

## **Publications Prof. Dr. Karen Zentgraf**

(as at July 2024)

(peer-reviewed manuscripts and peer-reviewed book chapters only; h-index 26; on July 15, 2024: 2841 citations)

Reichert, L., Hacker, S., Krüger, K., Mutz, M., & **Zentgraf, K.** (accepted). How much can genotype predict phenotypical power performance in elite male and female athletes? *Journal of Human Kinetics*.

Fleddermann, M.-T. & **Zentgraf, K.** (accepted). Biologische Grundlagen motorischer Entwicklung über die Lebensspanne. In C. Niessner, A. Conzelmann und K. Bös (Hrsg.), *Handbuch motorische Entwicklung*, X-X, Hoffmann: Schorndorf.

Wellm, D., Jäger, J., & **Zentgraf, K.** (accepted). Dismissing the idea that Basketball is a "contactless" sport: Quantifying contacts during professional gameplay. *Frontiers in Sports and Active Living - Elite Sports and Performance Enhancement*.

Niederdraeing, L. & **Zentgraf, K.** (under revision). Force-velocity profiling at different maturational stages in young Soccer players: A cross-sectional study.

Cermak, N., Wittenbrink, P., Rosenkötter, M., & **Zentgraf, K.** (under revision). Predictors for national junior squad selection in the German Volleyball Federation.

Kneissler, E. & **Zentgraf, K.** (under revision). Prevalence of urinary incontinence in female gymnasts: A systematic review.

Prosch, Y., Reichert, L., Fleddermann, M.-T., & **Zentgraf, K.** (under revision). Jump performance in trampoline athletes and how to measure it: Developing a repeated-jump-test.

Blessing, J., Hilpisch, C., Krüger, K., Raab, M., Wiese, L., **Zentgraf, K.**, & Mutz, M. (under review). Too much effort, too little reward? Dropout considerations of German elite athletes.

Wiedenbrüg, K., Will, L., Reichert, L., Hacker, S., Lenz, C., **Zentgraf, K.**, Raab, M., & Krüger, K. (under review). Inflammation and cognitive performance in elite athletes: A cross-sectional study.

Schmitz, T., Fleddermann, M.-T., & **Zentgraf, K.** (under review). Talent selection in 3x3 Basketball: Role of anthropometrics, maturation, and motor performance.

### **2024**

Brinkbäumer, M., Kupper, C., Reichert, L., & **Zentgraf, K.** (2024). Dual-task costs in speed tasks in elite Ice Hockey athletes. *Frontiers in Psychology - Movement Science*, 15, 1357312.  
doi: 10.3389/fpsyg.2024.1357312.

Roffler, A., Fleddermann, M.-T., de Haan, H., Krüger, K., & **Zentgraf, K.** (2024, online first). Menstrual cycle tracking in professional Volleyball athletes. *Frontiers in Sports and Active Living - Women in Sport*, 6, 1408711.

doi: 10.3389/fspor.2024.1408711.

Hilpisch, C., Krüger, K., Raab, M., Wiese, L., **Zentgraf, K.**, & Mutz, M. (2024, online first). Burnout symptoms in elite athletes: Assessing the role of effort-reward imbalance, support and emotions. *International Review for the Sociology of Sport*, 0, 0. doi: 10.1177/10126902241248767.

## 2023

Nolte, S., Krüger, K., Lenz, C., & **Zentgraf, K.** (2023). Optimizing the gut microbiome for individualized performance enhancement in elite athletes. *Biology*, 12, 1491. doi: 10.3390/biology12121491.

Sauer, K., Kunstmann, T., Wieland, B., & **Zentgraf, K.** (2023). Richtungswechsel im Volleyball: It's all about speed? *Leistungssport*, 53, 6, 20-23.

**Zentgraf, K.** & Raab, M. (2023). Excellence and expert performance in sports: What do we know and where are we going? *International Journal of Sport and Exercise Psychology*, 21, 5, 1-21. doi: 10.1080/1612197X.2023.2229362.

