KAMILA JOZWIK

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EMPLOYMENT

Sir Henry Wellcome postdoctoral fellow 2018 - present
Massachusetts Institute of Technology & University of **Cambridge**
(1st maternity leave (1 year): Oct 2020-Oct 2021, 2nd maternity leave (10 mo): Nov 2022-Aug 2023)
Humboldt postdoctoral fellow 2016 - 2017
Freie Universität **Berlin**

EDUCATION

PhD, Biological Sciences, University of **Cambridge** 2011 - 2016
MPhil, Biological Sciences, University of **Cambridge** 2010 - 2011
BSc, Biotechnology, University of **Warsaw** 2007 - 2010

PUBLICATIONS (over 1000 citations)

https://scholar.google.com/citations?user=oEifmSgAAAAJ&hl=en

JOURNAL PUBLICATIONS

• **Jozwik, K.M.**, Kietzmann, T.C., Cichy, RM., Kriegeskorte, N., Mur, M. (2023)
"Deep neural networks and semantic models explain complementary components of human ventral-stream representational dynamics" ***Journal of Neuroscience***, corresponding author
https://doi.org/10.1523/JNEUROSCI.1424-22.2022

• **Jozwik*, K.M.**, O'Keeffe*, J., Storrs*, K.R., Guo, W., Golan, T., Kriegeskorte, N. (2022)
"Face dissimilarity judgements are predicted by representational distance in morphable and image-computable models" ***Proceedings of the National Academy of Sciences*** (*contributed equally), corresponding author, data and code: https://osf.io/fhy36/
https://www.pnas.org/doi/full/10.1073/pnas.2115047119

• **Jozwik, K.M.**, Najarro, E., van den Bosch, JJF., Charest, I., Cichy*, RM. and Kriegeskorte*, N. (2022)
"Disentangling five dimensions of animacy in human brain and behaviour" ***Communications Biology***, corresponding author
https://doi.org/10.1038/s42003-022-04194-y

• **Jozwik, K.M**. (2021)
"What AI can learn from the biological brain" ***Science*** (book review)
https://www.science.org/doi/10.1126/science.abi4889

• Adhya, D., Swarup, V., Nagy, R., Dutan, L., Shum, C., Valencia-Alarcón, E.P., **Jozwik, K.M.**, Mendez, M.A., Horder, J., Loth, E., Nowosiad, P., Lee, I., Skuse, D., Flinter, F.A., Murphy, D., McAlonan, G., Geschwind, D.H., Price, J., Carroll, J., Srivastava, D.P., Baron-Cohen, S. (2021)
"Atypical neurogenesis in induced pluripotent stem cell (iPSC) from autistic individuals" ***Biological Psychiatry*** (designed initial genomics analyses and processed samples, collaboration initiator)
https://www.biologicalpsychiatryjournal.com/article/S0006-3223(20)31702-9/fulltext

• Cichy, R.M., Kriegeskorte, N., **Jozwik, K.M.**, van den Bosch, J.J.F., Charest, I. (2019)
"The spatiotemporal neural dynamics underlying perceived similarity for real-world objects" ***Neuroimage*** (collected and analysed part of the behavioural data)
https://www.sciencedirect.com/science/article/pii/S1053811919302083

• **Jozwik, K.M**., Kriegeskorte, N., Storrs, K.R., Mur, M. (2017)
"Deep convolutional neural networks outperform feature-based but not categorical models in explaining object similarity judgments" ***Frontiers in Psychology***, corresponding author
https://www.frontiersin.org/articles/10.3389/fpsyg.2017.01726/full

• **Jozwik, K.M.**, Kriegeskorte, N., Mur, M. (2016)
"Visual features as stepping stones toward semantics: Explaining object similarity in IT and perception with non-negative least squares" ***Neuropsychologia***
https://www.sciencedirect.com/science/article/pii/S0028393215301998?via%3Dihub

• **Jozwik, K.M.**, Chernukhin, I., Serandour, A.A., Nagarajan, S., Carroll, J.S. (2016)
"FOXA1 directs H3K4 monomethylation at enhancers via recruitment of the methyltransferase MLL3" ***Cell Reports*** https://doi.org/10.1016/j.celrep.2016.11.028

• **Jozwik, K.M.**, Carroll, J.S. (2012) "Pioneer factors in hormone dependent cancers" ***Nature Reviews Cancer*** https://doi.org/10.1038/nrc3263

