REBECCA CUTLER

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2022 – PRESENT
POSTDOCTORAL FELLOW | THE UNIVERSITY OF TEXAS AT AUSTIN | TX
MEMORY AND AGING LAB
PI: Dr Audrey Duarte

EDUCATION

2016 – 2022
PH.D. COGNITION & COGNITIVE NEUROSCIENCE | VANDERBILT UNIVERSITY| TN
COMPUTATIONAL MEMORY LAB
DISSERTATION TITLE | Characterizing memory space: The neural representational structure
of episodic and semantic memory
PI: Dr Sean Polyn

2011 - 2015
MSC COGNITIVE & PSYCHOLOGICAL SCIENCES | UNIVERSITY OF GLASGOW | SCOTLAND
Distinction and Honors of the First Class (4.0)
Advisor: Dr Marios Philliastides

2013 - 2014
COGNITIVE SCIENCE | UNIVERSITY OF CALIFORNIA, BERKELEY | CA
Advisor: Dr Rich Ivry

RESEARCH EXPERIENCE

2016 – 2022
GRADUATE RESEARCHER | **COMPUTATIONAL MEMORY LAB**
VANDERBILT UNIVERSITY, TN | US
Computational modeling of cognition · Mathematical and experimental psychology ·
Temporal and semantic information in memory search · Neural representational structure
and cognitive maps of memory · Mechanisms of category learning ·

2015
RESEARCH ASSISTANT | **DIVISION OF MIND AND BRAIN RESEARCH**
CHARITÉ UNIVERSITATSMEDIZIN | BERLIN |GERMANY
Neurogenetics · Network neuroscience · Psychopathology · DRD2 schizophrenia risk
variants · Fractional anisotropy in a non-clinical population ·

2014 - 2015

RESEARCH ASSISTANT | NEUROCOGNITION OF DECISION-MAKING LAB

UNIVERSITY OF GLASGOW | SCOTLAND | UK

Drift diffusion modeling · Reinforcement learning · Value-based decision making ·

2013 - 2014

RESEARCH ASSISTANT | COGNITION & ACTION LAB

UNIVERSITY OF CALIFORNIA | BERKELEY, CA | US

COVIS computational model of categorization · Brain stimulation: TMS and tDCS · Category learning and classification · Implicit learning & the role of motor skills ·

AWARDS AND RESEARCH GRANTS

2022	VU Graduate School Travel Grant
2021	Federation of European Neuroscience Societies IBRO/PERC Grant
2020	VU Psychology Research Scholarship
2018	Lisa M. Quesenberry Scholarship Fund
2016	Sanford Graduate Research Scholarship
2015	DAAD Scholarship (Charité Universitatsmedizin)
2015	Distinguished Award for Honours of the First Class
2015	British Psychological Society: Young Cognitive Neuroscientist
2014	Science and Engineering Merit Scholarship

PUBLICATIONS

Wild, M. G., **Cutler, R. A.,** Bachorowski, J. (2023) Quantifying social performance: A review and implications for future work. *Frontiers in Psychology, 14, 1124385*

Maxcey, A. M., **Cutler, R. A.,** Nosofsky, R. M., Shiffrin, R. M. [*Revised & resubmitted*] Does inhibition cause forgetting in recognition tests? *Journal of Experimental Psychology: Learning, Memory, and Cognition*

Cutler, R. A., Duff, M. C., Polyn, S. M. (2019). Searching for semantic knowledge: A vector space semantic analysis of the feature generation task. *Frontiers in Human Neuroscience, 13, 341*

Polyn, S. M., & **Cutler, R. A**. (2017). Retrieved-context models of memory search and the neural representation of time. *Current Opinion in Behavioral Sciences*, *17*, 203-210.

TALKS

Cutler, R. A., Mirjalili, S., Duarte, A. (2023) Semantic memory space becomes denser with age: An ERP analysis of semantic similarity in feature verification. *Psychonomics Society.* San Francisco, CA **[Chair of Cognitive Aging Symposium]**

Cutler, R. A., Morton, N. W., Duff, M. C., Polyn, S. M., Duarte, A. (2022) Characterizing memory space: The neural representational structure of episodic and semantic memory. *Cognition, Brain, and Behavior seminar*. Austin, TX

Cutler, R. A., Duff, M. C., Polyn, S. M. (2022) A cognitive map of semantic memory: The hippocampus facilitates exploration and retrieval in targeted memory search. *INS Dialogues*, Department of Neuroscience, Austin, TX

Cutler, R. A., Morton, N. W., Polyn, S. M. (2021) Stress-testing the memory system: Distraction disrupts temporal and semantic organization in memory search. *Vanderbilt CCN Colloquium*. Nashville, TN

Maxcey, A. M., **Cutler, R. A.,** Nosofsky, R. M., Shiffrin, R. M. (2021) Does inhibition cause forgetting in recognition tests? *Recognition memory symposium. Psychonomics Society*. (Virtual: COVID-19)

Cutler, R. A., Jeon, J., Polyn, S. M. (2020) Characterizing the interaction of temporal and semantic information in categorized free recall. *Federation of European Neuroscience Societies.* Virtual (COVID-19)

Cutler, R. A., Polyn, S. M. (2019) Neural representational structure: A cognitive map of semantic memory. *CCN Colloquium*, TN

Cutler, R. A., Polyn, S. M. (2019) Searching for semantic knowledge: A vector space semantic analysis of the feature generation task. *Context and Episodic Memory Symposium.* Philadelphia, PA.