Wellm, D., Willberg, C., & **Zentgraf, K.** (2023). Differences in player load of professional Basketball players as a function of distance to the game day during a competitive season. *International Journal of Strength and Conditioning*, 3, 1. doi: 10.47206/ijsc.v3i1.219.

Wellm, D. & **Zentgraf, K.** (2023). Diagnostic tools for return-to-play decisions in sports-related concussion. *Journal of Concussion*, 7, 1-18. doi: 10.1177/20597002231183234.

Reichert, L., Müller, T., Wieland, B., Fleddermann, M.-T., & **Zentgraf, K.** (2023). Upper body-isometric horizontal strength in sport game athletes. *Frontiers in Sports and Active Living - Sports Science, Technology and Engineering*, 5, 1213957. doi: 10.3389/fspor.2023.1213957.

Fleddermann, M.-T., Reichert, L., Wieland, B., & **Zentgraf, K.** (2023). Stop it! The relationship between sport expertise and response inhibition in elite athletes. *Frontiers in Psychology - Movement Science and Sport Psychology*, 14, 1192483. doi: 10.3389/fpsyg.2023.1192483.

Künzell, S., Maurer, L., Voigt, L., & **Zentgraf, K.** (2023). Kognitive Aktivität im Sportunterricht – eine bewegungswissenschaftliche Perspektive. *sportunterricht*, 72, 3, 98-104.

## 2022

Willberg, C., Kohler, A., & Zentgraf, K. (2022). Construct validity and applicability of a team-sport-specific change-of-direction test. *Journal of Human Kinetics*, 85, 115-126. doi: 10.2478/hukin-2022-0115.

Wieland, B., Behringer, M., & **Zentgraf, K.** (2022). Effects of motor imagery training on skeletal muscle contractile properties in sports science students. *PeerJ*, 10, e14412. doi: 10.7717/peerj.14412.

Wieland, B., Fleddermann, M.-T., & **Zentgraf, K.** (2022). Acute effects of real and imagined endurance exercise on sustained attention performance. *Frontiers in Psychology - Movement Science and Sport Psychology*, *13*, 905772. doi: 10.3389/fpsyg.2022.905772.

Eils, E., Wirtz, S., Brodatzki, Y., **Zentgraf, K.**, Büsch, D., & Szwajca, S. (2022). Optimizing the transition from the indoor to the beach season improves motor performance in elite Beach Handball players. *German Journal of Exercise and Sport Research*, *52*, 637–646. doi: 10.1007/s12662-022-00846-7.

Willberg, C., Wieland, B., Rettenmaier, L., Behringer, M., & **Zentgraf, K.** (2022). The relationship between external and internal load parameters in 3x3 Basketball tournaments. *BMC Sports, Medicine and Rehabilitation*, *14*, 152. doi: 10.1186/s13102-022-00530-1.

Müller, C., Willberg, C., Reichert, L., & **Zentgraf, K.** (2022). External load analysis in Beach Handball using a local positioning system and inertial measurement units. *Sensors*, *22*, 3011. doi: 10.3390/s22083011.

Wieland, B., Behringer, M., & **Zentgraf, K.** (2022). Motor imagery and the muscle system. *International Journal of Psychophysiology*, *174*, 57-65. doi: 10.1016/j.ijpsycho.2022.02.004.

Willberg, C., Wellm, D., Behringer, M., & **Zentgraf, K.** (2022). Analyzing acute and daily load parameters in match situations – a comparison of classic and 3x3 basketball. *International Journal of Sports Science & Coaching*, *18*, 1, 207-219. doi: 10.1177/17479541211067989.

## 2021

Willberg, C., **Zentgraf, K.**, & Behringer, M. (2021). The effect of lower-body blood flow restriction on static and perturbed stable stand in young, healthy adults. *Frontiers in Human Neuroscience – Motor Neuroscience*, *15*, 756230. doi: 10.3389/fnhum.2021.756230.

