Gidon T. **Frischkorn**

Cognitive Psychometrics · Bayesian Methods · Intelligence Research

Binzmühlerstrasse 14/22 - CH-8050 Zurich, Switzerland

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Education

Dr. phil. (PhD), Psychology

Heidelberg, Germany

Ruprecht-Karls Universität Heidelberg

09/2015 – 03/2019

- With distinction: *summa cum laude*

Master of Science, Psychology

Heidelberg, Germany

Ruprecht-Karls Universität Heidelberg

10/2013 – 08/2015

- GPA 1.0 (top grade)

Bachelor of Science, Psychology

Heidelberg, Germany

Ruprecht-Karls Universität Heidelberg

10/2009 – 08/2012

- GPA 1.6 (equivalent: very good)

Professional Experience

SNF Ambizione Fellow

Zurich, Switzerland

University of Zurich (UZH), Switzerland

01/2023 – present

- Secured and managed CHF 916,510 in competitive SNF funding as PI, leading an independent four-person research group from inception to publication
- Developed and published the bmm R package (CRAN) for Bayesian measurement models — a fully documented, open-source tool adopted across multiple research groups
- Designed and executed multiple experimental studies (lab and online), producing 10+ peer-reviewed publications on cognitive processes and individual differences
- Developing and applying hierarchical Bayesian modeling approaches to measure and dissociate cognitive processes
- Managing budget, personnel planning, and scientific direction of an SNSF-funded research project (over CHF 1 million incl. Flexibility Grant, 4 years)
- Planning, conducting, and analyzing experimental studies (lab and online)
- Teaching advanced statistical methods

Lecturer and Research Associate in Statistics & Methods

Lucerne, Switzerland

University of Lucerne, Switzerland (20% appointment)

08/2025 – 07/2026

- Designed and taught Statistics I and Statistics IV (incl. reproducible data analysis in R) for 150+ undergraduates, with interactive R-based exercise materials built for reproducibility
- Sole responsible instructor for both statistics lectures: design, delivery, accompanying exercises, and examination
- Developed open teaching materials in R and Quarto supporting hands-on statistical training across large cohorts
- Shaping the curricular design of the methods track

Postdoctoral Researcher

Zurich, Switzerland

University of Zurich (UZH), Switzerland

01/2019 – 12/2022

- Led international multi-site research projects at the intersection of psychometrics and cognitive psychology, contributing to 15+ peer-reviewed publications
- Secured external network funding (DFG, €44,645 as co-PI) and authored competitive grant applications across two funding cycles
- Advised a research group of 10+ on statistical methodology — Bayesian inference, mixed-effects models, and reproducible analysis pipelines
- Teaching courses and supervising bachelor and master theses
- Advising on statistical methodology and research computing for the group

Ph.D. Student

Heidelberg, Germany

Heidelberg University, Germany *09/2015 – 12/2018*

- Junior researcher in the "Differential Psychology & Diagnostics" research group
- Independently conducting a research project on individual differences in intelligence
- Applying advanced statistical and psychometric modeling techniques
- Teaching programming and experimental methods

Research Assistant

Heidelberg, Germany

Heidelberg University, Germany *09/2010 – 08/2015*

- Conducting and analyzing behavioral experiments
- Data management and preparation for empirical research projects

Shortlisted in Appointment Procedures

W2 Professorship in *Psychological Research Methods*

Witten-Herdecke University, Germany

Ranked 2nd on the appointment list *2024*

Language Skills

German: Native speaker (Swiss German: excellent comprehension)
English: Full professional proficiency, spoken and written (9 years of schooling + 10 years as working language)
French: Basic proficiency (DELF A2 diploma)

Awards, Honors, and Fellowships

Nominated for the UZH Mentoring Award

Award for outstanding support and mentoring of doctoral students *2024*

Fellow of the Psychonomic Society

Recognized for outstanding contributions to cognitive psychology and the development of an independent research profile *2024*

Teacher of the Hour

University of Zurich

Award for outstanding teaching during the COVID-19 outbreak *2020*

Best Paper Award

Journal of Intelligence

For the article: Cognitive Models in Intelligence Research: Advantages and Recommendations for Their Application *2019*

Franz Emanuel Weinert Preis

Department of Psychology, Heidelberg University

Award for the master thesis *2015*

Scholar of the German Academic Scholarship Foundation (Studienstiftung des deutschen Volkes)

2009–2015

Third-Party Funding

The binding hypothesis – A unified account of cognitive individual differences?

