

# CURRICULUM VITAE | Magdalena Boch

**Phone:** +43 (1) 4277 47136

**E-mail:** [magdalena.boch@univie.ac.at](mailto:magdalena.boch@univie.ac.at)

**Web:** [magdalenaboeh.com](http://magdalenaboeh.com)

**Twitter:** [@MagdalenaBoch](https://twitter.com/MagdalenaBoch)

**Nationality:** Austrian

CV last updated: September 2022

## EDUCATION

09/2022 **Dr. rer. nat. / Ph.D. | Psychology**

Faculty of Psychology, *Social Cognitive and Affective Neuroscience (SCAN) Unit*  
Faculty of Life Sciences, *Department of Behavioural and Cognitive Biology*  
University of Vienna, Vienna, Austria

Thesis: *"How dogs and humans perceive and understand each other: A comparative canine neuroimaging approach"*

Supervisor: Prof. Claus Lamm, Co-supervisors: Prof. Ludwig Huber & Dr. Isabella Wagner

09/2017 **M.Sc. | Psychology** (with distinction / summa cum laude)

Track: Social Neuroscience, Cognitive Psychology and Research Methods

University of Vienna, Vienna, Austria

Thesis: *"The triangular relationship between TV viewing, perception of capital punishment and chance. An endorsed and reviewed preregistered replication and meta-analysis."*

Supervisor: Prof. Martin Voracek

09/2015 **B.Sc. | Psychology**

University of Vienna, Vienna, Austria

Thesis 1: *"The impact of two opposed learning strategies on the outcome of multiple choice vs. open-ended question format"* Supervisor: Dr. Marco Jirasko

Thesis 2: *"Homophobic bullying and victimization from the perspective of lesbian, gay and bisexual (LGB) adolescents"* Supervisor: Dr. Elisabeth Stefanek

## ACADEMIC POSITIONS & RESEARCH EXPERIENCE

since Oct 22 **Post-doctoral researcher | University of Vienna**

Department for Cognition, Emotion, and Methods in Psychology

*Social Cognitive and Affective Neuroscience Unit* of Prof. Claus Lamm  
*Domestication lab* of Ass.-Prof. Friederike Range (University of Veterinary Medicine Vienna)

Project: Do human attitudes towards wolves and dogs reflect the human-related temperament traits of the two species?

2021-2022 **6-month research stay | University of Oxford**

Wellcome Centre for Integrative Neuroimaging

*Cognitive Neuroecology Lab* of Ass.-Prof. Rogier Mars

Project: Comparing brain areas for social behaviour in humans and dogs: A case on convergent evolution?

- 2017-2022 **Ph.D. candidate I University of Vienna, Vienna, Austria**  
 Department for Cognition, Emotion, and Methods in Psychology  
 Department of Behavioural and Cognitive Biology  
*Social Cognitive and Affective Neuroscience Unit* of Prof. Claus Lamm  
*Comparative Canine Neuroimaging Unit* of Prof. Claus Lamm and Prof. Ludwig Huber
- 2017 **Research internship I University of Vienna, Vienna, Austria**  
 Department for Cognition, Emotion, and Methods in Psychology, Faculty of Psychology (summer internship)  
*Social, Cognitive and Affective Neuroscience (SCAN) Unit* of Prof. Claus Lamm  
 Project: „The effects of violent video games on empathy and prosocial behaviour”
- 2016 **Research & applied neuropsychology internship I Vienna General Hospital, Vienna, Austria**  
 Department of Paediatrics and Adolescent Medicine (summer internship)  
*Paediatric Neuro-Oncology sub-unit* lead by Dr. Thomas Pletschko  
 Tasks: Literature research on effects of neuropsychological trainings, clinical and neuropsychological diagnostics with preschool children diagnosed with neurofibromatosis type 2 and paediatric neurological cancer survivors, preparation of opinion reports and administrative issues.

