



PD Dr. Kai Hamburger
Publications

Journal articles (peer-reviewed)

- **Hamburger, K.**, Ragni, M., Karimpur, H., Franzmeier, I., Wedell, F., & Knauff, M. (2018). TMS applied to V1 can facilitate reasoning. *Experimental Brain Research*, 236, 2277-2286. doi: 10.1007/s00221-018-5296-1
- Karimpur, H., & **Hamburger, K.** (2018). A rat in the sewer: How mental imagery interacts with object recognition. *PLoS One*, 13(3), e0194227. doi: 10.1371/journal.pone.0194227
- **Hamburger, K.**, & Karimpur, H. (2017). A psychological approach to olfactory information as cues in our environment. *Journal of Biourbanism*, 6(1&2), 59-73.
- Balaban, C. Z., Karimpur, H., Röser, F., & **Hamburger, K.** (2017). Turn left where you felt unhappy: How affect influences landmark-based wayfinding. *Cognitive Processing*, 18(2), 135-144. doi: 10.1007/s10339-017-0790-0
- Karimpur, H., Röser, F., & **Hamburger, K.** (2016). Finding the return path: Landmark position effects and the influence of perspective. *Frontiers in Psychology*, 7, 1956. doi: 10.3389/fpsyg.2016.01956
- Karimpur, H., & **Hamburger, K.** (2016). Multimodal integration of spatial information: The influence of object-related factors and self-reported strategies. *Frontiers in Psychology*, 7, 1443. doi: 10.3389/fpsyg.2016.01443
- Budnik, U., Hindi-Attar, C., **Hamburger, K.**, Pinna, B., Hennig, J., & Speck, O. (2016). Perceptual Experience of Visual Motion Activates hMT+ Independently From the Physical Reality: fMRI Insights From the Looming Pinna Figure. *Perception*, 45(11), 1211-1221. doi: 10.1177/0301006616652051
- **Hamburger, K.** (2016). Visual illusions based on processes instead of phenomena: A tentative classification system. *Perception*, 45(5), 588-595. doi: 10.3389/fpsyg.2015.01747
- Karimpur, H., & **Hamburger, K.** (2015). The future of action video games in psychological research and application. *Frontiers in Psychology*, 6, 1747.
- **Hamburger, K.**, & Röser, F. (2014). The role of landmark modality and familiarity in human wayfinding. *Swiss Journal of Psychology*, 73(4), 205-213.
- Varga, A. L., & **Hamburger, K.** (2014). Beyond type 1 vs. type 2 processing: The tri-dimensional way. *Frontiers in Psychology*, 5, 993. doi: 10.3389/fpsyg.2014.00993
- Jung, N., Wranke, C., **Hamburger, K.**, & Knauff, M. (2014). How emotions affect logical reasoning: Evidence from experiments with mood-manipulated participants, spider phobics, and people with exam anxiety. *Frontiers in Psychology*, 5, 570. doi: 10.3389/fpsyg.2014.00570
- Bucher, L., Röser, F., Nejasmic, J., & **Hamburger, K.** (2014). Belief revision and way-finding. *Cognitive Processing*, 15(1), 99-106.
- Neuf, H., & **Hamburger, K.** (2013). Approaching Stan Laurel's illusion: The self-induced rubber hand phenomenon. *Perception*, 42, 894-897.



