

# Hadas KOTEK

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<http://hkotek.com>



## SUMMARY

Language scientist with 10+ years experience in experimental and theoretical linguistics. Seeks to apply expertise in experiment design, language data collection and analysis, data annotation, taxonomy design, and team and budget management, to natural language generation, understanding, and processing in an organization requiring outstanding verbal, analytical, and teamwork skills.

## SKILLS

**Data skills** Taxonomy design | Data collection, annotation, processing, visualization, statistical analysis (R: plotrix, ggplot, dplyr, scatterplot3d, lme4, nlme; Matlab: Psychtoolbox; [github scripts repository](#)) | Annotation guideline creation

**Project skills** Qualitative and quantitative research methods | Problem solving | Experiment design | Language data collection, analysis, storage | Personnel, budget management | Team work and team leadership | Grant writing | Written, oral presentation

**Technical skills** R | SPSS | regex | Markdown | Python (basic) | SQL (basic) | HTML (basic) | Javascript (basic) | Pascal |  $\LaTeX$  | Advanced Excel | Praat |

**Languages** Hebrew (native) | English (native-like) | German (fluent, ZOP certificate) | Arabic (conversational) | Spanish (conversational) | Japanese (beginner) | French (beginner)

## EDUCATION

2014 *PhD in Linguistics, Massachusetts Institute of Technology*, Cambridge, MA.

2007 *BA in Linguistics and Political Science, Tel-Aviv University*, Tel-Aviv, Israel, summa cum laude.

Computer Science courses taken: Infinitesimal Calculus 1+2, Discrete Mathematics, building on a Computer Science, Math, Physics, and Languages specialties in high school.

## EXPERIENCE IN LANGUAGE SCIENCE, DATA ANALYSIS, AND CODING

### Visiting Professor of Linguistics

2016 – present

**Yale University** (2018 – present, 2016 – 2017), **New York University** (2017 – 2018)

- Collected linguistic data and developed cutting-edge linguistic theories, resulting in:
  - 1 book ([MIT Press](#)); 1 edited volume; over 20 papers and 30 presentations in international conferences and workshops; 3 grants and awards.
- Won grant to lead 15-person team in large-scale data collection project:
  - Created and managed budget; designed study and hired team.
  - Constructed corpus of example sentences in every paper in two top linguistics journals.
  - Created [annotation guidelines](#) and supervised annotators.
  - Implemented analysis script in R to test gender representation over time.
- Co-organized 6 international conferences and workshops with hundreds of attendees.
- Created teaching materials; taught large lectures, advanced courses and seminars; managed Teaching Assistant teams. (14 courses in syntax, semantics, and experimental linguistics, with a total of over 500 enrolled students.)
- Advised PhD dissertations, graduate Qualifying Papers, and undergraduate theses.

**Postdoctoral Fellow, McGill University** 2014 – 2016

- Won prestigious Mellon Fellowship (\$121,000).
- Developed and tested scientific theories of language structure, utilizing varied research methodologies including original elicitation work with native-speaker consultants.
  - Designed and implemented project on the meaning of questions across languages.
  - Led 5-person team in a fieldwork-based data collection project on the use of question words in non-question contexts.
  - Conducted original elicitation work on Chuj (Mayan) and Tibetan.
- 5 papers, 30 presentations, 1 award.

**Graduate Research Assistant, Massachusetts Institute of Technology** 2010 – 2014

- Designed and implemented psycholinguistics, neurolinguistic, sentence processing, first language acquisition, and large-scale grammaticality judgment experiments. Created data visualization and analysis scripts:
  - Experiment design (samples: [design document 1](#), [design document 2](#)).
  - Experiment creation in HTML, javascript, Matlab; Data analysis in R.
- Synthesized a large amount of natural language data from several languages, including English, German, and Japanese. Wrote a thesis on the structure and meaning of questions.
- 15 papers, 37 presentations, 10 grants and awards, including NSF Grant.

**Co-creator of *Turktools*, Massachusetts Institute of Technology** 2012 – 2013

- Free toolkit for automated implementation and analysis linguistic experiments on Amazon's Mechanical Turk.
  - Designed and coded HTML scripts and R script for data visualization and analysis.
  - Designed and contributed to programming of Python scripts.
  - Led a half-semester workshop on experiment design and analysis using *turktools* at MIT.
  - 1 peer-reviewed paper in top journal, 1 grant.

**Machine Learning Coordinator, Ontology Ltd, Tel-Aviv, Israel** 2005 – 2006

- Built a knowledge graph for machine learning software based on a multilingual classification algorithm. Platform targeted cross-language/culture economic relations in the EU.
- Contributed to taxonomy design.
- Collected, processed, and annotated datasets for the Spanish component of the software.

**Translator, Israeli Prime Minister's Office and Israeli Defense Forces** 2001 – 2003

- Arabic-Hebrew translator: audio, texts, and video sources.
- Contributed to wartime-specialized automatic translator.

Link to academic CV: <https://hkotek.com/KotekCV.pdf>.

Links to sample scripts and design documents: <https://github.com/hkotek/scripts>.