

Darinka Trübutschek

MARIE SKŁODOWSKA-CURIE FELLOW IN COGNITIVE NEUROSCIENCE

✉ darinka.truebutschek@ae.mpg.de | 🏠 darinkatruebutschek.github.io/ | 📧 DarinkaTruebutschek | 📄 Darinka Trübutschek

Married, two children (born August 2019 & December 2023)

CURRENT POSITION

Research Fellow

MAX PLANCK INSTITUTE FOR EMPIRICAL AESTHETICS

Frankfurt/Main, Germany

Jan 2021 - ongoing

- **Advisor:** Prof. Lucia Melloni
- **Project:** How does the immediate past shape current perception in the human brain?
- **Techniques:** psychophysics, eyetracking, EEG

CAREER GAPS

Parental Leave

Dedicated time for parental responsibilities

Oct 2023 - Dec 2024

Reduced Working Hours Due to Limited Childcare During COVID-19

Managed academic responsibilities while navigating restricted childcare availability

Jan 2021 - Jun 2021

Full-Time Caregiver During COVID-19 Lockdown

Provided full-time care for child during COVID-19 shutdown of childcare and research facilities

Mar 2020 - Aug 2020

Parental Leave

Dedicated time for parental responsibilities

Jul 2019 - Dec 2019

EDUCATION

PhD in Cognitive Neuroscience, with highest honors

SORBONNE UNIVERSITÉ

Paris, France

Nov 2014 - Oct 2018

- **Advisor:** Prof. Stanislas Dehaene
- **Project:** What is the relationship between conscious perception and working memory in the human brain?
- **Techniques:** psychophysics, eyetracking, MEG

MSc in Behavioral and Cognitive Neuroscience, magna cum laude

UNIVERSITÉ PIERRE ET MARIE CURIE

Paris, France

Sep 2012 - Dec 2013

- **Advisor:** Dr. Josselin Houenou
- **Project:** Emotional reactivity - A study of the anatomy and resting-state functional connectivity of the fronto-limbic network in bipolar patients and healthy controls
- **Techniques:** MRI-based VBM, resting-state fMRI-based functional connectivity, DTI

BSc with Honors in Psychology, summa cum laude (valedictorian)

WASHINGTON & LEE UNIVERSITY

Lexington, VA, USA

Sep 2007 - May 2010

RESEARCH & PROFESSIONAL EXPERIENCE

Postdoctoral Research Fellow

UNIVERSITY OF OXFORD

Oxford, UK

Jan 2019 - Dec 2020

- **Advisor:** Prof. Mark Stokes
- **Project:** How do memories shape the encoding and maintenance of future memories?
- **Techniques:** intracranial EEG

Research Intern

NEUROSPIN

Saclay, France

Jan 2014 - Oct 2014

- **Advisor:** Dr. Sébastien Marti

Postbaccalaureate Fellow in Functional Neuroimaging

DUKE UNIVERSITY

Durham, NC, USA

Jun 2010 - Aug 2012

- **Advisor:** Prof. Tobias Egner
- **Project:** What are the neural correlates of declarative and procedural working memory?
- **Techniques:** fMRI

GRANT FUNDING & FELLOWSHIPS

BIAL Foundation Grant

Co-PI (TOGETHER WITH L. MELLONI)

BIAL Foundation

Mar 2023 - Feb 2025

- **Project:** Event segmentation and time perception: understanding why time feels like flying
- **Amount:** €56,000

Marie Skłodowska-Curie Individual Fellowship

PRINCIPAL INVESTIGATOR

European Commission

Sep 2021 - Nov 2025

- **Project:** Cortical hierarchy of memories - deciphering the neuronal mechanisms of serial dependence in the human brain
- **Amount:** €174,806.40

Christiane-Nüsslein-Volhard Fellowship for Women in STEM

PRINCIPAL INVESTIGATOR

CNV Foundation

Mar 2021 - Feb 2022

- **Amount:** €4,800

Postdoctoral Fellowship

PRINCIPAL INVESTIGATOR

Fondation Fyssen

Jan 2019 - Dec 2020

- **Project:** Dynamic activity-silent brain states underpin working memory in the human brain
- **Amount:** €70,000

Graduate Fellowship

Co-PI (TOGETHER WITH S. DEHAENE)

Fondation Schneider Electric

Sep 2016 - Oct 2018

- **Project:** Probing the limits of non-conscious working memory
- **Amount:** €72,236

