Martin Schoemann, MSc, BA

Psychological Research Methods & Cognitive Modelling
School of Science – Faculty of Psychology
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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 *Volition and Cognitive Control*

Education & Training

2016   Erfurt University, Erfurt, Germany   **MSc Psychology**
Thesis: *Distinguishing Comparison Strategies in Intertemporal Decision Making: An Eye-tracking Study*
Advisors: *Frank Renkewitz & Stefan Scherbaum*

2013   Erfurt University, Erfurt, Germany   **BA Psychology & Philosophy**
Thesis: *Small Sample Advantage in Complex Environments: On the Detection of Population Parameters in the Iowa Gambling Task*
Advisor: *Tilman Betsch*

2024   Hochschudidaktik Sachsen, Leipzig, Germany   **Cert. Teacher of Higher Education**
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 Modelling (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: 487 · h-index: 11 · i10-index: 11

* indicates equal contribution

Refereed Journal Articles

1. 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. 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.

3. ***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.

4. 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.

5. 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.

6. 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 (#): 58.

7. 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.

8. 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 (#): 3.

9. *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 (#): 21.

10. **Schoemann, M.**, O'Hora, D., Dale, R., & Scherbaum, S. (2021). Using mouse cursor tracking to investigate online cognition: Preserving methodological ingenuity while moving toward re-

producible science. *Psychonomic Bulletin & Review*. *28*(3), 766-787. DOI: [10.3758/s13423-020-01851-3](10.3758/s13423-020-01851-3). Citations (#): 77.

11. 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](10.1177/1747021820964330). Citations (#): 20.

12. **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](10.1007/s10339-020-00953-z). Citations (#): 8.

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 (#): 38.

14. 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](10.3758/s13414-019-01889-z). Citations (#): 29.

15. *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.

16. **Schoemann, M.**, Schulte-Mecklenbeck, M., Renkewitz, F., & Scherbaum, S. (2019). Forward in risky choice: Mapping gaze and decision processes. *Journal of Behavioral Decision Making*. *32*(5), 521-535. DOI: [10.1002/bdm.2129](10.1002/bdm.2129). Citations (#): 27.

17. 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](10.3758/s13428-019-01228-y). Citations (#): 79.

18. **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](10.3758/s13428-018-1179-4). Citations (#): 47.

19. **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.

20. Betsch, T., Lehmann, A., Lindow, S., Lang, A., & **Schoemann, M.** (2016). Lost in search: (Mal-)adaptation to probabilistic decision environments in children and adults. *Developmental Psychology*. *52*(2), 311–325. DOI: [10.1037/dev0000077](10.1037/dev0000077). Citations (#): 43.

Working Papers & Papers Under Review

1. **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.

2. Grenke, O., Scherbaum, S., & **Schoemann, M.** (2024). Exploring the synthesis of mouse cursor tracking and drift diffusion modeling in a perceptual decision-making task. *Under review*. DOI: https://doi.org/10.31219/osf.io/dzykh. Citations (#): 0.

3. 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](10.31219/osf.io/apc26). Citations (#): 2.

4. **Schoemann, M.**, & Scherbaum, S. (2019). Choice History Bias in Intertemporal Choice. *In revision*. DOI: [10.31234/osf.io/7h9zj](10.31234/osf.io/7h9zj). Citations (#): 6.

5. 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*.

6. 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*.

7. *Pongratz, H., & ***Schoemann, M.** (2025). The ITC database: A comprehensive compilation of

choice-rt data in intertemporal choice. *Working paper*.

8. *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*.

9. *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*.

10. *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*.

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*.

Presentations / Conferences

Total Presentations by Category:

Invited Speaker (1), Conference Presentation (8), Poster Presentation (4)

Invited Speaker

1. "Mouse cursor tracking: Foundations and applications in digital marketing". Talk presented at School of Business and Economics, University of Galway, Galway, Ireland. 2024.

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 experimentell 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

1. "(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 experimentell 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	Type	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-32P09: 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. Jan 01, 2023.

Advising

Masters Students

1. Kevin Padrón Escobar, TUD Dresden University of Technology, with Frisch, S. (2019).

2. Oliver Grenke, TUD Dresden University of Technology, with Scherbaum, S. (2020).

3. Peggy Wehner, TUD Dresden University of Technology, with Scherbaum, S. (2020).
4. Clemens Steinke, TUD Dresden University of Technology, with Grenke, O. (2022).
5. Deborah M. Löschner, TUD Dresden University of Technology, with Scherbaum, S. (2022).
6. Lena Herchenhahn, TUD Dresden University of Technology, with Scherbaum, S. (2022).
7. Hannah Pongratz, TUD Dresden University of Technology, with Scherbaum, S. (2024).

Bachelors Students

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

Internships

1. Anke Richter, TUD Dresden University of Technology.
2. David Hamann, TUD Dresden University of Technology.
3. Eva Sinning, TUD Dresden University of Technology.
4. Malte V. Lüken, TUD Dresden University of Technology.
5. Till Habenicht, TUD Dresden University of Technology.

Grants

Internal Grants

1. 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". PI: 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
Computers in Human Behavior
Emotion
Intelligence

Journal of Behavioral Decision Making
Journal of Experimental Psychology: Applied
Journal of Experimental Psychology: LMC
Nature Human Behavior
Scientific Reports
SoftwareX

Continuing Education

1. 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

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