Dr. Martin Schoemann

Psychological Research Methods & Cognitive Modelling
School of Science – Faculty of Psychology
TUD Dresden University of Technology
BZW, Office A322
Zellescher Weg 17, Dresden, D-01069
\$\frac{\textbf{x}}{2} +49 (351) 463-32467
\$\textbf{m}\$ martin.schoemann[at]tu-dresden.de

Academic Appointments

2022 – present	TUD Dresden University of Technology , Dresden, Germany Research Associate, Psychological Research Methods and Cognitive Modelling
2020 – 2022	Aarhus University , Aarhus, Denmark Research Assistant, Management
2016 – 2020	TUD Dresden University of Technology , Dresden, Germany Predoctoral Researcher, Psychological Research Methods and Cognitive Modelling and CRC 940 <i>Volition and Cognitive Control</i>

Education & Training

2025 TUD Dresden University of Technology, Dresden, Germany **Dr. rer. nat. (PhD) Psychology** Dissertation: The Trouble with Reverse Inference: On the Mapping between Decision Processes and Movement Dynamics

Doctoral Committee: Stefan Scherbaum, Andreas Glöckner, Sebastian Pannasch, & Alexander Strobel

2016 Erfurt University, Erfurt, Germany

M. Sc. Psychology

Thesis: Distinguishing Comparison Strategies in Intertemporal Decision Making: An Eye-tracking Study Advisors: Frank Renkewitz & Stefan Scherbaum

2013 Erfurt University, Erfurt, Germany

B. A. Psychology & Philosophy

Thesis: Small Sample Advantage in Complex Environments: On the Detection of Population Parameters in the Iowa Gamblina Task

Advisor: Tilman Betsch

2024 Hochschudidaktik Sachsen, Leipzig, Germany

Cert. Teacher of HE

Thesis: Reducing Cognitive Load while Simultaneously Teaching Statistics and Programming Skills

Research Interests

- Process Dynamics in Judgement and Decision Making: Exploring the temporal dynamics of cognitive and affective processes underlying human judgment and decision making.
- **Methods of Process Tracing**: Developing and applying process-tracing methods to uncover temporal dynamics of cognitive processes underlying human behavior.
- Cognitive Modeling (DDM, ABM, DFT): Using formal cognitive models such as Drift Diffusion Model, Agent-Based Modeling, and Dynamic Field Theory to simulate and explain the cognitive processes driving human behavior.
- **Behavior Change**: Investigating psychological drivers and interventions that promote sustainable and health-related change in human behavior.
- **Meta-science**: Examining the practices, methods, and structures of psychological science to improve research transparency, reproducibility, and cumulative knowledge building.

Teaching Interests

- Psychological Research Methods: Teaching rigorous research design and methodology to foster critical thinking, transparency, and reproducibility in psychological science.
- **Statistics**: Introducing statistical reasoning and providing hands-on training on tools for analyzing psychological data in a reproducible manner.
- **Programming & Data Science**: Providing hands-on training for programming and data analytics in R and MATLAB for transparent, reproducible, and efficient handling, visualization, evaluation of psychological data.
- **Cognitive Modeling**: Introducing formal modeling techniques to stimulate better reasoning and theory building in psychological science.
- **Meta analysis & Meta studies**: Teaching methods for synthesizing evidence across studies and to establish robust and generalizable psychological research findings.