SNF (CHF 916'510)

PI | competitive *2023–2026*

- This project investigates individual differences in cognitive processes by combining experimental paradigms with formal measurement and process models. The aim is to develop theoretically grounded indicators of cognitive processes and examine their relationship with higher-order performance measures. The project is run as an independent research group with full budget and personnel responsibility.

Flexibility Grant

SNF (CHF 120'000)

PI | non-competitive *2023–2026*

- Supplementary funding within the Ambizione project to support the compatibility of family life and academic work.

SNSF Starting Grant 2026 — BASIC

SNF (ca. CHF 1.8 Mio. (beantragt))

PI | competitive — submitted, decision pending *ab 2027 (geplant)*

- Submitted to the SNSF on 2026-05-01, decision pending. Project on process-oriented, bias-reduced assessment of individual differences using cognitive measurement models.

Neurocognitive Psychometrics (research network)

DFG (€ 44,645)

Co-PI | competitive *2022–2026*

- An international scientific network to foster exchange between psychometrics, cognitive psychology, and neurocognition. My role involved co-coordinating the network and shaping its conceptual direction and grant applications.

Bayes Factor Estimation for Complex Hierarchical Models

Graduate Campus UZH (CHF 4'000)

Co-PI | competitive *2024*

- Funding for an international workshop on Bayes factor estimation in complex hierarchical models.

Travel Awards

Travel Award, Psychonomic Society Annual Meeting

CHF 1,000

60th Annual Meeting, Montreal, Canada *2019*

Student Travel Award, ISIR Annual Meeting

€ 1,000

International Society for Intelligence Research, Edinburgh, Scotland *2018*

Travel Award, Psychonomic Society Annual Meeting

€ 1,000

58th Annual Meeting, Vancouver, Canada *2017*

Publications and Research Contributions

Total citations: > 1000 (OpenAlex)
h-index: 16 | i-10 index: 20
Peer-reviewed articles: 34 | Preprints: 9

Software

bmm (R package)

Lead author

R package for Easy and Accessible Bayesian Measurement Models Using 'brms'

Preprints

9. Courage, I., & **Frischkorn, G. T.** (under review at Psychonomic Bulletin & Review). The relation between processing speed and working memory capacity: No difference across varying procedural working memory demands. Preprint: https://osf.io/bh4ps_v1

8. Li, C., **Frischkorn, G. T.**, & Oberauer, K. (under review at Behavior Research Methods). Measuring Individual Differences with Bayesian Hierarchical Cognitive Models. Preprint: https://osf.io/24w3z_v1

7. **Frischkorn, G. T.**, Dutli, J., Musfeld, P., & Oberauer, K. (under review at Advances in Methods & Practices for Psychological Science). How to Set Priors for Hypothesis Testing in Generalized Linear Models: A Three-Step Workflow with an Application to Binomial Models. Preprint: https://osf.io/q7byw_v1
6. **Frischkorn, G. T.**, & Li, C. (under review at Advances in Methods & Practices for Psychological Science). Applying the Memory Measurement Model (M3): A Tutorial Using the bmm R Package. Preprint: https://osf.io/tcuzx_v1
5. **Frischkorn, G. T.**, Rebmann, R., & Oberauer, K. (under review at Psychological Review). Validity is a Theoretical Problem: A Computational Psychometrics Perspective on How to Measure Cognition. Preprint: https://osf.io/pczua_v1
4. Göttmann, J., **Frischkorn, G. T.**, Oberauer, K., Schaefer, S. B., & Schubert, A.-L. (invited for revision at Journal of Mathematical Psychology). *Modeling Individual Differences in Working Memory: Subject-Level Parameter Recovery within the Memory Measurement Model Framework (M^3^).* Preprint: https://doi.org/10.31234/osf.io/945d2_v1
3. Oberauer, K., Schubert, A.-L., **Frischkorn, G. T.**, Nunez, M. D., & Fiebach, C. J. (under review at Perspectives on Psychological Science). The Signal-To-Noise Ratio Hypothesis of Intelligence. Preprint: https://doi.org/10.31219/osf.io/nkms3_v2
2. Rey-Mermet, A., Haaf, J., Donzallaz, M., **Frischkorn, G.**, Hedge, C., Kempkens, N., Oberauer, K., & Schubert, A.-L. (invited for revision at Perspectives on Psychological Science). *How can we achieve a good measurement of attentional control?* Preprint: https://doi.org/10.31234/osf.io/ugk4h_v1
1. Von Bastian, C. C., Blais, C., Brewer, G., Gyurkovics, M., Hedge, C., Kałamała, P., Meier, M., Oberauer, K., Rey-Mermet, A., Rouder, J. N., Souza, A. S., Bartsch, L. M., Conway, A. R. A., Draheim, C., Engle, R. W., Friedman, N. P., **Frischkorn, G. T.**, Gustavson, D. E., Koch, I., … Wiemers, E. (Preprint). Advancing the understanding of individual differences in attentional control. Preprint: https://doi.org/10.31234/osf.io/x3b9k