PEER-REVIEWED CONFERENCE PUBLICATIONS

• **Jozwik, K.M.**, Cichy*, RM. and Kriegeskorte*, N. (2025, accepted)
”Five animacy dimensions and the CLIP model explain complementary components of visual representational dynamics and similarity judgments”
Conference on Cognitive Computational Neuroscience
• **Jozwik, K.M.**, Lee, H., Kanwisher, N. and DiCarlo, J.J. (2023)
”First steps in using topographic deep artificial neural network models to generate hypotheses about not-yet-detected functional neural aggregates in the ventral stream”
Conference on Cognitive Computational Neuroscience
https://2023.ccneuro.org/proceedings/0001193.pdf
• **Jozwik, K.M.**, Lee, H., Kanwisher, N. and DiCarlo, J.J. (2019)
”Are topographic deep convolutional neural networks better models of the ventral visual stream?”
Conference on Cognitive Computational Neuroscience
https://ccneuro.org/2019/proceedings/0000674.pdf
• **Jozwik, K.M.**, Kriegeskorte, N., Cichy, R.M., Mur, M. (2018)
”Deep convolutional neural networks, features, and categories perform similarly at explaining primate high-level visual representations” ***Conference on Cognitive Computational Neuroscience***
https://ccneuro.org/2018/proceedings/1232.pdf
• **Jozwik, K.M.**, Charest, I., Kriegeskorte, N. and Cichy, R.M. (2017)
”Animacy dimensions ratings and approach for decorrelating stimuli dimensions” ***Conference on Cognitive Computational Neuroscience*** https://www.repository.cam.ac.uk/handle/1810/279144

PREPRINTS

• Lee, H., Margalit, E., **Jozwik, K.M.**, Cohen, M.A., Kanwisher, N., Yamins, D.L.K, DiCarlo, J.J. (2020)
”Topographic deep artificial neural networks reproduce the hallmarks of the primate inferior temporal cortex face processing network” (performed analyses on wiring cost and neural fits). ***bioRxiv***
https://doi.org/10.1101/2020.07.09.185116
• **Jozwik, K.M.**, Schrimpf, M., Kanwisher, N. and DiCarlo, J.J. (2019)
"To find better neural network models of human vision, find better neural network models of primate vision" ***bioRxiv***
https://doi.org/10.1101/688390
• **Jozwik, K.M.**, Lee, M., Marques, T., Schrimpf, M., Bashivan, P. (2019)
"Large-scale hyperparameter search for predicting human brain responses in the Algonauts challenge" ***bioRxiv***
https://doi.org/10.1101/689844

RESEARCH FUNDING (total **~£460,000**)

• Sir Henry **Wellcome** Postdoctoral Fellowship, University of Cambridge and Massachusetts Institute of Technology (4 years (extended to 7 years by two maternity leaves and part-time work (0.7FTE since October 2021), **£320,000**), 2018-2025
• Career Support Fund, University of **Cambridge** (12 months, **£9,600**), 2024-2025
• **Humboldt** Foundation Postdoctoral Fellowship, Freie Universität Berlin, (6 months, **€25,630**), 2017
• **Cancer Research UK** Graduate Studentship for PhD Studies, University of Cambridge (4 years, **£104,140**), 2011-2015
• Corbridge Cambridge Trust Scholarship for MPhil Studies, University of Cambridge (£2,500), 2010
• MRC Weatherall Institute of Molecular Medicine Studentship, Oxford University (£1,000), 2010
• Amgen Foundation Research Scholarship, University of Cambridge (£1,000), 2009
• Molecular Biosciences International Student Scholarship, Aarhus University (€1,500), 2009

SUPERVISION

• Informal supervisor to 3 PhD students at University of Cambridge (1) and MIT (2)

• Supervisor to 2 Master students at Freie Universität Berlin
• Team leader of 2 postdoctoral researchers and 2 graduate students for submission of computational models to the Algonauts Challenge that resulted in independent bioRxiv paper
• Supervisor to 5 undergraduate students at Freie Universität Berlin and MIT (recruited, designed project, provided supervision, oversaw report writing)
• Supervisor to 9 undergraduate students as Director of Studies "Psychological and Behavioural Sciences" at University of Cambridge (Churchill College)
• Mentored 8 students as part of Collegium Invisibile (outstanding students society) and Ivy Consultants (educational mentoring)

