

# María Melcón Martín

Facultad de Psicología  
Universidad Autónoma de Madrid (UAM)  
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## EDUCATION

2015 - Present

**PhD in Clinical and Health Psychology**

Autónoma University of Madrid (UAM)  
Doctoral thesis: Retinotopic Mapping of Endogenous and Exogenous Visuospatial Attention

2013 - 2014

**Masters Degree in Neuroscience**

Complutense University of Madrid (UCM)  
Cognitive Neuroscience Specialty

2008 - 2013

**Degree in Psychology**

Autónoma University of Madrid (UAM)  
Clinical and Health's Psychology Specialty

## EXPERIENCE

October 2021 - Present

**Predoctoral internship at University of Glasgow**

The effect of cue expectations on the spatio-temporal pattern of the spotlight of attention  
Memory and Attention Group – Simon Hanslmayr

January 2020 – March 2020

**Predoctoral internship at University of Birmingham**

Multivariate pattern analysis in the study of the spatio-temporal dynamics of the spotlight of attention  
Memory and Attention Group – Simon Hanslmayr

March 2019 – May 2019

**Predoctoral internship at University of Granada**

Alpha modulation by TMS interference of rTPJ during an endogenous attention task. A TMS/EEG co-registration study  
Attention and consciousness research group – Ana Chica

November 2017 - Present

**Predoctoral Contract for the Training of Research Personnel in Training**

Autónoma University of Madrid (UAM)

- Doctoral thesis: Retinotopic Mapping of Endogenous and Exogenous Visuospatial Attention
- Collaboration in teaching tasks (practical teaching, teaching innovation projects, representation...)

2017 - 2020

**Assistant Professor in University Master Degree in Cognitive Neuroscience and Neurophysiology**

Rey Juan Carlos University of Madrid (URJC)

- Subject: Analysis of Electromagnetic Signals - Practices

**November 2016 – June 2017**

**Research Staff in project “Fronto-parietal contributions to conscious perception”**

Universidad de Granada (UGR)

- Time-frequency analysis in intracranial EEG data recordings in patients with epilepsy
- Course on programming with Matlab and EEG analysis with FieldTrip

**September 2015 – November 2016**

**Quality control auditor in DOCENTIA-UAM Program: Identification and Assessment of Teaching.**

Autónoma University of Madrid (UAM)

- Evaluation processes and improving university quality
- Review and monitoring of instruments and evaluation procedures.
- Management of specific software.
- Collection and analysis of data for evaluation processes.
- Preparation of reports.

**February – May 2013**

**Psychologist**

El parque Clinic, Madrid

- Psychological evaluation, diagnosis and treatment: cognitive-behavioral therapy.

## **RESEARCH ACTIVITY**

### **Publications**

#### **Preprints**

Melcón, M., van Bree, S., Sánchez-Carro, Y. Barreiro-Fernández, L., Kolibius, L.D., Alzueta, E., Wimber, M., Capilla, A., Hanslmayr, S. The spotlight of attention turns from rhythmic exploration-exploitation to a stable exploitation state. *J Neurosci*, rejected after review.

Capilla, A., Arana, L., García-Huéscar, M., Melcón, M., Gross, J., Campo, P. *The natural frequencies of resting human brain: an MEG-based atlas*. *NeuroImage*, submitted.

Van Bree, S., Melcón, M., Kolibius, L., Kerren, C., Wimber, M., Hanslmayr, S. *Clock time: a foreign measure to brain dynamics*. *Nat Hum Behav*, preparing revision.

Arana, L., Melcón, M., Kessel, D., Hoyos, S., Albert, J., Carretié, L., Capilla, A. *Suppression of alpha-band power underlies exogenous attention to emotional distractors*. *Psychophysiology*, in review.

**2020**

Alzueta, E., Melcón, M., Jensen, O., & Capilla, A. (2020). *The ‘Narcissus Effect’: Top-down alpha-beta band modulation of face-related brain areas during self-face processing*. *NeuroImage*.

**2018**

Alzueta, E., Melcón, M., Poch, C., & Capilla, A. (2018). *Is your own face more than a highly familiar face?* *Biological psychology*.

**2016**

Capilla A, Melcón M, Kessel D, Calderón R, Pazo-Álvarez P, Carretié L. Retinotopic mapping of visual event-related potentials. *Biological Psychology* (2016), 118: 114-25 – IF: 3.40

## Book Chapters

**2019**

Melcón, M., Alzueta, E., Hernández-Lorca, M. & Capilla, A. Bases neurales de la percepción y la atención. En G. Barg, A. Cuadro & S. Hoyos (2019), *Neurocognición y Aprendizaje*. Montevideo: Magro.