Peer-Reviewed Journal Articles

34. **Frischkorn, G. T.**, Courage, I., Dames, H., Dignath, D., Pfeuffer, C. U., Schiltenwolf, M., Kiesel, A., & Oberauer, K. (2026). Bindings for Action: Bridging the Gap Between Theories of Procedural Working Memory and Action Control Research. *Journal of Cognition*, *9*(1), 16. https://doi.org/10.5334/joc.488
33. Li, C., **Frischkorn, G. T.**, & Oberauer, K. (2026). Can we process information without encoding it into working memory? *Journal of Experimental Psychology: Learning, Memory, and Cognition*. https://doi.org/10.1037/xlm0001585
32. Löffler, C., Sadus, K., **Frischkorn, G. T.**, Hagemann, D., & Schubert, A.-L. (2025). The factor structure of executive functions measured with electrophysiological correlates: An event-related potential analysis. *Journal of Experimental Psychology: Learning, Memory, and Cognition*. https://doi.org/10.1037/xlm0001549
31. **Frischkorn, G. T.**, & Oberauer, K. (2025). Is the antisaccade task a valid measure of inhibition? *Journal of Experimental Psychology: General*. https://doi.org/10.1037/xge0001808
30. Li, C., **Frischkorn, G. T.**, Dames, H., & Oberauer, K. (2025). The Benefit of Removing Information from Working Memory: Increasing Available Cognitive Resources or Reducing Interference? *Cognition*, *260*. https://doi.org/10.1016/j.cognition.2025.106134
29. Nunez, M. D., Schubert, A.-L., **Frischkorn, G. T.**, & Oberauer, K. (2025). Cognitive models of decision-making with identifiable parameters: Diffusion decision models with within-trial noise. *Journal of Mathematical Psychology*, *125*, 102917. https://doi.org/10.1016/j.jmp.2025.102917
28. **Frischkorn, G. T.**, & Popov, V. (2025). A tutorial for estimating Bayesian hierarchical mixture models for visual working memory tasks: Introducing the Bayesian Measurement Modeling (bmm) package for R. *Behavior Research Methods*, *57*(5), 144. https://doi.org/10.3758/s13428-025-02643-0
27. Li, C., **Frischkorn, G. T.**, & Oberauer, K. (2025). Updating of information in working memory: Time course and consequences. *Cognitive Psychology*, 156, 101702. https://doi.org/10.1016/j.cogpsych.2024.101702

26. Schubert, A.-L., **Frischkorn, G. T.**, Sadus, K., Welhaf, M. S., Kane, M. J., & Rummel, J. (2024). The brief mind wandering three-factor scale (BMW-3). *Behavior Research Methods*. https://doi.org/10.3758/s13428-024-02500-6

25. Dames, H., Li, C., **Frischkorn, G. T.**, & Oberauer, K. (2024). Removing information from working memory with a delay: Effective but not beneficial. *Psychonomic Bulletin & Review*. https://doi.org/10.3758/s13423-024-02550-z

