

# PAUL-CHRISTIAN BÜRKNER

## GENERAL INFORMATION

<i>Date of Birth</i>	16 June 1991
<i>Place of Birth</i>	Marburg, Germany
<i>Work Address</i>	Vogelpothsweg 87, 44227 Dortmund, Germany
<i>Email</i>	<a href="mailto:paul.buerkner@gmail.com">paul.buerkner@gmail.com</a>
<i>Website</i>	<a href="https://paulbuerkner.com">https://paulbuerkner.com</a>

## KEY SCIENTIFIC METRICS

<i>Publications</i>	125 (peer-reviewed only)
<i>Funding</i>	1,615,000 € (third-party only)
<i>Citations</i>	25,634 (source: GoogleScholar)
<i>h-index</i>	44 (source: GoogleScholar)

## WORK EXPERIENCE

TU Dortmund University	<i>since 2023</i>	Full Professor for Computational Statistics Full Professor for Computational Statistics, Department of Statistics, TU Dortmund University, Germany.
	<i>2020-2023</i>	Independent Junior Research Group Leader Independent Junior Research Group Leader for Bayesian Statistics at the Cluster of Excellence SimTech, University of Stuttgart, Germany.
University of Stuttgart	<i>2019-2020</i>	Postdoctoral Researcher Postdoctoral researcher at the chair of Computational Probabilistic Modeling (Prof. Dr. Vehtari), Aalto University, Department of Computer Science, Finland.
	<i>2014-2019</i>	Research Associate Research associate at the chair of Statistics and Methods (Prof. Dr. Holling), University of Münster, Department of Psychology, Germany.
Aalto University		
University of Münster		

## HIGHER EDUCATION

PhD in Psychology	<i>2014-2017</i>	University of Münster Grade: Summa Cum Laude · Institute of Psychology Title: <i>Optimal Design and Bayesian Data Analysis</i> . Received multiple awards (see the Awards section).
	<i>2014-2017</i>	University of Hagen Grade: 1.3 · Institute of Mathematics Thesis: <i>On the Statistics of Curie–Weiss–Distributed Random Variables</i> .
	<i>2013-2014</i>	University of Münster Grade: 1.1 · Institute of Psychology Thesis: <i>Adaptive Designs for Logistic Models with False Answers</i> .
Master of Mathematics	<i>2011-2014</i>	University of Hagen Grade: 1.7 · Institute of Mathematics Thesis: <i>A Hull Operator for Complex Matroids</i> .
	<i>2010-2013</i>	University of Münster Grade: 1.2 · Institute of Psychology Thesis: <i>Testing for Publication Bias in Diagnostic Meta-Analysis: A Simulation Study</i> .
Master of Psychology		
Bachelor of Mathematics		
Bachelor of Psychology		

## RESEARCH FUNDING

DFG	Fried et al. (2024). Spatio-temporal Statistics for the Transition of Energy and Transport (Collaborative Research Center). <i>Funder: German Research Foundation (DFG)</i> . Total: 12,540,000 €. Own share: <b>312,000 €</b> .
DFG	Bürkner P. C. & Radev S. T. (2023). BayesFlow: Simulation Intelligence with Deep Learning. <i>Funder: German Research Foundation (DFG)</i> . <b>353,000 €</b> .
DFG	Bürkner P. C. (2022). Intuitive Joint Priors for Bayesian Multilevel Models. <i>Funder: German Research Foundation (DFG)</i> . <b>238,000 €</b> .
DFG	Bürkner P. C. (2022). Bayesian Distributional Latent Variable Models. <i>Funder: German Research Foundation (DFG)</i> . <b>238,000 €</b> .
DFG	Bürkner P. C. & Bulling A. (2022). Amortized Bayesian Inference for Multilevel Models. <i>Funder: German Research Foundation (DFG)</i> . <b>232,000 €</b> .
EXC SimTech	Guthke A. & Bürkner P. C. (2022). Data-Integrated Training of Surrogate Models for Uncertainty Quantification and Diagnostics of Complex Biological Systems. <i>Funder: Cluster of Excellence SimTech</i> . <b>285,000 €</b> .
Cyber Valley	Bürkner P. C. (2021). Meta-Uncertainty in Bayesian Model Comparison. <i>Funder: Cyber Valley Research Fund</i> . <b>242,000 €</b> .
EXC SimTech	Bürkner P. C. & Sedlmair M. (2021). Machine Learning for Bayesian Model Building. <i>Funder: Cluster of Excellence SimTech</i> . <b>285,000 €</b> .
EXC SimTech	Bulling A. & Bürkner P. C. (2021). Bayesian Intent Prediction for Human-Machine Collaboration. <i>Funder: Cluster of Excellence SimTech</i> . <b>175,000 €</b> .
ELLIS	Bulling A. Bürkner P. C., Kuchenbecker J. K., Pradel M., Schulte im Walde S., Staab S., Steinwart I., & Vu T. (2021). Stuttgart ELLIS Unit. <i>Funders: ELLIS Society and University of Stuttgart</i> .

