

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>	paul.buerkner@gmail.com
<i>Website</i>	https://paul-buerkner.github.io/

KEY SCIENTIFIC METRICS

<i>Publications</i>	106 (peer-reviewed only)
<i>Funding</i>	1,511,000 € (third-party only)
<i>Citations</i>	18,945 (source: GoogleScholar)
<i>h-index</i>	35 (source: GoogleScholar)

WORK EXPERIENCE

<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.
<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.

HIGHER EDUCATION

<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> .
<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> .

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: 208,000 € .
DFG	Bürkner P. C. & Radev S. T. (2023). BayesFlow: Simulation Intelligence with Deep Learning. <i>Funder: German Research Foundation (DFG)</i> . 353,000 € .
DFG	Bürkner P. C. (2022). Intuitive Joint Priors for Bayesian Multilevel Models. <i>Funder: German Research Foundation (DFG)</i> . 238,000 € .
DFG	Bürkner P. C. (2022). Bayesian Distributional Latent Variable Models. <i>Funder: German Research Foundation (DFG)</i> . 238,000 € .
DFG	Bürkner P. C. & Bulling A. (2022). Amortized Bayesian Inference for Multilevel Models. <i>Funder: German Research Foundation (DFG)</i> . 232,000 € .
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> . 285,000 € .
Cyber Valley	Bürkner P. C. (2021). Meta-Uncertainty in Bayesian Model Comparison. <i>Funder: Cyber Valley Research Fund</i> . 242,000 € .
EXC SimTech	Bürkner P. C. & Sedlmair M. (2021). Machine Learning for Bayesian Model Building. <i>Funder: Cluster of Excellence SimTech</i> . 285,000 € .
EXC SimTech	Bulling A. & Bürkner P. C. (2021). Bayesian Intent Prediction for Human-Machine Collaboration. <i>Funder: Cluster of Excellence SimTech</i> . 175,000 € .
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 · Best paper honorable mention award at the German Conference of Pattern Recognition (GCPR).
SIPS	2020 · Mission award of the Society for Improving Psychological Science (SIPS) for brms.
SIPS	2020 · Commendation award of the Society for Improving Psychological Science (SIPS) for brms.
University of Münster	2018 · Award for the best dissertation 2017-2018 in Psychology at the University of Münster.
German Society for Psychology	2017 · Gustav A. Lienert Award for the best methodological dissertation in Psychology awarded by the German Society for Psychology (DGPs).
University of Münster	2017 · Award for the best lecture at the Institute of Psychology in Münster.
German National Acad. Foundation	2014 · Scholarship 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. Accepted.
<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>Founding Member</i>	2024 · Founding member of the Computational Clinical Psychology and Psychotherapy Network (https://ccpp.network/) 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 (https://ellis.eu/).
<i>Member</i>	2021 – 2024 · Member of Cyber-Valley (https://cyber-valley.de/en).
<i>Faculty Member</i>	2021 – 2023 · Faculty Member of the International Max Planck Research School for Intelligent Systems (IMPRS-IS; https://imprs.is.mpg.de/).
<i>Founding Member</i>	2021 – 2023 · Founding member of the Stuttgart ELLIS Unit (https://ellis.eu/units/stuttgart).
<i>Member</i>	since 2018 · Member of the Stan Development Team (https://mc-stan.org/).
<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> Bayesian Analysis, Behavior Research Methods, Biometrical Journal, 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, Philosophical Transactions, Psychological Methods, Psychometrika, Psychonomic Bulletin and Review, Statistics in Medicine.

SELECTED TALKS

<i>PHYSTAT-SBI Workshop</i>	2024 · Munich · Invited Talk Title: <i>A Statistical Perspective on Simulation-Based Inference.</i>
<i>Bayes on the Beach Conference</i>	2024 · Gold Coast · Keynote Title: <i>Does Bayes have to be slow? A glimpse into amortized Bayesian inference.</i>
<i>Oxford University</i>	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	2015 · Vienna · Contributed Talk Title: <i>Adaptive Designs for Logistic Models with False Answers.</i>
DGPs Conference	2015 · Jena · Contributed Talk Title: <i>Optimal Design of Non-Parametric Two-Sample Tests.</i>

SELECTED WORKSHOPS

Oxford University	2023 · Department of Biology · 1 day Title: <i>Bayesian modeling for biologists using brms.</i>
University of Tübingen	2023 · Center of Methods · 2 days Title: <i>Bayesian modeling with the brms package.</i>
TU Dortmund University	2022 · Department of Statistics · 2 days Title: <i>Bayesian Statistics.</i>

