamic network features as predictors.* Poster Presentation, Annual Meeting of the Society for Ambulatory Assessment 2025, Leuven, Belgium.

SOFTWARE

4. **Siepe, B.S.** (2025). **openesm**: Accessing the openESM database (R and Python Package). Available on CRAN (<https://doi.org/10.32614/CRAN.package.openesm>) and PyPi (<https://pypi.org/project/openesm/>). Status: Maintainer, Author
3. **Kloft, M. & Siepe, B.S.** (2025). **intervalpsych**: Analyzing Interval Data in Psychometrics (R Package). Available on CRAN (<https://doi.org/10.32614/CRAN.package.intervalpsych>). Status: Author
2. Lane, S., Gates, K. M., Fisher, Z., Arizmendi, C., & Molenaar, P. (2025). **gimme**: Group Iterative Multiple Model Estimation (R Package). Available on CRAN (<https://doi.org/10.32614/CRAN.package.gimme>). Status: Maintainer.
<https://doi.org/10.32614/CRAN.package.gimme>
1. **Siepe, B.S. & Kloft, M.** (2024). **tsnet**: Comparing and Visualizing Networks based on Time Series Data (R Package). Available on CRAN (<https://doi.org/10.32614/CRAN.package.tsnet>). Status: Maintainer, Author

SUPERVISION

First Supervisor: 7 Bachelor's, 3 Master's theses

Second Supervisor: 7 Bachelor's, 12 Master's theses

AWARDS

Best Poster Award	05/2025
Awarded at the Society for Ambulatory Assessment Conference 2025 for the poster "Taking uncertainty into account is central when using dynamic network features as predictors"	
Student Teaching Award	07/2024
Awarded by the student council psychology at Marburg University	

GRANTS

DAAD Research Travel Stipend	08/2024
Amount: 2.259€. Financing research stay in Groningen	
DAAD Conference Stipend	07/2024
Amount: 950€. Travel to the IMPS 2024 Annual Meeting	
Marburg Research Academy Conference Funding	07/2024
Amount: 1.500€. Co-Applicant on behalf of Open Science Initiative at Marburg University	
APS Conference Financial Assistance	03/2023
Amount: 400\$	

Erasmus Internship Stipend	03/2022
Amount: 1.089€. Financing research stay in Leiden	
German Federal Scholarship (Deutschlandstipendium)	10/2021
Amount: 3.600€ (over one year)	

PROFESSIONAL TRAINING

Combining R and C++ , DAGStat	2025
Linear Algebra for Machine Learning , Imperial College London, Coursera	2022
Modeling the Dynamics of Intensive Longitudinal Data , Utrecht Summer School	2021
Introduction to Statistical Learning , StanfordOnline, edX Course	2021
Practical Time Series Analysis , SUNY, Coursera	2021
Improving your Statistical Inferences , TU Eindhoven, Coursera	2020

ACADEMIC SERVICE

Member of Tenure Track Commission, Department of Psychology, Marburg University	2025 - present
Head of the special interest group for quality standards for simulation studies of the Quantitative Methods Subgroup of the German Psychological Association	2025 - present
Website coordinator, MITNB Consortium (URL)	2024 - present
Member of Doctoral Committee, Department of Psychology, Marburg University	2023 - present
Board Member Open Science Initiative, Marburg University	2022 - present
Co-Organizer Brainhack Marburg	2023 & 2024 & 2025
Co-Organizer Open Science Days Marburg	2023
Co-Host ReproducibiliTea Frankfurt	2022
Board Member Open Science Initiative, Goethe University Frankfurt	2021 - 2022
Editorial Team, Journal of European Psychology Students	2021 - 2023
Student Council Psychology, Goethe University Frankfurt	2021 - 2022

PROFESSIONAL MEMBERSHIPS

Member of the Society for Ambulatory Assessment (SAA)	2025 - present
Member of the German Society for Psychology (DGPS)	2023 - present

COMMUNITY SERVICE

CorrelAid Volunteer	2024 - present
Student tutor at Asylarbeitskreis Heidelberg (refugee aid)	2015 - 2021
Co-host of yearly after-school orientation day, Hölderlin-Gymnasium	2019 - 2021
Involvement with Jugend Rettet (refugee aid)	2017 - 2018
Assistant coach, youth soccer team of ASC Neuenheim	2013 - 2014

MEDIA COVERAGE

Press release by Leiden University on our article “Associations between ecological momentary assessment and passive sensor data in a large student sample” (URL)	
Article on the same paper in The Guardian (URL) and Gizmodo (URL), and Interview by The Signal, the newsletter of the Society for Ambulatory Assessment (URL)	
Interview on the Center for Open Science Blog about preregistration for simulation studies (URL)	

REVIEWING

Ad-Hoc reviewer for *Administration and Policy in Mental Health and Mental Health Services Research*; *Behavior Research Methods*; *Brain, Behavior, & Immunity - Health*; *Acta Psychiatrica Scandinavica*; *Advances in Methods and Practices in Psychological Science*; *Child Psychiatry & Human Development*; *Journal of Consulting & Clinical Psychology*; *Psychological Methods*; *npj Digital Medicine*; *Nature Human Behaviour*; *Multivariate Behavioral Research*; *Journal of Open Source Software*; *Cognitive Therapy and Research*; *Journal of Robustness Reports*.

Reviewer for the Bi-Annual Meeting (2024) of the *German Psychological Society (DGPS)*.