

Olivia Guest

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CONTACT

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DEGREES

- Ph.D. *Towards a Unified Computational Account of Semantic Impairments* 2014
Birkbeck, UK
Supervisors: Richard P. Cooper, Eddy J. Davelaar
- M.Sc. Cognitive and Decision Sciences (Distinction) 2010
University College London (UCL), UK
- B.Sc. Computer Science 2009
The University of York, UK

EMPLOYMENT HISTORY

- Donders Centre for Cognition, Radboud University
Netherlands, Assistant Professor 2021–
- Donders Centre for Cognitive Neuroimaging, Radboud University
Netherlands, Postdoctoral Researcher 2020–2021
- Research Centre on Interactive Media, Smart Systems & Emerging Technologies (CYENS)
Cyprus, Independent Researcher 2019–2020
- Department of Experimental Psychology, University College London
UK, Postdoctoral Researcher 2016–2019
- Department of Experimental Psychology, University of Oxford
UK, Postdoctoral Researcher 2014–2016
- Department of Psychological Sciences, Birkbeck
UK, Graduate Teaching Assistant / Ph.D. student 2010–2014

EDITORIAL ROLES

- [The Journal of Open Source Software](#) — Joint Editor-in-Chief 2022–
- [Cogent Psychology](#) — Editorial Board 2021–
- [ReScience C Journal](#) — Editor-in-Chief 2020–
- [The Journal of Open Source Software](#) — Topic Editor 2019–2022
- [ReScience C Journal](#) — Associate Editor 2015–2020
- Special issue on [NeurIPS 2019 Reproducibility Challenge](#) 2019
Co-edited special issue of ReScience C.

SUPERVISION & MENTORING	Computational Cognitive Science (CCS) group	2022–
	<ul style="list-style-type: none"> mentoring of junior assistant professor and postdoc contributing to vision and strategic management of CCS 	
	Research projects	
	<ul style="list-style-type: none"> Sara Østergaard (MSc student, Aarhus University) 	2022–
	<ul style="list-style-type: none"> Lelia Erscoi (BSc student, Radboud University) 	2021–
	<ul style="list-style-type: none"> Rory Spanton (PhD candidate, University of Plymouth) 	2021–22
	<ul style="list-style-type: none"> Perna Aneja (PhD candidate, University of East Anglia) 	2020–22
	Student research assistant	
	<ul style="list-style-type: none"> Manthan Gadhia (BSc student, Radboud University) 	2022–
	Thesis supervision	
	<ul style="list-style-type: none"> Avantika Karir (BSc) 	2022
	<ul style="list-style-type: none"> Arina Schippers (BSc) 	2022
	<ul style="list-style-type: none"> Amany Osman (BSc) 	2022
	<ul style="list-style-type: none"> Luc van der Gun (BSc) 	2022
	<ul style="list-style-type: none"> Leah van Oorschot (BSc) 	2022
	<ul style="list-style-type: none"> Noa Baijens (BSc) 	2021
	<ul style="list-style-type: none"> Lelia Erscoi (BSc) 	2021
	<ul style="list-style-type: none"> Evelien van Dijk (BSc) 	2021
	<ul style="list-style-type: none"> Joost Vossers (BSc) 	2021
	Computational & statistical modelling office/social hours (with Samuel H. Forbes)	2021
	<ul style="list-style-type: none"> Every Tuesday afternoon, 6pm C(S)ET onwards. Students (especially in neuroscience and psychology) pop in for advice and mentoring. 	
	DCCN, Senior Postdoc	2020–2021
	<ul style="list-style-type: none"> mentored PhD candidates trained PhD candidates in programming and neural network modeling. mentored Master students in how to apply for PhD positions. 	
	CYENS, Cyprus, Independent Researcher	2019–2020
	<ul style="list-style-type: none"> mentored PhD candidates trained PhD candidates in programming and neural network modeling. mentored Master students in how to apply for PhD positions. 	
	Department of Experimental Psychology, UCL, Senior Postdoc	2016–2019
	<ul style="list-style-type: none"> mentored PhD candidates and junior postdocs. trained PhD candidates and junior postdocs in computational modeling, programming and neural network modeling. 	
	Department of Experimental Psychology, University of Oxford, Postdoc	2014–2016
	<ul style="list-style-type: none"> mentored PhD candidates. trained PhD candidates in computational modeling and programming. 	
MANUSCRIPTS (under review, revision, or in prep)	Guest, O. (in prep) What makes a good scientific theory? <i>Invited for Lorentz workshop special issue of Computational Brain & Behavior</i>	
	van Rooij, I., Guest, O. , Adolfs, F., Kolokolova, A., & Rich, P. (in prep) Reclaiming AI as theoretical tool for cognitive science. <i>Invited for Lorentz workshop special issue of Computational Brain & Behavior</i>	
	Rich, P., Adolfs, F., Field, S. M., Fusaroli, R., Guest, O. , Hartley, T., Nuñez Hernandez, N. A., van de Braak, L., van Rooij, I. (in prep) The Role of Community in Theoretical Research. <i>Invited for Lorentz workshop special issue of Computational Brain & Behavior</i>	

