# Melanie Tschiersch

*Curriculum Vitae*

*Brain Circuits and Behavior Lab*
*Carrer de Rosseló 149*
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***Fields of interest:*** *Computational Neuroscience, working memory, serial dependence, behavioral and neural data analysis, synaptic plasticity, attractor networks*

Date of birth 01.07.1995
Nationality German

## Education

Oct. 2020 – now **PhD student in *Computational Neuroscience* at Brain Circuits and Behavior Lab, IDIBAPS, Barcelona, Spain**, *Topics:* working memory, inter-area interactions, neural data analysis, computational models, *Supervisor:* Albert Compte.

Oct. 2018 – Oct. 2020 **M. Sc. in *Neuroengineering* at Technische Universität München, Munich, Germany**, *Topics:* computational neuroscience, neurobiology, engineering, machine learning, signal processing, *Thesis:* An attractor network theory of serial dependencies in subliminal working memory, *Supervisor:* Jakob Macke.
with high distinction, with honors

Oct. 2015 – Oct. 2018 **B. Sc. in *Medical Engineering* at Universität zu Lübeck, Lübeck, Germany**, *Topics:* Medical Imaging, Mathematics, Physics, Electronics.

Aug. 2011 – Jun. 2012 **Exchange year at Waterford Kettering Highschool,Waterford, MI, USA**.

## Intensive Courses

July 28, 2019 – Aug. 24, 2019 **Summer School**, *Methods in Computational Neuroscience by the Marine Biological Laboratory (MBL)*, Woods Hole, MA, USA.
*Topics:* Computational and mathematical techniques used to address how the brain solves problems at levels of neural organization from single membrane channels to operations of the entire brain

March 12, 2019 – March 19, 2019 **Spring School**, *Interdisciplinary College (IK2019)*, Günne, Germany.
*Out of your senses from data to insight*, *Topics:* neurobiology, neural computation, cognitive science, machine learning, robotics, philosophy

Feb. 2, 2019 – June 2, 2019 **Neuroengineering Retreat**, Brixlegg in Tirol, Austria.
Organisation & participation in a research retreat from the M. Sc. in Neuroengineering

## Publications

March 17, 2022 – March 20, 2022 **Journal of Neurophysiology, Neuroforum**, M. Tschiersch, *Causal evidence for the higher-order origin of serial dependence suggests a multi-area account*, **under review**.

March 17, 2022 – March 20, 2022 **Peer-reviewed abstract for COSYNE 2022**, M. Tschiersch, J. Barbosa, A. Umakantha, M. Smith, A. Compte, *Dynamics of interhemispheric prefrontal coordination underlying serial dependence in working memory*, abstract and poster: here.

## Posters

July 9, 2022 – July 13, 2022 **FENS 2022, Paris, France**, M. Tschiersch, J. Barbosa, A. Umakantha, R. C. Williamson, M. Smith, A. Compte, *Neural correlates of serial dependence across visual hemifields and bilateral prefrontal cortex*.

March 17, 2022 – March 20, 2022 **COSYNE 2022, Lisbon, Portugal**, M. Tschiersch, J. Barbosa, A. Umakantha, M. Smith, A. Compte, *Dynamics of interhemispheric prefrontal coordination underlying serial dependence in working memory*, online poster: here.

Nov. 3, 2021 – Nov. 5, 2021 **SENC 2021, Lleida, Spain**, M. Tschiersch, J. Barbosa, A. Umakantha, M. Smith, A. Compte, *Neural mechanisms of serial dependence across visual hemifields and bilateral prefrontal cortex*.

Jul. 5, 2020 – Jul. 6, 2021 **BARCCSYN 2021, Barcelona, Spain**, M. Tschiersch, J. Barbosa, A. Umakantha, M. Smith, A. Compte, *Serial dependence across visual hemifields*.

Jul. 11, 2020 – Jul. 15, 2020 **FENS 2020, online**, M. Tschiersch, M. Popova, N. Berberich, S. Ehrlich, D. Franklin, G. Cheng, *A bump-attractor spiking neural network for motor learning based on Norepinephrine release*.

## Awards and Funding

Jul. 2022 **Thomas B & Elizabeth Grave Scholarship Fund**, *Fund to attend the Marine Biological Laboratory's (MBL) Methods in Computational Neuroscience summer school*, 4350$.

Feb. 2022 **SENC travel grant**, *SENC travel grant for attending FENS 2022*, 400€.

Sep. 2020 – 2024 **FPI program**, *Spanish Ministry of Science and Innovation*.

Oct. 2019 - Oct. 2020 **Deutschlandstipendium (Germany scholarship)**, *year-long monthly scholarship for talented and dedicated students*, *Sponsors:* Karl Max von Bauerfeind Verein, Bundesministerium für Bildung und Forschung (German ministry for education and research).

Oct. 2018 - Oct. 2019 **Deutschlandstipendium (Germany scholarship)**, *year-long monthly scholarship for talented and dedicated students*, *Sponsors:* Mr. Florian Lochner, Bundesministerium für Bildung und Forschung (German ministry for education and research).

## Languages

Languages **German (native), English (fluent), Spanish (advanced)**.

Programming **Python (advanced), Matlab (advanced), C++ (intermediate), Keras (basic)**.

Last updated: July 26, 2022