## SELECTED AWARDS

GCPR	2023 · <b>Best paper honorable mention award</b> at the German Conference of Pattern Recognition (GCPR).
SIPS	2020 · <b>Mission award</b> of the Society for Improving Psychological Science (SIPS) for brms.
SIPS	2020 · <b>Commendation award</b> of the Society for Improving Psychological Science (SIPS) for brms.
University of Münster	2018 · <b>Award for the best dissertation</b> 2017-2018 in Psychology at the University of Münster.
German Society for Psychology	2017 · Gustav A. Lienert <b>Award for the best methodological dissertation</b> in Psychology awarded by the German Society for Psychology (DGPs).
University of Münster	2017 · <b>Award for the best lecture</b> at the Institute of Psychology in Münster.
German National Acad. Foundation	2014 · <b>Scholarship</b> of the German National Academic Foundation (Studienstiftung des deutschen Volkes).

## OPEN-SOURCE SOFTWARE

brms	Lead author · An R package for Bayesian regression models using Stan. Received multiple awards (see the Awards section).
posterior	Lead author · An R package for working with posterior distributions.
thurstonianIRT	Lead author · An R Package for fitting Thurstonian IRT models.
BayesFlow	Author · A Python library for simulation-based Bayesian inference.
posteriordb	Author · A Posterior Database for Bayesian Inference.
loo	Author · An R package for approximate leave-one-out cross-validation.
ggsimplex	Author · An R package for simplex visualizations with ggplot2.

<i>bayesim</i>	Author · An R package for simulations with Bayesian models.
<i>bayehear</i>	Author · An R package for metrics to evaluate Bayesian models.
<i>bayesfam</i>	Author · An R package for custom brms families.
<i>bayesian</i>	Author · An R package to interface brms and tidymodels.
<i>rstan</i>	Contributor · An R Interface to Stan.
<i>bayesplot</i>	Contributor · An R package for visualizing Bayesian models.
<i>projpred</i>	Contributor · An R package for projection predictive variable selection.
<i>emmeans</i>	Contributor · An R package for estimating marginal means.

## SELECTED PROFESSORSHIP CALLS

<i>Full Professorship</i>	2022 · Call for the Full Professorship (W3) in Computational Statistics, Department of Statistics, TU Dortmund University, Germany. <b>Accepted.</b>
<i>Full Professorship</i>	2022 · Call for the Full Professorship (W3) in Data Analytics and Computational Statistics, Department of Computer Science, University of Konstanz, Germany.

