Magdalena Markowska

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Research Interests

- Computational/mathematical linguistics, fieldwork, grammatical inference, artificial intelligence
- Phonology and its interface with morphology and syntax, tones, constructing grammar for understudied languages
- Natural language understanding, cognitive state, dialogue processing, speech analysis, conversational agents

Projects

- **The Common Ground Corpus**
  - Creating a corpus for computational pragmatics by annotating unscripted dialogs from the CALLHOME corpus with common ground information from the perspective of the dialogs' participants.
  - Leading a team of undergraduate and graduate students with Prof. Owen Rambow.
  - Partially funded by The Defense Advanced Research Projects Agency.
- **Learning Finite-state Transducers for Morpho-phonology**
  - Developing algorithms that can infer finite-state models of morpho-phonological processes using linguistic representations.
  - Joint work with Prof. Jeffrey Heinz.
- **Documentation and Computational Modeling of Shupamem**
  - Conducting linguistic field research and analysis of Shupamem (Bantu).
  - Developing finite-state models of Shupamem's morpho-phonology with special attention to reduplication and tone.

Education

2020-present	**PhD in Linguistics**, *Stony Brook University* Advisor: Dr. Jeffrey Heinz
2020	**MA in Computational Linguistics**, The Graduate Center, CUNY; Thesis: *"Tones In Shupamem Reduplication"* Advisor: Dr. Kyle Gorman
2013	**MA in English Philology**, University of Warsaw; Thesis: *"An Optimality Theoretic analysis of contextual and contrastive nasalization in English and Polish"* Advisor: Dr. Bartlomiej Czaplicki
2011	**BA in English Philology**, University of Warsaw

Publications

accepted	**Magdalena Markowska**, Mohammad Taghizadeh, Adil Soubki, Seyedabolghasem Mirroshandel, Owen Rambow *Finding Common Ground: Annotating and Predicting Common Ground in Spoken Conversations*. EMNLP 2023
2023	**Magdalena Markowska** and Jeffrey Heinz. *Empirical and Theoretical Arguments for Using Properties of Letters for the Learning of Sequential Functions*. Proceedings of Machine Learning Research 1:1–5, 2023

2022 John Murzaku, Peter Zeng, **Magdalena Markowska**, and Owen Rambow. *Predicting the Author's Presentation of Factuality*. Proceedings of the 29th International Conference on Computational Linguistics.

2022 Jordan Kodner, Salam Khalifa, Khuyagbaatar Batsuren, Hossep Dolatian, Ryan Cotterell, Faruk Akkus, Antonios Anastasopoulos, Taras Andrushko, Aryaman Arora, Nona Atanalov, Gábor Bella, Elena Budianskaya, Yustinus Ghanggo Ate, Omer Goldman, David Guriel, Simon Guriel, Silvia Guriel-Agiashvili, Witold Kieraś, Andrew Krizhanovsky, Natalia Krizhanovsky, Igor Marchenko, **Magdalena Markowska**, Polina Mashkovtseva, Maria Nepomniashchaya, Daria Rodionova, Karina Scheifer, Alexandra Sorova, Anastasia Yemelina, Jeremiah Young, Ekaterina Vylomova. 2022. *SIGMORPHON–UniMorph 2022 Shared Task 0: Generalization and Typologically Diverse Morphological Inflection*. In Proceedings of the 19th SIGMOR-PHON Workshop on Computational Research in Phonetics, Phonology, and Morphology, pages 176–203, Seattle, Washington. Association for Computational Linguistics.

2022 Jennifer Tracey, Owen Rambow, Claire Cardie, Adam Dalton, Hoa Trang Dang, Mona Diab, Bonnie Dorr, Louise Guthrie, **Magdalena Markowska**, Smaranda Muresan, Vinodkumar Prabhakaran, Samira Shaikh and Tomek Strzalkowski. *BeSt: The Belief and Sentiment Corpus*. Proceedings of the 13th Edition of Language Resources and Evaluation Conference.

