

19 November 2024

Biological Psychology and Neuroergonomics  
Technical University Berlin  
Fasanenstr. 1  
10623 Berlin  
Germany  
phone: +49 176 25907207  
email: [martin.riemer@tu-berlin.de](mailto:martin.riemer@tu-berlin.de)  
  
homepage: [martinriemer.com](http://martinriemer.com)  
Web of Science Researcher ID: AAK-1399-2020

# Martin Riemer

## Education

- 02/2013 Ph.D. in Psychology, University of Mannheim (summa cum laude)
- 02/2009 Diploma in Psychology, University of Mannheim
- 2003-2009 Courses in Psychology, University of Mannheim
- 2002-2003 Courses in Physics, University of Heidelberg

## Employments and Work Experiences

- since 2021 Principal Investigator (Research Project: Time-space interference) at the Department of Biological Psychology and Neuroergonomics, Technical University Berlin
- 2022-2023 Professor at the Department of Cognitive Psychology and Ergonomics, Technical University Berlin
- 2018-2021 Postdoctoral Researcher at the Department of Experimental Psychology, University of Groningen, Netherlands
- 2014-2018 Postdoctoral Researcher at the German Center for Neurodegenerative Diseases (DZNE), Magdeburg
- 2008-2013 Research Assistant at the Otto-Selz-Institute (Laboratory for Clinical Psychophysiology), University of Mannheim
- 2006-2007 Internship at the Brain Research Laboratory, University of Vienna, Austria. *Project: Subliminal release of the feedback-related negativity (FRN)*

## Funding ID and Awards

- 2021-2025 Research Grant for project '*Age-related changes in time-space interferences and their relation to dysfunctions of the medial temporal lobe*'. Funding body: German Research Foundation (DFG)
- 2019-2021 Research Grant for project '*Time perception in real-life scenarios and its value for clinical diagnostics of early-stage dementia*'. Funding body: German Research Foundation (DFG)
- 2017-2020 Research Grant for project '*Resolving complex decisions via planning and associative value generalisation*' (with PD Dr. Gerhard Jocham). Funding body: Center for Behavioral Brain Sciences (CBBS)
- 2016-2018 Research Grant for project '*AGETIME*'. Funding body: Europäische Sozialfonds (ESF)
- 2014 Travel Grant for the International Conference on Timing & Time Perception in Korfu, Greece. Funding body: GlaxoSmithKline Stiftung (GSK)
- 2011-2013 Doctoral scholarship (LGFG) from the University of Mannheim
- 2012 Baden-Württemberg-Certificate for University Didactics
- 2009 Otto-Selz-Award of the Faculty of Social Sciences (University of Mannheim)

## Teaching and Supervisions

- 2022-2023 Representation of the department of Cognitive Psychology and Ergonomics at the TU Berlin (9 SWS, including courses on "Kognitive Ergonomie und Usability Testing", "Methoden des Usability Engineering und Testing", "Special Topics in Cognitive Psychology")
- since 2014 Supervision of 8 PhD, 12 MSc and 7 BSc theses at the Universities of Magdeburg and Groningen, and at the TU Berlin
- 2010-2021 Various MSc and BSc courses at the Universities of Mannheim, Magdeburg and Groningen, including courses on "Somatoforme und stressbedingte Störungen", "Körperwahrnehmung und Stress", "Klinische Diagnostik", "Affektive Störungen", "Klinische Psychologie", "Methods in Experimental Psychology and Psychophysics", "Spatial Cognition"

