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# ELINA A. K. JACOBS

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## EMPLOYMENT

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### **Johannes Gutenberg University Mainz**

Postdoctoral Researcher in the Ryu Lab

March 2021 to December 2022

Guest researcher at the Schuman lab, Max Planck Institute for Brain Research, Frankfurt (October to December 2021)

### **University College London**

Postdoctoral Research Fellow in the Isogai Lab and in collaboration with Meyer Lab at King's College London

January 2019 to December 2020

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## EDUCATION

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### **University College London**

PhD, Neuroscience

Wellcome Trust 4 year Neuroscience PhD Programme, September 2013 to September 2018

### **University of Edinburgh**

BSc Honours, Biological Sciences (Neuroscience), First Class

September 2009 to June 2013

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## PUBLICATIONS

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- ❖ **Elina A. K. Jacobs** & Soojin Ryu (2023). Larval zebrafish as a model for studying individual variability in translational neuroscience. *Frontiers in Behavioural Neuroscience*, *17*, 1143391.
- ❖ **Elina A. K. Jacobs**, Nicholas A. Steinmetz, Andrew J. Peters, Matteo Carandini, Kenneth D. Harris (2020). Cortical State Fluctuations during sensory Decision Making. *Current Biology*, *30*, 4944-4955.
- ❖ Lisa J. Knoll, Annie Gaule, Alberto Lazari, **Elina A. K. Jacobs**, Sarah-Jayne Blakemore (2020). Neural correlates of social influence on risk perception during development. *Social Neuroscience*, *15*, 355-367.
- ❖ Christopher P. Burgess, Armin Lak, Nicholas A. Steinmetz, Peter Zatzka-Haas, Charu Bai Reddy, **Elina A. K. Jacobs**, et al (2017). High-yield methods for accurate two-alternative visual psychophysics in head-fixed mice. *Cell Reports*, *20*, 2513-2524.
- ❖ Nicholas A. Steinmetz, Christina Buetfering, Jerome Lecoq, Christian R. Lee, Andrew J. Peters, **Elina A. K. Jacobs**, et al (2017). Aberrant neocortical activity in certain GCamp6-expressing transgenic mice. *eNeuro*, 0207-17.2017.
- ❖ **Elina Jacobs**, James D. Mills, Michael Janitz (2012). The Role of RNA Structure in Posttranscriptional Regulation of Gene Expression, *Journal of Genetics and Genomics*, *39*, 535-543.

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## AWARDS & ACHIEVEMENTS

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**Wellcome Trust PhD Studentship** 2013-2018

**FENS, IBRO-PERC and The Brain Prize stipend**, FENS Brain Conference 2016

**British Neuroscience Association Undergraduate Award 2013**

**Neuroscience Honours Best Science Student 2013** (University of Edinburgh)

**Edinburgh Award for Resident Assistants 2013** (University of Edinburgh)

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## INVITED TALKS

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**Society for Neuroscience Annual Meeting 2016**, San Diego, USA

**Nanosymposium: Visual Cognition – Decision Making**

*Widefield imaging of sensory cortices during visual and audio-visual behaviour in mice*

**Elina Jacobs**, Michael Okun, Nicholas Steinmetz, Christopher Burgess, Daisuke Shimaoka, Matteo Carandini & Kenneth D. Harris

**FENS (Federation of European Neuroscience Societies) Brain Conference 2016:**

**The Brain in Focus: New Approaches to Imaging Neurons and Neural Circuits**

Short talk, April 2016, Rungstedgaard, Denmark

*Wide-field imaging of genetically encoded calcium indicators during visual behaviour in mice.*

**Elina Jacobs**, Nicholas A. Steinmetz, Michael Okun, Christopher P. Burgess, Daisuke Shimaoka, Matteo Carandini & Kenneth D. Harris

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## POSTER PRESENTATIONS

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### **Neuromatch Conference 3.0 2020**, online

*Effects of the stress hormone cortisol on spontaneous activity in the larval zebrafish tectum.*

Elina A K Jacobs, Matthew J Harvey, Martin Meyer

### **Society for Neuroscience Annual Meeting 2019**, Chicago, USA

*Cortical states during sensory decision making.*

Elina A K Jacobs, Nicholas A Steinmetz, Andrew J Peters, Matteo Carandini & Kenneth Harris

### **UCL Neuroscience Symposium 2017**, London, UK

*Brain state dynamics during sensory decision making.*

Elina A K Jacobs, Nicholas A Steinmetz, Andrew J Peters, Matteo Carandini & Kenneth D Harris

### **OIST Computational Neuroscience summer school 2016**, Okinawa, Japan

*Widefield imaging of sensory cortex during visual behaviour in mice.*

Elina A K Jacobs, Michael Okun, Nicholas A Steinmetz, Christopher P Burgess, Matteo Carandini & Kenneth D Harris

### **Society for Neuroscience Annual Conference 2015**, Chicago, USA

*Midbrain dopamine stimulation enhances perceptual sensitivity.*

Lak A, Schröder S, Jacobs E, Soares S, Burgess C, Paton J, Harris KD, Carandini M

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## KEY RESEARCH & TRANSFERABLE SKILLS

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### **Technical skills**

In-vivo physiology: widefield and 2-photon imaging in mice and zebrafish; rodent behaviour and psychophysics; spatial transcriptomics (e.g. MERFISH); programming: MATLAB, Python, R; data analysis; basic machine learning

### **Soft skills**

Initiated collaborations internally and across institutions (with Prof Martin Meyer at KCL for developing MERFISH applications in zebrafish, with Arthur Gretton for developing 3D spatial transcriptomics analysis tools)

Organised the SWC Postdoc Retreat 2019

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## SELECTED SCIENCE COMMUNICATION & PUBLIC ENGAGEMENT

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### **BrainCamp Kosovo**

Run by the XhM Foundation to provide STEM education for secondary school students in Kosovo. In April 2020, I delivered live introductory Neuroscience lectures in the online ‘Mini BrainCamp’: [www.crowdcast.io/xhmfoundation](http://www.crowdcast.io/xhmfoundation)

### **Society for Neuroscience 2016 ‘Hot Topics’**

I was invited to submit a lay language summary of my work for inclusion in SfN’s ‘Hot Topics’ book for the media.

### **Cheltenham Science Festival**

I won a bursary from the UCL Graduate School to participate at the Cheltenham Science Festival in June 2014.

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## SELECTED TEACHING ACTIVITY

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### **Neuromatch Academy Online Computational Neuroscience Summer School**

Lead Teaching Assistant, July 2023; Group project Mentor, July 2021, July 2022; Teaching Assistant, July 2020

### **UCL Postgraduate Teaching Assistant**

2014-2018

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## REFEREES

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### **Prof Kenneth D Harris**

UCL Institute of Neurology, London, UK

[kenneth.harris@ucl.ac.uk](mailto:kenneth.harris@ucl.ac.uk)

### **Prof Tom Otis**

UCL Sainsbury Wellcome Centre, London, UK

[t.otis@ucl.ac.uk](mailto:t.otis@ucl.ac.uk)

### **Prof Matteo Carandini**

UCL Institute of Ophthalmology, London, UK

[matteo@cortexlab.net](mailto:matteo@cortexlab.net)

### **Prof Soojin Ryu**

University of Exeter Living Systems Institute, UK

[s.ryu@exeter.co.uk](mailto:s.ryu@exeter.co.uk)