

Mika Braginsky

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Education

June 2014 **B.S. in Computer Science and Engineering & Brain and Cognitive Sciences**,
Massachusetts Institute of Technology, Cambridge, MA, *GPA: 4.5/5.0*.

Research Experience

Sep 2014 **Language and Cognition Lab**, *Stanford University*,
– present Research Assistant, Advisor: Michael Frank.

Conduct large-scale analyses of language acquisition data, such as composition of vocabulary, relations between grammar and the lexicon, and prediction of words' age of acquisition. Lead development on innovative technical projects including:

- Wordbank: An open online repository of children's language development data.
- MetaLab: A tool aggregating meta-analyses of phenomena in the language acquisition literature.
- Wordful: A mobile app that aims to innovate in the collection of word learning data.

Sep 2013 **Computational Cognitive Science Group**, *Massachusetts Institute of Technology*,
– Aug 2014 Undergraduate Researcher, Advisor: Joshua Tenenbaum.

Developed and implemented a model of early cross-situational word learning using a framework of Bayesian inference.

Summer 2013 **Research and Development Team**, *Basis Technology*, R&D Intern.

Improved a statistical model for named-entity resolution and entity linking through error analysis and software development.

Spring 2013 **Psycholinguistics Laboratory Final Project**, *Massachusetts Institute of Technology*,
Professor: Ted Gibson.

Designed and ran an online experiment examining whether people tend to pick shorter word forms in more predictive global and local contexts.

Fall 2012 **Natural Language & Computer Representation of Knowledge Final Project**,
Massachusetts Institute of Technology, Professor: Robert Berwick.

Implemented a system that solves SAT analogy problems in a cognitively-motivated way.

Skills

Programming Proficient in R, Python, JavaScript; familiar with SQL, Java, MATLAB, Scheme.

Tools Linux, Git, Subversion, EC2, Apache, HTML, CSS, \LaTeX .

Languages Native English and Russian, conversational Hebrew.

Publications

Frank, M. C., **Braginsky, M.**, Yurovsky, D., and Marchman, V. A. (under revision). Wordbank: An open repository for developmental vocabulary data. *Journal of Child Language*.

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 Conference of the Cognitive Science Society*.

Posters and Talks

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 to be presented by Sho Tsuji at the 2015 Budapest CEU Conference on Cognitive Development. Budapest, Hungary.

Braginsky, M., Yurovsky, D., Marchman, V. A., and Frank, M. C. (December 2015). Predicting Age of Acquisition for Early Words Across Languages. Talk to be presented at the Studying Language Learning Workshop. Tübingen, Germany.

Braginsky, M., Yurovsky, D., Marchman, V. A., and Frank, M. C. (November 2015). Developmental trajectories of vocabulary composition across languages. Poster to be presented at the 40th Annual Boston University Conference on Language Development. Boston, MA.

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 to be presented by Molly Lewis at the 40th Annual Boston University Conference on Language Development. Boston, MA.

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 Conference of the Cognitive Science Society. Pasadena, CA.

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. Philadelphia, PA.

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.

Coursework

Massachusetts Institute of Technology

Cognitive Science & Linguistics

- Topics in Language Acquisition
- Laboratory in Psycholinguistics
- Computational Cognitive Science
- Semantics and Pragmatics
- Phonology
- Music Cognition
- What Is Intelligence?
- Philosophical Issues in Brain Science

Computer Science & Mathematics

- Practical Natural Language Processing
- Natural Language and the Representation of Knowledge
- Artificial Intelligence
- Design and Analysis of Algorithms
- Computer Systems Engineering
- Introduction to Inference
- Probability and Random Variables
- Linear Algebra

Linguistic Summer Institute 2015

- Computational Psycholinguistics
- Computational Lexical Semantics
- Unsupervised Learning of Linguistic Structure: Morphology
- Making the Most of Extant Data in Early Language Acquisition Research

Teaching Experience

- Sep 2011 **Laboratory Assistant**, *Introduction to Electrical Engineering and Computer Science*.
- Dec 2011 Assisted the course staff with lab preparation; guided the ~75 students during lab session.
- Jan 2010 **Afterschool Class Teacher**, *Jewish Community Day School*.
- Dec 2011 Taught elementary and middle school students mathematical thinking through puzzles and games.

Leadership Positions

President, MIT Assassins' Guild

May 2013 – Aug 2014

Vice President and Treasurer, Random Hall

Nov 2012 – Nov 2013

Treasurer, MIT Science Fiction Society

May 2012 – May 2013

Faculty Liaison, MIT Brain and Cognitive Sciences Society

May 2012 – May 2013