

# Mika Braginsky

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## EDUCATION

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### Massachusetts Institute of Technology

Ph.D., Cognitive Science (2022)

Advisor: Edward Gibson

Committee: Edward Gibson, Michael Frank, Timothy O'Donnell, Joshua Tenenbaum, Laura Schulz

Thesis: *Language learning at scale: Data-driven and model-motivated analyses of lexical and morphological development*

### Massachusetts Institute of Technology

B.S., Computer Science and Engineering & Brain and Cognitive Sciences (2014)

## RESEARCH EXPERIENCE

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### Postdoctoral Scholar

Mar 2022 – Present

Quantitative Sciences Unit, Stanford University

PI: Maya Mathur

### Graduate Student Researcher

Sep 2016 – Jan 2022

TedLab, MIT (PI: Edward Gibson)

Computational Psycholinguistics Lab, MIT (PI: Roger Levy)

### Research Assistant

Sep 2014 – June 2016

Language and Cognition Lab, Stanford University

PI: Michael Frank

### Undergraduate Researcher

Sep 2013 – Aug 2014

Computational Cognitive Science Group, MIT

PI: Joshua Tenenbaum

### Research and Development Intern

June 2013 – Aug 2013

Research and Development Team, Basis Technology

## AWARDS AND FELLOWSHIPS

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- Walle Nauta Award for Continuing Dedication to Teaching by a Graduate Student (2020, 2021, 2022)
- Angus MacDonald Award for Excellence in Undergraduate Teaching (2019)
- Henry E. Singleton Fellowship, MIT (2017–2018)
- Society for Language Development Student Award (2016)
- **National Science Foundation Graduate Research Fellowship** (2016–2021)

## BOOKS

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- Frank, M. C., **Braginsky, M.**, Cachia, J., Coles, N., Hardwicke, T., Hawkins, R., Mathur, M., and Williams, R. (in prep). Experimentology: An Open Science Approach to Experimental Psychology Methods. MIT Press. [langcog.github.io/experimentology](https://langcog.github.io/experimentology)
- Frank, M. C., **Braginsky, M.**, Marchman, V. A., and Yurovsky, D. (2021). Variability and Consistency in Early Language Learning: The Wordbank Project. MIT Press. [wordbank-book.stanford.edu](https://wordbank-book.stanford.edu)

## BOOK CHAPTERS

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- Mahowald, K., Dautriche, I., **Braginsky, M.**, and Gibson, E. (2022). Efficient communication and the organization of the lexicon. In *Oxford Handbook of the Mental Lexicon*. Oxford University Press.

## JOURNAL ARTICLES

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- Poliak, M., Ryskin, R., **Braginsky, M.**, Gibson, E. (under review). It's not what you say but how you say it: Evidence from Russian shows robust effects of the structural prior on noisy channel inferences. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.
- Ambridge, B., Leonard, B., Anastasopoulos, A., Anderson, A., Arora, A., Bonami, O., **Braginsky, M.**, et al (under revision). A pipeline for generating plausible wug words in many languages. *Transactions of the Association for Computational Linguistics*.
- Zettersten, M., Yurovsky, D., Xu, T., Uner, S., Tsui, A., ... **Braginsky, M.**, ... Frank, M. C. (2022). Peekbank: An open, large-scale repository for developmental eye-tracking data of children's word recognition. *Behavior Research Methods*.
- DeMayo, B., Kellier, D., **Braginsky, M.**, Bergmann, C., Hendriks, C., Rowland, C. F., Frank, M. C., & Marchman, V. (2021). Web-CDI: A system for online administration of the MacArthur-Bates Communicative Development Inventories. *Language Development Research*.
- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (2019). Consistency and variability in children's word learning across languages. *OpenMind: Discoveries in Cognitive Science*.
- Sanchez, A., Meylan, S. C., **Braginsky, M.**, MacDonald, K. E., Yurovsky, D., and Frank, M. C. (2019). childes-db: a flexible and reproducible interface to the Child Language Data Exchange System. *Behavioral Research Methods*.
- Bergmann, C., Tsuji, S., Piccinini, P., Lewis, M., **Braginsky, M.**, Frank, M. C., and Cristia, A. (2018). Promoting replicability in developmental research through meta-analyses: Insights from language acquisition research. *Child Development*.
- Frank, M. C., **Braginsky, M.**, Yurovsky, D., and Marchman, V. A. (2016). Wordbank: An open repository for developmental vocabulary data. *Journal of Child Language*.

## PEER-REVIEWED CONFERENCE PROCEEDINGS

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- Ambridge, B., Anastasopoulos, A., Anderson, N., Arora, A., Bonami, O., **Braginsky, M.**, et al (2021). A pipeline for generating plausible wug words in many languages. *Proceedings of the 18th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*.
- Zettersten, M., Bergey, C., Bhatt, N., Boyce, V., **Braginsky, M.**, Carstensen, A., ... & Frank, M. C. (2021). Peekbank: Exploring children's word recognition through an open, large-scale repository for developmental eye-tracking data. In *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society*.
- Tenenbaum, A., **Braginsky, M.**, and Levy, R. (2020). Integrating semantics into developmental models of morphology learning. In *Proceedings of the 42nd Annual Meeting of the Cognitive Science Society*.
- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (2016). From *uh-oh* to *tomorrow*: Predicting age of acquisition for early words across languages. In *Proceedings of the 38th Annual Meeting of the Cognitive Science Society*.
- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (2015). Developmental changes in the relationship between grammar and the lexicon. In *Proceedings of the 37th Annual Meeting of the Cognitive Science Society*.