Publications

ORCID: 0000-0002-2531-4175 | Google Scholar Profile

Citations: 527 • h-index: 11 • i10-index: 11

* indicates equal contribution

Refereed Journal Articles

- Bernardoni, F., King, J. A., Schoemann, M., Seidel, M., Keusch, L., Mehlhase, E., ... & Ehrlich, S. (2025). Reduced contextual influence on decision conflict during delay discounting persists after weight-restoration in anorexia nervosa. *Appetite*. 209, 107934. DOI: 10.1016/j.appet.2025.107934. Citations (#): 0.
- 2. Grenke, O., Scherbaum, S., & **Schoemann, M.** (2025). Exploring the synthesis of mouse cursor tracking and drift diffusion modeling in a perceptual decision-making task. *Behavior Research Methods*. 57, 297. DOI: 10.3758/s13428-025-02805-0. Citations (#): 0.
- 3. Löschner, D. M., **Schoemann, M.**, Jauk, E., Herchenhahn, L., Schwöbel, S., Kanske, P., & Scherbaum, S. (2025). A computational framework to study the etiology of grandiose narcissism. *Scientific Reports*. 15(1), 5897. DOI: 10.1038/s41598-025-90109-w. Citations (#): 0.
- 4. *Schoemann, M., *van de Mosselaar, P., Perkovic, S., & Orquin, J. L. (2025). A method for measuring consumer confusion due to lookalike labels. *International Journal of Research in Marketing*. 42(2), 298-315. DOI: 10.1016/j.ijresmar.2024.08.010. Citations (#): 3.
- 5. Maguinness, C., Schall, S., Mathias, B., **Schoemann, M.**, & von Kriegstein, K. (2024). Prior multisensory learning can facilitate auditory-only voice-identity and speech recognition in noise. *Quarterly Journal of Experimental Psychology.* 78(7), 1348-1368. DOI: 10.1177/17470218241278649. Citations (#): 0.
- 6. Senftleben, U., **Schoemann, M.**, & Scherbaum, S. (2024). Choice Repetition Bias in Intertemporal Choice: An Eye-Tracking Study. *Journal of Behavioral Decision Making*. *37*(3), e2388. DOI: 10.1002/bdm.2388. Citations (#): 2.
- Bernardoni, F., King, J. A., Hellerhoff, I., Schoemann, M., Seidel, M., Geisler, D., ... & Ehrlich, S. (2023). Mouse-cursor trajectories reveal reduced contextual influence on decisionconflict during delay discounting in anorexia nervosa. *International Journal of Eating Disorders*. 56(10), 1898-1908. DOI: 10.1002/eat.24019. Citations (#): 4.
- 8. *Perkovic, S., ***Schoemann, M.**, Lagerkvist, C. J., & Orquin, J. L. (2023). Covert attention leads to fast and accurate decision making. *Journal of Experimental Psychology: Applied.* 29(1), 78-94. DOI: 10.1037/xap0000425. Citations (#): 23.
- 9. Schaerer, M., Du Plessis, C., Nguyen, M. H. B., Van Aert, R. C., Tiokhin, L., Lakens, D., ... & Gender Audits Forecasting Collaboration (2023). On the trajectory of discrimination: A meta-analysis and forecasting survey capturing 44 years of field experiments on gender and