## Organisation of Conferences, Workshops and Symposia

- 2024 Virtual Reality and the Perception of Time. *Symposium at the TeaP in Regensburg, Germany*
- 2023 Temporal and Multisensory Processing in Virtual Reality. *Symposium at the 3<sup>rd</sup> Conference of the Timing Research Forum (TRF3) in Lisboa, Portugal*
- Time and Timing in Human-Computer Interaction. *Workshop at the Mensch und Computer (MuC) conference in Rapperswil, Switzerland (DOI: 10.18420/muc2023-mci-wso5-106)*
- 2018 2<sup>nd</sup> Interdisciplinary Symposium on Spatial Cognition in Aging and Neurodegeneration (iSCAN). *Research conference held at the DZNE Magdeburg, Germany*
- 2017 Interrelations between the Representation of Time and Space. *Symposium at the 1<sup>st</sup> Conference of the Timing Research Forum (TRF) in Strasbourg, France*
- 2015 The Body in Space. *Symposium at the IV International Conference on Spatial Cognition (ICSC) in Rome, Italy*
- 2012 New Applications for the Rubber Hand Illusion. *Symposium at the 54<sup>th</sup> TeaP in Mannheim, Germany*

## Invited Talks

- 2023 Underlying premises for using virtual reality in time perception research. *Annual Student Symposium "Keeping Track: Time perception and numerosity in brains and machines", Sainsbury Wellcome Centre, London, UK*
- 2022 Time-space interferences in virtual reality. *Vernetzungs-Workshop "Zeitforschung und Mensch-Maschine-Interaktion", University of Regensburg, Germany*
- 2021 Time perception in real-life scenarios and its value for clinical diagnostics. *German Center for Neurodegenerative Diseases (DZNE), Magdeburg, Germany*
- 2019 Age-related changes in the memory for temporal intervals. *Symposium "Time and the Brain" in Bochum, Germany*
- 2018 Neural representations of time and space. *University of Tübingen, Germany*
- 2015 A 'view from nowhen' on negative errors in time reproduction. *Research Centre for Computational Neuroscience and Cognitive Robotics (CNCR), University of Birmingham, UK*

## Memberships

Deutscher Hochschulverband (DHV); Timing Research Forum (TRF); Society for Neuroscience (SfN); German Society for Psychologists (DGPs); International Society for Psychophysics (ISP); Center for Behavioral Brain Sciences (CBBS); Bernstein Center for Computational Neuroscience (BCCN)

## Review Activities

Adv Cogn Psychol, Atten Percept Psychophys, Behav Brain Res, Behav Res Methods, Cognition, Conscious Cogn, Curr Biol, Exp Brain Res, Front Psychol, In Mind, J Cogn Neurosci, J Exp Psychol, J Neurosci, NeuroImage, PLOS ONE, Psychol Neurosci, Psychol Res, Q J Exp Psychol, Scand J Psychol, Timing Time Percept, a.o.

## Publications

### Peer-reviewed journal articles

**Riemer, M.**, & Cai, G. Z. (2024). Space-time interference: The asymmetry we get out is the asymmetry we put in. *Neuroscience and Biobehavioral Reviews*, *167*: 105941.

Bogon, J., Jagorska, C., Steinecker, I., & **Riemer, M.** (2024). Age-related changes in time perception: Effects of immersive virtual reality and spatial location of stimuli. *Acta Psychologica*, *249*: 104460.

**Riemer, M.**, Wolbers, T., & van Rijn, H. (2024). Memory traces of duration and location in the right intraparietal sulcus. *NeuroImage*, *297*: 120706.

Jagorska, C., & **Riemer, M.** (2024). The influence of travel time on perceived traveled distance varies by spatiotemporal scale. *Experimental Brain Research*, *242*: 2023-2031.

Mioni, G., Wolbers, T., & **Riemer, M.** (2024). Differences between sub-second and supra-second durations for the assessment of timing deficits in amnesic mild cognitive impairment. *Aging Brain*, *6*: 100120.

Rhodes, D., Bridgewater, T., Ayache, J., & **Riemer, M.** (2024). Rapid calibration to dynamic temporal contexts. *Quarterly Journal of Experimental Psychology*, *77*(9): 1923-1935.

Bogon, J., Högerl, J., Kocur, M., Wolff, C., Henze, N., & **Riemer, M.** (2024). Validating virtual reality for time perception research: Virtual reality changes expectations about the duration of physical processes, but not the sense of time. *Behavior Research Methods*, *56*: 4553-4562.