Teaching about theorising; theorising about teaching (in prep) Fusaroli R., De Santo, A., **Guest, O.**, Woensdregt, M., Adolfi, F., Todorovikj, S., Vermillet, A.-Q., Hartley, T., van Rooij, I., Skewes, J. *Invited for Lorentz workshop special issue of Computational Brain & Behavior*

Zgonnikov, A., Thill, S., Fau, P. B., Jonker, C. M., **Guest, O.** (in prep) Modeling Human Behavior in HRI: Why, What, and How.

Erscoi, L. A., Kleinherenbrink, A., & **Guest, O.** (in prep) My Fair AI: Humanising Artificial Intelligence by Dehumanising Women.

Guest, O., van Rooij, I., & Martin, A. E. (in prep; invited to special issue) What are our models really, and are models real? How metatheoretical calculi can obtain in cognitive computational neuroscience (2022). *Synthese*.

Guest, O. & Martin, A. E. (revise & resubmit) On logical inference over brains, behaviour, and artificial neural networks. *Computational Brain & Behavior*.
doi.org/10.31234/osf.io/tbmcg

Forbes, S. H., Aneja, P., & **Guest, O.** (accepted in special issue). The Myth of Normative Development. *Infant and Child Development*.
doi.org/10.31234/osf.io/ajynp

PUBLICATIONS

Levitis, E. et al. (2021). Centering inclusivity in the design of online conferences—An OHBM–Open Science perspective. *Gigascience*.
doi.org/10.1093/gigascience/giab051

Guest, O. & Birhane, A. (2021). Towards decolonising computational sciences. *Women, Gender & Research*.
doi.org/10.7146/kkf.v29i2.124899

Guest, O. & Martin, A. E. (2021). How computational modeling can force theory building in psychological science. *Perspectives on Psychological Science*.
doi.org/10.1177/1745691620970585

Barlas, P., Kyriakou, K., **Guest, O.**, Kleanthous, S., & Otterbacher, J. (2021). To “See” is to Stereotype: Image Tagging Algorithms, Gender Recognition, and the Accuracy-Fairness Trade-off. *The 23rd ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2020)*.
doi.org/10.1145/3432931

Bobadilla Suárez, S., **Guest, O.**, & Love, B. C. (2020). Subjective value and decision entropy are jointly encoded by aligned gradients across the human brain. *Communications Biology*.
doi.org/10.1038/s42003-020-01315-3

Botvinik-Nezer, R. et al. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*.
doi.org/10.1038/s41586-020-2314-9

Guest, O., Caso A. & Cooper, R. P. (2020). On Simulating Neural Damage in Connectionist Networks. *Computational Brain & Behavior*
doi.org/10.1007/s42113-020-00081-z