Appel, M., **Zentgraf, K.**, Krüger, K., & Alack, K. (2021). Effects of genetic variation on endurance performance, muscle strength and injury susceptibility in sports: A systematic review. *Frontiers in Physiology – Exercise Physiology*, *12*, 694411. doi: 10.3389/fphys.2021.694411.

Heins, N., Kluger, D., Vinbrüx, S., Pomp, J., Trempler, I., Kohler, A., Kornysheva, K., **Zentgraf, K.**, Raab, M., & Schubotz, R. (2021). Surmising synchrony of sound and sight: Factors explaining variance of audiovisual integration in hurdling, tap dancing and drumming. *PLoS ONE*, *16*, 7, e0253130. doi: 10.1371/journal.pone.0253130.

## 2020

Krüger, B., Hettwer, M., Zabicki, A., de Haas, B., Munzert, J., & **Zentgraf, K.** (2020). Practice modality of motor sequences impacts the neural signature of motor imagery. *Scientific Reports*, *10*, 19176. doi: 10.1038/s41598-020-76214-y.

- Heins, N., Trempler, I., **Zentgraf, K.**, Raab, M., & Schubotz, R. (2020). Too late! Influence of temporal delay on the neural processing of one's own incidental and intentional action sounds. *Frontiers in Neuroscience – Auditory Cognitive Neuroscience*, *14*, 573970. doi: 10.3389/fnins.2020.573970.
- Müller, C. & **Zentgraf, K.** (2020). Neck and trunk strength training to mitigate head acceleration in youth Soccer players. *Journal of Strength and Conditioning Research*, *35*, 81-89. doi: 10.1519/JSC.0000000000003822.
- Reiser, M., **Zentgraf, K.**, Kindermann, S., & Künzell, S. (2020). An approach to quantify the float effect of float serves in indoor and Beach Volleyball. *Frontiers in Sports and Active Living - Biomechanics and Control of Human Movement*, *2*, 559277. doi: 10.3389/fspor.2020.559277.
- Ferger, K., Helm, F., & **Zentgraf, K.** (2020). Estimating horizontal displacement deduction in trampoline gymnastics by means of constant and variable errors of landing positions: A new gold standard? *Science of Gymnastics Journal*, *12*, 2, 203-216.
- Heins, N., Pomp, J., Kluger, D., Trempler, I., **Zentgraf, K.**, Raab, M., & Schubotz, R. (2020). Incidental or intentional? Different brain responses to one's own action sounds in hurdling vs. tap dancing. *Frontiers in Neuroscience – Auditory Cognitive Neuroscience*, *14*, 483. doi: 10.3389/fnins.2020.00483.
- Kupper, C., Jusko, E., Roemer, K., & **Zentgraf, K.** (2020). Distality of attentional focus and its role in postural balance control. *Frontiers in Psychology - Movement Science and Sport Psychology*, *11*, 125. doi: 10.3389/fpsyg.2020.00125.
- Munzert, J. & **Zentgraf, K.** (2020). Mentales Training und Simulationstraining. In J. Munzert, M. Raab und B. Strauß (Hrsg.), *Sportpsychologie*, 109-130, Kohlhammer: Stuttgart.
- Zentgraf, K.** & Kohler, A. (2020). Forschungsmethoden in der empirischen Sportpsychologie. In J. Munzert, M. Raab und B. Strauß (Hrsg.), *Sportpsychologie*, 17-39, Kohlhammer: Stuttgart.
- Zentgraf, K.** & Helm, F. (2020). Brain changes in response to exercise. In G. Tenenbaum & R. C. Eklund (Eds.), *The Handbook of Sport Psychology*, 815-831, Wiley: Oxford.
- 2019**
- Fleddermann, M.-T., Heppe, H., & **Zentgraf, K.** (2019). Off-court generic perceptual-cognitive training in elite Volleyball athletes: Task-specific effects and levels of transfer. *Frontiers in Psychology*, *10*, 1599. doi: 10.3389/fpsyg.2019.01599.
- Ferger, K., Hackbarth, M., Mylo, M., Müller, C., & **Zentgraf, K.** (2019). Measuring temporal and spatial accuracy in Trampolining. *Sports Engineering*, *22*, 18. doi: 10.1007/s12283-019-0310-9.
- Zabicki, A., de Haas, B., **Zentgraf, K.**, Stark, R., Munzert, J., & Krueger, B. (2019). Subjective vividness of