Graduate Fellowship

PRINCIPAL INVESTIGATOR

Ecole des Neurosciences de Paris

Sep 2012 - Aug 2016

- **Amount:** €150,000

Postbaccalaureate Fellowship in Functional Neuroimaging

PRINCIPAL INVESTIGATOR

Duke Brain Imaging and Analysis Center

Jun 2010 - Aug 2012

- **Amount:** \$60,000

R.E. Lee Summer Scholar

PRINCIPAL INVESTIGATOR

Washington & Lee University

2009

- **Amount:** \$3,000

HONORS & AWARDS

L'Oréal-Unesco Prize for Women in Science National Award

€10,000

2022

Prix de la chancellerie des universités de Paris

Thesis award (€10,000)

2019

NIH Kavli Summer Institute in Cognitive Neuroscience

Travel award

2016

Robinson Award in English Literature, History, and Social Sciences

Undergraduate academic award

2010

Honor Roll

2007 - 2010

Ranked among the top 20 % of the Washington & Lee University student body

Election to Phi Beta Kappa

2009

National honor society for undergraduates ranked among the top 10 %

Psychology Departmental Scholarship

2009

Awarded by Washington & Lee University

James D. Davidson Memorial Fund Scholarship

2008

Awarded by Washington & Lee University

Election to Phi Eta Sigma

2009

National honor society for freshmen ranked among the top 20 % of their class

Congress/Bundestag Youth Exchange Scholarship

2004

Award to fund a 1-year high school exchange in Springfield, VA, USA

PUBLICATIONS

*name** denotes co-authorship, *name* denotes student authorship.

Published/Preprint

How do subjective perception and memory shape one another?

#8. **Trübutschek, D.***, Kienitz, R.*, Winkler, M., Öztürk, S., & Melloni, L. (to be submitted). Sequence learning without consciousness.

#7. Zheng, Z., **Trübutschek, D.**, Huang, S., Cai, Y., & Melloni, L. (2024). What you saw a while ago determines what you see now: The effect and temporal dynamics of awareness priming on implicit behavior. *PsyRXiv*.

#6. **Trübutschek, D.** & Melloni, L. (2023). Stable perceptual phenotype of the magnitude of history biases even in the face of global task complexity. *Journal of Vision*, 23(4), 1-20.

#5. **Trübutschek, D.** (2022). Context-independent item representations in human working memory. *Annals Fyssen* No. 35, 124-142.

#4. **Trübutschek, D.**, Marti, S., Ueberschär, H., & Dehaene, S. (2019). Probing the limits of activity-silent, non-conscious working memory. *PNAS*, 116(28), 14358-14367.

#3. **Trübutschek, D.**, Marti, S., & Dehaene, S. (2019). Temporal-order information can be maintained in non-conscious working memory. *Scientific Reports*, 9(6484).

#2. **Trübutschek, D.**, Marti, S., Ojeda, A., King, J.-R., Mi, Y., Tsodyks, M., & Dehaene, S. (2017). A theory of working memory without consciousness or sustained activity. *eLife*.

#1. Naccache, L., Marti, S., Sitt, J. D., **Trübutschek, D.**, & Berkovitch, L. (2016). Why the P3b is still a plausible correlate of conscious access? A commentary on Silverstein et al., 2015. *Cortex*, 85, 126-128.

Shaping the future of neuroscience

#6. Aczel, B.*, Szaszi, B.*, ..., **Trübutschek, D.**, ..., & Nosek, B. A. (to be submitted). Investigating the analytical robustness of the social and behavioral sciences.

#5. Stockart, F.*, Schreiber, M.*, ..., **Trübutschek, D.**, ..., & Mudrik, L. (2024). Studying unconscious processing: towards a consensus on best practices. *PsyRXiv*.

#4. Sarafoglou, A., Hoogeveen, S., ..., **Trübutschek, D.**, ..., & Wagenmakers, E.-J. (2024). Subjective evidence evaluation survey for many-analyst studies. *Royal Society Open Science*, 11(7), 240125.

#3. **Trübutschek, D.***, Yang, Y.-F.*, Gianelli, C.*, Cesnaite, E., Fischer, N. L., Vinding, M.C., Marshall, T. R., Algermissen, J., Pascarella, A., Puoliväli, T., Busch, N., & Nilsson, G. (2024). EEGManyPipelines: A large-scale, grassroots multi-analyst study of electroencephalography analysis practices in the wild. *Journal of Cognitive Neuroscience*, 36(2), 217-224.

#2. Ruzzoli, M., ..., **Trübutschek, D.**, ..., & Veniero, D. (2023). An #EEGManyLabs study to test the role of alpha phase on visual perception (a replication and new evidence). *PsyRXiv*.