Guest, O., Kanayet, F. J., & Love, B. C. (2019). Gerrymandering and Computational Redistricting. *Journal of Computational Social Science*.
doi.org/10.1007/s42001-019-00053-9

Guest, O. & Love, B. C. (2017). What the Success of Brain Imaging Implies about the Neural Code. *eLife*, 6:e21397.
doi.org/10.7554/eLife.21397

	<p>Rougier, N. P. et al. (2017). Sustainable computational science: the ReScience initiative. <i>PeerJ Computer Science</i>. doi.org/10.7717/peerj-cs.142</p> <p>Love, B. C., Kopeć, Ł. & Guest, O. (2015). Optimism Bias in Fans and Sports Reporters. <i>PLoS ONE</i>. doi.org/10.1371/journal.pone.0137685</p> <p>Cooper, R. P. & Guest, O. (2014). Implementations are not specifications: specification, replication and experimentation in computational cognitive modeling. <i>Cognitive Systems Research</i>. doi.org/10.1016/j.cogsys.2013.05.001</p>
CONFERENCE PROCEEDINGS	<p>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>.</p> <p>Guest, O., Cooper, R. P. & Davelaar, E. J. (2014). The Influence of Implementation on "Hub" Models of Semantic Cognition. In J. Mayor, P. Gomez (Eds.), <i>Computational Models of Cognitive Processes</i>.</p> <p>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>.</p>
MAGAZINES & NEWSLETTERS	<p>Whitaker, K., & Guest, O. (2020). #bropenscience is broken science. <i>The Psychologist</i>. doi.org/10.5281/zenodo.4099011</p> <p>Guest, O. & Rougier, N. P. (2016). What is computational reproducibility? <i>IEEE CIS Newsletter on Cognitive and Developmental Systems</i>.</p> <p>Guest, O. (2016). Crisis in What Exactly? <i>The Winnower</i>. doi.org/10.15200/winn.146590.01538</p>
PREPRINTS	<p>Spanton, R. W. & Guest, O. (2022) Measuring Trustworthiness or Automating Physiognomy? A Comment on Safra, Chevallier, Grèzes, and Baumard (2020). <i>arXiv</i>. doi.org/10.48550/arXiv.2202.08674</p> <p>Guest, O. (2021) & Martin, A. E. On logical inference over brains, behaviour, and artificial neural networks. <i>PsyArXiv</i>. doi.org/10.31234/osf.io/tbmcc</p> <p>Levitis, E. et al. (2021). Centering inclusivity in the design of online conferences. <i>PsyArXiv</i>. doi.org/10.31234/osf.io/vj5tu</p>
AWARDS, FELLOWSHIPS, & GRANTS	<p>Aarhus Education Collaboration: €40,000 2022–</p> <ul style="list-style-type: none"> • Radboud-Aarhus theoretical modelling internship (with Joshua Skewes) <p>Western-Radboud Collaboration Fund (co-applicant) 2022–</p> <ul style="list-style-type: none"> • Partner in collaboration on governance of artificial intelligence (AI) systems. <p>Shuttleworth Foundation Flash Grant: \$5,000 2021</p> <ul style="list-style-type: none"> • Funding is in recognition of my work as a “social change agent”, based on nominations from Shuttleworth Flash Fellows.