## SELECTED SCIENTIFIC INVOLVEMENT

<i>Editor</i>	since 2025 · Editor of the Journal of Robustness Reports.
<i>Member</i>	since 2024 · Member of the committee for the re-accreditation of Data Science studies at TU Dortmund University.
<i>Founding Member</i>	2024 · Founding member of the Computational Clinical Psychology and Psychotherapy Network ( <a href="https://ccpp.network/">https://ccpp.network/</a> ) funded by the DFG.
<i>Chairman</i>	2024 · Chairman of the appointment committee for the associate professorship in Causality at TU Dortmund University.
<i>Reviewer</i>	since 2024 · Reviewer in appointment procedures for professorships.
<i>Organizer</i>	2022 · Organizer of the 1st International SimTech Summer School, University of Stuttgart. Co-Organizers: Benjamin Unger and Kristyna Pluhackova.
<i>Reviewer</i>	since 2022 · Reviewer for major funding agencies. <i>Selection:</i> German Research Foundation (DFG).
<i>Member</i>	since 2021 · Member of the ELLIS Society ( <a href="https://ellis.eu/">https://ellis.eu/</a> ).
<i>Member</i>	2021 – 2024 · Member of Cyber-Valley ( <a href="https://cyber-valley.de/en">https://cyber-valley.de/en</a> ).
<i>Faculty Member</i>	2021 – 2023 · Faculty Member of the International Max Planck Research School for Intelligent Systems (IMPRS-IS; <a href="https://imprs.is.mpg.de/">https://imprs.is.mpg.de/</a> ).
<i>Founding Member</i>	2021 – 2023 · Founding member of the Stuttgart ELLIS Unit ( <a href="https://ellis.eu/units/stuttgart">https://ellis.eu/units/stuttgart</a> ).
<i>Member</i>	since 2018 · Member of the Stan Development Team ( <a href="https://mc-stan.org/">https://mc-stan.org/</a> ).
<i>Consultant</i>	since 2018 · Academic consultant in industry. Selection: Bayer (2018), Novartis (since 2021), Axem (since 2022).
<i>Editor</i>	2018 – 2020 · Associate editor of Biostatistics.
<i>Reviewer</i>	since 2014 · Reviewer for international journals and conferences. <i>Selection:</i> AISTATS, Bayesian Analysis, Behavior Research Methods, Biometrical Journal, ICML, ICLR, Journal of Machine Learning Research, Journal of Probability and Statistics, Journal of Statistical Software, Journal of the Royal Statistical Society, Nature, Nature Ecology & Evolution, Nature Human Behaviour, NeurIPS, Philosophical Transactions, Psychological Methods, Psychometrika, Psychonomic Bulletin and Review, Statistics in Medicine.

## SELECTED TALKS

<i>Bayescomp</i>	2025 · Singapore · Contributed Talk Title: <i>Robust Amortized Bayesian Inference with Self-Consistency Losses.</i>
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One World ABI Seminar	2025 · online · Invited Talk Title: <i>Amortized Mixture and Multilevel Models.</i>
Cyber Valley	2025 · Stuttgart · Invited Talk Title: <i>Meta-Uncertainty in Bayesian Model Comparison.</i>
University of Bielefeld	2025 · online · Invited Talk Title: <i>The future of Bayes and brms with application in biology.</i>
Stan Conference	2024 · Oxford · Contributed Talk Title: <i>Generative Bayesian Modeling with Implicit Priors.</i>
PHYSTAT-SBI Workshop	2024 · Munich · Invited Talk Title: <i>A Statistical Perspective on Simulation-Based Inference.</i>
Bayes on the Beach Conference	2024 · Gold Coast · Keynote Title: <i>Does Bayes have to be slow? A glimpse into amortized Bayesian inference.</i>
Oxford University	2023 · Oxford · Keynote Title: <i>Probabilistic Modeling for Ecology.</i>
Princeton University	2023 · online · Invited Talk Title: <i>An Introduction to Bayesian Statistics.</i>
DagStat Conference	2022 · Hamburg · Contributed Talk Title: <i>The sparse polynomial chaos expansion: a fully Bayesian approach with joint priors on the coefficients and global selection of terms.</i>
Psychoco Conference	2021 · online · Keynote Title: <i>Bayesian Item Response Models.</i>
Oslo UseR Group	2021 · online · Invited Talk Title: <i>Bayesian multilevel modeling with brms.</i>
Oxford University	2020 · online · Invited Talk Title: <i>Bayesian regression modeling.</i>
Turku University	2020 · online · Invited Talk Title: <i>Bayesian multilevel modeling with brms.</i>
TU Dortmund University	2020 · online · Invited Talk Title: <i>Bayesian multilevel modeling with brms.</i>
Bayer	2020 · online · Invited Talk Title: <i>Bayesian multilevel modeling with brms.</i>
Stat. Methods for Linguistics	2019 · Potsdam · Keynote Title: <i>A Principled Bayesian Workflow for Data Analysis.</i>
University of Duisburg-Essen	2019 · Essen · Invited Talk Title: <i>A Principled Bayesian Workflow for Data Analysis.</i>
DGPs Conference	2019 · Kiel · Contributed Talk Title: <i>Improving Convergence Diagnostics for MCMC Sampling Algorithms.</i>
Stan Conference	2019 · Cambridge · Contributed Talk Title: <i>Leave-Future-Out Cross-Validation for Bayesian Time-Series Models.</i>
Multilevel Conference	2019 · Utrecht · Keynote Title: <i>Bayesian Multilevel Modeling with brms and Stan.</i>
DagStat	2019 · Munich · Contributed Talk Title: <i>Leave-Future-Out Cross-Validation for Bayesian Time-Series Models.</i>
Stan Conference	2018 · Helsinki · Contributed Talk Title: <i>Custom Response Distributions in brms.</i>
EAM Conference	2018 · Jena · Contributed Talk Title: <i>Handling Ordinal Predictors in Regression Models via Monotonic Effects.</i>
Bayes@Lund	2018 · Lund · Keynote Title: <i>Why Not to be Afraid of Priors.</i>
DGPs Conference	2017 · Tübingen · Keynote Title: <i>Optimal Design and Bayesian Data Analysis.</i>
eRum Conference	2016 · Poznan · Contributed Talk Title: <i>brms: An R Package for Bayesian Multilevel Models using Stan.</i>