#1. Pike, A. C., ..., **Trübutschek, D.**, ..., & Noonan, M. P. (2022). 10 simple rules for a supportive lab environment. *Journal of Cognitive Neuroscience*, 35(1), 44-48.

#2. Coyle, E. F., Fulcher, M., & **Trübutschek, D.** (2016). Sissies, mama's boys, and tomboys: Is children's gender nonconformity more acceptable when nonconforming traits are positive? *Archives of Sexual Behavior*, 451827-1838.

#1. **Trübutschek, D.** & Egner, S. (2012). Negative emotion does not modulate rapid feature integration effects. *Frontiers in Psychology*, 3(100).

In preparation

Zheng, Z., **Trübutschek, D.**, Aru, J., & Melloni, L. (in prep). The intrinsic feature filtering function from consciousness to working memory.

Trübutschek, D., Fischer, C., Bledowski, C., & Melloni, L. (in prep). Attractive biases in working memory arise at the level of decisions, not perception.

Trübutschek, D., Vieten, I., Schwiedrzik, C. & Melloni, L. (in prep). Not so automatic? Active, but not latent working memory templates trump serial dependence.

Trübutschek, D., Wasmuht, D., Spaak, E., & Stokes, M. (in prep). Dynamic brain states for flexible decision-making in working memory.

INVITED TALKS

Colloquium Talk at the Leibniz Research Centre for Working Memory and Human Factors

Dortmund, Germany

TBD 2025

Brain Dynamics Days Keynote

Of moments and memories: How subjective perception and experience shape one another in the human brain

Leipzig, Germany

2024

Faculty of Psychology at the University of Leiden

Deciphering the neural code and computational principles of subjective perception and memory in the human brain

Online

2023

Faculty of Psychology at the University of Graz

Deciphering the neural code of subjective perception and memory in the human brain

Graz, Austria

2023

Faculty of Medicine at Goethe University

Decomposing our inner life: Using time-resolved electrophysiology to decipher the neural code of subjective perception and memory in the human brain

Frankfurt/Main, Germany

2023

Women in Neuroscience Panel Discussion

Family, maternity, and caring duties: finding work-life balance

Online

2022

Neural Dynamics Forum at the University of Bristol

Flexible decision-making in working memory

Online

2022

65th Congress of the German Society for Clinical Neurophysiology and Functional Imaging

Decoding our thoughts: Tracking the contents of (non-)conscious working memory

Online

2021

Aggregate Intellect's Spotlight Seminar Series

Decoding our thoughts: Tracking the contents of (non-)conscious working memory

Online

2020

Barnes' Lab Meeting at University College London

The neuro-cognitive architecture of complex working memory

London, UK

2020

Royal Netherlands Academy of Arts and Sciences Colloquium on 'New Perspectives on Visual Working Memory'

Characterizing the neuro-cognitive architecture of non-conscious working memory

Amsterdam, Netherlands

2019

Stokes' Lab Meeting at the University of Oxford

Characterizing the neuro-cognitive architecture of non-conscious working memory

Oxford, UK

2018

Basque Center on Cognition, Brain and Language External Speaker Seminar Series

Non-conscious working memory and its boundary conditions

San Sebastian, Spain

2018

Ecole des Neurosciences de Paris Seminar Series

A theory of working memory without consciousness or sustained activity

Paris, France

2018

Egner Lab Meeting at Duke University

Disentangling the relationship between conscious perception and working memory

Durham, NC, USA

2015

Neurophilosophy Workshop of the Berlin School of Mind and Brain

(Un)conscious working memory?

Venice, Italy

2015

CONFERENCE PRESENTATIONS

Symposium Talk at Psychologie und Gehirn

Challenging current theories of conscious perception? - The case of activity-silent, non-conscious 'working' memory

Hamburg, Germany

2024

Talk at the Association for the Scientific Study of Consciousness 26

Can we learn information non-consciously? - Exploring the relationship between non-conscious working memory and statistical sequence learning

New York, USA

2023

Poster at ICON 13

The limits of non-conscious working memory

Amsterdam, Netherlands

2017

Talk at the Association for the Scientific Study of Consciousness 21

The limits of non-conscious working memory

Beijing, China

2017

Talk & Poster at the Neuroscience Workshop Saclay

Disentangling the relationship between conscious perception and working memory

Gif/Yvette, France

2016

Poster at SFN

(Un)conscious working memory? - Disentangling the relationship between conscious perception and working memory

Chicago, IL, USA

2015

Symposium Talk at the Association for the Scientific Study of Consciousness 19

Perception and working memory during conscious and unconscious processing

Paris, France

2015

Poster at SRCD

Male gender non-conformity and derogatory labels: Young adults' attitudes about and labels for preschoolers

Montréal, Canada

2011

Poster at Science, Society, and the Arts Conference

Effects of parental closeness on emerging adults' engagement in risk-taking behaviors and adult status

Lexington, VA, USA

2009

TEACHING, SUPERVISION, & MENTORING

Lehrprobe for Undergraduate Level Course on the Neural Correlates of Attention

I prepared this lecture as part of a job application at the University of Graz and received very positive feedback for my didactic and engaging presentation - even compared to more experienced candidates.

