

CURRICULUM VITAE

DR. SASCHA MEYEN

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EMPLOYMENT

Postdoctoral Researcher

Experimental Cognitive Science

07 / 2022 – present
University of Tübingen, Germany

Postdoctoral Researcher

Experimental Cognitive Science

02 / 2017 – 07 / 2022
University of Tübingen, Germany

Revacom GmbH

Working Student

05 / 2010 – 11 / 2013
Potsdam, Germany

EDUCATION

Dissertation (magna cum laude)

Prof. Dr. Volker H. Franz, Prof. Dr. Ulrike von Luxburg

02 / 2017 – 03 / 2022
University of Tübingen, Germany

Information-theoretic perspectives on unconscious priming and group decisions

M.Sc. Computer Science (final grade 1.0)

Prof. Dr. Volker H. Franz, Prof. Dr. Ulrike von Luxburg

12 / 2016
University of Hamburg, Germany

Relation between classification accuracy and mutual information in equally weighted classification tasks

B.Sc. Psychology (final grade 1.4)

Dr. Sandra Wittleder

04 / 2016
University of Hamburg, Germany

Soziale Projektion von Vertrauenswürdigkeit: Ist die Welt von Lügern voller Lügner?

B.Sc. Human-Computer-Interaction (final grade 1.4)

Prof. Dr. Martin Spieß

08 / 2013
University of Hamburg, Germany

Eine Simulationsstudie zu den Grenzen der Inverse Probability Weighting Methode

RESEARCH INTERESTS

I **develop statistical measures** to capture constructs of interest.

- In **unconscious processing**, I studied how much information humans process without awareness, relating accuracy to Shannon's entropy.
- In **perceptual metacognition**, I developed information-theoretic measures to capture the appropriateness of subjective confidence ratings and study how internal confidence guides cue-integration.
- To evaluate performance in **group research**, appropriate baselines need to incorporate individual feelings of certainty, for which I developed a cognitive model.

AWARDS AND GRANTS

Teaching Awards

2024 – 2026

Nominated for the teaching award of the University of Tübingen, 2026

Winner of the teaching award of the computer science department at the University of Tübingen, 2025

Winner of the teaching award of the computer science department at the University of Tübingen, 2024

Finalist in 13th DGPs' Dissertationspreis Allgemeine Psychology

2023

Contribution to Funding Acquisition of DGPs' Sonderforschungsbereich 1233 Robust Vision

2017 – 2028

I contributed to the funding proposal of my own PhD position between 2017 and 2025 and led the writing of one out of 11 research projects covering three PhD positions (728,200 EUR).

TEACHING AND SUPERVISION

Mathematical Statistics & Research Methods

Lecture

10 / 2024 – present

University of Tübingen, Germany

Computer Supported Statistics

Teaching Assistant

10 / 2022 – 09 / 2024

University of Tübingen, Germany

Mathematical Statistics

Teaching Assistant

10 / 2017 – 09 / 2022

University of Tübingen, Germany

Machine Learning: Algorithms and Theory

Teaching Assistant

04 / 2017 - 10 / 2017

University of Tübingen, Germany

Quantitative Methods

Teaching Assistant

04 / 2014 - 10 / 2015

University of Hamburg, Germany

Tutoring

04 / 2011 - 10 / 2015

I passionately tutored for 4 years during my undergraduate courses. University of Hamburg, Germany
I led software projects in a group of 12 undergraduates between 2015–2016.

Supervision of Undergraduate Theses

Ida Knecht (B.Sc.)	2026
David Marx-Stölting (B.Sc.)	2025
Laura Bantle (B.Sc.)	2025
Linus Szillat (B.Sc.)	2024
Lin Lin (B.Sc.)	2024
Elias Kühle (B.Sc.)	2024
Carina Schrenk (B.Sc.)	2024
Katharina Deckenbach (B.Sc.)	2023
Lia Schmid (B.Sc.)	2021
David Wiedner (B.Sc.)	2020
Jakob Laing (B.Sc.)	2019
Dorothee M. B. Sigg (B.Sc.)	2019
Frieder Göppert (B.Sc.)	2018

