Esther Seyffarth

Graduate Researcher in Computational Linguistics

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Education

2010–2014 **Computational Linguistics, English Studies**, *Bachelor of Arts*, Ruhr University Bochum, Germany
Grade: 1.1 on a scale of 1-5 (university level), where 1 is the best grade

2014–2017 **Information Science & Language Technology**, *Master of Arts*, Heinrich Heine University Düsseldorf, Germany
Grade: 1.0 on a scale of 1-5 (university level), where 1 is the best grade

M.A. thesis *Vector Semantics and Dependency Parsing: Investigating the Influence of Distributional Information on Parsing Accuracy.*

2017–May 2023 **Computational Linguistics**, *PhD*, Heinrich Heine University Düsseldorf, Germany
Supervision: Professor Laura Kallmeyer, Prof. Wiebke Petersen, Dr. Kilian Evang. Expected thesis submission in May 2023.

Dissertation

The Semantics of Verb Alternations A Computational Approach to Identification, Modelling and Induction of Alternating Frames in English

My Ph.D. thesis is concerned with verb alternations in English and the way they interact with natural language processing goals. As a phenomenon at the syntax-semantics interface, these alternations complicate approaches to NLP that rely on the surface form of texts to draw conclusions about meaning. My focus is on alternations that allow verbs to express different semantic arguments in their primary syntactic argument slots. In my thesis, I implement an approach to the automatic identification of verbs that participate in particular alternations using large corpora, and propose a strategy to model alternating verb behavior in tree-adjoining grammar in a way that is linguistically motivated. I rely on Construction Grammar as a lens through which alternation behavior at the syntax-semantics interface is viewed, and on Frame Semantics as a tool for representing verb meaning in a way that is suitable for alternations.

Employment and Internships (Selection)

2021–2022   **Parental leave**
8 months

2017– ongoing   **Researcher in 2 DFG-funded research projects, Heinrich Heine University, Düsseldorf**
Research, teaching duties, outreach & publicity work for local Computational Linguistics B.A. program. See personal website for details.

2015   **Industry Internship, Kauz Semantic Technologies, Düsseldorf**
Contributions to a dialog system (chatbot); improving parsing quality, creating lexicon entries to extend language understanding

2011–2017   **Student Assistant, Ruhr University, Heinrich Heine University**
Teaching duties, programming tasks for a research group

Honors and Awards

2022   **Diversity Award**, Heinrich Heine University Düsseldorf
https://www.hhu.de/news-einzelansicht/engagiert-und-vielfaeltig-forschen-lehren-und-studieren

2020   **Selected for participation: Google Get Ahead EMEA**

2019–2020   **Member of the Selma Meyer Mentoring Program for Female Early Career Researchers**, Heinrich Heine University Düsseldorf
http://www.mentoring.hhu.de/en.html

2019   **€10,000 Teaching Award**, *with Benjamin Burkhardt*, Heinrich Heine University Düsseldorf, Category: eLearning
https://www.uni-duesseldorf.de/home/studium-und-lehre-an-der-hhu/lehre/lehrpreis-und-heinward.html

2019   **Selected for participation: Google NLP Summit**, Zurich, Switzerland

Scientific Engagement and Outreach (Selection)

2021   **Main Organizer**, *PhD Day at KONVENS 2021, with Oliver Deck, Janis Pagel, Ronja Laarmann-Quante, Stefan Grünewald*

2021   **Local Chair**, *KONVENS 2021*

2021   **Co-Organizer**, *Poster session of the section on computational linguistics at the DGfS meeting 2021, with Rainer Osswald*

2020–2021   **Member of an appointment committee for a W3 professorship**, *Heinrich Heine University*, representing the status group of non-tenured faculty (Mittelbau)

2020   **Virtual Social Chair**, *COLING 2020*

2020   **Local Chair**, *TLT 2020*

2020   **Publicity Co-Chair**, *ACL 2020, with Emily M. Bender and Zhiyuan Liu*

2020–21   **Reviewer**, *EACL 2021 (Outstanding Reviewer), LREC 2020, ACL 2020, COLING 2020, EMNLP 2020, *SEM 2020*

2019   **"Girls' Day" main organizer**, *Career orientation event for school children*, Heinrich Heine University Düsseldorf
https://www.girls-day.de

Teaching

2021	**Advanced Natural Language Processing with Python**, *with Tatiana Bladier, Rainer Osswald*, Düsseldorf Taught fully remotely.
2018/19– 2021	**CL-Programmierung Python**, *with Benjamin Burkhardt*, yearly introductory Python class for Bachelor students in computational linguistics, Düsseldorf Received €10,000 teaching award in 2019. Taught fully remotely in 2020/21.
2017/18	**CL-Programmierung Python**, *with Kilian Evang*, Düsseldorf
2017	**1-day workshop: Bots als Werkzeug in der Sprach- und Literaturwissenschaft: Erschließung, Generierung, Interaktion**, Ghent University, Department of Literary Studies
2016	**5-day workshop: Twitterbots und Textgenerierung**, Düsseldorf
2015	**Python für Linguisten**, *with Wiebke Petersen*, introductory Python class for linguists with no programming experience, