

Olivia Guest

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CONTACT

Email: contact@oliviaguest.com

GitHub: [oliviaguest](https://github.com/oliviaguest)

Website: oliviaguest.com

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

Blog: neurolausible.com

ORCID: [0000-0002-1891-0972](https://orcid.org/0000-0002-1891-0972)

PROFESSIONAL EXPERIENCE

Department of Experimental Psychology, University College London, UK

Postdoctoral Researcher

2016–

- Created computational models: for categorisation, for model-based fMRI, used deep neural networks, etc.
- Mentored Ph.D. and M.Sc. students (CSML and DSML M.Sc.s)
- Ran training courses for: git, continuous integration, module testing.
- Sat on hiring committees for postdoctoral fellows.

Software Sustainability Institute, UK — *Fellow* 2016

2016–2017

Department of Experimental Psychology, University of Oxford, UK

Postdoctoral Researcher

2014–2016

- Created models for category learning in infancy.
- Tutored on the Language and Cognition module.
- Ran and developed the Block Practical: [Connectionist Models and Cognitive Processes](#).

Department of Psychological Sciences, Birkbeck, UK

Graduate Teaching Assistant

2010–2014

- Taught on a range of courses within psychological sciences.
- Was trained to evaluate, mark, invigilate, and support part-time, mature, and full-time students.
- Managed the SONA system.
- Organised and led the [Centre for Cognition, Computation and Modelling's](#) seminar.

EDUCATION

Birkbeck, UK

2010–2014

Ph.D., Psychological Sciences, Sep 2014

- Thesis: *Towards a Unified Computational Account of Semantic Impairments*
- 1st Supervisor: *Richard P. Cooper*
- 2nd Supervisor: *Eddy J. Davelaar*

University College London, UK

2009–2010

M.Sc., [Cognitive and Decision Sciences](#) (Distinction), Sep 2010

- Thesis: *Modelling Semantic Memory & Its Impairments Following Neural Damage*
- Supervisor: *Richard P. Cooper*

The University of York, UK

2006–2009

B.Sc., [Computer Science](#), Jun 2009

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|-------------------------|---|
| PUBLICATIONS | Guest, O. , Kanayet, F. J., & Love, B. C. (in press). Gerrymandering and Computational Redistricting . <i>Journal of Computational Social Science</i> . |
| | Rougier, N. P. et al. (2017). Sustainable computational science: the ReScience initiative . <i>PeerJ Computer Science</i> . |
| | Love, B. C., Guest, O. , Slomka, P., Navarro, V., Wasserman, E. (2017). Deep Networks as Models of Human and Animal Categorization . In <i>Proceedings of the 39th Annual Meeting of the Cognitive Science Society</i> . (pp. 1457–1458). |
| | Guest, O. & Love, B. C. (2017). What the Success of Brain Imaging Implies about the Neural Code . <i>eLife</i> , 6:e21397. |
| | Guest, O. & Rougier, N. P. (2016). What is computational reproducibility? <i>IEEE CIS Newsletter on Cognitive and Developmental Systems</i> , 13 (1). |
| | Guest, O. (2016). Crisis in What Exactly? . <i>The Winnower</i> . |
| | Love, B. C., Kopeć, Ł. & Guest, O. (2015). Optimism Bias in Fans and Sports Reporters . <i>PLoS ONE</i> , 10 (9). |
| | Cooper, R. P. & Guest, O. (2014). Implementations are not specifications: specification, replication and experimentation in computational cognitive modeling . <i>Cognitive Systems Research</i> , 27, 42–49. |
| PREPRINTS & UNPUBLISHED | Guest, O. , Cooper, R. P. & Davelaar, E. J. (2014). [High-Level Cognition]. The Influence of Implementation on “Hub” Models of Semantic Cognition . In J. Mayor, P. Gomez (Eds.), <i>Computational Models of Cognitive Processes</i> (pp. 155–169). World Scientific. |
| | Guest, O. , Cooper, R. P. & Davelaar, E. J. (2012). Semantic Cognition: A Re-examination of the Recurrent Network “Hub” Model . In <i>Proceedings of the Ninth International Conference on Cognitive Modelling</i> . Berlin, Germany. April. (pp. 259–264). Berlin, Germany. April. Universitätsverlag der TU Berlin. |
| | Guest, O. Love, B. C. (in prep; invited for special issue). Model comparison as an alternative to theory falsification . <i>Perspectives on Psychological Science</i> |
| | Guest, O. , Caso A. & Cooper, R. P. (under review; available on request). On Simulating Neural Damage in Connectionist Networks . <i>Psychological Review</i> |
| INVITED TALKS | Guest, O. Love, B. C. (2019; under review at JEP:Gen). Levels of Representation in a Deep Learning Model of Categorization . <i>bioRxiv</i> . |
| | Upcoming: Inria and the Institute of Neurodegenerative Diseases, Bordeaux, France, September 2019; OpenMR Benelux, Leiden, The Netherlands, January 2020. |
| | Thirty-fifth International Conference on Machine Learning (ICML 2018) Workshop: Enabling Reproducibility in Machine Learning MLTrain@RML |
| | Stockholm, Sweden 14 Jul 2018 |
| | • Varieties of Reproducibility in Empirical and Computational Domains . |
| | Open Data Day 2018 |
| | Goldsmiths, University of London, UK 3 Mar 2018 |
| | • Gerrymandering and Computational Redistricting . |

Cognitive Neuroscience Friday Seminar (FriSem)

Stanford University, California, USA

16 Feb 2018

- *How deep networks contribute to our understanding of human and animal representation in categorization.*

Research Programming Technical Social

University College London, UK

15 Nov 2017

- *Gerrymandering and Computational Redistricting.*

Centre for Language Studies

Radboud University, The Netherlands

8 Mar 2017

- *What the Success of Brain Imaging Implies about the Neural Code.*

London Judgement and Decision Making Seminars

University College London, UK

8 Feb 2017

- *What the Success of Brain Imaging Implies about the Neural Code.*

Summerfield Lab

University of Oxford, UK

23 Nov 2016

- *What the Success of Brain Imaging Implies about the Neural Code.*

CONFERENCE PRESENTATIONS

18th Annual Summer Interdisciplinary Conference (ASIC 2019)

Seefeld, Austria

17–22 Jun 2019

- Talk: *Levels of Representation in a Deep Learning Model of Categorization.*

39th Annual Meeting of the Cognitive Science Society (CogSci 2017)

London, UK

26–29 Jul 2017

- Talk: *Deep Networks as Models of Human and Animal Categorization.*

16th Annual Summer Interdisciplinary Conference (ASIC 2017)

Interlaken, Switzerland

15–20 Jul 2017

- Talk: *Deep Networks as Models of Human and Animal Categorization.*

1st Lancaster Conference on Infant and Early Child Development (LCICD 2016)

Lancaster, UK

25–27 Aug 2016

- Talk: *Representational Re-description in hSOMs.*

15th Annual Summer Interdisciplinary Conference (ASIC 2016)

Selva, Val Gardena, Italy

3–8 Jul 2016

- Talk: *What the Success of Brain Imaging Implies about the Neural Code.*

14th Annual Summer Interdisciplinary Conference (ASIC 2015)

Mammoth Lakes, California, USA

10–15 Jul 2015

- Talk: *Optimism Bias in Novice and Expert Sport Forecasting.*

13th Neural Computation and Psychology Workshop (NCPW 13)

BCBL, San Sebastian, Spain

12–14 Jul 2012

- Talk: *Exploring the influence of architecture and learning algorithm on the breakdown of the “hub” model of semantic cognition.*

11th International Conference on Cognitive Modeling (ICCM 2012)

Technische Universität Berlin, Berlin, Germany

12–15 Apr 2012

- Poster: *Semantic Cognition: A Re-examination of the Recurrent Network “Hub” Model.*
- Won Best Student Poster Prize.

ORGANISING

18th Scientific Computing with Python Conference (SciPy 2019)

Austin, Texas, USA

8–14 Jul 2019

- Chaired cognitive science and neuroscience mini-symposium with Nicolas P. Rougier.
- Reviewed conference submissions.

Women in Cognitive Science (WiCS) Panel at 40th Annual Meeting of the Cognitive Science Society (CogSci 2018)

Madison, Wisconsin, USA

25 Jul 2018

- Topic: Women and Gender Minorities in Computational Cognitive Science: Sharing Experiences.
- Co-organised with Nora S. Newcombe.
- Panel members: Eliana Colunga, Rebecca Frost, Amy Perfors, and myself.

16th Scientific Computing with Python Conference (SciPy 2017)

Austin, Texas, USA

10–16 Jul 2017

- Chaired neuroscience mini-symposium with Ariel Rokem.
- Reviewed conference submissions.

Research Data Visualisation Workshop (RDVW)

Software Sustainability Institute, University of Manchester

28 Jul 2016

- Organised 1-day workshop with Raniere Silva (main organiser) and Vince Knight.
- Member of steering committee.
- Obtained funding from RStudio.

Introduction to Computational Cognitive Modelling Workshop

CCCM, Birkbeck

23–25 Apr 2014

- Organised 3-day workshop with Chris Brand (co-organiser).
- Prepared slides, exercises, created website.

TEACHING

Department of Experimental Psychology, University of Oxford, UK

Postdoctoral Research Assistant

2014–

Block Practical: Connectionist Models and Cognitive Processes

- Module: *Third Year, B.Sc.*
- Designed course structure and materials (slides and exercises).
- Set final report wherein students replicated from scratch Tyler et al. (2000) in Python.

- Created course website: oliviaguest.com/connectionism.

Tutorial: Language and Cognition

- Module: *Second Year, B.Sc.*
- Set essays and marked exams.

Department of Psychological Sciences, Birkbeck, University of London, UK

Graduate Teaching Assistant

2010–2014

- Modules Taught: *General Foundations of Psychology, Psychobiology, Advanced Research Methods, Advanced Quantitative Methods, Memory and Cognition, Matlab Programming for Psychological Science,*

MEDIA

BBC Radio 4: Today Show

22 Feb 2016

- Interview: *What can we learn in 4 months?*

Optimism Bias in Fans and Sports Reporters

9 Sep 2015

- Press Releases: [University of Oxford](#), [UCL](#)
- Media Coverage: [CS Monitor](#), [Medical Daily](#), [MinnPost](#), [Newsweek](#), [Pacific Standard](#), [Phys.org](#).

REVIEWING &
SERVICE

ReScience Journal — *Associate Editor*

2015–

Ad hoc

International Conference on Cognitive Modelling (ICCM), Scientific Computing with Python Conference (SciPy), Cognitive Science Journal, Cognitive Psychology, Memory & Cognition.

TECHNICAL
SKILLS

General

- Web design (e.g., [bradlove.org](#), [neuroplausible.com](#), [oliviaguest.com](#), [redistrict.science](#), [compcog.science](#)).
- Graphic design and image editing (i.e., Adobe Suite, GIMP, Inkscape); GUI design (i.e., PyGTK, GTK+).
- Artificial neural networks (e.g., TensorFlow).
- Unix (e.g., CLI, server administration).

Programming

Ada, C, C++, C#, Java, JavaScript, \LaTeX , MATLAB, OpenGL, Pascal, PHP, Prolog, Python, R, Scheme, SQL, Visual Basic.

LANGUAGES

Native: Modern Greek, Cypriot Greek, English

Basic: French, Italian