	Nomination for Faculty of Social Sciences Junior Education Prize 2021 <ul style="list-style-type: none"> Nominated by the student representatives of the BSc Degree Programme Committee.
	Software Sustainability Institute Fellowship: £3,000 2017
TEACHING	School of Artificial Intelligence, Radboud, NL Assistant Professor 2021– Postdoctoral Research Assistant 2021 <i>AI as a Science</i> <ul style="list-style-type: none"> Module: 3EC <i>Third Year, B.Sc.</i> Designed course from the ground up. Redesigned course (since in its 2nd year it has 10 times the students; from 5 to 50). <i>Theoretical Foundations for Cognitive Agents</i> <ul style="list-style-type: none"> Module: 6EC <i>M.Sc.</i> Redesigned course from the ground up. Department of Experimental Psychology, University of Oxford, UK Postdoctoral Research Assistant 2014–2016 <i>Block Practical: Connectionist Models and Cognitive Processes</i> <ul style="list-style-type: none"> Module: <i>Third Year, B.Sc.</i> Designed course structure and materials (slides and exercises). Students replicated from scratch Tyler et al. (2000) in Python. Created course website: oliviaguest.com/connectionism. <i>Tutorial: Language and Cognition</i> <ul style="list-style-type: none"> Module: <i>Second Year, B.Sc.</i> Set essays and marked exams. Department of Psychological Sciences, Birkbeck, University of London, UK Graduate Teaching Assistant 2010–2014 <ul style="list-style-type: none"> Modules Taught: <i>General Foundations of Psychology, Psychobiology, Advanced Research Methods, Advanced Quantitative Methods, Memory and Cognition, Matlab Programming for Psychological Science,</i>
ACADEMIC SERVICE	Diversity, Equity and Inclusion in Artificial Intelligence (0.2fte, 8 hours/week) 2022– Track leader of (prospective) CompCogSci MSc AI subspecialisation 2022– Member of Master's Artificial Intelligence Degree Programme Committee 2022– Member of evaluation committee for Internal DCC PhD round 2022 2022
SELECTED INVITED TALKS, PANELS & WORKSHOPS	What makes a good theory? Interdisciplinary Perspectives <i>Leiden, NL</i> 20–24 Jun 2022 <ul style="list-style-type: none"> Keynote speaker Organisers: Iris van Rooij, Todd Wareham, Berna Devezer, Sashank Varma, and Joshua Skewes ACM/IEEE HRI 2022 Workshop on Modeling Human Behavior in Human-Robot Interactions

Virtual

1 Mar 2022

- Keynote: *How Computational Modeling Can Force Theory Building*
- Organisers: Serge Thill, Arkady Zgonnikov

Edinburgh ReproducibiliTea

Edinburgh, UK (Virtual)

18 Feb 2022

- Panel: *EDI in Open Research*
- Co-panellists: Soliman, Nadia, Catherine Talbot, Kirstie Whitaker
- Organiser: Emily Sena

Mind & Machine Seminar Series 2021 at Bristol University

Bristol, UK (Virtual)

16 Dec 2021

- Talk: *On logical inference over brains, behaviour, and artificial neural networks*
- Organisers: Guillermo Puebla, Valerio Biscione, and Jeff Bowers

Radboud University Centre for Analytical Modelling in the Social Sciences and Humanities (RUCAM-SSH)

Nijmegen, NL

1 Nov 2021

- Talk: *On logical inference over brains, behaviour, and artificial neural networks*
- Organiser: Rein van Alebeek

Research colloquium at the Faculty of Psychology at the University of Basel

Basel, Switzerland (Virtual)

21 Oct 2021

- Talk: *On logical inference over brains, behaviour, and artificial neural networks*
- Organiser: Jana Jarecki

Society for Personality and Social Psychology's Annual Convention (SPSP) 2021

Austin, Texas (Virtual)

11 Feb 2021

- Workshop: *Computational Modeling and Theory-Building*
- Organiser: John K. Sakaluk

ReproducibiliTea UCL

UCL, UK (Virtual)

14 Sep 2020

- Talk: *How computational modeling can force theory building in psychological science*
- Organisers: Emma Norris, Tabea Schoeler, & Jessie Baldwin

MathPsych/ICCM 2020

Toronto, Canada (Virtual)

25–28 Jul 2020

- Symposium: *Perspectives on "What makes a good theory?"*
- Talk: *How computational modelling can force theory building in psychological science*
- Organisers: Iris van Rooij & Chris Donkin
- [Click to watch video on YouTube](#)

RIOT Science Club

King's College London, London, UK (Virtual)

2 Jul 2020

- Talk: *How computational modeling can force theory building in psychological science*
- Organiser: Miguel Xochicale
- NB: I have given this talk many times (not listed)
- [Click to watch video on YouTube](#)

