# Maria Korochkina, PhD

I am a cognitive neuroscientist studying **how we learn**, with a particular focus on how we acquire knowledge **of language** and **through experience with language**. I have a strong interest in **applied statistics** and am committed to promoting **transparency and reproducibility** in research. I am also passionate about **making science accessible** to the wider community and **engaging diverse voices in research** to drive meaningful societal change.

## **Education and qualifications**

PhD in Cognitive Science

Joint degree from Macquarie University (Australia) and Universities of Potsdam (Germany),

Newcastle upon Tyne (UK), Groningen (Netherlands), Trento (Italy), IDEALAB PhD programme

2015 − 2018

MSc in Experimental and Clinical Linguistics

University of Potsdam, Germany, IECL programme

2010 − 2015

BA & MA in Philology

Lomonosov Moscow State University, Russia

## **Academic employment**

# Teaching and educating

10/07/2024 **Invited speaker**, Opening up Open Science: Nuts and Bolts for Beginners workshop 31st annual meeting of the Society for the Scientific Study of Reading, Denmark 27/03/2023 **Instructor**, Bayesian LME and Distributional Regression models with brms workshop Royal Holloway, University of London 7/11/2022 – ongoing Instructor, ReproducibiliTea workshop series, Royal Holloway, University of London 02/2020 - 06/2022 Academic Tutor, Macquarie University Session 1, 2021 & 2022: Design and Statistics III Session 2, 2020 & 2021: Design and Statistics II Session 2, 2020 & 2021: Acquired Speech and Language Disorders Session 1, 2020: Exp Design and Data Analysis for the Cognitive and Brain Sciences 18/02/2021 ■ Instructor, Data analysis using (generalised) linear mixed effects models in R workshop Macquarie University 21-25/09/2020 Instructor, Introduction to R Software Carpentry workshop, Macquarie University

### **Publications**

Pre-registrations, materials, data, and analysis code for all papers are available at https://osf.io/zf8px/.

#### Under review

**Korochkina, M.**, & Rastle, K. (2024). *Morphology in children's books: What's there and what's useful for learning?* Pre-print available at https://doi.org/10.31219/osf.io/63pb4.

**Korochkina, M.**, & Rastle, K. (2024). The vocabulary barrier in the General Certificate of Secondary Education (GCSE) in English Literature. Pre-print available at https://doi.org/10.31219/osf.io/vg8c3.

#### Peer-reviewed

- Crawford, M., Raheel, N., **Korochkina, M.**, & Rastle, K. (2024). Inadequate foundational decoding skills constrain global literacy goals for pupils in low- and middle-income countries. *Nature Human Behaviour*. https://doi.org/10.1038/s41562-024-02028-x
- Korochkina, M., Nickels, L., & Bürki, A. (2024). What can we learn about integration of novel words into semantic memory from automatic semantic priming? *Language, Cognition, and Neuroscience*, 39(4), 455–488. https://doi.org/10.1080/23273798.2024.2328586
- Korochkina, M., Marelli, M., Brysbaert, M., & Rastle, K. (2024). The Children and Young People's Books Lexicon (CYP-LEX): A large-scale lexical database of books read by children and young people in the United Kingdom. *Quarterly Journal of Experimental Psychology*, 77(12), 2418–2438. https://doi.org/10.1177/17470218241229694
- Lombard, A., Ulicheva, A., **Korochkina, M.**, & Rastle, K. (2024). The regularity of polysemy patterns in the mind: Computational and experimental data. *GLOSSA Psycholinguistics*, 3(1), 3, 1–24. https://doi.org/10.5070/G60111327
- Korochkina, M., Sowman, P., Nickels, L., & Bürki, A. (2023). Neural correlates of encoding in novel word learning. *Collabra: Psychology*, 9(1), 57525. https://doi.org/10.1525/collabra.57525
- **Korochkina, M.**, Bürki, A., & Nickels, L. (2021). Apples and oranges: How does learning context affect novel word learning? *Journal of Memory and Language*, 120, 104246. https://doi.org/10.1016/j.jml.2021.104246