motor imagery has a neural signature in human premotor and parietal cortex. *NeuroImage*, 197, 273-283. doi: 10.1016/j.neuroimage.2019.04.073.

Heppe, H. & **Zentgraf, K.** (2019). Hand and foot response inhibition of team Handball experts and recreational athletes. *Frontiers in Psychology*, 10, 971. doi: 10.3389/fpsyg.2019.00971.

## 2018

Fleddermann, M.-T. & **Zentgraf, K.** (2018). Tapping the full potential? Jumping performance of Volleyball athletes in game-like situations. *Frontiers in Psychology*, 9, 1375. doi: 10.3389/fpsyg.2018.01375.

Boström, K., Dirksen, T., **Zentgraf, K.**, & Wagner, H. (2018). The contribution of upper body movements to dynamic balance regulation during challenged locomotion. *Frontiers in Human Neuroscience*, 12, 8. doi: 10.3389/fnhum.2018.00008.

Krüger, B., Kaletsch, M., Pilgramm, S., Schwippert, S., Hennig, J., Stark, R., Lis, S., Gallhofer, B., Sammer, G., **Zentgraf, K.**, & Munzert, J. (2018). Perceived intensity of emotional point-light displays is reduced in subjects with ASD. *Journal of Autism and Developmental Disorders*, 48, 1. doi: 10.1007/s10803-017-3286-y.

## 2017

Karlinsky, A., **Zentgraf, K.**, & Hodges, N. (2017). Action-skilled observation: Issues for the study of sport expertise and the brain. *Progress in Brain Research*, 234, 263-289. doi: 10.1016/bs.pbr.2017.08.009.

**Zentgraf, K.**, Heppe, H., & Fleddermann, M.-T. (2017). Training in interactive sports: A systematic review of practice and transfer effects of perceptual-cognitive training. *German Journal of Exercise and Sport Research*, 47, 1, 2-14. doi: 10.1007/s12662-017-0441-8.

Seuter, M., Pfeiffer, M., Bauer, G., **Zentgraf, K.**, & Kray, C. (2017). Running with technology: Evaluating the impact of interacting with wearable devices on running movement. *Proceedings of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies*, 1, 3, 101. doi: 10.1145/3120966.

Eils, E., Cañal-Bruland, R., Sieverding, L., de Lussanet de la Sablonière, M. H. E., & **Zentgraf, K.** (2017). Vision adds to haptics when dyads perform a whole-body joint balance task. *Experimental Brain Research*, 235, 1-14. doi: 10.1007/s00221-017-4952-1.

## 2016

Zabicki, A., de Haas, B., **Zentgraf, K.**, Stark, R., Munzert, J., & Krüger, B. (2016). Imagined and executed actions in the human motor system: Testing neural similarity between execution and imagery of actions with a multivariate approach. *Cerebral Cortex*, 26, 1-14. doi: 10.1093/cercor/bhw257.

Dirksen, T., de Lussanet de la Sablonière, M. H. E., **Zentgraf, K.**, Slupinski, L., & Wagner, H. (2016). Increased throwing accuracy improves children's catching performance in a ball-catching task from the

movement assessment battery (MABC-2). *Frontiers in Psychology – Movement Science and Sport Psychology*, 7, 1122. doi: 10.3389/fpsyg.2016.01122.

