

PAUL-CHRISTIAN BÜRKNER

GENERAL INFORMATION

<i>Date of Birth</i>	16 June 1991
<i>Nationality</i>	German
<i>Work Address</i>	Vogelpothsweg 78, 44227 Dortmund, Germany
<i>Email</i>	paul.buerkner@gmail.com
<i>Website</i>	https://paul-buerkner.github.io/

KEY SCIENTIFIC METRICS

<i>Publications</i>	88 (peer-reviewed only)
<i>Funding</i>	950,000 € (third-party only)
<i>Citations</i>	12,541 (source: GoogleScholar)
<i>h-index</i>	30 (source: GoogleScholar)

WORK EXPERIENCE

<i>University of Dortmund</i>	<i>since 2023</i>	Full Professor for Computational Statistics Full Professor for Computational Statistics, Department of Statistics, Technical University of Dortmund, 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>Aalto University</i>	<i>2019-2020</i>	Postdoctoral Researcher Research Post-Doc at the chair of Computational Probabilistic Modeling (Prof. Dr. Vehtari), Aalto University, Department of Computer Science, Finland.
	<i>2014-2019</i>	Research Associate and Lecturer Research associate at the chair of Statistics and Methods (Prof. Dr. Holling), University of Münster, Department of Psychology, Germany. Lecturer in Statistics I and II for the Bachelor's Degree Program in Psychology.
<i>University of Münster</i>		

HIGHER EDUCATION

<i>PhD in Psychology</i>	<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>Master of Mathematics</i>		
<i>Master of Psychology</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>Bachelor of Mathematics</i>	2011-2014	University of Hagen	Grade: 1.7 · Institute of Mathematics Thesis: <i>A Hull Operator for Complex Matroids.</i>
<i>Bachelor of Psychology</i>	2010-2013	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	Bürkner P. C. (2022). Intuitive Joint Priors for Bayesian Multilevel Models. <i>Funder: German Research Foundation (DFG). 238,000 €.</i>
DFG	Bürkner P. C. (2022). Bayesian Distributional Latent Variable Models. <i>Funder: German Research Foundation (DFG). 238,000 €.</i>
DFG	Bürkner P. C. & Bulling A. (2022). Amortized Bayesian Inference for Multilevel Models. <i>Funder: German Research Foundation (DFG). 232,000 €.</i>
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. 285,000 €.</i>
Cyber Valley	Bürkner P. C. (2021). Meta-Uncertainty in Bayesian Model Comparison. <i>Funder: Cyber Valley Research Fund. 242,000 €.</i>
EXC SimTech	Bürkner P. C. & Sedlmair M. (2021). Machine Learning for Bayesian Model Building. <i>Funder: Cluster of Excellence SimTech. 285,000 €.</i>
EXC SimTech	Bulling A. & Bürkner P. C. (2021). Bayesian Intent Prediction for Human-Machine Collaboration. <i>Funder: Cluster of Excellence SimTech. 175,000 €.</i>
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>

AWARDS

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

<i>brms</i>	Lead author · An R package for Bayesian regression models using Stan. Received multiple awards (see the Awards section).
<i>posterior</i>	Lead author · An R package for working with posterior distributions.
<i>thurstonianIRT</i>	Lead author · An R Package for fitting Thurstonian IRT models.
<i>BayesFlow</i>	Author · A Python library for simulation-based Bayesian inference.
<i>posteriordb</i>	Author · A Posterior Database for Bayesian Inference.
<i>loo</i>	Author · An R package for approximate leave-one-out cross-validation.
<i>ggsimplex</i>	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>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>Faculty Member</i>	since 2021 · Faculty Member of the International Max Planck Research School for Intelligent Systems (IMPRS-IS; https://imprs.is.mpg.de/).
<i>Member</i>	since 2021 · Member of Cyber-Valley (https://cyber-valley.de/en).
<i>Member</i>	since 2021 · Member of the ELLIS Society (https://ellis.eu/).
<i>Founding Member</i>	since 2021 · 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