Int. Workshop on  
Simulation  
DGPs Conference

2015 · Vienna · Contributed Talk  
Title: *Adaptive Designs for Logistic Models with False Answers.*  
2015 · Jena · Contributed Talk  
Title: *Optimal Design of Non-Parametric Two-Sample Tests.*

## SELECTED WORKSHOPS

Oxford University

2023 · Department of Biology · 1 day  
Title: *Bayesian modeling for biologists using brms.*

University of  
Tübingen

2023 · Center of Methods · 2 days  
Title: *Bayesian modeling with the brms package.*

TU Dortmund  
University

2022 · Department of Statistics · 2 days  
Title: *Bayesian Statistics.*

University of  
Salzburg

2022 · Department of Psychology · 2 days  
Title: *Introduction to Bayesian Data Analysis.*

Oxford University

2021 · Department of Zoology · 4 days  
Title: *Bayesian Regression Modelling for Biologists.*

Research Cluster  
SMiP

2020 · Mannheim · 2 days  
Title: *Introduction to Stan: A Probabilistic Programming Language for Bayesian Inference.*

University of  
Aarhus

2020 · Department of Economics and Business Economics · 1 day  
Title: *Bayesian Model and Variable Selection.*

MPI for Human  
Development

2019 · Göttingen · 1 day  
Title: *Bayesian Multilevel Modeling.*

MPI for Emp.  
Aesthetics

2019 · Frankfurt · 2 days  
Title: *Bayesian Multilevel Modeling.*

Multilevel  
Conference

2019 · Utrecht · 1 day  
Title: *Introduction to Bayesian Data Analysis.*

DagStat  
Conference

2019 · Munich · 1 day  
Title: *Bayesian Data Analysis using Stan.*

University of  
Lausanne

2018 · Department of Psychology · 2 days  
Title: *Introduction to Meta-Analysis.*

University of  
Magdeburg

2018 · Department of Psychology · 4 days  
Title: *Introducing Basic and Advanced Bayesian Modelling.*

University of  
Aarhus

2018 · 4 days  
Title: *Advanced Bayesian Statistical Modeling.*

ETH Zurich

2018 · 1 day  
Title: *Classical and Bayesian Multi-Level Models in R.*

University of  
Hamburg

2017 · Department of Psychology · 2 days  
Title: *Fitting Multi-Level Models in R.*

DPPD Conference

2017 · Munich · 1 day  
Title: *Bayesian Multi-Level Models in R with brms.*

University of Bern

2017 · Department of Psychology · 3 days  
Title: *Bayesian Multi-Level Models in R with brms.*

University of  
Münster

2017 · Department of Psychology · 3 days  
Title: *Introduction to Bayesian Inference.*

University Paris  
Decartes

2017 · 1 day  
Title: *Introduction to Meta-Analysis.*

DGPs Conference

2016 · Leipzig · 1 day  
Title: *Bayesian Multilevel Models in R using the Package brms.*