Cutler, R. A., Polyn, S. M. (2018) A semantic vector space analysis of feature generation in hippocampal amnesia. *Cognitive Neuroscience Society.* Boston, MA.

CONFERENCE POSTERS

Cutler, R. A., Mirjalili, A., Duarte, A. (2023) The effect of semantic congruence in memory search is modulated by similarity: An ERP analysis of feature verification. *Cognitive Neuroscience Society*. San Francisco, CA.

Cutler, R. A., Morton, M. W., Polyn, S. M. (2022) Neural integration of semantic information is disrupted by continual distraction*. Cognitive Neuroscience Society.* San Francisco, CA.

Cutler, R. A., Morton, M. W., Polyn, S. M. (2021) Stress-testing the memory system: Varying distraction to characterize semantic integration at encoding. *Context and Episodic Memory Symposium.* Philadelphia, PA.

Cutler, R. A., Jeon, J., Polyn, S. M. (2020) Characterizing the interaction of temporal and semantic information in categorized memory search. *Context and Episodic Memory Symposium.* Virtual (COVID-19)

Cutler, R. A., Jeon, J., Polyn, S. M. (2020) Characterizing the interaction of temporal and semantic information in categorized free recall. *Federation of European Neuroscience Societies.* Virtual (COVID-19)

Cutler, R. A., Jeon, J., Polyn, S. M. (2020) The interaction of temporal and semantic information in categorized free recall. *Cognitive Neuroscience Society.* Virtual (COVID-19)

Cutler, R. A., Brown-Schmidt, S., Polyn, S. M. (2019) Semantic and temporal structure in memory for narratives: A benefit for semantically congruent ideas. *Psychonomics Society.* Montreal, Quebec, Canada.

Cutler, R. A., Palan, J., Brown-Schmidt, S., Polyn, S. M. (2019) Structure in memory for narratives: Adapting free-recall analyses to investigate the interaction of semantic and temporal information. *Context and Episodic Memory Symposium.* Philadelphia, PA.

Cutler, R. A., Duff, M. C., Polyn, S. M. (2018) A vector space analysis of semantic retrieval in patients with hippocampal amnesia. *Model Based Neuroscience.* Amsterdam, Netherlands.

Cutler, R. A., Duff, M. C., Polyn, S. M. (2018) Searching for semantic knowledge: A vector space analysis of the feature generation task. *Cognitive Neuroscience Society.* Boston, MA.

TEACHING EXPERIENCE

Spring 2021	Teaching Assistant, **Deciding to be an Expert Witness** | Dr. Maxcey
Spring 2018	Teaching Assistant, **Abnormal Psychology** | Dr. Olatunji
Fall 2017	Teaching Assistant, **Human Memory** | Dr. Polyn

SUMMER ACADEMIES & GUEST LECTURES

Fall 2023	UT Austin Bootcamp for incoming PhDs: Data Visualization & Statistics
Summer 2021	Intro to Computational Modeling
Summer 2020/21	Data Visualization
Summer 2019	Statistics for Neuroscience
Summer 2018	Human Memory and Clinical Psychology
Summer 2017	Memory
Fall 2016	Multivariate Pattern Analysis (Human Memory)
Fall 2016	Physics & Physiology of fMRI (Computational Neuroscience)

SERVICE AND OUTREACH

2023 –	catchafire.org: Volunteer Data Scientist & Data Consultant
2019 – 2022	Vanderbilt Graduate Worker's Union liaison
2018 – 2022	Psychology Graduate Student Council representative
2019 – 2022	SustainVU - Graduate student representative for environmental committee
2018 – 2020	VU Imaging Center tours for high school & Summer Access groups
2018 – 2019	Lead organizer for VU Grad Recruitment Weekend

WORKSHOPS ATTENDED

Summer 2018	Model Based Neuroscience (University of Amsterdam, Netherlands)
Summer 2017	Methods in Neuroscience at Dartmouth (New Hampshire, USA)

PRACTICAL SKILLS

- Programming: R (tidyverse, dplyr, stringr, etc.), Python (pandas, numpy, scikit learn), Matlab, Shell/Bash, HTML, CSS
- Experimental Design & Analysis
- Data visualization (ggplot, matlibplot)
- Time-series Analysis
- Scientific Communication

- Statistical Analysis: Bayesian and Frequentist
- Predictive Analytics / Machine Learning
- Regression & Hierarchical Modeling
- Pattern Recognition & Classification
- NLP (Word Embedding)
- A/B Testing
- Consultation, Teaching & Mentorship