SCIENTIFIC SERVICE

Reviewer for Scientific Journals

2021 – present

Advances in Cognitive Psychology
Cognitive Research: Principles and Implications
Consciousness and Cognition
Current Directions in Psychological Science
International Journal of Psychology
Journal of Articles in Support of the Null Hypothesis, PeerJ
Journal of Experimental Psychology: Learning, Memory, and Cognition
Neuroscience of Consciousness
Proceedings of the National Academy of Sciences
Scientific Reports, Psychonomic Bulletin & Review
Qeios

Conference co-organizer of Tagung Experimentall Arbeitender Psychologen (TeaP 2026, 800 participants)

03 / 2026

Website and information management

Chair of conference symposium Computational Models of Confidence and Metacognitive Ability at TeaP 2026

03 / 2026

Member of Deutsche Gesellschaft für Psychologie

2020 – present

Special group: General Psychology (Fachgruppe Allgemeine Psychologie)

PUBLICATIONS

Peer-Reviewed Journal Articles

Meyen, S., Göppert, F., Schrenk, C., Luxburg, U. von, & Franz, V. H. (2025). Information-theoretic measures of metacognition: Bounds and relation to group performance. *Open Mind*, 9, 1728–1762. <https://doi.org/10.1162/opmi.a.40>

Streicher, J., **Meyen, S.**, Franz, V. H., & Stein, T. (2025). Neural correlates of unconscious processing in functional magnetic resonance imaging: Does brain activity contain more information than can be consciously reported? *Neuroscience of Consciousness*, 2025(1). <https://doi.org/10.1093/nc/niaf042>

Stockart, F., Schreiber, M., Amerio, P., Carmel, D., Cleeremans, A., Deouell, L. Y., Dienes, Z., Elozegi, P., Gayet, S., Goldstein, A., Halchin, A.-M., Hesselmann, G., Kimchi, R., Lamy, D., Loued-Khenissi, L., **Meyen, S.**, Micher, N., Pitts, M., Salomon, R., ... Mudrik, L. (2025). Studying unconscious processing: Contention and consensus. *Behavioral and Brain Sciences*, 1–77. <https://doi.org/10.1017/s0140525x25101489>

Göppert, F., Bhatia, K., **Meyen, S.**, & Franz, V. H. (2025). Realistic expectations for replications: Expecting too little is just as bad as expecting too much. *Advances in Methods and Practices in Psychological Science*, 8(3). <https://doi.org/10.1177/25152459251369846>

Klein, T., **Meyen, S.**, Brendel, W., Wichmann, F. A., & Meding, K. (2025). *Quantifying uncertainty in error consistency: Towards reliable behavioral comparison of classifiers*. <https://doi.org/10.48550/arXiv.2507.06645>

Rausch, M., **Meyen, S.**, & Hellmann, S. (2025). statConfR: An R package for static models of decision confidence and metacognition. *Journal of Open Source Software*, 10(106), 6966. <https://doi.org/10.21105/joss.06966>

Franz, V. H., **Meyen, S.**, & von Luxburg, U. (2024). Technical comment on Gunderson, ten Brinke, and Sokol-Hessner (2023). When the body knows: Interoceptive accuracy enhances physiological but not explicit differentiation between liars and truth-tellers. *Personality and Individual Differences*, 204, 112039. *Personality and Individual Differences*, 217, 112439. 10.1016/j.paid.2023.112439

Meyen, S., Vadillo, M. A., von Luxburg, U., & Franz, V. H. (2024). No evidence for contextual cueing beyond explicit recognition. *Psychonomic Bulletin & Review*, 31(3), 907–930. 10.3758/s13423-023-02358-3

Meyen, S., Zerweck, I. A., Amado, C., von Luxburg, U., & Franz, V. H. (2022). Advancing research on unconscious priming: When can scientists claim an indirect task advantage? *Journal of Experimental Psychology: General*, 151(1), 65–81. 10.1037/xge0001065

Invited Talks

Meyen, S., & Franz, V. H. (2025, April 3). *Research on unconscious and implicit processing suffers from the indirect task advantage fallacy*. [Invited talk]. Cognitive and Brain Sciences (Early Career Seminar Series), University of Nevada, Reno, USA. <https://www.unr.edu/psychology/degrees/cognitive-and-brain-sciences/colloquia>

Meyen, S. (2024, May 14). *Information-theoretic measures of metacognition and evidence accumulation*. [Invited talk]. Metamotor Lab, University of Tübingen, Germany. <https://metamotorlab.filevich.com/>

Meyen, S. (2024, March 7). *Information-theoretic measures of metacognition*. [Invited talk]. Workshop on Visual Representations, University of Tübingen, University of Darmstadt, and University of Luxembourg.