Schücker, L., Fleddermann, M.-T., de Lussanet de la Sablonière, M. H. E., Elischer, J., Böhmer, C., & **Zentgraf, K.** (2016). Focusing attention on circular pedaling reduces movement economy in cycling. *Psychology of Sport and Exercise*, 27, 9-17. doi: 10.1016/j.psychsport.2016.07.002.

Behrendt, F., de Lussanet de la Sablonière, M. H. E., **Zentgraf, K.**, & Zschorlich, V. (2016). Motor-evoked potentials in the lower back are modulated by visual perception of lifted weight. *PLoS ONE*, 11, 6, e0157811, 1-13. doi: 10.1371/journal.pone.0157811.

Querfurth, S., Schücker, L., de Lussanet de la Sablonière, M. H. E., & **Zentgraf, K.** (2016). An internal focus leads to longer quiet eye durations in novice Dart players. *Frontiers in Psychology*, 7, 633. doi: 10.3389/fpsyg.2016.00633.

Heppe, H., Kohler, A., Fleddermann, M.-T., & **Zentgraf, K.** (2016). The relationship between expertise in sports, visuospatial, and basic cognitive skills. *Frontiers in Psychology*, 7, 904. doi: 10.3389/fpsyg.2016.00904.

## 2015

Pilgramm, S., de Haas, B., Helm F, **Zentgraf, K.**, Stark, R., Munzert, J., & Krüger, B. (2015). Motor imagery of hand actions: Decoding the content of motor imagery from brain activity in frontal and parietal motor areas. *Human Brain Mapping*, 37, 1, 81-93. doi: 10.1002/hbm.23015.

Dirksen, T., **Zentgraf, K.**, & Wagner, H. (2015). Bewegungskoordination und Schulerfolg? Feldstudie zum Einfluss einer Bewegungsintervention auf koordinative und schulische Leistungen von Schülerinnen und Schülern in der Sekundarstufe I. *Sportwissenschaft*, 45, 2, 73-82. doi:10.1007/s12662-015-0359-y.

Bischoff, M., **Zentgraf, K.**, Pilgramm, S., Krüger, B., Balsler, N., Sauerbier, I., Stark, R., & Munzert, J. (2015). Anticipating action effects with different attention foci is reflected in brain activation. *Perceptual and Motor Skills*, 120, 1, 39-56. doi: 10.2466/22.24.PMS.120v10x7.

## 2014

Balsler, N., Lorey, B., Pilgramm, S., Naumann, T., Kindermann, S., Stark, R., **Zentgraf, K.**, Williams, A. M., & Munzert, J. (2014). The influence of expertise on brain activation of the action observation network during anticipation of tennis and volleyball serves. *Frontiers in Human Neuroscience*, 8, 568. doi: 10.3389/fnhum.2014.00568.

Kaletsch, M., Pilgramm, S., Bischoff, M., Kindermann, S., Sauerbier, I., Stark, R., Lis, S., Gallhofer, B., Sammer, G., **Zentgraf, K.**, Munzert, J., & Lorey, B. (2014). Major depressive disorder alters perception of emotional body movements. *Frontiers in Psychiatry*, 5, 4. doi: 10.3389/fpsy.2014.00004.

Kaletsch, M., Krüger, B., Pilgramm, S., Stark, R., Lis, S., Gallhofer, B., **Zentgraf, K.**, Munzert, J., & Sammer, G. (2014). Borderline personality disorder is associated with lower confidence in perception of emotional body movements. *Frontiers in Psychology – Emotion Science*, *5*, 262. doi: 10.3389/fpsyg.2014.01262.

Bischoff, M., **Zentgraf, K.**, Pilgramm, S., Stark, R., Krüger, B., & Munzert, J. (2014). Anticipating action effects recruits audiovisual movement representations in the ventral premotor cortex. *Brain and Cognition*, *92*, 39-47. doi: 10.1016/j.bandc.2014.09.010.