- hiring decisions. *Organizational Behavior and Human Decision Processes.* 179, 104280. DOI: 10.1016/j.obhdp.2023.104280. Citations (#): 67.
- Scheffel, C., Korb, F., Dörfel, D., Eder, J., Möschl, M., Schoemann, M., & Scherbaum, S. (2023). Gute wissenschaftliche Praxis und Open Science im Empiriepraktikum: Wissenschaftlicher Kompetenzerwerb durch Replikationsstudien. *Psychologische Rundschau*. 74(4), 241-243. DOI: 10.1026/0033-3042/a000643. Citations (#): 3.
- 11. **Schoemann, M.**, O'Hora, D., Dale, R., & Scherbaum, S. (2021). Using mouse cursor tracking to investigate online cognition: Preserving methodological ingenuity while moving toward reproducible science. *Psychonomic Bulletin & Review. 28*(3), 766-787. DOI: 10.3758/s13423-020-01851-3. Citations (#): 81.
- 12. Senftleben, U., **Schoemann, M.**, Rudolf, M., & Scherbaum, S. (2021). To stay or not to stay: The stability of choice perseveration in value-based decision making. *Quarterly Journal of Experimental Psychology*. 74(1), 199-217. DOI: 10.1177/1747021820964330. Citations (#): 20.
- 13. *Atiya, N. A. A., *Zgonnikov, A., O'Hora, D., **Schoemann, M.**, Scherbaum, S., Wong-Lin, K.-F. (2020). Changes-of-mind in the absence of new post-decision evidence. *PLoS Computational Biology*. *16*(2), e1007149. DOI: 10.1371/journal.pcbi.1007149. Citations (#): 41.
- 14. Kieslich, P. J., **Schoemann, M.**, Grage, T., Hepp, J., & Scherbaum, S. (2020). Design factors in mouse-tracking: What makes a difference?. *Behavior Research Methods*. *52*(1), 317-341. DOI: 10.3758/s13428-019-01228-y. Citations (#): 85.
- 15. **Schoemann, M.**, & Scherbaum, S. (2020). From high- to one-dimensional dynamics of decision making: Testing simplifications in attractor models. *Cognitive Processing. 21*(2), 303-313. DOI: 10.1007/s10339-020-00953-z. Citations (#): 8.
- 16. Grage, T., **Schoemann, M.**, Kieslich, P. J., & Scherbaum, S. (2019). Lost to translation: How design factors of the mouse-tracking procedure impact the inference from action to cognition. *Attention, Perception, and Psychophysics.* 81(7), 2358-2557. DOI: 10.3758/s13414-019-01889-z. Citations (#): 34.
- 17. **Schoemann, M.**, Lüken, M., Grage, T., Kieslich, P. J., & Scherbaum, S. (2019). Validating mouse-tracking: How design factors influence action dynamics in intertemporal decision making. *Behavior Research Methods*. *51*(5), 2356-2377. DOI: 10.3758/s13428-018-1179-4. Citations (#): 51.
- 18. **Schoemann, M.**, Schulte-Mecklenbeck, M., Renkewitz, F., & Scherbaum, S. (2019). Forward inference in risky choice: Mapping gaze and decision processes. *Journal of Behavioral Decision Making*. *32*(5), 521-535. DOI: 10.1002/bdm.2129. Citations (#): 30.
- *Senftleben, U., *Schoemann, M., Schwenke, D., Richter, S., Dshemuchadse, M., & Scherbaum, S. (2019). Choice perseveration in value-based decision making: The impact of inter-trial interval and mood. *Acta Psychologica*. 198, 102876. DOI: 10.1016/j.actpsy.2019.102876. Citations (#): 20.
- 20. **Schoemann, M.**, & Scherbaum, S. (2017). Attractor dynamics in delay discounting: A call for complexity. *Proceedings of the Annual Meeting of the Cognitive Science Society.* 39. Citations (#): 1
- 21. Betsch, T., Lehmann, A., Lindow, S., Lang, A., & **Schoemann, M.** (2016). Lost in search: (Maladaptation to probabilistic decision environments in children and adults. *Developmental Psychology*. *52*(2), 311–325. DOI: 10.1037/dev0000077. Citations (#): 44.

Working Papers & Papers Under Review

- 1. *Dutschke, R., *Thiele, G., **Schoemann, M.**, Surrey, C., & Scherbaum, S. (2025). Testing the reliability and validity of the triad task in assessing belief structures. *Working paper*.
- 2. Grenke, O., Scherbaum, S., & **Schoemann, M.** (2025). Validating psychological interpretations of the drift diffusion model with mouse cursor tracking. *Working paper*.
- 3. Herchenhahn, L., Scherbaum, S., **Schoemann, M.**, Jauk, E., Lerche, V. (2025). From charm to conflict: Simulating narcissistic interpersonal dynamics with agent-based modeling. *Under review*.
- 4. *Pongratz, H., & *Schoemann, M. (2025). A large-scale compilation of choice and response-