24. Souza, A. S., **Frischkorn, G. T.**, & Oberauer, K. (2024). Older yet sharp: No general age-related decline in focusing attention. *Journal of Experimental Psychology: General*. https://doi.org/10.1037/xge0001649

23. Bartsch, L. M., **Frischkorn, G. T.**, & Shepherdson, P. (2024). When Load is Low, Working Memory is Shielded From Long-Term Memory's Influence. *Journal of Cognition* 7(1). https://doi.org/10.5334/joc.368

22. Löffler, C., **Frischkorn, G. T.**, Hagemann, D., Sadus, K., & Schubert, A.-L. (2024). The common factor of executive functions measures nothing but speed of information uptake. *Psychological Research*. https://doi.org/10.1007/s00426-023-01924-7

21. **Frischkorn, G. T.** (2024). Responsible Research Assessment requires structural more than procedural reforms. *Meta-Psychology*, 8. https://doi.org/10.15626/MP.2023.3734

20. Dames, H., Musfeld, P., Popov, V., Oberauer, K., & **Frischkorn, G. T.** (2024). Responsible Research Assessment Should Prioritize Theory Development and Testing Over Ticking Open Science Boxes. *Meta-Psychology*, 8. https://doi.org/10.15626/MP.2023.3735

19. Souza, A. S., & **Frischkorn, G. T.** (2023). A diffusion model analysis of age and individual differences in the retro-cue benefit. *Scientific Reports*, 13(1). https://doi.org/10.1038/s41598-023-44080-z

18. **Frischkorn, G. T.**, Wilhelm, O., & Oberauer, K. (2022). Process-oriented intelligence research: A review from the cognitive perspective. *Intelligence*, 94, 101–681. https://doi.org/10.1016/j.intell.2022.101681

17. **Frischkorn, G. T.**, Hilger, K., Kretzschmar, A., & Schubert, A.-L. (2022). Intelligenzdiagnostik der Zukunft. [The future of intelligence assessment] *Psychologische Rundschau*, 73(3), 173–189. https://doi.org/10.1026/0033-3042/a000598

16. **Frischkorn, G. T.**, von Bastian, C. C., Souza, A. S., & Oberauer, K. (2022). Individual differences in updating are not related to reasoning ability and working memory capacity. *Journal of Experimental Psychology: General*. https://doi.org/10.1037/xge0001141

15. Löffler, C., **Frischkorn, G. T.**, Rummel, J., Hagemann, D., & Schubert, A.-L. (2022). Do Attentional Lapses Account for the Worst Performance Rule? *Journal of Intelligence*, 10(1), 2. https://doi.org/10.3390/jintelligence10010002

14. **Frischkorn, G. T.**, & Oberauer, K. (2021). Intelligence test items varying in capacity demands cannot be used to test the causality of working memory capacity for fluid intelligence. *Psychonomic Bulletin & Review*. https://doi.org/10/gjp3br

13. **Frischkorn, G. T.**, & von Bastian, C. C. (2021). In Search of the Executive Cognitive Processes Proposed by Process-Overlap Theory. *Journal of Intelligence*, 9(3), 43. https://doi.org/10/gmm7dz

12. Lerche, V., von Krause, M., Voss, A., Frischkorn, G. T., Schubert, A.-L., & Hagemann, D. (2020). Diffusion modeling and intelligence: Drift rates show both domain-general and domain-specific relations with intelligence. *Journal of Experimental Psychology: General*, 149, 2207–2249. https://doi.org/10/ggt8r7

11. Schubert, A.-L., *&* ***Frischkorn, G. T.*** (2020). Neurocognitive Psychometrics of Intelligence: How Measurement Advancements Unveiled the Role of Mental Speed in Intelligence Differences. *Current Directions in Psychological Science*. https://doi.org/10/ggkz9b

10. Schubert, A.-L., Hagemann, D., Löffler, C., & **Frischkorn, G. T.** (2020). Disentangling the Effects of Processing Speed on the Association between Age Differences and Fluid Intelligence. *Journal of Intelligence*, 8(1), 1. https://doi.org/10/ggj5hm