Meyen, S., & Franz, V. H. (2023, September 15). *Missing evidence for implicit recognition: The indirect task*

advantage in contextual cueing. [Invited talk]. Visual Perception, University of Iowa.
<https://psychology.uiowa.edu/.../visual-perception/>

Meyen, S., Sigg, D. M. B., & Franz, V. H. (2021, July 12). *Predicting group decisions based on confidence weighted majority voting*. [Invited talk]. Cognitive Modeling, University of Tübingen.
<https://uni-tuebingen.de/.../cognitive-modeling/>

Meyen, S., & Franz, V. H. (2020, November 23). *The fallacy of the indirect task advantage (ITA) in unconscious priming research*. [Invited talk]. Cognition and Perception, University of Tübingen.
<https://uni-tuebingen.de/.../cognition-and-perception/>

Meyen, S., & Franz, V. H. (2020, June 6). *Inconsistent standard reasoning in unconscious priming research*. [Invited talk]. Cognitive Systems Lab, Chemnitz University of Technology.
<https://www.tu-chemnitz.de/physik/SFKS/index.html.en>

Meyen, S., & Franz, V. H. (2019, July 7). *The indirect task advantage in consciousness research*. [Invited talk]. Liad Mudrik Lab, Tel Aviv University. <https://people.socsci.tau.ac.il/mu/mudriklab/>

Conference Contributions

Meyen, S., Göppert, F., & Franz, V. H. (2026, March 15-18). *How to interpret information-theoretic measures of metacognition?* In S. Meyen (Chair), Computational Models of Confidence and Metacognitive Ability [Symposium]. 68th Tagung experimentell arbeitender Psycholog:innen (TeaP), Tübingen, Germany. <https://www.teap.de/>

Szillat, L., Göppert, F., **Meyen, S.**, & Franz, V. H. (2026, March 15-18). *Does optional stopping lead to higher error rates than fixed-n designs in the bayesian t-test?* [Poster presentation]. 68th Tagung experimentell arbeitender Psycholog:innen (TeaP), Tübingen, Germany. <https://www.teap.de/>

Knecht, I., Franz, V. H., & **Meyen, S.** (2026, March 15-18). *Comparing m-ratio to information-theoretic measures of metacognition*. [Poster presentation]. 68th Tagung experimentell arbeitender Psycholog:innen (TeaP), Tübingen, Germany.
<https://www.teap.de/>

Lin, L., Schrenk, C., Franz, V. H., & **Meyen, S.** (2026, March 15-18). *Accumulated evidence as an additive performance measure based on confidence ratings*. [Poster presentation]. 68th Tagung experimentell arbeitender Psycholog:innen (TeaP), Tübingen, Germany. <https://www.teap.de/>

Bhatia, K., Huber, T., **Meyen, S.**, Goehringer, F., Schenk, T., & Franz, V. H. (2026, March 15-18). *Size discrimination in perception and action*. In V. H. Franz (Chair), Perception & Psychophysics [Symposium]. 68th Tagung experimentell arbeitender Psycholog:innen (TeaP), Tübingen, Germany. <https://www.teap.de/>

Göppert, F., **Meyen, S.**, & Franz, V. H. (2026, March 15-18). *Comparing frequentist and bayesian hypothesis tests using regions of decision*. [Conference session]. 68th Tagung experimentell arbeitender Psycholog:innen (TeaP), Tübingen, Germany.
<https://www.teap.de/>

Göppert, F., Szillat, L., **Meyen, S.**, & Franz, V. H. (2025, December 15-18). *Does bayesian optional stopping always increase error rates?* [Poster presentation]. 2025 IMS International Conference on Statistics and Data Science (ICSDDS), Seville, Spain.
<https://sites.google.com/view/ims-icsds2025/>

