

Personal information



Spanish 07/09/1991

Darías Holgado

Researcher

Institute of sport sciences, University of
Lausanne,

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Brief summary

My research line is transdisciplinary since I have worked on exercise science under the focus of experimental Psychology and neuroscience. I consider of paramount importance a policy for the Open Science to improve the credibility of science (e.g., preregistration of studies, data sharing) and doing meta research. I consider myself as highly motivated and productive to develop the competencies of my position.

Keywords: mental fatigue; meta science; experimental psychology; exercise performance; brain stimulation; cognition

Employment

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| 01/2022 - Present | Researcher at Institute of Sport Science, University of Lausanne, Switzerland and Mind, Brain and Behavior Research Centre, University of Granada, Spain |
| 10/2019
04/2020 | – Postdoc at the Mind, Brain and Behavior Research Centre, University of Granada, Spain |
| 10/2015
09/2019 | – PhD Student at the Department of Physical Education & Sport and Mind, Brain and Behavior Research Centre, University of Granada, Spain |
| 09/2018
12/2018 | – PhD. Internship in Campus Biotech. University of Geneva, Switzerland. |
| 04/2014
10/2015 | – Research fellow at the Department of Physical Education & Sport, University of Granada, Spain |
| 09/2013
08/2014 | – Research assistant at the Department of Physical Education & Sport, University of Granada, Spain |

Education

- September 2019 **International PhD in Biomedicine.** University of Granada
Thesis title: "Executive functions, self-paced exercise and cycling performance". Advisors: Daniel Sanabria and Mikel Zabala
- October 2015 **Master of Research in sport and physical Activity.** University of Granada
- July 2014 **BSc. in Sport Sciences (Extraordinary Degree Award).** University of Granada
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Publications

1. Luis F. Ciria, Rafael Román-Caballero, Miguel Vadillo, **Darías Holgado**, Antonio Luque-Casado, Pandelis Perakakis & Daniel Sanabria. (2023). An umbrella review of randomized control trials on the effects of physical exercise on cognition. *Nature Human Behavior*. <https://www.nature.com/articles/s41562-023-01554-4>
2. **Darías Holgado**, Léo Jolidon, Guillermo Borrigan, Daniel Sanabria, Nicolas Place. (2023). Individualized mental fatigue does not impact neuromuscular function and exercise performance. *Medicine and Science in Sport and Exercise*. https://journals.lww.com/acsm-msse/Fulltext/9900/Individualized_Mental_Fatigue_Does_Not_Impact.292.aspx
3. **Darías Holgado**, Christian Mesquida, Rafael Román-Caballero Assessing the evidential value mental fatigue and exercise research. (2023). SportRxiv: <https://doi.org/10.51224/SRXIV.245>
4. **Darías Holgado** & Thomas Zandonai. (2022) Comment on "What is the Effect of Paracetamol (Acetaminophen) Ingestion on Exercise Performance? Current Findings and Future Research Directions." *Sports Med.* 2022;52:2561–2.
5. Thomas Zandonai, **Darías Holgado**, Luis F. Ciria, James Hopker, Mikel Zabala, Tristan Bekinschtein, & Daniel Sanabria Sanabria, D. (2021). Novel evidence on the effect of tramadol on self-paced high-intensity cycling. *Journal of Sport Science*. Doi: 10.1080/02640414.2021.1877440
6. **Darías Holgado**; Daniel Sanabria; José C. Perales and Miguel A. Vadillo. (2020). "Mental fatigue might be not so bad for exercise performance after all: A Systematic Review and Bias-sensitive Meta-analysis." *Journal of Cognition*. <https://doi.org/10.5334/joc.126>.
7. **Darías Holgado** & Daniel Sanabria. (2020). "Does self-paced exercise depend on executive processing? A narrative review of the current evidence." *International Review of Sport and Exercise Psychology*. doi: <https://doi.org/10.1080/1750984X.2020.1774915>
8. **Darías Holgado**; Esther Troya; José C. Perales; Miguel A. Vadillo and Daniel Sanabria. (2020). "Does mental fatigue impair physical performance? A replication study" *European Journal of Sport Science*. <https://doi.org/10.1080/17461391.2020.1781265>.
9. Thomas Zandonai & **Darías Holgado**. (2020). Doping in tennis, where we are and where we should be going? *Performance Enhancement & Health*. <https://doi.org/10.1016/j.peh.2020.100157>
10. **Darías Holgado** (2019). Executive Functions, Self-Paced Exercise and Cycling Performance [Doctoral dissertation, University of Granada, Spain]. Supervisor: Daniel Sanabria and Mikel Zabala. *Thesis Common*. 10.31237/osf.io/vtyfu.