## SELECTED TEACHING ACTIVITIES

<i>Data Science and Statistics</i>	2025 · TU Dortmund University Lecture: <i>Simulation-Based Inference</i> .
<i>Data Science and Statistics</i>	2024 · TU Dortmund University Lecture: <i>Statistical Learning for Big Data</i> .
<i>Data Science and Statistics</i>	2024 · TU Dortmund University Lecture: <i>Case Studies I and II</i> .
<i>Data Science and Statistics</i>	2023-2025 · TU Dortmund University Lecture: <i>Applied Bayesian Data Analysis</i> .
<i>Data Science and Statistics</i>	2023 · TU Dortmund University Lecture: <i>Computational Statistics</i> .
<i>Data Science and Statistics</i>	2023 · TU Dortmund University Seminar: <i>Multilevel Models</i> .
<i>Simulation Science</i>	2022 · University of Stuttgart Lecture: <i>Bayesian Statistics and Probabilistic Machine Learning</i> .
<i>Simulation Science</i>	2021 · University of Stuttgart Lecture: <i>ML Sessions: Bayesian Statistics</i> .
<i>Simulation Science</i>	2021-2022 · University of Stuttgart · <b>2 times</b> Seminar: <i>Advanced Topics in Simulation Science</i> .
<i>Psychology</i>	2018 · University of Münster · <b>2 times</b> Seminar: <i>Structural Equation Modeling and Bayesian Statistics</i> . Average Evaluation: 10.9 points (15 point <i>abitur</i> scale).
<i>Psychology</i>	2014-2019 · University of Münster · <b>5 times</b> Lecture: <i>Descriptive Statistics and Probability Theory</i> . Average Evaluation: 12.6 points (15 point <i>abitur</i> scale). Award for the best lecture in the winter semester 2016/2017.
<i>Psychology</i>	2015-2018 · University of Münster · <b>4 times</b> Lecture: <i>Inferential Statistics</i> . Average Evaluation: 12.1 points (15 point <i>abitur</i> scale).

## CURRENT PHD STUDENTS

<i>TU Dortmund University</i>	since 2024 · Svenja Jedhoff · Statistics Topic: <i>Real-time spatio-temporal data analysis for monitoring logistics networks</i> . Co-Advisor: Prof. Anne Meyer
<i>TU Dortmund University</i>	since 2024 · Aayush Mishra · Statistics Topic: <i>Robust and Efficient Learning in Amortized Bayesian Inference</i> .
<i>TU Dortmund University</i>	since 2024 · Lars Kühmichel · Statistics Topic: <i>BayesFlow: Simulation Intelligence with Deep Learning</i> . Co-Advisor: Prof. Stefan Radev
<i>TU Dortmund University</i>	since 2023 · Jacob Grytzka · Statistics Topic: <i>Regularization in Generalized Linear and Additive Multilevel Models</i> . Co-Advisor: Prof. Andreas Groll
<i>TU Dortmund University</i>	since 2022 · Florence Bockting · Statistics Topic: <i>Simulation-Based Prior Distributions for Bayesian models</i> .
<i>TU Dortmund University</i>	since 2022 · Luna Fazio · Statistics Topic: <i>Bayesian Distributional Latent Variable Models</i> .
<i>TU Dortmund University</i>	since 2022 · Soham Mukherjee · Statistics Topic: <i>Probabilistic Models for scRNA Sequencing Data</i> . Co-Advisor: Prof. Manfred Claassen
<i>University of Stuttgart</i>	since 2022 · Philipp Reiser · Computer Science Topic: <i>Data-Integrated Training of Surrogate Models for Uncertainty Quantification and Diagnostics of Complex Biological Systems Models</i> . Co-Advisor: Dr. Anneli Guthke
<i>University of Stuttgart</i>	since 2021 · Maximilian Scholz · Computer Science Topic: <i>Machine Learning for Bayesian Model Building</i> .



University of  
Stuttgart

since 2021 · Javier Aguilar · Computer Science  
Topic: *Intuitive Joint Priors for Bayesian Multilevel Models.*

## GRADUATED PHD STUDENTS

University of  
Stuttgart

2021 – 2025 · Marvin Schmitt · Computer Science  
Topic: *Meta-Uncertainty in Bayesian Model Comparison.*

Aalto University

2019 – 2023 · Alejandro Catalonia · Computer Science  
Topic: *Robust Bayesian Methods for Model and Variable Selection.*  
Primary Advisor: Prof. Aki Vehtari

University of  
Münster

2018 – 2021 · Niklas Schulte · Psychology  
Topic: *Statistical Properties of Forced-Choice Questionnaires in Applicant Personality Measurements.*  
Primary Advisor: Prof. Heinz Holling

## CURRENT POSTDOCTORAL RESEARCHERS

TU Dortmund  
University

since 2024 · Šimon Kucharský  
Topic: *Applications of Amortized Bayesian Inference.*

TU Dortmund  
University

since 2023 · Daniel Habermann  
Topic: *Amortized Bayesian Inference for Multilevel Models.*

## FORMER POSTDOCTORAL RESEARCHERS

University of  
Stuttgart

2022 – 2024 · Lei Shi  
Topic: *Bayesian Intent Prediction for Human-Machine Collaboration.*  
Co-Advisor: Prof. Andreas Bulling

University of  
Heidelberg

2021 – 2023 · Stefan Radev  
Topic: *Amortized Bayesian Inference.*  
Became an assistant professor at Rensselaer Polytechnic Institute, Troy, USA.