Meyen, S., Göppert, F., & Franz, V. H. (2025, July 6-9). *The limits of measures of metacognition*. [Poster presentation]. 28th Annual Meeting of the Association for the Scientific Study of Consciousness (ASSC), Heraklion, Greece.
<https://assc2025.gr/>

Meyen, S., & Franz, V. H. (2025, March 9-12). *Better evidence for unconscious priming: Double dissociations plus indirect task advantages*. In G. Hesselmann (Chair), Unveiling the future of masked priming: Innovations, challenges, and collaborative pathways [Symposium]. 67th Tagung experimentell arbeitender Psycholog:innen (TeaP), Frankfurt, Germany.
<https://www.teap.de/>

Göppert, F., Szillat, L., **Meyen, S.**, & Franz, V. H. (2025, March 9-12). *Is optional stopping really no problem for bayesians?* [Poster presentation]. 67th Tagung experimentell arbeitender Psycholog:innen (TeaP), Frankfurt, Germany.
<https://www.teap.de/>

Blöck, A., Küchle, E., **Meyen, S.**, & Franz, V. H. (2025, March 9-12). *Controlling a game via steady-state visually evoked potentials*. [Poster presentation]. 67th Tagung experimentell arbeitender Psycholog:innen (TeaP), Frankfurt, Germany.
<https://www.teap.de/>

Göppert, F., **Meyen, S.**, & Franz, V. H. (2024, October 28-31). *Evaluating bayesian and frequentist hypothesis tests using regions of support*. [Poster presentation]. Conference on Meta-Science and Replicability in the social, behavioral, and cognitive sciences (META-REP), Munich, Germany. <https://meta-rep.de/conference24/>