9. Schubert, A.-L., **Frischkorn, G. T.**, & Rummel, J. (2019). The validity of the online thought-probing procedure of mind wandering is not threatened by variations of probe rate and probe framing. *Psychological Research*. https://doi.org/10/gfz6s4
8. **Frischkorn, G. T.**, Schubert, A.-L., & Hagemann, D. (2019). Processing speed, working memory, and executive functions: Independent or inter-related predictors of general intelligence. *Intelligence*, 75, 95–110. https://doi.org/10/gf3sxs
7. Schubert, A.-L., Hagemann, D., **Frischkorn, G. T.**, & Herpertz, S. C. (2018). Faster, but not smarter: An experimental analysis of the relationship between mental speed and mental abilities. *Intelligence*, 71, 66–75. https://doi.org/10/gffjb9
6. **Frischkorn, G. T.** *, & Schubert, A.-L.* (2018). Cognitive Models in Intelligence Research: Advantages and Recommendations for Their Application. *Journal of Intelligence*, 6(3), 34. https://doi.org/10/gd3vqn
5. Schubert, A.-L., Hagemann, D., & **Frischkorn, G. T.** (2017). Is general intelligence little more than the speed of higher-order processing? *Journal of Experimental Psychology: General*, 146(10), 1498-1512. https://doi.org/10/gch83n
4. **Frischkorn, G. T.**, Schubert, A.-L., Neubauer, A., & Hagemann, D. (2016). The Worst Performance Rule as Moderation: New Methods for Worst Performance Analysis. *Journal of Intelligence*, 4(3), 9. https://doi.org/10/gd3vsz
3. Schubert, A.-L., **Frischkorn, G. T.**, Hagemann, D., & Voss, A. (2016). Trait Characteristics of Diffusion Model Parameters. *Journal of Intelligence*, 4(3), 7. https://doi.org/10/gd3vs3
2. Meißner, A., Greiff, S., **Frischkorn, G. T.**, & Steinmayr, R. (2016). Predicting Complex Problem Solving and school grades with working memory and ability self-concept. *Learning and Individual Differences*, 49, 323–331. https://doi.org/10/f82798
1. **Frischkorn, G. T.**, Greiff, S., & Wüstenberg, S. (2014). The development of complex problem solving in adolescence: A latent growth curve analysis. *Journal of Educational Psychology*, 106(4), 1007–1020. https://doi.org/10/gd3vsg

Presentations

Talk Series

Distributed Working Memory Series (DWMS)
Organizer of a virtual talk series bringing together working memory researchers worldwide *2021*

Invited Talks

Analyzing data on the level of psychological processes
Colloquium of the Psychological Institute, Johannes-Gutenberg University Mainz *July 2024*

The *bmm* R package: Easy and Accessible Bayesian Measurement Models using 'brms'
Department of Statistics, Computational Statistics Lab, TU Dortmund *May 2024*

Measuring psychological theories requires formal theories
Faculty for Psychology, Sigmund Freud University Vienna *May 2024*

Measuring & dissociating cognitive processes: Problems and pitfalls exemplified with the Anti-Saccade Task
Working Memory, Cognition, and Development Laboratory, University of Geneva *May 2022*

Implications from cognitive psychology for measuring cognitive processes: The example of the anti-saccade task
Chair of General Psychology: Cognition, Action, and Sustainability, University of Freiburg *May 2021*

Conference Contributions

More than 30 contributions (18 as talks) at international conferences, including:

- Annual Meeting of the Psychonomic Society

- Conference of the European Society of Cognitive Psychology
- Congress of the German Psychological Society
- European Working Memory Symposium
- Annual Meeting Psychology & Brain
- Conference of Experimental Psychologists (TeaP)
- Conference of the European Mathematical Psychology Group
- International Workshop on Psychometric Computing

Teaching

Overview of teaching (since 2015, summarized): 4 lecture courses; more than 10 seminars; 6 workshops

Lectures

Statistics I

University of Lucerne

HS 2025

- 3 contact hours/week; 5 ECTS
- B.Sc. Psychology, approx. 150 students
- Evaluation: Overall course rating: 3.0; Instructor: 3.4 (first delivery; large mandatory introductory cohort)

Statistics IV (Reproducible Data Analysis in R)