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	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>

LECTURES

Simulation Science	2022 · University of Stuttgart Title: <i>Bayesian Statistics and Probabilistic Machine Learning.</i> No evaluation available.
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<i>Simulation Science</i>	2021 · University of Stuttgart Title: <i>ML Sessions: Bayesian Statistics</i> . No evaluation available.
<i>Computer Science</i>	2019 · Aalto University Title: <i>Bayesian Data Analysis</i> . No evaluation available. Contributed as TA.
<i>Psychology</i>	2014-2019 · University of Münster · 5 times Title: <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 Title: <i>Inferential Statistics</i> . Average Evaluation: 12.1 points (15 point <i>abitur</i> scale).

SEMINARS

<i>Simulation Science</i>	2021-2022 · University of Stuttgart · 2 times Title: <i>Advanced Topics in Simulation Science</i> . No evaluation available.
<i>Psychology</i>	2018 · University of Münster · 2 times Title: <i>Advanced Statistics II: Structural Equation Modeling and Bayesian Statistics</i> . Average Evaluation: 10.9 points (15 point <i>abitur</i> scale).

SELECTED WORKSHOPS

<i>Oxford University</i>	2023 · Department of Biology · 1 day Title: <i>Bayesian modeling for biologists using brms</i> .
<i>University of Tübingen</i>	2023 · Center of Methods · 2 days Title: <i>Bayesian modeling with the brms package</i> .
<i>TU Dortmund University</i>	2022 · Department of Statistics · 2 days Title: <i>Bayesian Statistics</i> .
<i>University of Salzburg</i>	2022 · Department of Psychology · 2 days Title: <i>Introduction to Bayesian Data Analysis</i> .
<i>Oxford University</i>	2021 · Department of Zoology · 4 days Title: <i>Bayesian Regression Modelling for Biologists</i> .
<i>Research Cluster SMiP</i>	2020 · Mannheim · 2 days Title: <i>Introduction to Stan: A Probabilistic Programming Language for Bayesian Inference</i> .
<i>University of Aarhus</i>	2020 · Department of Economics and Business Economics · 1 day Title: <i>Bayesian Model and Variable Selection</i> .
<i>MPI for Human Development</i>	2019 · Göttingen · 1 day Title: <i>Bayesian Multilevel Modeling</i> .
<i>MPI for Emp. Aesthetics</i>	2019 · Frankfurt · 2 days Title: <i>Bayesian Multilevel Modeling</i> .
<i>Multilevel Conference</i>	2019 · Utrecht · 1 day Title: <i>Introduction to Bayesian Data Analysis</i> .
<i>DagStat Conference</i>	2019 · Munich · 1 day Title: <i>Bayesian Data Analysis using Stan</i> .
<i>University of Lausanne</i>	2018 · Department of Psychology · 2 days Title: <i>Introduction to Meta-Analysis</i> .
<i>University of Magdeburg</i>	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>

CURRENT PHD STUDENTS

University of Stuttgart	since 2022 · Florence Bockting Topic: <i>Simulation-Based Prior Distributions for Bayesian models.</i>
University of Stuttgart	since 2022 · Luna Fazio Topic: <i>Bayesian Distributional Latent Variable Models.</i>
University of Stuttgart	since 2022 · Soham Mukherjee Topic: <i>Probabilistic Models for scRNA Sequencing Data.</i> Co-Advisor: Prof. Manfred Claassen
University of Stuttgart	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
University of Stuttgart	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: <i>Intuitive Joint Priors for Bayesian Multilevel Models.</i>
University of Stuttgart	since 2021 · Marvin Schmitt · Computer Science Topic: <i>Meta-Uncertainty in Bayesian Model Comparison.</i>
Aalto University	since 2021 · Noa Kallioinen · Computer Science Topic: <i>Sensitivity Diagnostics in a Bayesian Workflow.</i> Primary Advisor: Prof. Aki Vehtari
Aalto University	since 2020 · Teemu Säilynoja · Computer Science Topic: <i>Convergence and Goodness-of-Fit Diagnostics in a Bayesian Workflow.</i> Primary Advisor: Prof. Aki Vehtari
Aalto University	since 2019 · Alejandro Catalonia · Computer Science Topic: <i>Robust Bayesian Methods for Model and Variable Selection.</i> Primary Advisor: Prof. Aki Vehtari