- Meyen, S.**, & Franz, V. H. (2024, September 04–06). *The limits of measuring metacognition*. [Poster presentation]. European Mathematical Psychology Group Meeting (EMPG), Tübingen, Germany. <https://www.mathpsy.uni-tuebingen.de/empg2024/>
- Göppert, F., **Meyen, S.**, & Franz, V. H. (2024, September 04–06). *Comparing hypothesis tests using regions of support*. [Poster presentation]. European Mathematical Psychology Group Meeting (EMPG), Tübingen, Germany. <https://www.mathpsy.uni-tuebingen.de/empg2024/>
- Meyen, S.**, Soukup, M., & Franz, V. H. (2024, August 25–29). *Measuring time-dependent evidence accumulation based on confidence reports*. [Poster presentation]. 46th European Conference on Visual Perception (ECVP), Aberdeen, Scotland. <https://ecvp2024.abdn.ac.uk/>
- Göppert, F., **Meyen, S.**, & Franz, V. H. (2024, July 19–22). *Comparing hypothesis tests using regions of support*. [Poster presentation]. 57th Annual Meeting of the Society for Mathematical Psychology (MathPsych), Tilburg, Netherlands. <https://mathpsych.org/conference/15/>
- Meyen, S.**, Soukup, M., & Franz, V. H. (2024, March 17–20). *Measuring time-dependent drift rates in diffusion processes through metacognition*. [Poster presentation]. 66th Tagung experimentell arbeitender Psycholog:innen (TeaP), Regensburg, Germany. <https://www.teap.de/>
- Göppert, F., **Meyen, S.**, & Franz, V. H. (2024, March 17–20). *Relating frequentist and bayesian hypothesis tests using regions of support*. [Poster presentation]. 66th Tagung experimentell arbeitender Psycholog:innen (TeaP), Regensburg, Germany. <https://www.teap.de/>
- Meyen, S.**, Soukup, M., & Franz, V. H. (2023, August 27–31). *Metacognition of perceptual evidence accumulation in the first 50 ms of viewing*. [Poster presentation]. 45th European Conference on Visual Perception (ECVP), Paphos, Cyprus. <https://cyprusconferences.org/ecvp2023>
- Streicher, J., **Meyen, S.**, & Franz, V. H. (2023, June 22–25). *Scanning the neural correlates of consciousness: When can scientists claim an indirect task advantage? The case of fMRI studies*. [Poster presentation]. 26th Annual Meeting of the Association for the Scientific Study of Consciousness (ASSC), New York City, New York, USA. <https://www.teap.de/>
- Meyen, S.**, Vadillo, M. A., von Luxburg, U., & Franz, V. H. (2023, March 26–29). *Missing evidence for implicit recognition: The indirect task advantage in contextual cueing*. In S. Malejka (Chair), New methodological approaches to measuring unconscious mental processes [Symposium]. 65th Tagung experimentell arbeitender Psycholog:innen (TeaP), Trier, Germany. <https://www.teap.de/>
- Göppert, F., **Meyen, S.**, & Franz, V. H. (2023, March 26–29). *Allowing for indecisive outcomes: A fair comparison of equivalence tests*. [Poster presentation]. 65th Tagung experimentell arbeitender Psycholog:innen (TeaP), Trier, Germany. <https://www.teap.de/>
- Meyen, S.**, Vadillo, M. A., von Luxburg, U., & Franz, V. H. (2022, July 12–15). *Contextual cueing: Evidence for implicit recognition or not?* [Poster presentation]. 25th Annual Meeting of the Association for the Scientific Study of Consciousness (ASSC), Amsterdam, Netherlands. <https://theassc.org/assc-25/>
- Meyen, S.**, von Luxburg, U., & Franz, V. H. (2022, March 20–23). *Quantifying the contribution of top-down information in visual perception using metacognition*. [Poster presentation]. 64th Tagung experimentell arbeitender Psycholog:innen (TeaP), Cologne, Germany. <https://www.teap.de/>
- Meyen, S.**, von Luxburg, U., & Franz, V. H. (2021, May 21–26). *Is contextual cueing unconscious? The indirect task advantage in implicit learning*. [Poster presentation]. 21st Annual Meeting of the Vision Science Society (VSS), online conference. <https://www.visionssciences.org>
- Zerweck, I. A., **Meyen, S.**, Friedrich, F., Hepting, C., & Franz, V. H. (2021, May 21–26). *Effects of visually masked numbers and lines on brain activity*. [Poster presentation]. 21st Annual Meeting of the Vision Science Society (VSS), online conference. <https://www.visionssciences.org>
- Meyen, S.**, von Luxburg, U., & Franz, V. H. (2021, August 22–27). *Contextual cueing may not be unconscious*. [Conference session]. 43rd European Conference on Visual Perception (ECVP), online conference. <https://ecvp2021.org/>
- Zerweck, I. A., **Meyen, S.**, Friedrich, F., Hepting, C., & Franz, V. H. (2021, August 22–27). *Unconscious priming revisited: Is there evidence for superior unconscious processing with EEG?* [Poster presentation]. 43rd European Conference on Visual Perception (ECVP), online conference. <https://ecvp2021.org/>
- Meyen, S.**, Zerweck, I. A., Amado, C., von Luxburg, U., & Franz, V. H. (2021, March 13–16). *A fallacy in unconscious priming research: When can scientists truly claim an indirect task advantage?* [Conference session]. 63rd Tagung experimentell arbeitender Psycholog:innen (TeaP), Ulm, Germany. <https://www.teap.de/>
- Zerweck, I. A., **Meyen, S.**, Friedrich, F., & Franz, V. H. (2021, March 13–16). *Unconscious priming. Should scientists use continuous direct measures?* [Conference session]. 63rd Tagung experimentell arbeitender Psycholog:innen (TeaP), Ulm, Germany. <https://www.teap.de/>
- Meyen, S.**, von Luxburg, U., & Franz, V. H. (2020, March 22–25). *Predicting group decisions based on confidence weighted*

majority voting. [Poster presentation]. 62nd Tagung experimentell arbeitender Psycholog:innen (TeaP), Jena, Germany. <https://www.teap.de/>

Zerweck, I. A., **Meyen, S.**, Amado, C., & Franz, V. H. (2020, March 22–25). *Can we process task-irrelevant stimuli better than task-relevant stimuli? The case of number- and line-stimuli*. [Conference session]. 62nd Tagung experimentell arbeitender Psycholog:innen (TeaP), Jena, Germany. <https://www.teap.de/>

Amado, C., **Meyen, S.**, Zerweck, I. A., & Franz, V. H. (2020, March 22–25). *The indirect task advantage on low-level sensory input: New insights on unconscious priming*. [Conference session]. 62nd Tagung experimentell arbeitender Psycholog:innen (TeaP), Jena, Germany. <https://www.teap.de/>