May 2023

(Co-)Supervision of PhD Students

3 students: Qiyuan Zeng, Maximilian Winkler, Zefan Zheng

since Sep 2021

Supervision of Master Students

2 students: Cécile Pernossi, Ilona Vieten (now PhD student with Florian Mormann)

since Sep 2021

Supervision of Research Assistants & Undergraduate Interns

5 students: Jana Taube, Chiara Grasso, Sophie Danielle Oprée, Tuba Özcan, Sümeyye Öztürk

since Sep 2021

Mentor in the Letters to a Pre-scientist Program

This mentoring program pairs up a researcher and a elementary - high school student from a disadvantaged background to be pen pals for the duration of the academic year.

2018-2019

Mentor in the Skype a Scientist Program

This program allows school children from all over the world to interact with a researcher through skype.

since 2017

Teaching Assistant for an Undergraduate Laboratory Statistics Course at Washington & Lee University

I prepared and led practical sessions accompanying an introductory statistics lecture, and designed and graded evaluations.

2009

Peer tutor in German and Psychology at Washington & Lee University

2008-2010

OUTREACH

Deutschlandfunk Podcast "How does consciousness emerge? A bet between philosophy and experiment"

I co-advised producers on scientific content & provided interview material.

2023

Brain Awareness Week Plenary Talk

Together with Sébastien Marti, I gave a keynote on how our brain constructs conscious experience at the Paris Brain Awareness Week.

2018

NHK Documentary Series on the Human Body

I co-advised producers on scientific content.

2017

ARTE Documentary "Déchiffrer la conscience"

I co-advised producers on scientific content & participated in scenes on MEG data acquisition.

2016

Brain Awareness Week

I co-organized a seminar on a head full of music at the Paris Brain Awareness Week.

2013

Brain Awareness Week

I organized & hosted lab visits for the general public and gave introductory lectures on the brain in several local schools at the Durham Brain Awareness Week.

2011

SERVICE TO THE COMMUNITY

Editorial Board Member

PCI Registered Reports

since 2024

Ad-hoc Peer Reviewer

Behavioral Brain Research, Cerebral Cortex, Consciousness & Cognition, Imaging Neuroscience, Neuroscience of Consciousness, Scientific Reports, Quarterly Journal of Experimental Psychology

since 2017

Conference Organizer

Co-organizer of the Neuroscience Workshop Saclay (NEWS 2017) on "Neural circuits and behavior: from cells to connectivity and function": 9 international plenary speakers, 8 local trainee speakers, 153 attendees

2016-2017

Committee Member

Elected representative for the Ecole des Neurosciences de Paris student body: managed annual budget, organized a seminar series on "New Frontiers in Neuroscience", coordinated cultural & social events; **steering committee member** of the EEGManyPipelines project

since 2015

Institutional Service

Co-organizer of the NCC-Lab Seminar Series; social media manager of the Melloni lab; co-organizer of the weekly Consciousness Seminar in the Dehaene lab

since 2014

TECHNICAL SKILLS

Methods

ECoG, EEG/MEG, eyetracking, (f)MRI/DTI, psychophysics

Programming

Latex, Matlab, Python, R

Stimulus presentation

E-prime, Presentation, PsychoPy, Psychtoolbox

Data analysis

Brainstorm, Fieldtrip, FSL, MNE Python, scikit-learn, SPM, SPSS

Version control

git, GitHub

Operating systems

Linux, MacOS, Windows

LANGUAGES

German

Native speaker

English

Native level

French

Fluent

Italian

Beginner

MAJOR ONGOING COLLABORATIONS

Prof. Lucia Melloni

Max Planck Institute for Empirical Aesthetics, Frankfurt/Main, Germany

EEGManyPipelines project

World-wide collaboration

Dr. Ricardo Kienitz

Goethe University, Frankfurt/Main, Germany

Prof. Eelke Spaak

Donders Institute, Nijmegen, Netherlands

Dr. Christoph Bledowski

Goethe University, Frankfurt/Main, Germany