- time data in intertemporal choice. Under review.
- 5. *Pongratz, H., & ***Schoemann, M.** (2025). Fast and automatic short-term choice vs slow and deliberate long-term decisions? A systematic meta-study of response times in experimental studies on intertemporal choice. *Working paper*.
- 6. **Schoemann, M.**, Grenke, O., & Scherbaum, S. (2025). Testing the link between decision and action dynamics. *Working paper*. DOI: 10.31234/osf.io/4geys_v1. Citations (#): 0.
- 7. **Schoemann, M.**, Perkovic, S., van der Lans, R., & Orquin, J. L. (2025). The color of lookalike labels drives consumer confusion. *Working paper*.
- 8. Simonsen, N., **Schoemann, M.**, Orquin, J.L., Perkovic, S. (2025). Rebiasing heuristics and biases: A novel framework for risk perception and sustainable decision-making. *Under review*.
- 9. *Thiele, G., *Dutschke, R., Scherbaum, S., Surrey, C., & **Schoemann, M.** (2025). Assessing belief structures efficiently through balanced incomplete designs and reduced elements in the triads task. *Working paper*.
- 10. Priolo, G., Stablum, F., Vacondio, M., D'Ambrogio, S., Caserotti, M., Conte, B., ... & Rubaltelli, E. (2023). The robustness of mental accounting: a global perspective. *Under review*. DOI: 10.31219/osf.io/apc26. Citations (#): 4.
- 11. **Schoemann, M.**, Perkovic, S., Stojić, H., Todd, P. M., Larsen, N. M., Dolan, R. J., & Orquin, J. L. (2021). A foraging model of consumer search. *In revision*.
- 12. **Schoemann, M.**, & Scherbaum, S. (2019). Choice History Bias in Intertemporal Choice. *In revision*. DOI: 10.31234/osf.io/7h9zj. Citations (#): 6.

Presentations / Conferences

Total Presentations by Category:

Conference Presentation (8), Poster Presentation (4)

Conference Presentations

- 1. "Copycat product labels cause consumer confusion", with van de Mosselaar, P., Perkovic, S., & Orquin, J. L. Talk presented at 29th Biennial Meeting of the European Association for Decision Making (SPUDM29), Vienna, Austria. 2023.
- 2. "Back to the future: Toward a gold-standard for mouse-tracking research". Talk presented at 27th Biennial Meeting of the European Association for Decision Making (SPUDM27), Amsterdam, Netherlands. 2019.
- 3. "Mouse-tracking revisited: Methodological implementations from the beginning", with O'Hora, D., Dale, R., & Scherbaum, S. Talk presented at 38th Annual Meeting of the European Group of Process Tracing Studies, Dresden, Germany. 2019.
- 4. "Validate mouse tracking: How design factors influence action dynamics", with Lüken M., Grage, T., Kieslich, P. J., & Scherbaum, S. Talk presented at 37th Annual Meeting of the European Group of Process Tracing Studies, Aarhus, Denmark. 2018.
- 5. "The Needleman-Wunsch algorithm: Fixation sequences as an indicator of decision strategies", with Scherbaum, S., & Renkewitz, F. Talk presented at 26th Biennial Meeting of the European Association for Decision Making (SPUDM26), Haifa, Israel. 2017.
- 6. "Attractor dynamics in delay discounting: A call for complexity", with Scherbaum, S. Talk presented at 39th Annual Conference of the Cognitive Science Society, London, UK. 2017.
- 7. "The continuity between choice and preference: Augmenting a drift-diffusion analysis of delay discounting with eye-tracking measures", with Scherbaum, S. Talk presented at 59th Tagung experimental arbeitender Psychologen (Conference of Experimental Psychologists), Dresden, Germany. 2017.
- 8. "Distinguishing comparison strategies in intertemporal decision making", with Renkewitz, F., & Scherbaum, S. Talk presented at 35th Annual Meeting of the European Group of Process

Tracing Studies, Bonn, Germany. 2016.

Posters

- "(Communication of) Open Science Practices at Conferences", with Schulte-Mecklenbeck, M. Poster presented at Society for Judgment and Decision Making (SJDM) Annual Conference 2024, New York City (NY), USA. 2024.
- 2. "A method for measuring consumer confusion due to copycat product label", with van de Mosselaar, P., Perkovic, S., & Orquin, J. L. Poster presented at Society for Judgment and Decision Making (SJDM) Annual Conference 2023, San Francisco (CA), USA. 2023.
- 3. "Validate mouse tracking: How design factors influence action dynamics in intertemporal choice", with Lüken M., Grage, T., Kieslich, P. J., & Scherbaum, S. Poster presented at 60th Tagung experimental arbeitender Psychologen (Conference of Experimental Psychologists), Marburg, Germany. 2018.
- 4. "Forward inference and scanpath analysis: An approach to improved process tracing", with Scherbaum, S., & Renkewitz, F. Poster presented at 36th Annual Meeting of the European Group of Process Tracing Studies, Galway, Ireland. 2017.