**Riemer, M.** (2023). Interval timing in virtual reality: Merits, goals, and premises. *Mensch und Computer 2023 - Workshopband*. DOI: 10.18420/muc2023-mci-ws05-433. GI. MCI-WS05: Time and Timing in Human-Computer Interaction. Rapperswil. 3.-6. September 2023

Bublitzky, F., Allen, P., & **Riemer, M.** (2023). Spatial navigation under threat: Aversive apprehensions improve route retracing in higher versus lower trait anxious individuals. *Frontiers in Psychology*, *14*: 1166594.

**Riemer, M.**, Achtzehn, J., Kuehn, E., & Wolbers, T. (2022). Cross-dimensional interference between time and distance during spatial navigation is mediated by speed representations in intraparietal sulcus and area hMT+. *NeuroImage*, *257*: 119336.

**Riemer, M.**, Vieweg, P., van Rijn, H., & Wolbers, T. (2022). Reducing the tendency for chronometric counting in duration discrimination tasks. *Attention, Perception, & Psychophysics*, *84*: 2641-2654.

Maaß, S. C., Wolbers, T., van Rijn, H., & **Riemer, M.** (2022). Temporal context effects are associated with cognitive status in advanced age. *Psychological Research*, *86*: 512-521.

- Riemer, M.**, Wolbers, T., & van Rijn, H. (2021). Age-related changes in time perception: The impact of naturalistic environments and retrospective judgements on timing performance. *Quarterly Journal of Experimental Psychology*, 74(11): 2002-2012.
- Riemer, M.**, & Wolbers, T. (2020). Negative errors in time reproduction tasks. *Psychological Research*, 84: 168-176.
- Stangl, M., Kanitscheider, I., **Riemer, M.**, Fiete, I., & Wolbers, T. (2020). Sources of path integration error in young and aging humans. *Nature Communications*, 11: 2626.
- Stahn, A. C., **Riemer, M.**, Wolbers, T., Werner, A., Brauns, K., Besnard, S., Denise, P., Kühn, S., & Gunga, H.-C. (2020). Spatial updating depends on gravity. *Frontiers in Neural Circuits*, 14: 20.
- Dordevic, M., Taubert, M., Müller, P., **Riemer, M.**, Kaufmann, J., Hökelmann, A., & Müller, N. G. (2020). Which effects on neuroanatomy and path-integration survive? Results of a randomized controlled study on intensive balance training. *Brain Sciences*, 10: 210.
- Riemer, M.**, Trojan, J., Beauchamp, M., & Fuchs, X. (2019). The rubber hand universe: On the impact of methodological differences in the rubber hand illusion. *Neuroscience and Biobehavioral Reviews*, 104: 268-280.
- Riemer, M.**, Wolbers, T., & Kuehn, E. (2019). Preserved multisensory body representations in advanced age. *Scientific Reports*, 9: 2663.
- Bublitzky, F., **Riemer, M.**, & Guerra, P. (2019). Reversing threat to safety: Incongruence of facial emotions and instructed threat modulates conscious perception but not physiological responding. *Frontiers in Psychology*, 10: 2091.
- Maaß, S. C., **Riemer, M.**, Wolbers, T., & van Rijn, H. (2019). Timing deficiencies in amnesic mild cognitive impairment: Disentangling clock and memory processes. *Behavioural Brain Research*, 373: 112110.
- Riemer, M.**, Kubik, V., & Wolbers, T. (2019). The effect of feedback on temporal error monitoring and timing behavior. *Behavioural Brain Research*, 369: 111929.
- Merhav, M., **Riemer, M.**, & Wolbers, T. (2019). Spatial updating deficits in human aging are associated with traces of former memory representations. *Neurobiology of Aging*, 76: 53-61.
- Vieweg, P., **Riemer, M.**, Berron, D., & Wolbers, T. (2019). Memory Image Completion: Establishing a task to behaviorally assess pattern completion in humans. *Hippocampus*, 29: 340-351.
- Riemer, M.**, Shine, J.P., & Wolbers, T. (2018). On the (a)symmetry between the perception of time and space in large-scale environments. *Hippocampus*, 28: 539-548.
- Müller, N. G., **Riemer, M.**, Brandt, L., & Wolbers, T. (2018). Repetitive transcranial magnetic stimulation reveals a causal role of the human precuneus in spatial updating. *Scientific Reports*, 8(1): 10171.
- Kuehn, E., Perez-Lopez, M. B., Diersch, N., Döhler, J., Wolbers, T., & **Riemer, M.** (2018). Embodiment in the aging mind. *Neuroscience and Biobehavioral Reviews*, 86: 207-225.
- Riemer, M.** (2018). Delusions of control in schizophrenia: Resistant to the mind's best trick? *Schizophrenia Research*, 197: 98-103.
- Fuchs, X., **Riemer, M.**, Diers, M., Flor, H., & Trojan, J. (2016). Perceptual drifts of real and artificial limbs in the rubber hand illusion. *Scientific Reports*, 6: 24362.
- Riemer, M.**, Diersch, N., Bublitzky, F., & Wolbers, T. (2016). Space, time, and numbers in the right posterior parietal cortex: Differences between response code associations and congruency effects. *NeuroImage*, 129: 72-79.
- Riemer, M.**, Rhodes, D., & Wolbers, T. (2016). Systematic underreproduction of time is independent of judgment certainty. *Neural Plasticity* (Article ID: 6890674): 1-8.