GRADUATED PHD STUDENTS

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 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

University of
Heidelberg

since 2021 · Stefan Radev
Topic: *Amortized Bayesian Inference.*
Co-Advisor: Prof. Ullrich Köthe

ALL PUBLICATIONS

In Review

109) **Bürkner P. C.**, Scholz M., & Radev S. T. (in review). Some models are useful, but how do we know which ones? Towards a unified Bayesian model taxonomy. *ArXiv preprint*.

108) 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*.

107) Schmitt, M., **Bürkner P. C.**, Köthe U., & Radev S. T. (in review). Detecting Model Misspecification in Amortized Bayesian Inference with Neural Networks. *ArXiv preprint*.

106) Modrák M., Moon A. H., Kim S., **Bürkner P. C.**, Huurre N., Faltejsková K., Gelman A., & Vehtari A. (in review). Simulation-Based Calibration Checking for Bayesian Computation: The Choice of Test Quantities Shapes Sensitivity. *ArXiv preprint*.

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

104) Kallioinen N., Paananen T., **Bürkner P. C.**, & Vehtari A. (in review). Detecting and diagnosing prior and likelihood sensitivity with power-scaling. *ArXiv preprint*.

103) Elsemüller L., Schnuerch M., **Bürkner P. C.**, & Radev S. T. (in review). A Deep Learning Method for Comparing Bayesian Hierarchical Models. *ArXiv preprint*.

102) Schumacher L., **Bürkner P. C.**, Voss A., Köthe U., & Radev S. T. (in review). Neural Superstatistics: A Bayesian Method for Estimating Dynamic Models of Cognition. *ArXiv preprint*.

101) 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*.

100) Schulte, N., Kaup, L., Bürkner, P. C., & Holling, H. (in review). The Fakeability of Personality Measurement with Graded Paired Comparisons. *PsyArXiv preprint*.

- 99) Kolczyńska M., **Bürkner P. C.**, Kennedy L., & Vehtari A. (in review). Trust in state institutions in Europe, 1989-2019. *SocArXiv preprint*.
- 98) Bolzenkötter, T., **Bürkner P. C.**, Zetsche, U., & Schulze, L. (in review). Assessing the short-term effects of detached mindfulness on repetitive negative thinking and affect: A randomized controlled trial in daily life. *PsyArXiv preprint*.
- 2023 97) **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*.
- 96) Aguilar J. E. & **Bürkner P. C.** (2023). Intuitive Joint Priors for Bayesian Linear Multilevel Models: The R2D2M2 prior. *Electronic Journal of Statistics*.
- 95) Schmitt, M., Radev, S. T., & **Bürkner P. C.** (2023). Meta-Uncertainty in Bayesian Model Comparison. *Artificial Intelligence and Statistics (AISTATS) Conference Proceedings*.
- 94) 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*.
- 93) 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
- 92) Mikkola P., Martin O., Chandramouli S., ..., **Bürkner P. C.**, & Klami A. (2023). Prior knowledge elicitation: The past, present, and future. *Bayesian Analysis*.
- 91) 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)*.
- 90) Rodriguez, J. E., Williams, D. R., & **Bürkner P. C.** (2023). Heterogeneous Heterogeneity by Default: Testing Categorical Moderators in Random-effects Meta-Analysis. *British Journal of Mathematical and Statistical Psychology*. doi:10.1111/bmsp.12299
- 89) Kolczyńska M. & **Bürkner P. C.** (2023). Modeling public opinion over time: A simulation study of latent trend models. *Journal of Survey Statistics and Methodology*.
- 88) Arslan, R. C., Blake, K., Botzet, L., **Bürkner, P. C.**, DeBruine, L. M., Fiers, T., ..., & Stern, J. (2023). Not within spitting distance: salivary immunoassays of estradiol have subpar validity for cycle phase. *Psychoneuroendocrinology*. doi:10.1016/j.psyneuen.2022.105994
- 87) Zhang, J., **Bürkner, P. C.**, Kiesel A., & Dignath D. (2023). How Emotional Stimuli Modulate Cognitive Control: A Meta-Analytic Review of Studies With Conflict Tasks. *Psychological Bulletin*.
- 86) Zetsche, U., **Bürkner P. C.**, Bohländer, J., Renneberg, B., Röpke, S., & Schulze, L. (2023). Daily affect regulation in borderline personality disorder and major depression. *Clinical Psychological Science*.
- 85) Danböck, S. K., Franke, L. K., Miedl, S. F., Liedlgruber, M., **Bürkner P. C.**, & Wilhelm, F. H. (2023). Aversive-Audiovisual and Painful-Electrical Stimulation Cause Peritraumatic Dissociation: A Functional Magnetic Resonance Imaging Study. *Behaviour Research and Therapy*. doi:10.1016/j.brat.2023.104289

