

## **Multisensory research in the real world and applications**

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### **Real-world / application reviews**

Soto-Faraco, S., Kvasova, D., Biau, E., Ikumi, N., Ruzzoli, M., Morís-Fernández, L., & Torralba, M. (2019). *Multisensory Interactions in the Real World* (Elements in Perception). Cambridge: Cambridge University Press. doi:10.1017/9781108578738

Spence, C., & Soto-Faraco, S. (2020). *Crossmodal Attention Applied: Lessons for Driving* (Elements in Perception). Cambridge: Cambridge University Press. doi:10.1017/9781108919951

### **Searching for objects**

Kvasova, D., Garcia-Vernet, L., & Soto-Faraco, S. (2019). Characteristic sounds facilitate object search in real-life scenes. *Frontiers in psychology*, 10, 2511. <https://www.frontiersin.org/articles/10.3389/fpsyg.2019.02511/full>

Kvasova, D., Stewart, T., & Soto-Faraco, S. (2021). Cross-modal Semantic Relationships Guide Spontaneous Orienting in Real-life Scenes. *bioRxiv*, 2021-11. <https://www.biorxiv.org/content/10.1101/2021.11.29.470351v1.abstract>

Hamzeloo, M., Kvasova, D., & Soto-Faraco, S. (2021). Association Between Action Video Game Playing Experience and Visual Search in Real-world Multisensory scenes. *bioRxiv*, 2021-10. <https://doi.org/10.1101/2021.10.04.462750>

### **Conflict in perception**

Marly, A., Yazdjian, A., & Soto-Faraco, S. (2023). The role of conflict processing in multisensory perception: behavioural and electroencephalography evidence. *Philosophical Transactions of the Royal Society B*, 378(1886), 20220346. <https://doi.org/10.1098/rstb.2022.0346>

Moris Fernandez, L., Macaluso, E., & Soto-Faraco, S. (2017). Audiovisual integration as conflict resolution: The conflict of the McGurk illusion. *Human brain mapping*, 38(11), 5691-5705. <https://doi.org/10.1002/hbm.23758>

Moris Fernandez, L., Torralba, M., & Soto-Faraco, S. (2018). Theta oscillations reflect conflict processing in the perception of the McGurk illusion. *European Journal of Neuroscience*, 48(7), 2630-2641. <https://doi.org/10.1111/ejn.15554>

Ruzzoli, M., McGuinness, A., Morís Fernández, L., & Soto-Faraco, S. (2020). From cognitive control to visual incongruity: Conflict detection in surrealistic images. *Plos one*, *15*(6), e0224053. <https://doi.org/10.1371/journal.pone.0224053>

### **Pre-stimulus trial to trial classification**

Ikumi, Nara, Mireia Torralba, Manuela Ruzzoli, and Salvador Soto-Faraco. "The phase of pre-stimulus brain oscillations correlates with cross-modal synchrony perception." *European Journal of Neuroscience* 49, no. 2 (2019): 150-164. <https://doi.org/10.1111/ejn.14186>

Cruzat, J., Torralba, M., Ruzzoli, M., Fernández, A., Deco, G., & Soto-Faraco, S. (2021). The phase of Theta oscillations modulates successful memory formation at encoding. *Neuropsychologia*, *154*, 107775. <https://doi.org/10.1016/j.neuropsychologia.2021.107775>

### **Brain Computer Interface**

Vigué-Guix, I., Moris Fernandez, L., Torralba Cuello, M., Ruzzoli, M., & Soto-Faraco, S. (2022). Can the occipital alpha-phase speed up visual detection through a real-time EEG-based brain-computer interface (BCI)?. *European Journal of Neuroscience*, *55*(11-12), 3224-3240. <https://doi.org/10.1111/ejn.14931>

Esparza-laizzo, M., Vigué-Guix, I., Ruzzoli, M., Torralba-Cuello, M., & Soto-Faraco, S. (2023). Long-Range  $\alpha$ -Synchronization as Control Signal for BCI: A Feasibility Study. *Eneuro*, *10*(3). <https://doi.org/10.1523/ENEURO.0203-22.2023>

Vigué-Guix, I., & Soto-Faraco, S. (2023). Using occipital  $\alpha$ -bursts to modulate behavior in real-time. *Cerebral Cortex*, bhad217. <https://doi.org/10.1093/cercor/bhad217>