## ALL PUBLICATIONS

*In Review*

- 152) **Bürkner P. C.**, Schmitt M., & Radev S. T. (in review). Simulations in Statistical Workflows. *ArXiv preprint*.
- 151) Aguilar J. E. & **Bürkner P. C.** (in review). Dependency-Aware Shrinkage Priors for High Dimensional Regression. *ArXiv preprint*.
- 150) Bockting F., Radev S. T., & **Bürkner P. C.** (in review). Expert-elicitation method for non-parametric joint priors using normalizing flows. *ArXiv preprint*.
- 149) Fazio L., Scholz M., & **Bürkner P. C.** (in review). Primed Priors for Simulation-Based Validation of Bayesian Models. *ArXiv preprint*.
- 148) Habermann D., Schmitt M., Kühmichel L., Bulling A., Radev S. T., & **Bürkner P. C.** (in review). Amortized Bayesian Multilevel Models. *ArXiv preprint*.
- 147) Jedhoff S., Kutabi H., Meyer A. & **Bürkner P. C.** (in review). Efficient Uncertainty Propagation in Bayesian Two-Step Procedures. *ArXiv preprint*.
- 146) Kucharský Š. & **Bürkner P. C.** (in review). Amortized Bayesian Mixture Models. *ArXiv preprint*.
- 145) Mishra A., Habermann D., Schmitt M., Radev S. T., & **Bürkner P. C.** (in review). Robust Amortized Bayesian Inference with Self-Consistency Losses on Unlabeled Data. *ArXiv preprint*.
- 144) Mukherjee S., Claassen M., & **Bürkner P. C.** (in review). Hilbert space methods for approximating multi-output latent variable Gaussian processes. *ArXiv preprint*.
- 143) Reiser P., **Bürkner P. C.**, & Guthke A. (in review). Bayesian Surrogate Training on Multiple Data Sources: A Hybrid Modeling Strategy. *ArXiv preprint*.