- 84) Ewendt, F., Schmitt, M., Kluttig, A., Kühn, J., ..., **Bürkner P. C.**, Föller, M., & Stangl, G. I. (2023). Association between vitamin D status and eryptosis – results from the German National Cohort Study. *Annals of Hematology*. doi:10.1007/s00277-023-05239-w
- 2022 83) **Bürkner P. C.** (2022). On the information obtainable from comparative judgments. *Psychometrika*. doi:10.1007/s11336-022-09843-z
- 82) Säilynoja, T., **Bürkner P. C.**, & Vehtari A. (2022). Graphical Test for Discrete Uniformity and its Applications in Goodness of Fit Evaluation and Multiple Sample Comparison. *Statistics and Computing*.
- 81) Catalina A., **Bürkner P. C.**, & Vehtari A. (2022). Projection Predictive Inference for Generalized Linear and Additive Multilevel Models. *Artificial Intelligence and Statistics (AISTATS) Conference Proceedings*.
- 80) Pavone, F., Piironen, J., **Bürkner P. C.**, & Vehtari A. (2022). Using reference models in variable selection. *Computational Statistics*.
- 79) Schad D. J., Nicenboim B., **Bürkner P. C.**, Betancourt M., & Vasishth S. (2022). Workflow Techniques for the Robust Use of Bayes Factors. *Psychological Methods*.
- 78) Heck, D., Boehm, U., Böing-Messing, F., **Bürkner P. C.**, ..., Hoijtink, H. (2022). A Review of Applications of the Bayes Factor in Psychological Research. *Psychological Methods*.
- 77) Malén T., Karjalainen T., Isojärvi J., Vehtari A., **Bürkner P. C.**, ..., & Nummenmaa L. (2022). Age and sex dependent variability of type 2 dopamine receptors in the human brain: A large-scale PET cohort. *NeuroImage*.
- 76) Franke, L. K., Miedl, S. F., Danböck, S. K., Lohse, J., Liedlgruber, M., **Bürkner P. C.**, Pletzer B., & Wilhelm, F. H. (2022). Estradiol during (analogue-)trauma: risk- or protective factor for intrusive re-experiencing? *Psychoneuroendocrinology*. doi:10.1016/j.psyneuen.2022.105819
- 75) Pluhackova K., Schittny V., **Bürkner P. C.**, Siligan C., & Horner A. (2022). Multiple Pore Lining Residues modulate Water Permeability of GlpF. *Protein Science*.
- 74) George J. P., **Bürkner P. C.**, Sanders T., Neumann M., Cammalleri C., Vogt J., & Lang M. (2022). Long-term forest monitoring unravels constant mortality rise in European forests. *Plant Biology*.
- 73) Seaton F. M., Robinson D. A., Monteith D., Lebron I., **Bürkner P. C.**, Tomlinson S., Emmett B. A., & Smart S. M. (2022). Fifty years of reduction in sulphur deposition drives recovery in soil pH and plant communities. *Journal of Ecology*.
- 72) Jordon M., Smith P., Long P., **Bürkner P. C.**, Petrokofsky G. & Willis K. (2022). Can Regenerative Agriculture increase national soil carbon stocks? Simulated country-scale adoption of reduced tillage, cover cropping, and ley-arable integration using RothC-26.3. *Science of the Total Environment*. doi:10.1016/j.scitotenv.2022.153955
- 71) Jordon M., Willis K., **Bürkner P. C.**, & Petrokofsky G. (2022). Rotational grazing and multispecies herbal leys increase productivity in temperate pastoral systems – a meta-analysis. *Agriculture, Ecosystems & Environment*. doi:doi:10.1016/j.agee.2022.108075
- 70) Jordon M., Willis K., **Bürkner P. C.**, Haddaway N., Smith P., & Petrokofsky G. (2022). Temperate Regenerative Agriculture; a win-win for soil carbon and crop yield? *Environmental Research Letters*. doi:10.1088/1748-9326/ac8609

