

# Jacob Hoover VIGLY\*

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46-3027 MIT, 77 Massachusetts Ave, Cambridge MA 02139, USA

2024–PRES. | Postdoctoral Fellow, **Massachusetts Institute of Technology**  
Department of Brain and Cognitive Sciences  
[Computational Psycholinguistics Lab](#) | PI: Roger Levy

## Education

2018–24 | PhD, **McGill University**, Department of [Linguistics](#), and [Mila – Québec AI Institute](#)  
advisor: Timothy J. O'Donnell  
dissertation: “The Cost of Information: Looking beyond Predictability in Language Processing”  
2006–12 | ALB, *cum laude*, **Harvard University** [Extension School](#)  
Field of Study: Mathematics | Minor: Linguistics

## Teaching

WINTER '23 | Instructor, McGill COMP/LING 445 *Computational Linguistics*  
FALL '21 | Guest lecture for McGill COMP/LING 445 *Computational Linguistics*  
2019–22 | Teaching Assistant, 6 McGill courses in linguistics/computer science  
COMP/LING 596 *Probabilistic Programming* (WINTER '21, WINTER '22)  
COMP/LING 445 *Computational Linguistics* (FALL '20, '21)  
LING 201 *Introduction to Linguistics* (FALL '19, WINTER '20)

## Community

2020–22 | Graduate student representative, McGill Linguistics Department  
2020 | Graduate Program changes Committee, student member  
2019–22 | Vice President, Academic, **GLAM**, Graduate Linguistics Association of McGill  
2019–20 | Founding member, **EARTH-LING**, McGill Linguistics department environmental working group  
2018–24 | Graduate student member, webmaster, [MCQLL](#) (Montréal Computational and Quantitative Linguistics Lab)

Reviewer for: [TACL](#), 2022; [CogSci](#), 2021; [CoNLL](#) 2020, 2023

## Research

- 2024 **Jacob Louis Hoover**. “[The Cost of Information: Looking beyond Predictability in Language Processing](#)”. PhD thesis. Montréal, Canada: McGill University. xi, 110.
- Hamed Rahimi, David Mimno, **Jacob Hoover**, Hubert Naacke, Camelia Constantin, and Bernd Amann. “[Contextualized Topic Coherence Metrics](#)”. In: *Findings of the Association for Computational Linguistics: EACL 2024*. Findings 2024. Ed. by Yvette Graham and Matthew Purver. St. Julian's, Malta: Association for Computational Linguistics, pp. 1760–1773.
- 2023 **Jacob Louis Hoover**, Morgan Sonderegger, Steven T. Piantadosi, and Timothy J. O'Donnell. “The Plausibility of Sampling as an Algorithmic Theory of Sentence Processing”. In: *Open Mind: Discoveries in Cognitive Science* 7, pp. 350–391. ISSN: 2470-2986. DOI: [10.1162/opmi\\_a\\_00086](https://doi.org/10.1162/opmi_a_00086).

\*Note: As of Sept. 2024, I use the surname Vigly (i.e., “Vigly, Jacob Hoover”). Previously I published under the surname Hoover.

- 2022 Michaela Socolof, **Jacob Louis Hoover**, Richard Futrell, Alessandro Sordoni, and Timothy J. O'Donnell. "[Measuring Morphological Fusion Using Partial Information Decomposition](#)". In: *Proceedings of the 29th International Conference on Computational Linguistics*. COLING 2022. Gyeongju, Republic of Korea: International Committee on Computational Linguistics, pp. 44–54.
- Jacob Louis Hoover**, Morgan Sonderegger, and Timothy J. O'Donnell. "[With Better Language Models, Processing Time Is Superlinear in Surprisal](#)". Poster. *Architectures and Mechanisms for Language Processing* (York, England).
- 2021 **Jacob Louis Hoover**, Wenyu Du, Alessandro Sordoni, and Timothy J. O'Donnell. "Linguistic Dependencies and Statistical Dependence". In: *Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing*. EMNLP 2021. Online and Punta Cana, Dominican Republic: Association for Computational Linguistics, pp. 2941–2963. DOI: [10.18653/v1/2021.emnlp-main.234](#).
- Jacob Louis Hoover**. "[Accounting for Variation in Number Agreement in Icelandic Dative-Nominative Constructions](#)". In: *Proceedings of the 38th West Coast Conference on Formal Linguistics*. WCCFL38, March 6–8, 2020, University of British Columbia, Vancouver. Ed. by Rachel Soo, Una Y. Chow, and Sander Nederveen. Somerville, Mass., USA: Cascadia Proceedings Project, pp. 231–241.

## Fellowships and Awards

2024–26	<b>National Science Foundation SBE Postdoctoral Research Fellowship (SPRF)</b> : "Algorithmic models of incremental human language comprehension" (SMA <a href="#">2404644</a> ). With sponsor Roger Levy, at MIT. Co-funded by NSF's Perception, Action and Cognition (PAC) program. US\$160k.
2023	<b>McGill International Graduate Mobility Award</b> , for research visit with Roger Levy, MIT. CA\$6k.
2019	<b>CRBLM Graduate Scholar Stipend</b> , Centre for Research on Brain, Language and Music (CRBLM). "What neural network models can tell us about linguistic structure." CA\$3k.

## Languages

English	Native
Estonian	Intermediate (2½ years living and working in Estonia: ~ CEF level B2)
French	Intermediate (~ B2)
Japanese	Novice (two years' undergraduate study, rather atrophied)
Russian, Spanish	Basic knowledge

## Ballet career

2018–PRES.	I retired from full-time dancing in 2018, when I began my graduate study at McGill. I have continued with occasional appearances as an independent artist including with Festival Ballet Providence, Rhode Island Women's Choreography Project, Revolve Dance Project in Providence, RI, and Robinson Ballet in Bangor, ME.
2008–18	I worked full-time as professional dancer from 2008 until 2018. Trained as a ballet dancer at Walnut Hill School and Miami City Ballet School, I danced soloist roles at <b>José Mateo Ballet Theatre</b> in Cambridge, MA (2008–12), and <b>Vanemuine Theatre</b> in Tartu, Estonia (2013–15), and was a company dancer for <b>Festival Ballet Providence</b> , now Ballet RI (2015–18).