University of Salzburg	2022 · Department of Psychology · 2 days Title: <i>Introduction to Bayesian Data Analysis.</i>
Oxford University	2021 · Department of Zoology · 4 days Title: <i>Bayesian Regression Modelling for Biologists.</i>
Research Cluster SMiP	2020 · Mannheim · 2 days Title: <i>Introduction to Stan: A Probabilistic Programming Language for Bayesian Inference.</i>
University of Aarhus	2020 · Department of Economics and Business Economics · 1 day Title: <i>Bayesian Model and Variable Selection.</i>
MPI for Human Development	2019 · Göttingen · 1 day Title: <i>Bayesian Multilevel Modeling.</i>
MPI for Emp. Aesthetics	2019 · Frankfurt · 2 days Title: <i>Bayesian Multilevel Modeling.</i>
Multilevel Conference	2019 · Utrecht · 1 day Title: <i>Introduction to Bayesian Data Analysis.</i>
DagStat Conference	2019 · Munich · 1 day Title: <i>Bayesian Data Analysis using Stan.</i>
University of Lausanne	2018 · Department of Psychology · 2 days Title: <i>Introduction to Meta-Analysis.</i>
University of Magdeburg	2018 · Department of Psychology · 4 days Title: <i>Introducing Basic and Advanced Bayesian Modelling.</i>
University of Aarhus	2018 · 4 days Title: <i>Advanced Bayesian Statistical Modeling.</i>
ETH Zurich	2018 · 1 day Title: <i>Classical and Bayesian Multi-Level Models in R.</i>
University of Hamburg	2017 · Department of Psychology · 2 days Title: <i>Fitting Multi-Level Models in R.</i>
DPPD Conference	2017 · Munich · 1 day Title: <i>Bayesian Multi-Level Models in R with brms.</i>
University of Bern	2017 · Department of Psychology · 3 days Title: <i>Bayesian Multi-Level Models in R with brms.</i>
University of Münster	2017 · Department of Psychology · 3 days Title: <i>Introduction to Bayesian Inference.</i>
University Paris Decardes	2017 · 1 day Title: <i>Introduction to Meta-Analysis.</i>
DGPs Conference	2016 · Leipzig · 1 day Title: <i>Bayesian Multilevel Models in R using the Package brms.</i>

SELECTED TEACHING ACTIVITIES

Statistics and Data Science	2024 · TU Dortmund University Lecture: <i>Case Studies I and II.</i>
Statistics and Data Science	2023 · TU Dortmund University Lecture: <i>Applied Bayesian Data Analysis.</i>
Statistics and Data Science	2023 · TU Dortmund University Lecture: <i>Computational Statistics.</i>
Statistics and Data Science	2023 · TU Dortmund University Seminar: <i>Multilevel Models.</i>
Simulation Science	2022 · University of Stuttgart Lecture: <i>Bayesian Statistics and Probabilistic Machine Learning.</i>
Simulation Science	2021 · University of Stuttgart Lecture: <i>ML Sessions: Bayesian Statistics.</i>

<i>Simulation Science</i>	2021-2022 · University of Stuttgart · 2 times Seminar: <i>Advanced Topics in Simulation Science.</i>
<i>Psychology</i>	2018 · University of Münster · 2 times 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 · 5 times 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 · 4 times 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 · 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>University of Tübingen</i>	since 2022 · Soham Mukherjee 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>
<i>University of Stuttgart</i>	since 2021 · Javier Aguilar · Computer Science Topic: <i>Intuitive Joint Priors for Bayesian Multilevel Models.</i>
<i>University of Stuttgart</i>	since 2021 · Marvin Schmitt · Computer Science Topic: <i>Meta-Uncertainty in Bayesian Model Comparison.</i>
<i>Aalto University</i>	since 2021 · Noa Kallioinen · Computer Science Topic: <i>Sensitivity Diagnostics in a Bayesian Workflow.</i> Primary Advisor: Prof. Aki Vehtari
<i>Aalto University</i>	since 2020 · Teemu Säilynoja · Computer Science Topic: <i>Convergence and Goodness-of-Fit Diagnostics in a Bayesian Workflow.</i> Primary Advisor: Prof. Aki Vehtari

GRADUATED PHD STUDENTS

<i>Aalto University</i>	2019 – 2023 · Alejandro Catalania · Computer Science Topic: <i>Robust Bayesian Methods for Model and Variable Selection.</i> Primary Advisor: Prof. Aki Vehtari
<i>University of Münster</i>	2018 – 2021 · Niklas Schulte · Psychology Topic: <i>Statistical Properties of Forced-Choice Questionnaires in Applicant Personality Measurements.</i> 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.*

University of
Stuttgart

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

FORMER POSTDOCTORAL RESEARCHERS

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

133) Aguilar J. E. & **Bürkner P. C.** (in review). Generalized Decomposition Priors on R2. *ArXiv preprint.*