69) Nohe C., Hüffmeier J., **Bürkner P. C.**, Mazei J., Sondern D., Runte A., Sieber F., & Hertel G. (2022). Unethical Choice in Negotiations: A Meta-Analysis on Gender Differences and Their Moderators. *Organizational Behavior and Human Decision Processes*.

68) Teetzen, F., **Bürkner P. C.**, Gregersen, S., & Vincent-Höper, S. (2022). The Mediating Effects of Work Characteristics on the Relationship between Transformational Leadership and Employee Well-Being: A Meta-Analytic Investigation. *Journal of Environmental Research and Public Health*. doi:10.3390/ijerph19053133

67) Kołczyńska M. & **Bürkner P. C.** (2022). Political trust as a cause and consequence of democracy: Longitudinal analysis of European data. *SocArXiv preprint*.

2021

66) **Bürkner P. C.** (2021). Bayesian Item Response Modelling in R with brms and Stan. *Journal of Statistical Software*. 100(5). 1–54. doi:10.18637/jss.v100.i05

65) Vehtari A., Gelman A., Simpson D., Carpenter B., & **Bürkner P. C.** (2021). Rank-normalization, folding, and localization: An improved Rhat for assessing convergence of MCMC (with discussion). *Bayesian Analysis*. 16(2), 667–718. doi:10.1214/20-BA1221

64) Radev S., D'Alessandro M., Mertens U. K., Voss A., Köthe U., & **Bürkner P. C.** (2021). Amortized Bayesian Model Comparison with Evidential Deep Learning. *IEEE Transactions on Neural Networks and Learning Systems*. doi:10.1109/TNNLS.2021.3124052

63) Paananen T., Piironen, J., **Bürkner P. C.**, & Vehtari A. (2021). Implicitly Adaptive Importance Sampling. *Statistics and Computing*. 31(2), 1–19. doi:10.1007/s11222-020-09982-2

62) Williams, D. R., Rodriguez, J. E., & **Bürkner P. C.** (2021). Putting Variation into Variance: Modeling Between-Study Heterogeneity in Meta-Analysis. *PsyArXiv preprint*.

61) Driebe, J. C., Sidari, M., Dufner, M., von der Heiden, J. M., **Bürkner P. C.**, Penke, L., Zietsch B. P., & Arslan, R. C. (2021). Intelligence can be detected but is not found attractive in videos and live interactions. *Evolution and Human Behavior*.

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