### Outreach contributions

#### **Publications**

- Korochkina, M., & Rastle, K. (2024). What makes GCSE English Literature so hard for students? *Tes*. https://www.tes.com/magazine/teaching-learning/secondary/what-makes-gcse-english-lit-so-hard-students
- **Korochkina, M.**, & Rastle, K. (2024). What words do children encounter when they read for pleasure? *Nomanis*, Issue 27. https://www.nomanis.com.au/blog/issue-17-june-2024. Also available here.

#### **Talks**

- Words in books: A challenge, a blessing, or both? (September 2024, with Kathy Rastle). Invited talk, ResearchED National Conference, London, UK.
- What makes GCSE English Literature so hard for students? (June 2024). Working Together: Research and Practice meeting, The South East Research Network for Schools, Egham, UK.

### Recent conference talks

A full list of talks and posters (along with the slide decks) is available at https://mariakna.github.io.

#### 2024

- The nature of morphemic regularities in children's literature: What do British children learn about derivational morphology when they read? Talk given at the 31st annual meeting of the Society for the Scientific Study of Reading, Copenhagen, Denmark.
- What can children learn about English morphology through book reading? Talk given at the annual meeting of the Experimental Psychology Society, York, UK.

- Apples and oranges: How does learning context affect novel word learning? Talk given at the Contextual Diversity Workshop organised by the Experimental Psychology Society, London, UK.
- What do children read as they transition into and through adolescence? Insights from CYP-LEX, a new large-scale lexicon of books for children and young people. Talk given at the annual meeting of the Cognitive and Developmental sections of the British Psychological Society, Bristol, UK.
- The Children and Young People's Books Lexicon (CYP-LEX): A lexical database of books directed at children and young adults. Talk given at the 23<sup>rd</sup> meeting of the European Society for Cognitive Psychology, Porto, Portugal.
- The Children and Young People's Books Lexicon (CYP-LEX): How does book language change as children transition into and through adolescence? Talk given at the annual meeting of the Experimental Psychology Society, Swansea, UK.
- Behavioural and electrophysiological markers of integration in novel word learning. Talk given at the annual meeting of the Experimental Psychology Society, London, UK.

## Awards and funding

2023	<b>Student Researcher Credibility Prize</b> , The British Neuroscience Association
	Read the media announcement here.

- Funding award for an 8-week Instructor Training with The Carpentries, Macquarie University
- 2020 Postgraduate Research Fund, Macquarie University
- 2019–2022 | International Research Excellence PhD Scholarship, Macquarie University
  - 2019 Conference travel & participant recruitment awards, University of Potsdam
- 2018–2019 **PhD Scholarship**, University of Potsdam
- 2012 & 2014 | Student exchange awards, University of Vienna, Austria

## **Skills**

Experimental techniques Behavioural, EEG, eye-tracking, fNIRS Corpus linguistics, computational modelling

Programming languages & software MATLAB, Python, R, Stan, Presentation Neurobehavioural Systems Stata, HTML, OpenSesame, LTEX

Languages English, German, Russian, Swedish, Icelandic (beginner)
British Sign Language (beginner)

# Recent training and development

2024 Introduction to Research Impact, Social Science Impact Accelerator, Royal Holloway, University of London

- Storytelling with Impact: Visual storytelling, Nifty Fox Creative
- Storytelling with Impact: Unleash the power of narrative with Duncan Yellowlees
- Storytelling to success: Developing your Narrative CV, University of Leeds
- 2022 Introduction to Natural Language Processing in Python, DataCamp
  - The 6<sup>th</sup> Summer School on Statistical Methods for Linguistics and Psychology, University of Potsdam
- 2021 *Badged Instructor* training, The Carpentries
- 2020 Understanding the Brain: The Neurobiology of Everyday Life, University of Chicago