ReproducibiliTea Glasgow

Univeristy of Glasgow, UK (Virtual)

20 Apr 2020

- Speakers: Olivia Guest & Andrea E. Martin
- Talk: *How computational modeling can force theory building in psychological science*
- Organisers: Anna Henschel & Stephanie Allan
- [Click to watch video on YouTube](#)

Research Centre on Interactive Media, Smart Systems and Emerging Technologies

Nicosia, Cyprus

16 Jul 2019

- Talk: *What do deep neural networks know?*

Thirty-fifth International Conference on Machine Learning (ICML 2018)

Workshop: *Enabling Reproducibility in Machine Learning* MLTrain@RML

Stockholm, Sweden

14 Jul 2018

- Talk: *Varieties of Reproducibility in Empirical and Computational Domains.*

Open Data Day 2018

Goldsmiths, University of London, UK

3 Mar 2018

- Talk: *Gerrymandering and Computational Redistricting.*

Cognitive Neuroscience Friday Seminar (FriSem)

Stanford University, California, USA

16 Feb 2018

- Talk: *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

- Talk: *Gerrymandering and Computational Redistricting.*

Centre for Language Studies

Radboud University, The Netherlands

8 Mar 2017

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

London Judgement and Decision Making Seminars

University College London, UK

8 Feb 2017

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

Summerfield Lab

University of Oxford, UK

23 Nov 2016

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

CONFERENCE TALKS

MathPsych/ICCM 2020

Virtual

20 Jul 2020

- Talk (invited, see above section for more details): *How computational modelling can force theory building in psychological science.*
- [Click to watch video on YouTube.](#)

Open Science Room at Organisation for Human Brain Mapping (OHBM)

Virtual

30 Jun 2020

- Panel discussion (invited): *Past, Present and Future of Open Science (Emergent session): Pre-registration, Registered reports.*
- [Click to watch video on YouTube](#)

Society for Neuroscience (SfN 2019)

Chicago, USA

19–23 Oct 2019

- Poster: *The neural link between subjective value and decision entropy.*
- Presented by: S. Bobadilla Suarez

9th Annual Scientific Conference of Center for Applied Neuroscience

Nicosia, Cyprus

4 Oct 2019

- Talk (invited) and poster: *Levels of Representation in a Deep Learning Model of Categorization.*

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

Queer in AI @ ICML 2020 Workshop

Virtual

14 Jul 2020

- Organised and ran [COVID-19 Issues and LGBTQ Folks in ML/AI](#) with Stephen Moll-drem, Mustafa I. Hussain, and Luke Stark.

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.

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.

MAINSTREAM MEDIA & OUTREACH

Selected popular blog posts from: neuroplausible.com

2017–

- [Why Women in Psychology Can't Program](#)
- [I Hate Matlab: How an IDE, a Language, and a Mentality Harm](#)

Measuring Trustworthiness or Automating Physiognomy?

2022

- Media Coverage: [No, Machine Learning Can't Predict Trustworthiness Based on Faces](#), The Debrief

Gerrymandering and computational redistricting

2017

- Media Coverage: [An Unbiased Algorithm Could Help Put an End to Partisan Gerrymandering](#), Seeker

BBC Radio 4: Today Show

2016

- Interview: [What can we learn in 4 months?](#)

Optimism bias in fans and sports reporters

2015

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

REVIEWING

International Conference on Learning Representations (ICLR), International Conference on Cognitive Modelling (ICCM), International Conference on Machine Learning (ICML), Scientific Computing with Python Conference (SciPy), EnviroInfo.

Cognitive Neuropsychology, Cognitive Psychology, Cognitive Science Journal, Journal of Cognitive Neuroscience, Journal of Open Source Education, Memory & Cognition, PeerJ, PLoS Computational Biology, Royal Society Open Science, Topics in Cognitive Science.

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+).
- Unix (e.g., CLI, server administration).

Programming language experience

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