## CONFERENCE PRESENTATIONS

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- Loukatou, G., Tan, A., **Braginsky, M.**, Mankewitz, J. and Frank, M. C. (November 2022). Typological variation in predicting early word learning across languages. Poster presented by Alvin Tan at the 47th Annual Boston University Conference on Language Development.
- Zettersten, M., Bergey, C., Bhatt, N., Boyce, V., **Braginsky, M.**, Carstensen, A., ... & Frank, M. C. (October 2022). Peekbank: Exploring children's word recognition through an open, large-scale repository for developmental eye-tracking data. Talk presented by Martin Zettersten at the 2022 Big Team Science Conference.
- Zettersten, M., Saleh, A., Bhatt, N., Yurovsky, D., Xu, T. L., ..., **Braginsky, M.**, ..., and Frank, M. C. (November 2021). Increases in speed and accuracy of children's online word recognition measured via a large-scale, open database of developmental eye-tracking data. Talk presented by Martin Zettersten at the 46th Annual Boston University Conference on Language Development.
- Watt, M., **Braginsky, M.**, and O'Donnell, T. (July 2021). Processing differences among irregular inflection classes. Poster presented by Maya Watt at the 43rd Annual Meeting of the Cognitive Science Society.
- Zettersten, M., Bergey, C., Bhatt, N., Boyce, V., **Braginsky, M.**, Carstensen, A., ... & Frank, M. C. (July 2021). Peekbank: Exploring children's word recognition through an open, large-scale repository for developmental eye-tracking data. Poster presented by Martin Zettersten at the 43rd Annual Meeting of the Cognitive Science Society.
- **Braginsky, M.**, Marchman, V. A., and Frank, M. C. (July 2020). Characterizing the relationship between lexical and morphological development. Poster presented at the 42nd Annual Meeting of the Cognitive Science Society.
- Tenenbaum, A., **Braginsky, M.**, and Levy, R. (July 2020). Integrating semantics into developmental models of morphology learning. Poster presented by Abigail Tenenbaum at the 42nd Annual Meeting of the Cognitive Science Society.
- **Braginsky, M.**, Marchman, V. A., and Frank, M. C. (July 2020). Characterizing the relationship between lexical and morphological development. Talk presented at the XXII Biennial International Congress of Infant Studies.
- Meylan, S., **Braginsky, M.**, deMayo, B., Sanchez, A., Schonberg, C., Srinivasan, M., Vlach, H., Lupyan, G., Griffiths, T., Frank, M. C. (November 2019). Wordful: Tracking early productive vocabulary growth with smartphones. Talk presented by Stephan Meylan at the 44th Annual Boston University Conference on Language Development.
- **Braginsky, M.**, Marchman, V. A., and Frank, M. C. (March 2019). Demographic effects on the composition of children's early vocabulary. Talk presented at the 2019 Society for Research in Child Development Biennial Meeting.
- **Braginsky, M.**, Levy, R., and O'Donnell, T. (July 2018). Evaluating models of productivity in language acquisition. Poster presented at the 40th Annual Meeting of the Cognitive Science Society.
- Tsuji, S., Bergmann, C., Lewis, M., **Braginsky, M.**, Piccinini, P., Frank, M. C., and Cristia, A. (August 2017). MetaLab: A repository for meta-analyses on language development, and more. Talk presented by Sho Tsuji at Interspeech 2017.
- **Braginsky, M.**, Yurovsky, D., Meylan, S., Marchman, V. A., and Frank, M. C. (April 2017). Building quantitative theories of early language using large-scale parent report data. Talk presented at the 2017 Society for Research in Child Development Biennial Meeting.
- **Braginsky, M.**, Yurovsky, D., Meylan, S., Marchman, V. A., and Frank, M. C. (November 2016). Gender differences in lexical input and acquisition. Talk presented at the 41th Annual Boston University Conference on Language Development.
- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (August 2016). From *uh-oh* to *tomorrow*: Predicting age of acquisition for early words across languages. Talk presented at the 38th Annual Meeting of the Cognitive Science Society.

- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (May 2016). Predicting age of acquisition for early words across languages. Talk presented at the XX Biennial International Congress of Infant Studies.
- **Braginsky, M.** (January 2016). Using Shiny for exploration of Wordbank. RStudio Shiny Developer Conference.
- Tsuji, S., Bergmann, C., Cristia, A., Lewis, M., **Braginsky, M.**, and Frank, M. C. (January 2016). MetaLab: Power analysis and experimental planning in developmental research made easy. Poster presented by Sho Tsuji at the 2015 Budapest CEU Conference on Cognitive Development.
- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (December 2015). Predicting age of acquisition for early words across languages. Talk presented at the Studying Language Learning Workshop.
- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (November 2015). Developmental trajectories of vocabulary composition across languages. Poster presented at the 40th Annual Boston University Conference on Language Development.
- Lewis, M., **Braginsky, M.**, Bergmann, C., Tsuji, S., Cristia, A., and Frank, M. C. (November 2015). MetaLab: A tool for power analysis and experimental planning in developmental research. Talk presented by Molly Lewis at the 40th Annual Boston University Conference on Language Development.
- **Braginsky, M.**, Yurovsky, D., Marchman, V. A., and Frank, M. C. (July 2015). Developmental changes in the relationship between grammar and the lexicon. Poster presented at the 37th Annual Meeting of the Cognitive Science Society.
- Frank, M. C., Yurovsky, D., Schneider, R., **Braginsky, M.**, and Marchman, V. A. (March 2015). Studying children’s vocabulary development at scale. Talk presented by Michael Frank at the 2015 Society for Research in Child Development Biennial Meeting.
- Frank, M. C., Yurovsky, D., Krishna, R., **Braginsky, M.**, and Marchman, V. A. (November 2014). Wordbank: An open repository for developmental vocabulary data. Poster presented by Michael Frank at the 39th Annual Boston University Conference on Language Development. Boston, MA.

## DEPARTMENTAL PRESENTATIONS

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- **Braginsky, M.** (October 2022). Tools for fitting generalized linear mixed-effects models in Julia from R. Research Methods Seminar, Quantitative Sciences Unit, Stanford University.
- **Braginsky, M.**, Marchman, V. A., and Frank, M. C. (November 2019). Characterizing the relationship between lexical and morphological development. Emerging Scholars of Psychological Science, Princeton University.
- **Braginsky, M.** (October 2018). Understanding productivity inferences in children and models. CogLunch, Department of Brain and Cognitive Sciences, MIT.
- **Braginsky, M.**, Levy, R., and O’Donnell, T. (October 2017). Bayesian models of productivity in acquisition. CogLunch, Department of Brain and Cognitive Sciences, MIT.

## TEACHING

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### Teaching Assistant

Laboratory in Psycholinguistics, MIT  
Instructor: Edward Gibson

Spring 2021, Spring 2020, Spring 2019, Spring 2018

### Workshop Instructor

Large-scale data tools in child language acquisition  
Linguistic Society of America 2019 Linguistic Institute  
Co-instructor: Michael Frank

July 2019

SERVICE

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- Ad-hoc reviewer for Journal of Child Language, Language Development Research, Cognitive Science Society
- Co-organizer of weekly CogLunch talk series in MIT BCS department Sep 2017 – May 2018

SOFTWARE

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<b>phacking</b> (co-creator and primary maintainer)	<a href="https://github.com/mikabr/phacking">github.com/mikabr/phacking</a>
R package for correcting meta-analysis for phacking	
<b>Wordbank</b> (co-creator and maintainer)	<a href="http://wordbank.stanford.edu">wordbank.stanford.edu</a>
Open repository of parent-report data on children's early language learning	
Interactive visualizations and tools	
R package for data access and manipulation (wordbankr)	
<b>chilides-db</b> (co-creator and maintainer)	<a href="http://chilides-db.stanford.edu">chilides-db.stanford.edu</a>
Flexible and reproducible interface to CHILDES, a corpus of child language transcripts	
R package for data access (chilidesr)	
<b>Peekbank</b> (co-creator and maintainer)	<a href="http://peekbank.stanford.edu">peekbank.stanford.edu</a>
Flexible and reproducible interface to developmental eyetracking datasets	
R package for data access (peekbankr)	
<b>Wordful</b> (co-creator and former maintainer)	<a href="http://wordfulapp.com">wordfulapp.com</a>
Smartphone app for tracking early vocabulary growth	
<b>MetaLab</b> (co-creator and former maintainer)	<a href="http://metallab.stanford.edu">metallab.stanford.edu</a>
Interactive tools for community-augmented meta-analysis in cognitive development research	
<b>rwebppl</b> (co-creator and former maintainer)	<a href="https://github.com/mhtess/rwebppl">github.com/mhtess/rwebppl</a>
R interface to the WebPPL probabilistic programming language	
<b>jglmm</b> (creator and maintainer)	<a href="https://github.com/mikabr/jglmm">github.com/mikabr/jglmm</a>
R package for fitting generalized linear fixed effects models in Julia	
<b>ggpirate</b> (creator and maintainer)	<a href="https://github.com/mikabr/ggpirate">github.com/mikabr/ggpirate</a>
R package for making plots of data with categorical independent variables	
<b>tidyboot</b> (co-creator and maintainer)	<a href="https://github.com/langcog/tidyboot">github.com/langcog/tidyboot</a>
R package for doing tidyverse-compatible bootstrapping	

*Last updated: 2022-11-15*