Balser, N., Lorey, B., Pilgramm, S., Stark, R., Bischoff, M., **Zentgraf, K.**, Williams, A. M., & Munzert, J. (2014). Prediction of human actions: Expertise and task-related effects on neural activation of the action observation network. *Human Brain Mapping*, *35*, 8, 4016-4034. doi: 10.1002/hbm.22455.

Lorey, B., Naumann, T., Pilgramm, S., Petermann, C., Bischoff, M., **Zentgraf, K.**, Stark, R., Vaitl, D., & Munzert, J. (2014). Neural simulation of actions: Effector- versus action-specific motor maps within the human premotor and posterior parietal area? *Human Brain Mapping*, *35*, 4, 1212-1225. doi: 10.1002/hbm.22246.

Munzert, J., Reiser, M., & **Zentgraf, K.** (2014). Bewegungsvorstellungstraining im Sport. In K. Zentgraf und J. Munzert (Hrsg.), *Kognitives Training im Sport*, S. 9-36, Hogrefe: Göttingen.

**Zentgraf, K.** & Munzert, J. (Hrsg.) (2014). *Kognitives Training im Sport*, Hogrefe: Göttingen.

## 2013

Lorey, B., Naumann, T., Pilgramm, S., Petermann, C., Bischoff, M., **Zentgraf, K.**, Stark, R., Vaitl, D., & Munzert, J. (2013). How equivalent are the action execution, imagery, and observation of intransitive movements? Revisiting the concept of somatotopy during action simulation. *Brain and Cognition*, *81*, 1, 139-150. doi: 10.1016/j.bandc.2012.09.011.

## 2012

Lorey, B., Kaletsch, M., Pilgramm, S., Bischoff, M., Kindermann, S., **Zentgraf, K.**, & Munzert, J. (2012). Confidence in emotion perception in point-light displays varies with the ability to perceive own emotions. *PLoS ONE*, *7*, 8. doi: 10.1371/journal.pone.0042169.

Bischoff, M., **Zentgraf, K.**, Lorey, B., Pilgramm, S., Balser, N., Baumgärtner, E., Hohmann, T., Stark, R., Vaitl, D., & Munzert, J. (2012). Motor familiarity: Brain activation when watching kinematic displays of one's own movements. *Neuropsychologia*, *50*, 8, 2085-2092. doi: 10.1016/j.neuropsychologia.2012.05.009.

Zimmermann, K.M., Bischoff, M., Lorey, B., Stark, R., Munzert, J., & **Zentgraf, K.** (2012). Neural correlates of switching attentional focus during finger movements: An fMRI study. *Frontiers in Psychology*, *3*, 555. doi: 10.3389/fpsyg.2012.00555.

## 2011

**Zentgraf, K.**, Munzert, J., Bischoff, M., & Newman-Norlund, R. D. (2011). Simulation during observation of human actions--theories, empirical studies, applications. *Vision Research*, 51, 8, 827-835. doi: 10.1016/j.visres.2011.01.007.

**Zentgraf, K.**, Naumann, T., & Lorey, B. (2011). Bewegungsvorstellungstraining in Sport und Rehabilitation. In C. Dettmers (Hrsg.), *Motorische Therapie nach Schlaganfall*, 157-177, Hippocampus: Bad Honnef.

Lorey, B., Pilgramm, S., Bischoff, M., Stark, R., Vaitl, D., Kindermann, S., Munzert, J., & **Zentgraf, K.** (2011). Activation of the parieto-premotor network is associated with vivid motor imagery - A parametric fMRI study. *PLoS ONE*, 6, 5, e20368. doi: 10.1371/journal.pone.0020368.

## 2010

**Zentgraf, K.** (2010). Motorik, Diagnostik und Intervention nach Schlaganfall. In N. Schott und J. Munzert, (Hrsg.), *Motorische Entwicklung*, S. 230-249, Hogrefe: Göttingen.