Meyen, S., Helen, A., Wiedner, D., von Luxburg, U., & Franz, V. H. (2020, January 23–24). *A theoretical perspective on the allocation of processing resources in the visual system*. [Poster presentation]. 1st GK Doctoral Symposium on Cognitive Science (GK), Tübingen, Germany. <https://uni-tuebingen.de>

Zerweck, I. A., Eltz, M. von, Kao, C., **Meyen, S.**, Amado, C., Klimm, M., & Franz, V. H. (2020, January 23–24). *Effects of number priming on task performance: No evidence for preserved unconscious processing*. [Poster presentation]. 1st GK Doctoral Symposium on Cognitive Science (GK), Tübingen, Germany. <https://uni-tuebingen.de>

Meyen, S., Zerweck, I. A., Amado, C., von Luxburg, U., & Franz, V. H. (2019, May 17–22). *Re-analyzing unconscious priming: Is there really an indirect task advantage?* [Poster presentation]. 19th Annual Meeting of the Vision Sciences Society (VSS), St. Pete Beach, Florida, USA. <https://www.visionssciences.org>

Zerweck, I. A., Eltz, M. von, Kao, C., **Meyen, S.**, Amado, C., Klimm, M., & Franz, V. H. (2019, May 17–22). *Is there evidence for unconscious processing of digits?* [Poster presentation]. 19th Annual Meeting of the Vision Sciences Society (VSS), St. Pete Beach, Florida, USA. <https://www.visionssciences.org>

Meyen, S., Zerweck, I. A., Amado, C., von Luxburg, U., & Franz, V. H. (2018, August 26–30). *Reviewing evidence for superior visual processing without awareness: Do we really process more than we can know?* [Poster presentation]. 41st European Conference on Visual Perception (ECVP), Trieste, Italy. <https://www.ecvp2018.org/>

Zerweck, I. A., **Meyen, S.**, Amado, C., Friedrich, F., U., & Franz, V. H. (2018, August 26–30). *Evaluating methods in visual tasks: Confidence ratings convey more information than binary responses*. [Poster presentation]. 41st European Conference on Visual Perception (ECVP), Trieste, Italy. <https://www.ecvp2018.org/>

Meyen, S., von Luxburg, U., & Franz, V. H. (2018, March 11–14). *Reviewing evidence for superior unconscious processing: Do we really perceive more than we know?* In G. Hesselmann (Chair), Perception: Visibility and awareness [Symposium]. 60th Tagung experimentell arbeitender Psycholog:innen (TeaP), Marburg, Germany. <https://www.teap.de/>

Zerweck, I. A., **Meyen, S.**, Friedrich, F., Grethen, K., & Franz, V. H. (2018, March 11–14). *Unconscious processing of numbers: How important is the response format?* [Poster presentation]. 60th Tagung experimentell arbeitender Psycholog:innen (TeaP), Marburg, Germany. <https://www.teap.de/>

Meyen, S., Franz, V. H., & von Luxburg, U. (2017, June 19–30). *Classification accuracy and mutual information in psychological research*. [Poster presentation]. Machine Learning Summer School (MLSS), Tübingen, Germany. <http://mlss.cc/>

ADDITIONAL INFORMATION

Certified Mediator

I am an IMI certified mediator.

2022

Consensus Campus, Stuttgart, Germany

European Business Competence* Licence A

I learned basic economic principles and laws for businesses in Germany.

2018

Student representative

As a member of the student representatives in the psychology department at the University of Hamburg, I managed the homepage and did committee work.

10 / 2012 — 03 / 2016

Courses

- Gender communication training seminar at University of Hamburg
- Basic course Social Media at the Social Media Academy

4 / 2011

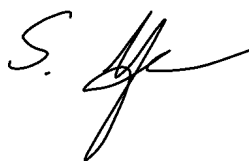
5 / 2010 – 8 / 2010

Programming

- R, Matlab for data analysis
- LaTeX for professional writing
- Python, Java, JavaScript, PHP, HTML5, CSS

Languages

- German (native)
- English (C1)
- Latin proficiency certificate



Sascha Meyen, July 24, 2026