Name: Jesús Cabrera-Álvarez
Label: Researcher in Computational Neuroscience
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Location: La Línea de la Concepción, Cádiz, Spain

Education

- **PhD in Psychology, Computational Neuroscience** - Complutense University of Madrid (2020-2024)
  - Dissertation: "Computational modeling the neuronal basis of episodic memory to test the disconnection hypothesis in Alzheimer's disease"
  - Supervisors: Fernando Maestú & Gianluca Susi
  - Honors: Cum Laude
  - Program Link
- **M.Sc. in Integrative Neuroscience** - University of Edinburgh (2018-2019)
  - Dissertation: "The relationship between structural and functional neural networks in *C. elegans*"
  - Supervisor: Melanie Stefan
  - Score: 8.02
  - Program Link
- **Bachelor's in Psychology** - Complutense University of Madrid (2014-2018)
  - Dissertation: "Emotion's influence on sensory processing"
  - Supervisor: Stefan Moratti
  - Score: 8.53
  - Program Link
- **Bachelor's in Criminology** - Complutense University of Madrid (2012-2016)
  - Dissertation: "Relationship between attachment and impulsivity - a review"
  - Supervisor: Juan Ramos-Cejudo
  - Score: 7.92
  - Program Link

Experience

- **Post-Doctoral Researcher**, C3N, Complutense University of Madrid (2024-Present)
- **Visiting Researcher**, Charité University Hospital, Berlin (2022)
- **UCM Team Member - EMBRACE Project**, Berlin (2022)
- **Doctoral Researcher**, C3N, Complutense University of Madrid (2020-2024)
- **Master's Researcher**, Stefan Lab, University of Edinburgh (2019)

Publications

1. Cabrera-Álvarez, J., Stefanovski, L., Martin, L., Susi, G., Maestú, F., & Ritter, P. (2024). A Multiscale Closed-Loop Neurotoxicity Model of Alzheimer's Disease Progression Explains Functional Connectivity Alterations. *eNeuro, 11*(4), ENEURO.0345-23.2023. https://doi.org/10.1523/ENEURO.0345-23.2023.
2. Cabrera-Álvarez, J., Susi, G., Maestú, F., & Ritter, P. (2023). Understanding the effects of cortical gyrification in tACS: insights from experiments and computational models. *Frontiers in Neuroscience, 17*, 1223950. https://doi.org/10.3389/fnins.2023.1223950
3. Cabrera-Álvarez, J., Stefan, M., Susi, G., & Maestú, F. (2023). Modeling the role of the thalamus in resting-state functional connectivity: Nature or structure? *PLoS Computational Biology, 19*(6), e1011007. https://doi.org/10.1371/journal.pcbi.1011007

Conferences

- Brain Modes Conference 2024

  , Bilbao, Spain (Poster Presentation)

  - Title: "Understanding alpha rhythm fluctuations: from topological gradients to neural mechanisms"
  - Event link
- Bernstein Conference 2023

  , Berlin, Germany (Poster Presentation)

  - Title: "A multiscale closed-loop neurotoxicity model of Alzheimer's disease progression explains functional connectivity alterations"
  - Event link
- International Congress of Neurophysiology 2023

  , Almarza, Spain (Oral Presentation)

  - Title: "Multiscale modeling functional connectivity changes through Alzheimer's disease spectrum"
- Doctoral Research Days 2024

  , Complutense University of Madrid, Spain (Oral Presentation)

  - Title: "Computational modeling of episodic memory at the neuronal level to test the disconnection hypothesis in Alzheimer's disease"
- 5th International Brain Stimulation Conference 2023

  , Lisbon, Portugal (Poster Presentation)

  - Title: "Computational modeling the impact of fronto-parietal tACS desynchronization protocol over whole-brain functional connectivity"
  - Event link
- CORTICON Symposium 2022

  , Paris, France (Poster Presentation)

  - Title: "A brain network model of extended Jansen-Rit neural masses to enhance spectral richness and heterogeneity in MEEG resting state simulations"
- SEPNECA Congress 2021

, Cádiz, Spain (Poster Presentation)

- Title: "A computational model to guide the functional decoupling of two brain regions with transcranial alternating current stimulation"

Teaching Experience

- Lecturer in Psychology of Thought, Complutense University of Madrid (2021-2022)
- Workshop on Computational Neuroscience, SEPNECA Congress (2023)
- Seminar on Computational Neuroscience, Rey Juan Carlos University (2023)

Fellowships

- **University Teaching Training Contract (FPU19/04251)**, Ministry of Universities, Spanish Government (2020-2024)

Skills

- Computational Neuroscience: Brain Network Models, The Virtual Brain
- Neuroimaging: MEG, dwMRI, Functional Connectivity, Machine Learning
- Programming: Python, MATLAB, R

Languages

- English: C1 (IELTS 7.0)
- Spanish: Native