TEACHING

• **Director of Studies** (academic care, supervisions organisation and overview, admissions, interviews, senior position usually held by assistant/associate professors), **"Psychological and Behavioural Sciences",** University of **Cambridge**, Churchill College, 4.75 (1-5 scale, mean across participants, same measure in all scores below), 2023 – current
• **Fellow of the Higher Education Academy** (FHEA), 2025 – current
• Graduate course **lecturer**, "**Cognition & the Brain**", "**Cognitive computational neuroscience of vision: combining behaviour, neuroimaging, and biologically-inspired deep learning**", MPhil in Cognitive Neuroscience, University of **Cambridge**, 4.59 (1-5 scale), 2024 – current
• Undergraduate course **supervisions** (**small group teaching**), **"Computational Approaches to Cognition**", Natural Sciences students and Psychological and Behavioural Sciences students at University of **Cambridge**, student evaluation 4.56 (1-5 scale), 2024 - current
• Undergraduate course **lecturer**, designed and taught deep learning lectures at **"Computational Approaches to Cognition"** at University of **Cambridge**, student evaluation 4.42 (1-5 scale), 2024 - current
• Graduate course **seminar leader**, MPhil in Cognitive Neuroscience, journal club seminars and marking review/perspective-type essays, University of **Cambridge**, 4.17 (1-5 scale), 2024
• Undergraduate course **lecturer**, "**Brain Imaging"** lectures at **"Introduction to Experimental Psychology and Neuroscience"** at University of **Cambridge**, 4.05 (1-5 scale), 2024
• Undergraduate course **lecturer**, lecture and **workshop "Use of AI in research and education"** at University of **Cambridge**, student evaluation 4.33 (1-5 scale), 2024
• Graduate course **lecturer**, "**AI in Cognitive Science and Neuroscience**", MPhil in Data Intensive Science, University of **Cambridge**, student evaluation 5 (1-5 scale), 2024
• Undergraduate course **supervisions** (**small group teaching**), **"Cognitive Neuroscience and Experimental Psychology**", Natural Sciences students and Psychological and Behavioural Sciences students at University of **Cambridge**, student evaluation 4.75 (1-5 scale), 2023 - current
• Course **lecturer**, designed and taught lectures **"Decision making in uncertainty"** (including **"AI and neuroscience"** module) and **"Neuroscience of learning and stress"** at Møller Institute, Churchill College, University of **Cambridge**, 2023 - current
• Graduate course **lecturer**, designed and taught "Object recognition" lectures at **"Cognitive Science"** at **MIT**, student evaluation 4.93 (1-5 scale), 2020
• Under- and postgraduate course **lecturer**, organised, designed and taught **"Deep neural networks as a window into the human brain"** at **MIT**, student evaluation 4.60 (1-5 scale), 2020
• Tutorial **lecturer,** Cambridge **Methods** in Cognitive Neuroscience Day, "Predicting human and monkey visual brain representations with biologically-inspired deep neural networks", 2019
• Tutorial lecturer, Cambridge Vision Workshop, "Weighted representational modelling in deep neuronal networks", 2016
• Tutorial lecturer, at MRC Cognition and Brain Sciences Methods Day, "Weighted representational modelling in fMRI and behaviour", 2015
• Training: Inclusive teaching: STEM Students with Specific Learning Difficulties, 2024, Teaching Students with ADHD, 2024, Student Mental Health Essentials, 2024, University of Cambridge

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AWARDS (selected)

• **Fellow of the Higher Education Academy** (FHEA), 2025
• **Teaching By-Fellowship**, Churchill College, University of **Cambridge,** 2023
• **By-Fellowship**, Churchill College, University of **Cambridge**, 2019
• **Best Poster** Award at McGovern Institute for Brain Research at MIT Retreat, 2019
• **International Brain Research Organization Stipend**, 2016
• **Organization for Human Brain Mapping Merit Abstract Award** ($2,000), 2016

• Freie Universität Berlin **Dean's stipend** (€1,970), 2016
• Concepts, Actions and Objects Conference **Abstract Award** (€200), 2016
• Cambridge University Representative for Global Young Scientists Summit, 2013

INVITED AND CONFERENCE TALKS (selected)

• Invited Talks at: Imperial College London (2024), Oxford (2023), Max Planck Institute for Human Cognitive and Brain Sciences (2023), University College London (2023), Western University (2022), Brown University (2020), Symposium: How Humans and Machines Learn to See? (2019), Boston College (2019), Harvard Vision Lab (2018), MRC Cognition and Brain Sciences Unit (2018)
• Selected Conference Talks at: AI for Science Summit (2024), Society for Neuroscience conference (2023, 2018, 2015), Cambridge Neuroscience Seminar (2023, 2019), Applied Vision Association Spring meeting (2022), Mathematics of Neuro-Science symposium (2022, 2021), European Conference on Visual Perception (2021), Simons Collaboration on the Global Brain Postdoc Meeting (2020), Center for Brains, Minds and Machines retreat (2018), Organization for Human Brain Mapping Conference (2016), Concepts, Actions and Objects Conference (2016)

ACADEMIC SERVICE

• Graduate course seminar leader, MPhil in Cognitive Neuroscience, University of Cambridge, 2024 – current
• member of international AI in the Research and Education group, 2024 – current
• **Psychological and Behavioural Sciences Directors of Studies committee**, University of Cambridge, 2023 – current
• undergraduate admissions recruiter and interviewer, Psychological and Behavioural Sciences, University of Cambridge, 2023 – current
• Organizer and co-chair of workshop: ”Challenges for deep neural network models of visual cognition: From incorporating biological constraints to predicting correlational and causal experimental outcomes”, Computational and Systems Neuroscience Conference, 2019
• Academic interviewer at **Center for Brains, Minds and Machines**, **MIT**, 2019
• Debate chair and moderator "How do deep neural networks differ from brains" at Center for Brains, Minds and Machines retreat, MIT, 2018
• Student application reviewer and co-recruiter at Center for Brains, Minds and Machines Summer School, MIT, 2018
• Reviewer at 16 journals and conferences including: Science, Nature, Neuroimage, CCN, COSYNE
• Public engagement lecturer at Berlin Night of Science, Freie Universität Berlin, 2017
• Membership: Center for Brains, Minds & Machines; MIT Quest for Intelligence; Society for Neuroscience; Vision Sciences Society; Organization for Human Brain Mapping; Applied Vision Association

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REFEREES

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