Teaching & Education

Courses Taught at TUD Dresden University of Technology

Sem.	Course	Role	Туре	Level
F16	Psy-Ba-M1: Introduction to psychological research methods	Instructor	Seminar	BA
S17	Psy-Ba-M2: Experimental design and sample size	Instructor	Seminar	BA
F17	Psy-Ba-M1: Introduction to psychological research methods	Instructor	Seminar	BA
S18	Psy-Ba-M2: Experimental design and sample size	Instructor	Seminar	BA
F18	Psy-Ba-M1: Introduction to psychological research methods	Instructor	Seminar	BA
S19	Psy-Ba-M2: Experimental design and sample size	Instructor	Seminar	BA
F19	Psy-Ba-M1: Introduction to psychological research methods	Instructor	Seminar	BA
S20	Psy-Ba-M2: Experimental design and sample size	Instructor	Seminar	BA
F20	BIO-MBBT-32Pog: Statistics for biologists	Instructor	Tutorial	BA
S22	Psy-Ba-M2: Introduction to statistics	Instructor	Tutorial	BA
F22	Psy-Ba-M1: Introduction to psychological research methods	Instructor	Seminar	BA
S23	Psy-Ba-M2: Introduction to statistics	Instructor	Tutorial	BA
S23	Psy-BaMa: Data analysis with R	Instructor	Tutorial	Mixed
F23	Psy-Ba-M1: Introduction to psychological research methods	Instructor	Seminar	BA
S24	Psy-Ba-M2: Introduction to statistics	Instructor	Tutorial	BA
F24	Psy-Ba-M1: Introduction to psychological research methods	Instructor	Seminar	BA
F24	Psy-BaMa: Data analysis with R	Instructor	Tutorial	Mixed
S25	Psy-Ba-M2: Introduction to statistics	Instructor	Tutorial	BA

F = Fall, denotes the winter term, Oct.–Mar.; S = Spring, denotes the summer term, Apr.–Sep.

Workshops

1. "Tracking the embodied dynamics of cognition using computer mouse tracking", with Scherbaum, S. Spring School Interdisciplinary College (IK), Günne, Germany. Mar 03, 2023.

Guest Lectures

1. "Mouse cursor tracking: Measuring conflict between valuation systems" University of Aarhus, School of Business and Social Sciences, Aarhus, Denmark. Sep 26, 2025.

2. "Mouse cursor tracking: Foundations and applications in digital marketing" School of Business and Economics, University of Galway, Galway, Ireland. Feb 09, 2024.

Advising

Doctoral Students

- 1. Oliver Grenke, TUD Dresden University of Technology, with Scherbaum, S. (current).
- 2. René Dutschke, TUD Dresden University of Technology, with Scherbaum, S. (current).

Master's Students

- 1. Clemens Steinke, TUD Dresden University of Technology, with Grenke, O. (2022).
- 2. Deborah M. Löschner, TUD Dresden University of Technology, with Scherbaum, S. (2022).
- 3. Hannah Pongratz, TUD Dresden University of Technology, with Scherbaum, S. (2024).
- 4. Kevin Padrón Escobar, TUD Dresden University of Technology, with Frisch, S. (2019).
- 5. Lena Herchenhahn, TUD Dresden University of Technology, with Scherbaum, S. (2022).
- 6. Oliver Grenke, TUD Dresden University of Technology, with Scherbaum, S. (2020).
- 7. Peggy Wehner, TUD Dresden University of Technology, with Scherbaum, S. (2020).

Bachelor's Students

- 1. David Hamann, TUD Dresden University of Technology, with Scherbaum, S. (2020).
- 2. Ella Hirche, TUD Dresden University of Technology, with Senftleben, U. (2024).
- 3. Jennifer Küpper, TUD Dresden University of Technology, with Helmert, J. (2023).
- 4. Melchior Reiche, TUD Dresden University of Technology (2025).
- 5. Philipp Schake, TUD Dresden University of Technology, with Scherbaum, S. (2019).
- 6. Rahel Martin, TUD Dresden University of Technology (2025).
- 7. Shawaiz H. Kakra, TUD Dresden University of Technology (2024).