Lorey, B., Pilgramm, S., Walter, B., Stark, R., Munzert, J., & **Zentgraf, K.** (2010). Your mind's hand: Motor imagery of pointing movements with different accuracy. *NeuroImage*, 49, 4, 3239-3247. doi: 10.1016/j.neuroimage.2009.11.038.

Lotze, M. & **Zentgraf, K.** (2010). Contribution of the primary motor cortex to motor imagery. In A. Guillot and C. Collet (Eds.), *The Neurophysiological Foundations of Mental and Motor Imagery*, p. 31-45, Oxford University Press: Oxford.

Pilgramm, S., Lorey, B., Stark, R., Munzert, J., Vaitl, D., & **Zentgraf, K.** (2010). Differential activation of the lateral premotor cortex during action observation. *BMC Neuroscience*, 11, 89. doi: 10.1186/1471-2202-11-89.

## 2009

**Zentgraf, K.**, Lorey, B., Bischoff, M., Zimmermann K, Stark, R., & Munzert, J. (2009). Neural correlates of attentional focusing during finger movements: A fMRI study. *Journal of Motor Behavior*, 41, 6, 535-541. doi: 10.3200/35-08-091.

Lorey, B., Bischoff, M., Pilgramm, S., Stark, R., Munzert, J., & **Zentgraf, K.** (2009). The embodied nature of motor imagery: The influence of posture and perspective. *Experimental Brain Research*, 194, 2, 233-243. doi: 10.1007/s00221-008-1693-1.

**Zentgraf, K.** & Munzert, J. (2009). Effects of attentional focus instructions on movement kinematics. *Psychology of Sport and Exercise*, 10, 520-525. doi: 10.1016/j.psychsport.2009.01.006.

Munzert, J., Lorey, B., & **Zentgraf, K.** (2009). Cognitive motor processes: The role of motor imagery in the study of motor representations. *Brain Research Reviews*, 60, 2, 306-326. doi: 10.1016/j.brainresrev.2008.12.024.



Munzert, J. & **Zentgraf, K.** (2009). Motor imagery and its implications for understanding the motor system. In M. Raab, J. G. Johnson and H. R. Heekeren (Eds.), *Progress in Brain Research, Mind and Motion: The Bidirectional Link between Thought and Action*, p. 219-229. Elsevier: The Netherlands. doi: 10.1016/S0079-6123(09)01318-1.

**Zentgraf, K.**, Green, N., Munzert, J., Schack, T., Tenenbaum, G., Vickers, J. N., Weigelt, M., Wolfensteller, U., & Heekeren, H. R. (2009). How are actions physically implemented? In M. Raab, J. G. Johnson and H. R. Heekeren (Eds.), *Progress in Brain Research, Mind and Motion: The Bidirectional Link between Thought and Action*, p. 303-318. doi: 10.1016/S0079-6123(09)01324-7.

Pilgramm, S., Lorey, B., Stark, R., Munzert, J., & **Zentgraf, K.** (2009). The role of own-body representations in action observation: A functional MRI study. *Neuroreport*, 20, 11, 997-1001. doi: 10.1097/WNR.0b013e32832d21fc.

## 2008

Munzert, J., **Zentgraf, K.**, Stark, R., & Vaitl, D. (2008). Neural activation in cognitive motor processes: Comparing motor imagery and observation of gymnastic movements. *Experimental Brain Research*, 188, 3, 437-444. doi: 10.1007/s00221-008-1376-y.

## 2005

**Zentgraf, K.**, Stark, R., Reiser, M., Künzell, S., Schienle, A., Kirsch, P., Walter, B., Vaitl, D., & Munzert, J. (2005). Differential activation of pre-SMA and SMA proper during action observation: Effects of instructions. *NeuroImage*, 26, 3, 662-672. doi: 10.1016/j.neuroimage.2005.02.015.