## International Congress

**May, 2020**

Melcón, M., Sánchez-Carro, Y. Barreiro-Fernández, Capilla, A. Visuospatial distribution of endogenous attention. Cognitive Neuroscience Society (CNS), Virtual Meeting, 2020

**March, 2015**

Melcón M, Duplan I, Fernández-González S y Capilla A. Tonic and retinotopically-organized alpha-band modulations by visuospatial attention. 22<sup>nd</sup> annual meeting, San Francisco, 2015

**March, 2015**

Capilla A, Melcón M, Kessel D, Calderón R, Pazo-Álvarez P, Carretié L. Retinotopic Mapping of visual evoked potentials. 22<sup>nd</sup> annual meeting, San Francisco, 2015

## National Congress

**September, 2021**

Melcón, M., van Bree, S., Sánchez-Carro, Y. Barreiro-Fernández, L., Alzueta, E., Kolibius, L.D., Capilla, A., Hanskmayr, S. Oral communication: The spotlight of attention: when, how and where. XII Congreso SEPNECA, Cádiz, 2021

**September, 2021**

Stern, E., Melcón, M., Poch, C., Campo, P., Capilla, A. Análisis multivariado de la actividad oscilatoria cerebral relacionada con la percepción consciente. XII Congreso SEPNECA, Cádiz, 2021

**September, 2021**

Andreu, C., Melcón, M., García-Rubio, C. The effects of a mindfulness-based intervention at school on neural indices of inhibitory control in at-risk children. XII Congreso SEPNECA, Cádiz, 2021

**September, 2021**

Capilla, García-Huésar, M., A., Arana, L., Melcón, M., Cano, A., Campo, P. Atlas MEG de las frecuencias naturales del cerebro humano en reposo. XII Congreso SEPNECA, Cádiz, 2021

**April, 2021**

Melcón, M., van Bree, S., Sánchez-Carro, Y. Barreiro-Fernández, L., Alzueta, E., Kolibius, L.D., Capilla, A., Hanskmayr, S. The spotlight of attention shifts from rhythmic exploration to stable exploitation. SEPEX, Virtual Meeting, 2021

**July, 2018**

Melcón M, García-Huésar M, Capilla A. Retinotopic mapping of visuospatial endogenous attention. First Joint Congress of the SPEX, SEPNECA and AIP experimental, Madrid, 2018

**October, 2014**

Capilla A, Melcón M, Kessel D, Calderón R, Pazo-Álvarez P y Carretié L. Mapeo retinotópico de los potenciales relacionados con estímulos visuales. IX Congreso organizado por SEPNECA, Murcia, 2014

## Scientific Disclosure

**July, 2019**

**What goes on in our babies mind?**

III Edition NeuroBeers  
Organizing Committee

**May, 2019**

**Pint of Science Granada**

Organizing Committee

**September, 2018**

**Workshop: Do you dare? Test your memory and attention**  
IX European Researchers' Night of Madrid  
Speaker

**July, 2018**

**The brain stimulated**  
III Edition NeuroBeers  
Organizing Committee

**May, 2018**

**Pint of Science Madrid**  
Organizing Committee

**February, 2018**

**Woman and Neuroscience**  
II Edition NeuroBeers  
Organizing Committee

**February, 2018**

**Talk: Neuropsychology**  
Speaker

**November, 2017**

**Brain and Neuroplasticity**  
I Edition NeuroBeers  
Organizing Committee

## **SCIENTIFIC TRAINING**

**November, 2020**

**Multivariate EEG analysis**  
Spanish society of psychophysiology and cognitive and affective neuroscience (University of Granada, SEPEX and SEPNECA)

**June, 2019**

**Resting-state fMRI functional connectivity**  
Spanish society of psychophysiology and cognitive and affective neuroscience (SEPNECA)

**July, 2018**

**Workshop: Processing of structural brain images obtained by magnetic resonance**  
Spanish society of psychophysiology and cognitive and affective neuroscience (SEPNECA)

**July, 2018**

**Wrokshop: Dynamic systems, brain and cognition**  
Spanish society of psychophysiology and cognitive and affective neuroscience (SEPNECA)

**January, 2018**

**Workshop: Processing and analysis of brain response evoked by the heartbeat**  
Spanish society of psychophysiology and cognitive and affective neuroscience (SEPNECA)

**September, 2017 – June 2018**

**Psychtoolbox for dummies: workshop in the Psychology Degree**  
Teacher innovation project in UAM, participant in the work team

**June, 2017**

**Time - Frequency analysis on EEG signal**  
PhD in Clinical and Health Psychology Program (UAM)  
Dr. Claudia Poch

**May, 2017**

**Functional Connectivity for Magnetic Resonance Imaging**  
Granada University (UGR)

<b>April, 2017</b>	<b>I International CIMCYC Workshop: from representations to cognitive theory</b> Granada University (UGR)
<b>February – June, 2017</b>	<b>Basic programming in Matlab and advanced EEG analysis in Fieldtrip</b> Course taught at Granada University (UGR)
<b>January, 2017</b>	<b>Multivariate approaches in fMRI</b> Spanish society of psychophysiology and cognitive and affective neuroscience (SEPNECA)
<b>September, 2016 – June 2017</b>	<b>Psychtoolbox for dummies: an online workshop for beginners</b> Teacher innovation project in UAM, participant in the work team
<b>May – June, 2016</b>	<b>How to write scientific texts in Psychology</b> PhD in Clinical and Health Psychology Program (UAM) Dr. Orfelio León
<b>April, 2016</b>	<b>When the brain sends: workshop for Conflict Management</b> Institute of Forensic Sciences and Security (UAM)
<b>May, 2015</b>	<b>Neuroimaging in Cognitive Neuroscience</b> PhD in Clinical and Health Psychology Program (UAM)
<b>January, 2015</b>	<b>Introduction to R as an alternative software for data analysis</b> PhD in Clinical and Health Psychology Program (UAM)

## OTHER SKILLS

<b>Languages</b>	Spanish: native English: advance (C2)
<b>Computer skills</b>	Programming and data analysis skills: Matlab Electrophysiological data recording: Biosemi Toolboxes for EEG: Matlab, Fieldtrip, MVPA-light, Brain Time