Interns

- 1. David Hamann, TUD Dresden University of Technology (2018 to 2020).
- 2. Anke Richter, TUD Dresden University of Technology (2019 to 2020).
- 3. Eva Sinning, TUD Dresden University of Technology (2019).
- 4. Malte V. Lüken, TUD Dresden University of Technology (2018).
- 5. Till Habenicht, TUD Dresden University of Technology (2025).

Grants

Internal Grants

- TUD Psychology Seed Funding (No. MK202303). "Trial-level signal detection parameters".
 €900. 100% Credit. May 2023 Apr. 2024.
- 2. TUD Psychology Seed Funding. "The applicability of scanpath analysis for measuring cognitive processes in decision-making paradigms". €500. 100% Credit. Oct. 2016 Sep. 2017.

Affiliated Grants

- 1. Icelandic Research Fund (No. 511673-051). "The foundations of attention management and its applications for health and sustainability in marketing". Pl. J.L. Orquin. €499,056. Affiliated researcher. Jan. 2025 Dec. 2028.
- 2. Danish Research Fund (No. 2099-00015A). "Using cognitive biases to increase risk perceptions of endocrine-disrupting chemicals: ReBIAS". PI: S. Perkovic. €385,130. Affiliated researcher. Nov. 2023 Mar. 2026.

Honors / Awards

• 2017: Student Travel Award, Cognitive Science Society (sponsored by the Robert J. Glushko and Pamela Samuelson Foundation).

Service

Faculty Service

- 1. Steering Committee, OSIP at TUD (2025 present).
- 2. Member, Open Science Initiative of the Faculty of Psychology (OSIP) at TUD (2018 present).

Professional Service

1. *Organizer*, with Grage T. & Scherbaum, S. 38th Annual Meeting of the European Group of Process Tracing Studies in Judgment and Decision Making, Dresden, Germany (2019).

Peer Reviewer

Completed 23 journal reviews (2019 - present)

List of Journals

BMC Psychology Behavior Research Methods Cognitive Science Communications Psychology Computers in Human Behavior Emotion Intelligence Journal of Behavioral Decision Making Journal of Experimental Psychology: Applied Journal of Experimental Psychology: LMC Nature Human Behavior Psychonomic Bulletin & Review Scientific Reports SoftwareX

Continuing Education

- Certification programme "Diversity in Focus" on Diversity and Inclusion in Higher Education (47 units of instruction), TUD Dresden University of Technology, Dresden, Germany (2025 present).
- 2. Course (Train the Trainer) on Research Data Management, Dr. Sven Paßmann, University of Leipzig, Leipzig, Germany (2023).
- 3. Certification programme for Teaching and Learning in Higher Education Saxony (240 units of instruction), Hochschudidaktik Sachsen, Leipzig, Germany (2022 2024).
- 4. Web-based course "Protecting Human Research Participants Online Training" (2020).
- 5. Lecture on Good Scientific Practice, Dr. Michael Höfler, TUD Dresden University of Technology, Dresden, Germany (2018).

6. Summer school on the Dynamic Field Theory, Prof. Dr. Gregor Schöner, Institute of Neuroinformatics, Ruhr University Bochum, Bochum, Germany (2017).

Skills

- · Language: German (native language), English (fluent), French (basic), Spanish (basic).
- **Data Collection**: Survey Design, Experiment Design (behavioral, mouse cursor tracking, eye tracking), Systematic Search (for meta study/analysis).
- **Modeling & Analysis**: Computational Cognitive Modeling, Discrete Choice Modeling, Resampling, Optimization, Regression, Time Series.
- · Programming: R, MatLab, LaTeX, Markdown, Java
- · Technologies: Quarto, Git/GitHub, OSF, REDCap, ORSEE, OpenSesame

Referees

Prof. Jacob L. Orquin, PhD

Department of Management Aarhus University Fuglesangs Allé 4 DK-8210, Aarhus V, Denmark ⊠ jalo[at]mgmt.au.dk

Prof. Dr. Stefan Scherbaum

Psychological Research Methods and Cognitive Modelling TUD Dresden University of Technology Zellescher Weg 17 D-01069, Dresden Germany Stefan.scherbaum[at]tu-dresden.de