## PUBLICATIONS (\*equal author contributions)

**ORCID:** <https://orcid.org/0000-0003-3627-5180>

**Google Scholar:** <https://scholar.google.com/citations?user=-3iMARMAAAAJ&hl=de&oi=ao>

**Github:** <https://github.com/magdalenaboch>

- 2022 Guran, A. C.-N., Sladky, R., Karl, S., **Boch, M.**, Laistler, E., Windischberger, C., Huber, L., Lamm, C. (2022). Validation of a new coil array tailored for dog functional magnetic resonance imaging (fMRI) studies. *bioRxiv*, doi: 10.1101/2022.06.14.496064
- 2021 **Boch, M.**, Wagner, I.C., Karl, S., Huber, L.\* & Lamm, C.\* (2021). Similarities and differences of face and body perception in the dog (*Canis familiaris*) and human brain. *bioRxiv*, doi:10.1101/2021.08.17.456623.  
**Boch, M.**, Karl, S., Sladky, R., Huber, L., Lamm\*, C. & Wagner\*, I. C. (2021). Tailored haemodynamic response function increases detection power of fMRI in awake dogs (*Canis familiaris*). *Neuroimage*, doi:10.1016/j.neuroimage.2020.117414  
 Bukowski, H., Todorova, B., **Boch, M.**, Silani, G., & Lamm, C. (2021). Socio-cognitive training impacts emotional and perceptual self-salience but not self-other distinction. *Acta Psychologica*. doi:10.1016/j.actpsy.2021.103297
- 2020 Karl, S, **Boch, M.**, Zamansky A, van der Linden D, Wagner IC, Völter CJ, Lamm\* C, Huber\* L (2020). Exploring the dog-human relationship by combining fMRI, eye-tracking and behavioural measures. *Scientific Reports*, doi:10.1038/s41598-020-79247-5  
 Bukowski, H., **Boch, M.**, Lamm, C., & Silani, G. (2020). Is Self-Other distinction malleable? Egocentric and altercentric biases in empathy are modulated by priming attachment style and similarity mindsets. *psyArXiv*. doi: 10.31234/osf.io/bpyvz  
 Karl, S., **Boch, M.**, Virány, Z., Lamm, C., & Huber L. (2020). Training pet dogs for eye-tracking and awake fMRI. *Behavior Research Methods*, 1-19. doi:10.3758/s13428-019-01281-7
- 2019 **Boch, M.**, Tran, U. S., & Voracek, M. (2019). Does really one in ten believe capital punishment exists in a contemporary European Community country? An endorsed, prereviewed, preregistered replication study and meta-analysis. *Frontiers in psychology*, 10, 1601. doi:10.3389/fpsyg.2019.01601
- 2017 **Boch, M.** & Lamm, C. (2017). The multiple facets of empathy. *Animal Sentience*, 14(14).

## OSF I Projects & Preregistrations

- 2021 **Boch, M.**, Wagner, I., Karl, S., Huber, L., & Lamm, C. (2021, December 8). Similarities and differences of face and body perception in the dog (*Canis familiaris*) and human brain. Retrieved from [osf.io/kzcs2](https://osf.io/kzcs2)
- 2020 Karl, S., **Boch, M.**, Wagner, I., Lamm, C., & Huber, L. (2020, May 7). Exploring the dog-human relationship using a multimethod approach: Combining fMRI, eye tracking and behavioral measures. Retrieved from [osf.io/kagy3](https://osf.io/kagy3)
- 2017 **Boch, M.**, & Voracek, M. (2017, June 13). Endorsed Pre-Registered Replication: Till et al. (2016). Retrieved from [osf.io/9qagr](https://osf.io/9qagr)

## INVITED TALKS

- 07/2022 **Boch, M.**, Wagner, I.C., Karl, S., Huber, L., & Lamm, C. *Comparing brain areas for social cognition in dogs and humans: A case on convergent evolution?* Talk as part of the symposium “Comparative insights into the development and evolution of the social brain” co-organized by **Magdalena Boch** and Claus Lamm, European Society for Cognitive and Affective Neuroscience (ESCAN) Meeting, Vienna, Austria
- 07/2021 **Boch, M.**, Wagner, I.C., Karl, S., Huber, L., & Lamm, C. *Face, body and object representation in dog and human brain.* *Canine Science Forum*, virtual conference.
- 04/2021 **Boch, M.**, Wagner, I.C., Karl, S., Huber, L., & Lamm, C. *Face, body and object representation in the human and canine occipito-temporal cortex.* 28th International Conference on Comparative Cognition, virtual conference.
- 01/2021 **Boch, M.**, *How dogs and humans perceive and understand each other: A comparative neuroimaging approach.* Institutional talk at the Cognitive Neuroecology Lab, University of Oxford, Oxford, United Kingdom (virtual)
- 04/2018 **Boch M.**, Tran, U.S. & Voracek, M. *A State-of-the-Art Replication Study: Close, conceptually extended, endorsed, preregistered, pre-reviewed.* Austrian Association of Psychological Science (ÖGP) annual meeting 2018, University of Linz, Austria.

