

Motion – Spaces of Human Experience

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WHO IS WHO?

- Name: Tiziano Agostini

- Foto:



- Link to the website:

<http://dsv.units.it/en>

- 100 words about me:

Tiziano Agostini is Full Professor at the Department of Life Sciences of the University of Trieste. He teaches Introductory Psychology and Methods of Investigation and Intervention Applied to Sport and Health. For two years he carried out research in the United States where he also taught. He is interested in visual perception, methodology of psychological research, history of psychology, experimental psychology of sport, cognitive ergonomics, and emergency psychology. He coordinates national and international grants. He is the coordinator of the Ph.D. programme in Neuroscience and Cognitive Sciences. It counts more than 350 publications.

- Research:

Lightness perception, Movement perception, numerical and spatial cognition, sport psychology, motor rehabilitation.

- Read it! – 10 publications of the last 10 years (Auswahl) (short title or link):

1. Murgia, M., Pili, R., Corona, F., Sors, F., Agostini, T., Bernardis, P., Casula, C., Cossu, G., Guicciardi, M., Pau, M. (2018). The use of footstep sounds as rhythmic auditory stimulation for gait rehabilitation in Parkinson's disease: A randomized controlled trial. *Frontiers in Neurology*, 9:358, 1-13.
2. Sors, F., Lath, F., Bader, A., Santoro, I., Galmonte, A., Agostini, T., & Murgia, M. (2018). Predicting the length of volleyball serves: The role of early auditory and visual information. *PLOS ONE*. 13(12): e0208174, 1-17.
3. Murgia, M., Prpic, V., O, J., McCullagh, P., Santoro, I., Galmonte, A., & Agostini, T. (2017). Modality and perceptual-motor experience influence the detection of temporal deviations in tap dance sequences. *Frontiers in Psychology*, 8:1340, 1-8.
4. Santoro, I., Murgia, M., Sors, F., & Agostini, T. (2017). Walking reduces the gap between encoding and sensorimotor alignment effects in spatial updating of described environments. *The Quarterly Journal of Experimental Psychology*, 70(4), 750-760.
5. Santoro, I., Murgia, M., Sors, F., Prpic, V., & Agostini, T. (2017). Walking during the encoding of described environments enhances a heading-independent spatial representation. *Acta Psychologica*, 180, 16-22.
6. Sors, F., Murgia, M., Santoro, I., Prpic, V., Galmonte, A., & Agostini, T. (2017). The contribution of early auditory and visual information to the discrimination of shot power in ball sports. *Psychology of Sport and Exercise*, 31, 44-51.
7. Murgia, M., Santoro, I., Tamburini, G., Prpic, V., Sors, F., Galmonte, A., & Agostini, T. (2016). Ecological sounds affect breath duration more than artificial sounds. *Psychological Research*, 80(1), 76-81.
8. Murgia, M., Sors, F., Muroni, A. F., Santoro, I., Prpic, V., Galmonte, A., & Agostini, T. (2014). Using perceptual home-training to improve anticipation skills of soccer goalkeepers. *Psychology of Sport and Exercise*, 15, 642-648.
9. Kennel, C., Pizzera, A., Hohmann, T., Schubotz, R., Murgia, M., Agostini, T., & Raab, M. (2014). The perception of natural and modulated movement sounds. *Perception*, 43, 796-804.
10. Murgia, M., Hohmann, T., Galmonte, A., Raab, M., & Agostini, T. (2012). Recognising one's own motor action through sound: The role of temporal factors. *Perception*, 41, 976-987.

- Title: Rhythm: a gestalt of human movement
- Summary of the abstract in 3 sentences: 1) We observed that the cyclical movements of human body can be accurately represented by an acoustic stimulus having definite rhythmical characteristics and that this acoustic stimulus can be easily recognized by who has produced it. 2) We found that ecological sounds (the real sounds produced by real body movements) are more efficient than artificial sounds in building up an effective motor action mental representation. 3) We discovered that auditory information is an important feedback to exert a more accurate control of timing in terms of improvement and standardization of a specific movement.

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Rhythm: a gestalt of human movement

In 2006 on Gestalt Theory, we published a paper titled “Rhythm, a gestalt of human movement?”. The question mark was strongly suggested because the number of empirical evidences supporting this claim was still too limited. Thirteen years later, after that many experimental proofs, in different research domains, had fully supported this claim, we are quite confident in removing the question mark from the title. In our studies, we obtained 3 main results. 1) We observed that the cyclical movements of human body can be accurately represented by an acoustic stimulus having definite rhythmical characteristics and that this acoustic stimulus can be easily recognized by who has produced it (Murgia et al. 2012). 2) We found that ecological sounds (the real sounds produced by real body movements) are more efficient than artificial sounds in building up an effective motor action mental representation (Murgia et al., 2016). 3) We discovered that auditory information is an important feedback to exert a more accurate control of timing in terms of improvement and standardization of a specific movement (Sors et al., 2015). This evidence offers important indications to develop applied strategies to standardize and to improve motor execution that can indirectly affect cognitive functions.

References

Murgia, M., Santoro, I., Tamburini, G., Prpic, V., Sors, F., Galmonte, A., & Agostini, T. (2016). Ecological sounds affect breath duration more than artificial sounds. *Psychological Research*, 80(1), 76–81.

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Murgia, M., Hohmann, T., Galmonte, A., Raab, M., & Agostini, T. (2012). Recognising one’s own motor actions through sound: the role of temporal factors. *Perception*, 41(8), 976–987. <https://doi.org/10.1068/p7227>

Sors, F., Murgia, M., Santoro, I., & Agostini, T. (2015). Audio-based interventions in sport. *The Open Psychology Journal*, 8(1), 212–219. <https://doi.org/10.2174/1874350101508010212>