132) Bockting F., Radev, S. T., & **Bürkner P. C.** (in review). Simulation-Based Prior Knowledge Elicitation for Parametric Bayesian Models. *ArXiv preprint.*

131) Fazio L. & **Bürkner P. C.** (in review). Gaussian distributional structural equation models: A framework for modeling latent heteroscedasticity. *ArXiv preprint.*

130) Mukherjee S., Claassen M., & **Bürkner P. C.** (in review). DGP-LVM: Derivative Gaussian process latent variable models. *ArXiv preprint.*

129) Reiser P., Aguilar J. E., Guthke A., & **Bürkner P. C.** (in review). Uncertainty Quantification and Propagation in Surrogate-based Bayesian Inference. *ArXiv preprint.*

128) Schmitt M., Radev S. T., & **Bürkner P. C.** (in review). Fuse It or Lose It: Deep Fusion for Multimodal Simulation-Based Inference. *ArXiv preprint.*

127) Schmitt M., Pratz V., Köthe U., **Bürkner P. C.**, & Radev S. T. (in review). Consistency Models for Scalable and Fast Simulation-Based Inference. *ArXiv preprint.*

126) 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.*

125) Schmitt, M., Bürkner P. C., Köthe U., & Radev S. T. (2023). Detecting Model Misspecification in Amortized Bayesian Inference with Neural Networks: An Extended Investigation. *ArXiv preprint.*

124) Scholz M., & **Bürkner P. C.** (in review). Prediction can be safely used as a proxy for explanation in causally consistent Bayesian generalized linear models. *ArXiv preprint.*

123) Scholz M. & **Bürkner P. C.** (in review). Posterior accuracy and calibration under misspecification in Bayesian generalized linear models. *ArXiv preprint.*

122) Catalina A., **Bürkner P. C.**, & Vehtari A. (in review). Latent space projection predictive inference. *ArXiv preprint.*

121) Dubova, M., Chandramouli, S., Gigerenzer, G., . . . , Wagenmakers E. J., **Bürkner P. C.**, & Sloman, S. (in review). Is Occam's razor losing its edge? New perspectives on the principle of model parsimony. *MetaArXiv Preprint.*

120) Elsemüller L., Olischläger H., Schmitt M., **Bürkner P. C.**, Köthe U., & Radev S.T. (in review). Sensitivity-Aware Amortized Bayesian Inference. *ArXiv preprint.*

- 119) Lingel, H., **Bürkner P. C.**, Melchers, K. G., & Schulte, N. (in review). Measuring Personality When Stakes Are High: Are Graded Paired Comparisons a More Reliable Alternative to Traditional Forced-Choice Methods? *PsyArXiv preprint*.
- 118) Shi L., **Bürkner P. C.**, & Bulling A. (in review). ActionDiffusion: An Action-aware Diffusion Model for Procedure Planning in Instructional Videos. *ArXiv preprint*.
- 117) Bagañi, A., Liu, Y., Kapoor, M., Son, G., **Bürkner P. C.**, Tisdall, L., & Mata, R. (in review). Comparing the Temporal Stability and Convergent Validity of Risk Preference Measures: A Meta-Analytic Approach. *PsyArXiv preprint*.
- 2024 116) 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)*.
- 115) 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
- 114) Else Müller L., Schnuerch M., **Bürkner P. C.**, & Radev S. T. (2024). A Deep Learning Method for Comparing Bayesian Hierarchical Models. *Psychological Methods*. doi:10.1037/met0000645
- 113) Huber F., **Bürkner P. C.**, Göttsche D., & Schulte M. (2024). Knowledge-based modeling of simulation behavior for Bayesian optimization. *Computational Mechanics*. doi:10.1007/s00466-023-02427-3
- 112) Raulo A., **Bürkner P. C.**, Dale J., English H., Finerty G., Lamberth C., Firth J. A., Coulson T., & Knowles S. (2024). Social and environmental transmission spread different sets of gut microbes in wild mice. *Nature Ecology & Evolution*. doi:10.1038/s41559-024-02381-0
- 111) Kołczyńska M., **Bürkner P. C.**, Kennedy L., & Vehtari A. (2024). Trust in state institutions in Europe, 1989-2019. *Survey Research Methods*. doi:10.18148/srm/2024.v18i1.8119
- 110) Revathe T., Mundry R., Atmoko S. S. U., **Bürkner P. C.**, van Noordwijk M. A., & Schuppli C. (2024). Maternal behavior in Sumatran orangutans (*Pongo abelii*) is modulated by mother-offspring characteristics and socioecological factors. *International Journal of Primatology*. doi:10.1007/s10764-024-00435-5
- 109) Schmitt M., Ewendt F., Kluttig A., Mikolajczyk R., Kraus B., Waetjen W., **Bürkner P. C.**, Stangl G., & Föller M. (2024). Smoking is associated with increased eryptosis, suicidal erythrocyte death, in a large population-based cohort. *Scientific Reports*. doi:10.1038/s41598-024-53258-y
- 108) Garcia-Argibay M., **Bürkner P. C.**, Lichtenstein P., Zhang L., D'Onofrio B. M., Andell P., Chang Z., Cortese S., & Larsson H. (2024). Methylphenidate and Short-Term Cardiovascular Risk. *JAMA Network Open*. doi:10.1001/jamanetworkopen.2024.1349
- 107) Whitridge J. W., Huff M. J., Ozubko J. D., **Bürkner P. C.**, Lahey C. D., Fawcett J. M. (2024). Singing does not necessarily improve memory more than reading aloud: An empirical and meta-analytic investigation. *Experimental Psychology*.
- 106) Schulte, N., Kaup, L., **Bürkner, P. C.**, & Holling, H. (2024). The Fakeability of Personality Measurement with Graded Paired Comparisons. *Journal of Business and Psychology*. doi:10.1007/s10869-024-09931-0
- 105) Zetsche, U., Neumann, P., **Bürkner P. C.**, Renneberg, B., Koster, E. H. W., & Hoorelbeke, K. (2024). Computerized Cognitive Training to Reduce Rumination in Major Depression: A Randomized Controlled Trial. *Behaviour Research and Therapy*. doi:10.1016/j.brat.2024.104521.
- 104) Bolzenkötter, T., **Bürkner P. C.**, Zetsche, U., & Schulze, L. (2024). Assessing the short-term effects of detached mindfulness on repetitive negative thinking and affect: A randomized controlled trial in daily life. *Mindfulness*. doi:10.1007/s12671-024-02350-5.

