

EVGENIIA (YEV) DIACHEK

COGNITIVE SCIENTIST

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EDUCATION

Ph.D.	Psychological Sciences (minor: Quantitative Methods) Vanderbilt University	2023
M.S.	Psychological Sciences Vanderbilt University	2020
M.A.	Applied Linguistics University of Massachusetts	2017
B.A.	Linguistics Moscow State Pedagogical University	2015

RESEARCH EXPERIENCE

The Conversation Lab Computational Memory Lab Language Neuroscience Lab <i>Vanderbilt University / Vanderbilt University Medical Center, Nashville TN</i>	2018-2023
Ev Fedorenko's Lab <i>Massachusetts Institute of Technology, Cambridge MA</i>	2016-2018
Harvard Laboratory for Developmental Studies <i>Harvard University, Cambridge MA</i>	2016-2017

AWARDS AND FELLOWSHIPS

Russel G. Hamilton Graduate Student Travel Grant Vanderbilt University	2022
The William F. Hodges Teaching Assistant Award Vanderbilt University	2022
Lisa M. Quesenberry Foundation Award Community Foundation of Louisville	2022
Russel G. Hamilton Graduate Student Travel Grant Vanderbilt University	2020
The Abby and Jon Winkelried Fellowship Peabody College, Vanderbilt University	2019
Peabody Dean's Fellowship Peabody College, Vanderbilt University	2018
Graduate Honor Fellowship Vanderbilt University	2018
Graduate Assistantship University of Massachusetts Boston	2015

PUBLICATIONS

* equal contributors

- [1] **Diachek, E.**, & Brown-Schmidt, S. (under review). Linguistic features of spontaneous speech predict conversational recall.
- [2] **Diachek, E.**, Brown-Schmidt, S., & Polyn, S. (under review). Items outperform adjectives in a computational model of binary semantic classification.
- [3] Mahowald, K. *, **Diachek, E. ***, Gibson, E., Fedorenko, E., & Futrell, R. (2022). Grammatical cues are largely, but not completely, redundant with word meanings in natural language. <https://arxiv.org/abs/2201.12911>
- [4] **Diachek, E.**, Morgan, V., & Wilson, S.M. (2022). Adaptive language mapping paradigms for presurgical language assessment. *American Journal of Neuroradiology*, 43, 1453-1459.
- [5] **Diachek, E.**, & Brown-Schmidt, S. (2022). The effect of disfluency on memory for what was said. Advanced online publication. *Journal of Experimental Psychology: Learning, Memory and Cognition*.
- [6] **Diachek, E. ***, Blank, I. *, Siegelman, M. *, Affourtit, J., & Fedorenko, E. (2020). The domain-general multiple demand (MD) network does not support core aspects of language comprehension: a large-scale fMRI investigation. *Journal of Neuroscience*, 40(23), 4536-4550.
- [7] Mollica, F., Siegelman, M., **Diachek, E.**, Piantadosi, S. T., Mineroff, Z., Futrell, R., ... & Fedorenko, E. (2020). Composition is the core driver of the language-selective network. *Neurobiology of Language*, 1(1), 104-134.

IN PREPARATION

- [8] **Diachek, E.**, Patel, N., Brown-Schmidt, S., & Duff, M. (in preparation). Intact memory for language following disfluency in individuals with traumatic brain injury.
- [9] **Diachek, E.**, Blank, I., & Fedorenko E. (in preparation). Co-lateralization of linguistic and arithmetic processing to the left hemisphere.

CONFERENCE PRESENTATIONS

Diachek, E., Brown-Schmidt, S., & Duff, M. Intact memory benefit following disfluent speech in adults with moderate-severe traumatic brain injury. The 14th World Congress on Brain Injury. Dublin, Ireland, March 2023.

Diachek, E., & Brown-Schmidt, S. Low-level linguistic features predict conversational recall. The 63th Annual Meeting of the Psychonomic Society. Boston MA, November 2022.

Diachek, E., Brown-Schmidt, S., & Polyn, S. A computational model of binary semantic classification. The 61st Annual Meeting of the Psychonomic Society. Virtual, November 2020.

Diachek, E., & Brown-Schmidt, S. The effect of disfluency on memory for what was said. The 61st Annual Meeting of the Psychonomic Society. Virtual, November 2020.

Diachek, E., Blank, I., & Fedorenko E. Co-lateralization of linguistic and arithmetic processing to the left hemisphere. The 20th Annual Meeting of the Society for the Neurobiology of Language. Virtual, October 2020.

Diachek, E. & Brown-Schmidt, S. The effect of disfluency on memory following sentence comprehension. The 33rd CUNY Conference on Human Sentence Processing. Amherst MA, March 2020.

Diachek, E., Siegelman, M., Blank, I. & Fedorenko, E. The domain general (MD) system does not support core aspects of language comprehension: a large-scale fMRI investigation. The 25th AMLaP Conference Architectures and Mechanisms of Language Processing. Moscow, Russia, September 2019.

Futrell, R., **Diachek, E.,** Syed, N., Gibson, E. & Fedorenko, E. Formal marking is redundant with lexico-semantic cues to meaning in transitive clauses. The 32nd CUNY Conference on Human Sentence Processing. Boulder CO, March 2019.

INVITED TALKS

The role of white matter tracks for language comprehension in the brain. <i>Departmental Round Table at the University of Massachusetts Boston.</i>	2017
Research methods in cognitive psychology. <i>Programs for Talented Youth at Vanderbilt University.</i>	2021
The neurobiology of language. <i>Programs for Talented Youth at Vanderbilt University.</i>	2021
Fun things to do with confirmatory factor analysis. <i>Structural Equation Modeling Class at Vanderbilt University.</i>	2021

PROFESSIONAL DEVELOPMENT

2022	Transformer Intensive AI Workshop. <i>Vanderbilt University</i>
2020	The Fourth Summer School on Statistical Methods for Linguistics and Psychology (Advanced methods in frequentist statistics track). <i>University of Potsdam</i>
2019	Python for Data Science Workshop. <i>Vanderbilt University</i>

LEADERSHIP

- Graduate student liaison to the faculty for the 2021-2022 and 2022-2023 Academic Years.
- Member of the Graduate Workers United at Vanderbilt and the head of the Student Fees Committee.
- Charter member of the Nashville chapter of the Graduate Women in Science (GWIS).

TEACHING EXPERIENCE

Fall 2022 **PSY-GS 8873-01: Structural Equation Modeling.** Instructor: David Cole. *Vanderbilt University.*

Fall 2021 **PSY-GS 8873-01: Structural Equation Modeling.** Instructor: David Cole. *Vanderbilt University.*

MENTORSHIP

The Conversation Lab *Jasmine Aggarwal, Ameenah McKnight, Shijia Huang, Cameryn Murakami, Christina Lee, Kelsey Zhu, Bryant Reynolds, Eugene Chi*

PROFESSIONAL SERVICE

Ad-hoc Reviewer *Journal of Experimental Psychology: Learning, Memory and Cognition*

SKILLS

Programming: R, Python, MATLAB, HTML & CSS

Research Methods: fMRI, eye-tracking, behavioral online experiments (PCibex, Qualtrics, SurveyMonkey, MTurk, AWS), in-person behavioral experiments, computational modeling

Languages: English (native-like proficiency), Russian (native), French (intermediate), Korean (beginner)