- Riemer, M.** (2015). Psychophysics and the anisotropy of time. *Consciousness & Cognition*, 38: 191-197.
- Riemer, M.**, Bublatzky, F., Trojan, J., & Alpers, G. W. (2015). Defensive activation during the rubber hand illusion: Ownership versus proprioceptive drift. *Biological Psychology*, 109: 86-92.
- Riemer, M.**, Fuchs, X., Bublatzky, F., Kleinböhl, D., Hölzl, R., & Trojan, J. (2014). The rubber hand illusion depends on a congruent mapping between real and artificial fingers. *Acta Psychologica*, 152: 34-41.
- Bublatzky, F., Gerdes, A. B. M., White, A. J., **Riemer, M.**, & Alpers, G. W. (2014). Social and emotional relevance in face processing: Happy faces of future interaction partners enhance the LPP. *Frontiers in Human Neuroscience*, 8: 493.
- Riemer, M.**, Hölzl, R., & Kleinböhl, D. (2014). Interrelations between the perception of time and space in large-scale environments. *Experimental Brain Research*, 232: 1317-1325.
- Riemer, M.**, Kleinböhl, D., Hölzl, R., & Trojan, J. (2013). Action and perception in the rubber hand illusion. *Experimental Brain Research*, 229: 383-393.
- Riemer, M.**, Trojan, J., Kleinböhl, D., & Hölzl, R. (2012). A 'view from nowhere' on time perception experiments. *Journal of Experimental Psychology: Human Perception and Performance*, 38(5): 1118-1124.
- Riemer, M.**, Trojan, J., Kleinböhl, D., & Hölzl, R. (2010). Body posture affects tactile discrimination and identification of fingers and hands. *Experimental Brain Research*, 206(1): 47-57.

#### Peer-reviewed book chapters

- Riemer, M.** (in press). Time perception deficits in Alzheimer's disease and mild cognitive impairment. In: *Neural Bases of Timing and Time Perception* (Ed. Mioni, G., & Grondin, S.) Routledge: New York: 214-239.
- Seizova-Cajić, T., Zopf, R., **Riemer, M.**, & Fuchs, X. (2023). Somatosensory illusions. In: *Somatosensory Research Methods* (Ed. Holmes, N. P.) Springer: New York: 267-285.

#### Monographs

- Riemer, M.** (2013). Dynamic representations of the body in space. PhD Thesis, Otto Selz Institute for Applied Psychology, University of Mannheim.
- Riemer, M.** (2009). Postural influences on tactile discrimination and identification of fingers and hands. Diploma Thesis, Otto Selz Institute for Applied Psychology, University of Mannheim.

#### Articles for newspapers and magazines (not peer-reviewed)

- Riemer, M.** (2020). Physical time, perceived time, and their interrelation. *De Physicus*, 31(3): 5-7.