- 103) **Bürkner P. C.**, Scholz M., & Radev S. T. (2023). Some models are useful, but how do we know which ones? Towards a unified Bayesian model taxonomy. *Statistics Surveys*. doi:10.1214/23-SS145
- 102) **Bürkner P. C.**, Kröker I., Oladyshkin S., & Nowak W. (2023). A fully Bayesian sparse polynomial chaos expansion approach with joint priors on the coefficients and global selection of terms. *Journal of Computational Physics*. doi:10.1016/j.jcp.2023.112210
- 101) Aguilar J. E. & **Bürkner P. C.** (2023). Intuitive Joint Priors for Bayesian Linear Multilevel Models: The R2D2M2 prior. *Electronic Journal of Statistics*. doi:10.1214/23-EJS2136
- 100) Schmitt, M., Radev, S. T., & **Bürkner P. C.** (2023). Meta-Uncertainty in Bayesian Model Comparison. *Artificial Intelligence and Statistics (AISTATS) Conference Proceedings*.
- 99) Schmitt, M., **Bürkner P. C.**, Köthe U., & Radev S. T. (2023). Detecting Model Misspecification in Amortized Bayesian Inference with Neural Networks. *Proceedings of the German Conference on Pattern Recognition (GCPR)*.
- 98) Radev S. T., Schmitt M., Pratz V., Picchini U., Köthe U., & **Bürkner P. C.** (2023). JANA: Jointly Amortized Neural Approximation of Complex Bayesian Models. *Uncertainty in Artificial Intelligence (UAI) Conference Proceedings*.
- 97) Schumacher L., **Bürkner P. C.**, Voss A., Köthe U., & Radev S. T. (2023). Neural Superstatistics: A Bayesian Method for Estimating Dynamic Models of Cognition. *Scientific Reports*. doi:10.1038/s41598-023-40278-3
- 96) Modrák M., Moon A. H., Kim S., **Bürkner P. C.**, Huurre N., Faltejsková K., Gelman A., & Vehtari A. (2023). Simulation-Based Calibration Checking for Bayesian Computation: The Choice of Test Quantities Shapes Sensitivity. *Bayesian Analysis*. doi:10.1214/23-BA1404
- 95) Perini L., **Bürkner P. C.**, & Klami A. (2023). Estimating the Contamination Factor's Distribution in Unsupervised Anomaly Detection. *Proceedings of the International Conference on Machine Learning (ICML)*.
- 94) Riutort-Mayol G., **Bürkner P. C.**, Andersen M. R., Solin A., & Vehtari A. (2023). Practical Hilbert space approximate Bayesian Gaussian processes for probabilistic programming. *Statistics and Computing*. doi:10.1007/s11222-022-10167-2
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June 28, 2024