- 142) Scheurer S., Reiser P., Brünnette T., Nowak W., Guthke A., & **Bürkner P. C.** (in review). Uncertainty-Aware Surrogate-based Amortized Bayesian Inference for Computationally Expensive Models. *ArXiv preprint*.
- 141) Schmitt M., Radev S. T., & **Bürkner P. C.** (in review). Fuse It or Lose It: Deep Fusion for Multimodal Simulation-Based Inference. *ArXiv preprint*.
- 140) Schmitt M., Hikida Y., Radev S. T., Sadlo F., & **Bürkner P. C.** (in review). The Simplex Projection: Lossless Visualization of 4D Compositional Data on a 2D Canvas. *ArXiv preprint*.
- 139) Schmitt, M., **Bürkner P. C.**, Köthe U., & Radev S. T. (in review). Detecting Model Misspecification in Amortized Bayesian Inference with Neural Networks: An Extended Investigation. *ArXiv preprint*.
- 138) Scholz M. & **Bürkner P. C.** (in review). Posterior accuracy and calibration under misspecification in Bayesian generalized linear models. *ArXiv preprint*.
- 137) Elsemüller L., Pratz V., von Krause M., Voss A., **Bürkner P. C.**, & Radev S. T. (in review). Does Unsupervised Domain Adaptation Improve the Robustness of Amortized Bayesian Inference? A Systematic Evaluation. *ArXiv preprint*.
- 136) Säilynoja T., Schmitt M., **Bürkner P. C.**, & Vehtari A. (in review). Posterior SBC: Simulation-Based Calibration Checking Conditional on Data. *ArXiv preprint*.
- 135) Kołczyńska M., & **Bürkner P. C.** (in review). Does political trust strengthen democracy? *SocArXiv preprint*.
- 134) Coretta, S. & **Bürkner P. C.** (in review). Bayesian beta regressions with brms in R: A tutorial for phoneticians. *OSF preprint*.
- 2025 133) Aguilar J. E. & **Bürkner P. C.** (2025). Generalized Decomposition Priors on R2. *Bayesian Analysis*.
- 132) Fazio L. & **Bürkner P. C.** (2025). Gaussian distributional structural equation models: A framework for modeling latent heteroscedasticity. *Multivariate Behavioral Research*. doi:10.1080/00273171.2025.2483252
- 131) Mukherjee S., Claassen M., & **Bürkner P. C.** (2025). DGP-LVM: Derivative Gaussian process latent variable models. *Statistics and Computing*.
- 130) Reiser P., Aguilar J. E., Guthke A., & **Bürkner P. C.** (2025). Uncertainty Quantification and Propagation in Surrogate-based Bayesian Inference. *Statistics and Computing*. doi:10.1007/s11222-025-10597-8
- 129) Scholz M., & **Bürkner P. C.** (2025). Prediction can be safely used as a proxy for explanation in causally consistent Bayesian generalized linear models. *Journal of Statistical Computation and Simulation*. doi:10.1080/00949655.2024.2449534
- 128) Magnusson M., Torgander J., **Bürkner P. C.**, Zhang L., Carpenter B., & Vehtari A. (2025). posteriordb: Testing, Benchmarking and Developing Bayesian Inference Algorithms. *Artificial Intelligence and Statistics (AISTATS) Conference Proceedings*.
- 127) Dubova, M., Chandramouli, S., Gigerenzer, G., ..., Wagenmakers E. J., **Bürkner P. C.**, & Sloman, S. (2025). Is Occam's razor losing its edge? New perspectives on the principle of model parsimony. *Proceedings of the National Academy of Sciences (PNAS)*. doi:10.1073/pnas.2401230121
- 126) Kucharský Š. & **Bürkner P. C.** (2025). Amortized Bayesian Cognitive Modeling with BayesFlow. *PsyArXiv preprint*. doi:10.31234/osf.io/34k6qv1
- 125) Shi L., **Bürkner P. C.**, & Bulling A. (2025). ActionDiffusion: An Action-aware Diffusion Model for Procedure Planning in Instructional Videos. *IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*.
- 124) Ingram D. J., Froese G. Z. L., Carroll D., **Bürkner P. C.**, ..., Abernethy K., & Coad L. (2025). Regional patterns of wild animal hunting in African tropical forests. *Nature Sustainability*. doi:10.1038/s41893-024-01494-5



- 123) Bagañi, A., Liu, Y., Kapoor, M., Son, G., **Bürkner P. C.**, Tisdall, L., & Mata, R. (2025). Comparing the Temporal Stability and Convergent Validity of Risk Preference Measures: A Meta-Analytic Approach. *Nature Human Behavior*. doi:10.1038/s41562-024-02085-2
- 122) Revathe T., Mundry R., Utami-Atmoko S. S., Aprilla T. U., van Noordwijk M. A., Fröhlich M., **Bürkner P. C.**, Schuppli C. (2025). Sumatran orangutan mothers differ in the extent and trajectory of their expression of maternal behaviour. *Proceedings of the Royal Society B: Biological Sciences*. doi:10.1098/rspb.2025.0443
- 2024 121) Bockting F., Radev, S. T., & **Bürkner P. C.** (2024). Simulation-Based Prior Knowledge Elicitation for Parametric Bayesian Models. *Scientific Reports*. doi:10.1038/s41598-024-68090-7
- 120) Schmitt M., Pratz V., Köthe U., **Bürkner P. C.**, & Radev S. T. (2024). Consistency Models for Scalable and Fast Simulation-Based Inference. *Proceedings of the Conference on Neural Information Processing Systems (NeurIPS)*.
- 119) Schmitt M., Habermann D., **Bürkner P. C.**, Köthe U., & Radev S. T. (2024). Leveraging Self-Consistency for Data-Efficient Amortized Bayesian Inference. *Proceedings of the International Conference on Machine Learning (ICML)*.
- 118) Kallioinen N., Paananen T., **Bürkner P. C.**, & Vehtari A. (2024). Detecting and diagnosing prior and likelihood sensitivity with power-scaling. *Statistics and Computing*. doi:10.1007/s11222-023-10366-5
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