11. **Darías Holgado**; Miguel A. Vadillo; Daniel Sanabria. (2019). 'Brain-doping ', is it a real threat? **Frontiers in Physiology**. <https://doi.org/10.3389/fphys.2019.00483>
12. **Darías Holgado**.; Mikel Zabala; Daniel Sanabria. (2019). No evidence of the effect of cognitive load on self-paced cycling performance. **Plos One**. <https://doi.org/10.1371/journal.pone.0217825>
13. **Darías Holgado**; Thomas Zandonai; Luis F Ciria; Mikel Zabala; James Hopker; Daniel Sanabria. (2019). Transcranial direct current stimulation (tDCS) over the left prefrontal cortex does not affect time-trial self-paced cycling performance: Evidence from oscillatory brain activity and power output. **Plos One**. <https://doi.org/10.1371/journal.pone.0210873>
14. **Darías Holgado**; Thomas Zandonai; Daniel Sanabria. (2019). Comment on "Review of WADA Prohibited Substances: Limited Evidence for Performance-Enhancing Effects". **Sports Medicine**. <https://doi.org/10.1007/s40279-019-01062-4>
15. **Darías Holgado**; Miguel A. Vadillo; Daniel Sanabria. (2018). The effects of transcranial direct current stimulation on objective and subjective measures of sports performance: A systematic review and meta-analysis. **Brain Stimulation**. <https://doi.org/10.1016/j.brs.2018.12.002>.
16. Ana Peinado; **Darías Holgado**; Antonio Luque Casado; Miguel Rojo Tirado; Daniel Sanabria Lucena; Coral González; Manuel Mateo-March; Cristobal Sanchez Muñoz; Francisco Calderón; Mikel Zabala. 2018. Effect of induced alkalosis on performance during a field-simulated BMX cycling competition. **Journal of Science and Medicine in Sport**. 08/2018. <https://doi.org/10.1016/j.jsams.2018.08.010>
17. **Darías Holgado**; Thomas Zandonai; Mikel Zabala; James Hopker; Pandelis Perakakis; Antonio Luque Casado; Luis Ciria; Eduardo Guerra Hernandez; Daniel Sanabria. 2017. Tramadol effects on physical performance and sustained attention during a 20-min indoor cycling time-trial: A randomised controlled trial. **Journal of Science and Medicine in Sport**. 01/11/2017. <https://doi.org/10.1016/j.jsams.2017.10.032>
18. Luis F Ciria; Antonio Luque-Casado; Daniel Sanabria; **Darías Holgado**; Plamen Ch Ivanov; Pandelis Perakakis. 2018. Oscillatory brain activity during acute exercise: Tonic and transient neural response to an Oddball task. **Psychophysiology**. 10.1111/psyp.13326
19. **Darías Holgado**; James Hopker; Daniel Sanabria; Mikel Zabala. 2017. Analgesics and Sport Performance: Beyond the Pain Modulating Effects. **PM&R**. 10.1016/j.pmrj.2017.07.068

C.1.2 Ongoing projects

20. Hard physical exercise might be bad for your mind. <https://osf.io/cz3s5/>
21. Can we actually enhance exercise performance by stimulating the brain? Evidence from an umbrella review. <https://osf.io/73qsu/>.

Funding

- 1 Participating member: Putting the brain at work: Self-regulated acute aerobic exercise and executive control. Spanish Ministerio de Economía y Hacienda. Pi: Daniel Sanabria. (University of Granada) 01/01/2017-31/12/2019. 54.500 €.
- 2 Participating member: Clinical trial on the effects of the combination of tramadol and paracetamol on physical, cognitive and brain performance during cycling. World Anti-Doping Agency (WADA). Pi: Daniel Sanabria. (University of Granada). 01/07/2018-01/07/2020. 94.556,01 €.

- 3 Participating member: Tramadol and sport: Effects on physical and sustained attention performance during cycling exercise. World Anti-Doping Agency (WADA). Pi: Daniel Sanabria. (University of Granada). 15/02/2016-15/02/2016. 67.000 €.
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Teaching

- **Course:** Behavioral analysis and motor development. **Degree:** BSc. Sport Sciences. **Academic Year:** 2022/2023 **Credits ECTS:** 3 **Faculty:** Sport Sciences. University of Granada
 - **Course:** Are we moving sport sciences forward? The need for effective and transparent practices. **Master seminar.** **Academic Year:** 2022. **Faculty:** Institute of Sport Science, University of Lausanne, Switzerland.
 - **Course:** Fundamentals of Sport IV: Cycling. **Degree:** BSc. Sport Sciences. **Academic Year:** 2017/2018, 2018/2019. **Credits ECTS:** 6 **Faculty:** Sport Sciences. University of Granada
 - **Course:** Sport Specialization: Cycling. **Degree:** BSc. Sport Sciences. **Academic Year:** 2016/2017, 2018/2019. **Credits ECTS:** 6 **Faculty:** Sport Sciences. University of Granada
 - **Course:** Sport Advanced Course: Cycling. **Degree:** BSc. Sport Sciences. **Academic Year:** 2017/2018. **Credits ECTS:** 3. **Faculty:** Sport Sciences. University of Granada
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Additional formation

Languages

Language	Listening	Reading	Speaking	Writing
French	C1	C1	B2	B2
German (Hochdeutsch)	B2	B2	B1-B2	B1
Italian	C1	C1	B2	B2
English	C1	C1	C1	C1

Self-reported level

Relevant courses

- MATLAB programming. 20h. University of Granada.
- Data Science in R. Basics Course; Inference and Modeling; Probability; Visualization. 60h. edX (Harvard).
- Advanced design and multivariate analysis. 20h. University of Granada.
- EEG/ERPs data analysis with EEGLAB-ERPLAB MATLAB tool. 10h. Mind, brain and Behavior Research Centre, University of Granada.
- EEG/ERPs data analysis with Fieldtrip, MATLAB. 15h. Mind, brain and Behavior Research Centre, University of Granada.
- Methodology in Psychology: preparing experimental studies with E-prime. 15h. Mind, Brain and Behavior Research Centre, University of Granada.