# Mika Braginsky



## **EDUCATION**

## **Massachusetts Institute of Technology**

Ph.D., Brain and Cognitive Sciences (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

## **Graduate Student Researcher** Sep 2016 – January 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

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

## JOURNAL ARTICLES

- Zettersten, M., Yurovsky, D., Xu, T., Uner, S., Tsui, A., ... Braginsky, M., ... Frank, M. C. (under review). Peekbank:
   An open, large-scale repository for developmental eye-tracking data of children's word recognition.
- 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.

#### **BOOKS**

 Frank, M. C., Braginsky, M., Marchman, V. A., and Yurovsky, D. (2021). Variability and Consistency in Early Language Learning: The Wordbank Project. MIT Press.

## **BOOK CHAPTERS**

— 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.

## PEER-REVIEWED CONFERENCE PROCEEDINGS

- 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

- 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 to to be 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

- 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**

#### **Teaching Assistant**

Spring 2021, Spring 2020, Spring 2019, Spring 2018

Laboratory in Psycholinguistics, MIT

Instructor: Edward Gibson

## **Workshop Instructor**

July 2019

Large-scale data tools in child language acquisition

LSA Linguistic Institute 2019

## **Advanced Learning Assistant**

Fall 2011

Introduction to Electrical Engineering and Computer Science I

#### SERVICE

- 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

Wordbank (co-creator and former primary maintainer)

wordbank.stanford.edu

A database of vocabulary development data from the CDI and interactive tools for its access

wordbankr (co-creator and primary maintainer)

github.com/langcog/wordbankr

An R package for accessing Wordbank

childesr (co-creator and primary maintainer)

github.com/langcog/childesr

An R package for accessing childes-db, a database of child language corpora from CHILDES

rwebppl (co-creator and maintainer)

github.com/mhtess/rwebppl

An R interface to the WebPPL probabilistic programming language

**MetaLab** (co-creator and former primary maintainer)

metalab.stanford.edu

Interactive tools for community-augmented meta-analysis in cognitive development research

# ggpirate (creator and primary maintainer)

github.com/mikabr/ggpirate

An R package for making informative plots of data with categorical independent variables

# tidyboot (co-creator and maintainer)

github.com/langcog/tidyboot

An R package for doing tidyverse-compatible bootstrapping

# jglmm (creator and maintainer)

github.com/mikabr/jglmm

An R package for fitting generalized linear fixed effects models in Julia

Last updated: 2022-01-30