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QMRI
University of Edinburgh
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United Kingdom

Language Skills
Chinese ★★★★★
English ★★★★★

Programming Skills
Python ★★★★★☆
Matlab ★★★★★☆
LaTeX ★★★★★☆
Shell ★★★★★☆

Awards
Runner-Up
Closed-Loop
Neuromodulation
Hackathon, GBR, 2025

Outstanding Student
XUT, CHN, 2013

Mengzhen Arthur Zhang, PhD

Postdoctoral Research Fellow

About Me A PhD and MSc in Neuroscience, BSc in Psychology (with Honours), and LLB (Bachelor of Laws) graduate, currently a postdoctoral research fellow at the Institute for Neuroscience and Cardiovascular Research, the University of Edinburgh, supervised by [Prof Nathalie Rochefort](#). Has experience in large-scale electrophysiology recording and behavioural training in rodents, big-data analysis and software development in python, machine learning, scientific project management, and solicitation.

Education

Doctor of Philosophy Neuroscience (09/2021 – 09/2026)

University of Edinburgh, Edinburgh, GBR

- Scholarship: *UKRI MRC Precision Medicine Doctoral Training Programme*
- Thesis: *Internal Visuospatial Representations in Mouse Visual Cortex*

Master of Science by Research Neuroscience (09/2020 – 08/2021)

University of Edinburgh, Edinburgh, GBR

- Scholarship: *School of Biomedical Sciences, International Masters Scholarship for Integrative Neuroscience*
- Dissertation: *What Do You See Before Reaching – Visual Processing in PPC-PM2 Circuit*

Bachelor of Science Psychology (09/2017 – 01/2020)

Leiden University, Leiden, NLD

- **LU Honours College (09/2018 – 01/2020): Society & Science**
- Thesis: *Do Pessimists Suffer More – Investigate The Role of Pessimism on Nocebo Hyperalgesia*

Bachelor of Laws Law (09/2012 – 07/2016)

Xi'an University of Technology (XUT), Xi'an, CHN

- Scholarships: *National Scholarship (2013) & Wujiang Innovation Scholarship (2014)*
- Thesis: *International Cooperation in Terroristic Criminal Matters*

Research Experience

PhD Candidate & Postdoctoral Researcher 09/2021 – present

Rochefort Lab, INCR, University of Edinburgh

1. *Food scarcity modulation of cortical and thalamic neuronal activity*
2. *Internal visuospatial representations in mouse visual cortex*
3. *Oestrus cycle modulation of cortical and hippocampal neuronal activity*
 - Performing brain surgical procedures & behavioural task training in mice
 - Chronic *Neuropixels* implant designing & implementation
 - Conducting acute and chronic recording *Neuropixels*
 - Data analysis pipeline development in python
 - Behavioural & neuronal data analysis in python

Research Internship 01/2021 – 08/2021

Duguid Lab, INCR, University of Edinburgh

Convergence of visuomotor information streams in secondary motor cortex

- Performing brain surgical procedures & behavioural task training in mice
- Conducting acute *Neuropixels* recordings
- Behavioural & neuronal data analysis in python

Research Assistant 02/2020 — 09/2020

CODELAB, Cognitive Psychology Unit, Leiden University

Predicting finger-handedness from daily smartphone taps

- Signal processing theories & methodologies learning
- Time-series & behavioural data processing and analysis

Research Assistant 09/2019 — 12/2020

Vici Project, Health, Medical & Neuropsychology Unit, Leiden University

Neural correlates of nocebo effects on pain

- Participants recruitment
- EEG experiment conducting & data acquisition
- Behavioural data analysis & neural data pre-processing

Research Assistant 02/2019 — 01/2020

Comparative Psychology & Animal Behaviour Project, Leiden, NLD

Contagious nature of play in young western gorillas

- Behaviour observation & encoding

Teaching Experience

Course Demonstrator 01 — 05/2022, 2023, 2024, 2025

Informatics 1 — Cognitive Science, University of Edinburgh

- Computational labs demonstration
- Coursework marking

Course Tutor 02 — 05/2024, 2025

Neuroscience 3 — Vision, University of Edinburgh

- Practical labs tutoring
- Coursework marking

Course Instructor 12/2024

CAJAL Advanced Neuroscience Training Programme, Bordeaux School of Neuroscience, Bordeaux, FRA

Movement and Motor Control in Health and Disease

- Chronic *Neuropixels* implant demonstration
- Large-scale electrophysiological data analysis tutoring

Course Tutor 09/2023 — 11/2023

Neural Circuit for Learning & Memory, University of Edinburgh

- Experimental design and scientific presentation tutoring

Publication

Bimbard et al., 2025 An adaptable, reusable, and light implant for chronic Neuropixels probes

eLife

Conference Abstracts

FENS 2026, Barcelona, ESP

Poster: Reusable, reduced-weight *Neuropixels* implant for stable chronic recordings in small adult mice

Gordon Research Conference Inhibition 2025, Newry, Maine, USA

Poster: Lightweight, adaptable, and reusable chronic *Neuropixels* implant in mice

M. A. Zhang
PhD, MSc, BSc, LLB
She/Her

Qlife 2024, Paris, FRA

Poster: Predictive coding in mouse visual cortex: representation of a familiar environment in darkness

SfN 2023, Washington DC, USA

Poster: Lightweight, reusable chronic implants for *Neuropixels* probes

European Visual Cortex Meeting 2022, Munich, DEU

Poster: Recyclable, super lightweight, chronic *Neuropixels* apparatus

References

Prof Nathalie Rochefort Personal Chair of Visual Neuroscience

Prof Ian Duguid Personal Chair of Cellular and Systems Neuroscience

Dr Nina Kudryashova Royal Society University Research Fellow