- Röser, F., **Hamburger, K.**, Krumnack, A., & Knauff, M. (2012). The structural salience of landmarks: Results from an on-line study and a virtual environment experiment. *Journal of Spatial Science*, 57(1), 37-50.
- **Hamburger, K.**, Baier, F., & Spillmann, L. (2012). The tilted Hermann grid illusion: 'illusory spots' versus 'phantom bands'. *Perception*, 41, 239-242.
- **Hamburger, K.** (2012). Still motion? Motion illusions and luminance contrast. *Perception*, 41, 113-116.
- **Hamburger, K.**, Geremek, A., & Spillmann, L. (2012). Perceptual filling-in of negative afterimages. *Perception*, 41, 50-56.
- **Hamburger, K.**, & Röser, F. (2011). The meaning of Gestalt for human wayfinding - How much does it cost to switch modalities? *Gestalt Theory*, 33(3/4), 363-382.
- **Hamburger, K.**, & Knauff, M. (2011). SQUARELAND: A virtual environment for investigating cognitive processes in human wayfinding. *PsychNology Journal*, 9 (2), 137-163.
- Röser, F., **Hamburger, K.**, & Knauff, M. (2011). The Giessen virtual environment laboratory: Human wayfinding and landmark salience. *Cognitive Processing*, 12, 209-214.
- Knauff, M., Budeck, C., Wolf, A. G., & **Hamburger, K.** (2010). The illogicality of stock-brokers: Psychological experiments on the effects of prior knowledge and belief biases on logical reasoning in stock trading. *PLoS One* 5(10): e13483. doi: 10.1371/journal.pone.0013483
- **Hamburger, K.**, & Hansen, T. (2010). Analysis of individual variations in the classical horizontal-vertical illusion. *Attention, Perception, & Psychophysics*, 72, 1045-1052.
- **Hamburger, K.**, & Shapiro, A. G. (2009). Spillmann's weaves are more resilient than Hermann's grid. *Vision Research*, 49, 2121-2130.
- Billino, J., **Hamburger, K.**, & Gegenfurtner, K. R. (2009). Age effects on the perception of motion illusions. *Perception*, 38, 508-521.
- **Hamburger, K.**, Hansen, T., & Gegenfurtner, K. R. (2007). Geometric-optical illusions at isoluminance. *Vision Research*, 47, 3276-3285.
- Hindi Attar, C., **Hamburger, K.**, Rosenholtz, R., Götzl, H., & Spillmann, L. (2007). Uniform vs. random orientation in fading and filling-in. *Vision Research*, 47, 3041-3051.
- Shapiro, A. G., & **Hamburger, K.** (2007). Grouping by contrast - figure-ground segregation is not necessarily fundamental. *Perception*, 36, 1104-1107.
- **Hamburger, K.** (2007). Apparent rotation and jazzing in Leviant's Enigma illusion. *Perception*, 36, 797-807.
- Spillmann, L., Otte, T., **Hamburger, K.**, & Magnussen, S. (2006). Perceptual filling-in from the edge of the blind spot. *Vision Research*, 46, 4252-4257.
- Gori, S., **Hamburger, K.**, & Spillmann, L. (2006). Reversal of apparent rotation in the Enigma-figure with and without motion adaptation and the effect of T-junctions. *Vision Research*, 46, 3267-3273.
- Gori, S., & **Hamburger, K.** (2006). Last but not Least: A new motion illusion: The Rotating-Tilted-Lines-Illusion. *Perception*, 35, 853-857.



- **Hamburger, K.**, Prior, H., Sarris, V., & Spillmann, L. (2006). Filling-in with colour: Different modes of surface completion. *Vision Research*, 46, 1129-1138.
- **Hamburger, K.** (2005). Color assimilation as a grouping factor. *Gestalt Theory*, 27(2), 155-163.

Journal articles (not peer-reviewed)

- **Hamburger, K.**, Graben, K., & Neuf, H. (2017). Guest Editorial - Hallucination-Consciousness-Illusion. *Perception*, 46(6), 645-649. doi: 10.1177/0301006616684906
- **Hamburger, K.** (2012). Visual illusions: brain and consciousness. *DGaO Proceedings 2012*, S5.
- Groos, A., Röser, F., & **Hamburger, K.** (2011). Anbahnung räumlicher Orientierung durch den Nachbau einer detailgetreuen Modelllandschaft. Gießener Elektronische Bibliothek (GEB). <http://geb.uni-giessen.de/geb/volltexte/2011/8260/>
- Geremek, A., **Hamburger, K.**, & Spillmann, L. (2009). An illusion induced by an illusion -perceptual filling-in of coloured negative afterimages. *naturepreceedings* <http://preceedings.nature.com/documents/3789/version/1>

Articles in Conference Proceedings (peer-reviewed)

- **Hamburger, K.**, & Röser, F. (2015). Finding the return path: allo- versus egocentric perspective. In D. C. Noelle, R. Dale, A. S. Warlaumont, J. Yoshimi, T. Matlock, C. D. Jennings & P. P. Maglio (Eds.), *Proceedings of the 37th Annual Conference of the Cognitive Science Society* (pp. 860-865). Austin, TX: Cognitive Science Society.
- **Hamburger, K.**, Trillmich, C. M., Baier, F., Wolf, C., & Röser, F. (2014). How global visual landmarks influence the recognition of a city. *Cognitive Processing*, 15(Suppl.), S42-S44.
- Röser, F., & **Hamburger, K.** (2014). Visual salience in human landmark selection. *Cognitive Processing*, 15(Suppl.), S60-S61.
- Strickrodt, M., Hinterecker, T., Röser, F., & **Hamburger, K.** (2014). What if you could build your own landmark? The influence of color, shape, and position on landmark salience. *Cognitive Processing*, 15(Suppl.), S142-S144.
- Wedell, F., Röser, F., & **Hamburger, K.** (2014). Visualizer verbalizer questionnaire: evaluation and revision of the German translation. *Cognitive Processing*, 15(Suppl.), S151-S154.
- Balaban, C. Z., Röser, F., & **Hamburger, K.** (2014). The effect of emotions and emotionally laden landmarks on wayfinding. In P. Bello, M. Guarini, M. McShane & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 1880-1885). Austin, TX: Cognitive Science Society.
- Hinterecker, T., Röser, F., Strickrodt, M., & **Hamburger, K.** (2014). SQUARELAND 2.0: A flexible and realistic virtual environment for investigating cognitive processes in human wayfinding. In P. Bello, M. Guarini, M. McShane & B. Scassellati (Eds.), *Proceedings of the 36th*