## CONFERENCE POSTERS (selection)

- 2021 **Boch, M.**, Karl, S., Wagner, I. C., Huber\*, L., & Lamm\*, *Neural correlates of action observation in dogs (Canis familiaris) and humans.* 7<sup>th</sup> Computational Properties Prefrontal Cortex 2022, Oxford, United Kingdom.
- 2021 **Boch, M.**, Wagner, I.C., Karl, S., Huber\*, L., & Lamm\*, C. *Face, body and object representations in the dog and human brain.* 43rd Annual Meeting of the Cognitive Science Society, virtual conference.
- Boch, M.**, Wagner, I.C., Karl, S., Huber, L., & Lamm, C. *Face, body and object representation in canine temporal and occipital cortices.* ESCAN, virtual conference.
- Boch, M.**, Wagner, I.C., Karl, S., Huber\*, L., & Lamm\*, C. *Face, body and object representation in the human and canine occipito-temporal cortex,* Sfn Global Connectome, virtual conference.
- 2020 Karl, S., **Boch, M.**, Lamm, C. & Huber. *Exploring the dog-human relationship: Combining fMRI and eye-tracking in attentive dogs.* 70 Years of Attachment Research: A Multidisciplinary Social Neuroscience Perspective, University of Essex, United Kingdom (*held online*)
- 2019 Karl, S., **Boch, M.**, Lamm, C. & Huber. *Who do you prefer? Investigating the human-dog attachment system in pet dogs,* 6th European Student Conference on Behaviour & Cognition, 2019, Padua, Italy.
- Boch, M.**, Karl, S., Wagner, I. C., Windischberger, C., Huber L. & Lamm, C. *A rewarding human smile? Neural correlates of canine emotion perception,* OHBM Annual Meeting 2019, Rome, Italy.
- Boch, M.**, Karl, S., Wagner, I. C., Huber L. & Lamm, C. *A rewarding Human Smile: An fMRI study investigating canine emotion perception.* Canine Science Forum, 2018, Budapest, Hungary.

Karl, S., **Boch, M.**, Lamm, C. & Huber L. *Training pet dogs to use functional magnetic resonance imaging (fMRI)*. Canine Science Forum, 2018, Budapest, Hungary.

**Boch, M.**, Karl, S., Huber L. & Lamm, C. *How dogs and humans perceive and understand each other: A canine neuroimaging approach*. Annual Poster Session, Faculty of Psychology, University of Vienna, 2018, Austria. • **Awarded best poster**

## ACADEMIC SCHOLARSHIPS & AWARDS

2021	Marietta Blau Scholarship, OeAD – Austria’s Agency for Education and Internationalisation, Austria (9.480€)
2019-2022	Travel grants, Jungwissenschaftler-Fond, University of Vienna, Austria (> 1500€)
2018	Best Poster Award: Young Scientists Poster Session, Faculty of Psychology, Vienna Austria Scholarship for excellent academic achievements, University of Vienna, Vienna, Austria (751€)
2017	Scholarship for excellent academic achievements, University of Vienna, Vienna, Austria (750€)

## TEACHING & SUPERVISION

2019-ongoing	Supervision of 2 master students: one student ongoing; other student graduation in fall 2020 (with distinction), thesis title: “ <i>Emotion processing and lateralization in the canine brain</i> ”
2017-2022	Supervision of > 20 interns; supervision and training of 3 research assistants to help acquire MRI data from awake and unrestrained dogs
2019, 2020	Teaching assistant, course name: “Theorie & Empirie wissenschaftlichen Arbeitens“ (winter terms) Topic: A course on theoretical background and practical steps necessary to perform and interpret functional magnetic resonance imaging (fMRI) data analysis. Main task: practical sessions, and conceptual sessions focusing on comparative (imaging) research in humans and non-human animals, and open science.