2021 **Magdalena Markowska**, Jeffrey Heinz, and Owen Rambow. *Finite-state Model of Shupamem Reduplication*. Proceedings of the 18th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology.

2021 Qihui Xu, **Magdalena Markowska**, Martin Chodorow, and Ping Li. *Modeling Bilingual Lexical Processing through Code-Switching Speech: A Network Science Approach*. Frontiers in Psychology.

2021 Qihui Xu, **Magdalena Markowska**, Martin Chodorow, and Ping Li. *A Network Science Approach to Bilingual Code-switching*, Proceedings of the Society for Computation in Linguistics: Vol. 4 , Article 3. DOI: https://doi.org/10.7275/raze-1b18.

2019 Kyle Gorman, Arya D. McCarthy, Ryan Cotterell, Ekaterina Vylomova, MiikkaSilfverberg, and **Magdalena Markowska**. *Weird inflects but OK: making sense of morphological generation errors*. In CoNLL, 140-151.

Awards

Fall 2022, **Junior Researcher Award**, *Institute for Advanced Computational Science, SBU*
Fall 2023

Summer 2022 **Full scholarship to attend the African Linguistics School (ALS 6)**, *Porto Novo, Benin*

Fall 2020, **New Recruit Award**, *Institute for Advanced Computational Science, SBU*
Fall 2021

Teaching Experience

Summer 2023 **Structure of English (LIN 320/527)**, *Primary Instructor*, Stony Brook University

Fall 2022, **Language and Technology (LIN 120)**, *Teaching Assistant with recitations*, Stony Brook
Fall 2023 University

   ○ **This course focuses on teaching Python.**

Spring 2021 **Survey in Cognition and Perception (PSY 260)**, *Teaching Assistant*, Stony Brook University

Fall 2020 **The Structure of an Uncommonly Taught Language (LIN 431)**, *Teaching Assistant with recitations*, Stony Brook University

○ **This course focuses on creating formal grammar of low resource languages.**

Talks

2023 **Magdalena Markowska and Adil Soubki**, *Formal Representation of Common Ground in Dialogue*, TbiLLC, September 20

2023 **Magdalena Markowska**, *Empirical and Theoretical Arguments for Using Properties of Letters for the Learning of Sequential Functions*, ICGI 16, July 13

Magdalena Markowska, *Learning phonological transformations with small data using sub-symbolic properties*, IACS Student Seminar, Apr 26

2022 **Magdalena Markowska**, *The Common Ground Corpus*, IACS Student Seminar, Apr 27

Magdalena Markowska, *Tonal Polarity and Compound Nouns in Shupamem*, Annual Conference on African Linguistics (ACAL 53), Apr 9

2021 **Magdalena Markowska**, *Shupamem DP: tonal changes on nouns modified by adjectives*, Grassfields Bantu Working Group at McGill University, Oct 29

Magdalena Markowska, *Finite-state Model of Shupamem Reduplication*, SIGMORPHON 2021: 18th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology, August 5

Magdalena Markowska, *Finite-state Analysis of Tonal Reduplication in Shupamem*, IACS Student Seminar, Stony Brook University, March 24

Magdalena Markowska, *Tones in Shupamem Reduplication*, CIRCLE, The Graduate Center, CUNY, March 16

Service

Fall 2022 - **Secretary, IACS Student Association**, *Institute for Advanced Computational Science*, present Stony Brook University

Fall 2021 - **Social Media Manager**, *Linguistics Department*, Stony Brook University
Fall 2022

Spring 2021 - **Organizer**, *Brown Bag Series*, Stony Brook University
Fall 2021

Fall 2020 - **Organizer**, *PhoRum: Phonology reading group*, Stony Brook University
Spring 2022

Technical Skills

Python, Praat, LaTeX

Natural Languages

Polish (native), English (advanced), German (pre-intermediate), French (pre-intermediate), Shupamem (fieldwork)