Annual Conference of the Cognitive Science Society (pp. 2363–2368).
Austin, TX: Cognitive Science Society.

- Hinterecker, T., Strickrodt, M., Röser, F., & **Hamburger, K.** (2014). The influence of structural salience and verbalization on finding the return path. In P. Bello, M. Guarini, M. McShane & B. Scassellati (Eds.), *Proceedings of the 36th Annual Conference of the Cognitive Science Society* (pp. 613–618). Austin, TX: Cognitive Science Society.
- **Hamburger, K.**, Dienelt, L. E., Strickrodt, M., & Röser, F. (2013). Spatial cognition: the return path. In M. Knauff, M. Pauen, N. Sebanz & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 537–542). Austin, TX: Cognitive Science Society.
- Röser, F., Krumnack, A., & **Hamburger, K.** (2013). The influence of perceptual and structural salience. In M. Knauff, M. Pauen, N. Sebanz & I. Wachsmuth (Eds.), *Proceedings of the 35th Annual Conference of the Cognitive Science Society* (pp. 3315–3320). Austin, TX: Cognitive Science Society.
- Röser, F., Krumnack, A., **Hamburger, K.**, Knauff, M. (2012). A four factor model of landmark salience – A new approach. In N. Rußwinkel, U. Drewitz & H van Rijn (Eds.), *Proceedings of the 11th International Conference on Cognitive Modeling (ICCM)* (pp. 82–87). Berlin.
- Wranke, C., Jung, L., & **Hamburger, K.** (2009). How strong emotions influence reasoning: effects of spider phobia on a conditional inference task. In N. A. Taatgen & H. van Rijn (Eds.), *Proceedings of the 31st Annual Conference of the Cognitive Science Society* (pp. 532–537). Austin, TX: Cognitive Science Society.

Book chapters (peer-reviewed)

- **Hamburger, K.** (2017). The enigmatic Enigma illusion. In A. G. Shapiro & D. Todorovic (Eds.), *The Oxford compendium of visual illusions* (pp. 496–499). Oxford: University Press.
- **Hamburger, K.**, Hansen, T., & Gegenfurtner, K. (2017). Geometric-optical illusions under isoluminance? In A. G. Shapiro & D. Todorovic (Eds.), *The Oxford compendium of visual illusions* (pp. 206–208). Oxford: University Press.
- **Hamburger K.**, Dixon, E. L., & Shapiro, A. G. (2014). From Hermann's grid to Spillmann's weaves. In A. Geremek, M. Greenlee & S. Magnussen (eds.), *Perception Beyond Gestalt – Progress in vision research* (pp. 118–127). Hove, UK: Psychology Press.
- **Hamburger, K.**, Röser, F., Bukow, G. C., & Knauff, M. (2012). Der Weg als Ziel: Virtuelle Umgebungen und räumlicher Wissenserwerb. In G. C. Bukow, J. Fromme & B. Jörissen (Hrsg.), *Raum, Zeit, Medienbildung: Untersuchungen zu medialen Veränderungen unseres Verhältnisses zu Raum und Zeit (Medienbildung und Gesellschaft)* (S. 173–193). VS Verlag.
- Shapiro, A. G., & **Hamburger, K.** (2011). When is an illusion an illusion? An examination of contrast information in grouping and grid phenomena. In E. P. Charles (ed.), *A new look at new realism – The Psychology and Philosophy of E. B. Holt* (pp. 81–102). New Brunswick, NJ: Transaction Publishers.



- Knauff, M., Bucher, L., & **Hamburger, K.** (2010). Bilder im Kopf - Wie die Phantasie unser Denken lenkt. In R. Rosenzweig (Hrsg.), *Geistesblitz und Neuronendonner - Intuition, Kreativität und Phantasie* (S. 91-106). Paderborn: mentis.

Monographs

- **Hamburger, K.** (2007). *Visual illusions - Perception of luminance, color, and motion in humans*. Saarbrücken: VDM.