## AD-HOC REVIEWER

Journal of Comparative Neurology, Neuroimage

## DOCTORAL SCHOOLS & PROGRAMS

2017-2022	Vienna Doctoral school CoBeNe (Cognition, Behaviour, Neuroscience), <b>Behavioral &amp; Cognitive Biology</b> program. Speaker: Prof. Thomas Bugnyar, University of Vienna, Vienna, Austria  Doctoral program (DK) “ <b>Cognition and Communication 2</b> ” (Chair: W. Tecumseh Fitch), University of Vienna and University of Veterinary Medicine, Vienna, Austria
-----------	---

## WORKSHOPS & SUMMER/WINTER SCHOOLS

10/2021	Three-day <b>grant writing retreat and workshop</b> , online. Organiser: Doctoral college Cognition & Communication 2, Writing Coach: Dr Iain Patten.
02/2021	Winter School: <b>MRInference: From data to knowledge</b> , University of Padua, Italy (virtual). Organisers: Assoc. Prof. Livio Finos, Dr. Paolo Girardi
09/2020	<b>Pattern Recognition in Neuroimaging (PRNI) Virtual Summer School</b> , Vienna, Austria. Organiser: Prof. Moritz Grosse-Wentrup
01/2020	Five-day <b>writing retreat and scientific writing workshop</b> , Baden, Austria. Organiser: Doctoral college Cognition & Communication 2, Writing Coach: Dr Iain Patten.
09/2018	Summer School: <b>The Visceral Mind</b> . Bangor, United Kingdom. Organisers: Drs Turnbull, Watson, Muhlert, Thiebaut de Schotten, Bracewell & Thierry.

09/2017 Four-day **SPM 12** and **Matlab course** (Fall 2017), Institute for Systems Neuroscience, UKE Hamburg, Germany. Lectures and practical fMRI analysis training in univariate, multivariate and resting state analysis.

## ORGANIZATION, INVOLVEMENT & SCIENTIFIC OUTREACH

2022 **Pint of Science Austria** – talk about my research for the general public addressing the questions *why* I do comparative research, *how* we train the dogs for functional MRI and *what* I have learned so far from my research

2020-2022 **“Kinderuni”** (engl. children’s university): half-day workshop for children aged 7-9 years old with a focus on social cognition (rubber hand illusion, playing games to train perspective taking and empathy) and the brain in general (making brain helmets, matching brains and animals quiz)

2021 Co-organization of a **2-day workshop** surrounding the topic **“How to become a Post-doc”** targeted at PhD candidates in their final year – tasks ranged from project ideas and conceptualization to organization of speakers (principal investigators and post-docs) and attendees and moderation of the workshop.

2018-2022 Administration of the **Comparative Canine Neuroimaging Unit (CCNU) Website** with updates on current projects, publications and facilities (ccnu.univie.ac.at)

2018 & 2020\* **“Lange Nacht der Forschung”** (engl. Long night of research): Information booth on psychological research in the psychology department (e.g. “How do we measure affective touch? How do dogs stay motionless during MRI data acquisition and why do we study dogs?”), paired with quizzes (e.g. facts about the brain) and actual data collection (emotion discrimination task) \*postponed to 2021 due to COVID-19

2018 Photo Competition **“My Research in one Picture”**, University of Vienna, Austria. • **Top 10 finalist**

2017-2018 Co-Coordinator and **Host of the Journal club** at the Social Cognitive and Affective Neuroimaging Unit

## SKILLS & CERTIFICATIONS

### Data acquisition

- Extensive training and certification for Siemens Magnetom Skyra MR system
- Co-development of functional MRI data acquisition protocol for fully awake and unrestrained dogs (*Canis familiaris*)
- Experimental control using Psychopy (Python) and Cogent (Matlab)
- Eye-tracking with Eyelink 1000 Plus, SR Research, Ontario, Canada
- Facial EMG (conduction & analysis of a small study within a research internship)

### Data analysis I Coding

- Excellent Matlab skills including toolboxes such as SPM: univariate, psycho-physiological interaction, representational similarity analysis
- Neuroimaging analysis using FSL and bash scripting
- Development of preprocessing and analysis pipeline for dog MRI data
- Python including toolboxes such as Nilearn (data visualization) and Nipype (human MRI data analysis)
- R (multivariate statistics, data visualization)
- ITK-snap (manual segmentation and labelling)
- State-of-the-art open science methods such as pre-registration, safeguard power analysis, small telescopes approach and (better) *p*-curve
- Other software: SPSS (multivariate statistics), Psychometrics (Mokken scale analysis), Photoshop, TYPO3 (Content Management System)

### Languages

- German (native)
- English (proficient)
- French (A-levels)