University of Lucerne

FS 2026

- Reproducible data analysis in R with interactive Quarto/webR exercise materials
- B.Sc. Psychology, approx. 80 students
- Evaluation: Clearly positive evaluation (1–6 scale; item medians 5–6): e.g., learning climate 5.2, instructor contact 5.7

Cognitive Psychology I

University of Zurich

FS 2021

- 2 contact hours/week; 3 ECTS; co-taught with Dr. Lea Bartsch; fully responsible for 6 of 12 lectures and 50% of the exam
- B.Sc. Psychology, approx. 800 students

Seminars

Introduction to Bayesian Statistics

University of Zurich

FS 2024

- 2 SWS; 4 ECTS; co-taught with Philipp Musfeld; fully responsible for 6 of 12 sessions and 50% of the exam
- M.Sc. Psychology, 15 students

Using simulations to challenge your intuitions about cognitive theories

University of Zurich

FS 2023

- 2 SWS; 4 ECTS
- M.Sc. Psychology, 20 students
- Evaluation: Overall course rating: 4.9; Instructor: 5.7

Using simulations to challenge your intuitions about statistics and cognitive theories

University of Zurich

FS 2022

- 2 SWS; 4 ECTS
- M.Sc. Psychology, 5 students

Cutting Edge Research in Human Cognition

University of Zurich

HS 2021

- 2 SWS; 4 ECTS; co-taught with Dr. Lea Bartsch; fully responsible for 6 of 12 sessions and 50% of the exam
- M.Sc. Psychology, 25 students
- Evaluation: Overall course rating: 5.6; Instructor: 5.7

Workshops

Analyzing data on the level of cognitive processes

24th Conference of the European Society of Cognitive Psychology, Sheffield, United Kingdom *September 2025*

Introduction to Structural Equation Modeling in R

Graduate School of the Faculty of Arts and Social Sciences at University of Zurich, Switzerland *June 2025*

Bayesian Modelling for Observational Data

R group at the Institute of Psychology at University of Zurich, Switzerland *April 2024*

Improving Inference About Cognitive Processes Using Mixture Models

23rd Conference of the European Society of Cognitive Psychology, Porto, Portugal *September 2023*

Structural equation modeling in R & lavaan

Workshop for PhD & MSc students, University of Porto *October 2022*

Higher Education Professional Development

Foundation course: University teaching

2-day workshop on evidence-based structuring of lectures and seminars & designing rubrics for exams and written assignments *HS 2025*

Supervision Training

2-day workshop as part of the postdoctoral professional development program of the Graduate School at the Faculty of Arts, University of Zurich *June 2025*

Thematic Breadth

- Introductory and intermediate courses in statistics and research methods
- Advanced courses on Bayesian statistics, hierarchical models, and structural equation models
- Seminars on psychometric modeling and test theory
- Project and methods seminars on planning, conducting, and analyzing experimental studies
- Programming courses for experimental implementation and data analysis (including R, jsPsych)
- Research seminars and colloquia in cognitive psychology and individual differences

Engagement in the Scientific Community

Editorial Roles

- Journal of Cognition (Associate Editor)
- PCI: Registered Reports (Recommender)
- PCI: Psychology (Recommender)
- Psychological Science (Editorial Board Member)
- Behavior Research Methods (Consulting Editor)

Reviewing

Research funding

- Swiss National Science Foundation
- National Science Center Poland

Scientific journals

- Advances in Methods and Practices in Psychological Science
- Behavior Research Methods
- Current Directions in Psychological Science
- Experimental Psychology
- Journal of Experimental Psychology: General
- Journal of Experimental Psychology: Learning, Memory, and Cognition
- Memory & Cognition
- Psychological Review
- Psychological Science
- Quarterly Journal of Experimental Psychology

Additional international journals (> 20 total)

Memberships

- Psychonomic Society
- European Society of Cognitive Psychology (ESCoP)
- Society for the Improvement of Psychological Science

Engagement in Academic Self-Governance

ECR Representative, Strategy Committee

Department of Psychology, University of Zurich *10/2019 – 06/2024*

Deputy ECR Representative, Departmental Assembly

Department of Psychology, University of Zurich *10/2019 – 06/2024*

Deputy ECR Representative, Appointment Committee
Professorship "Work and Organizational Psychology," Dept. of Psychology, UZH *2024*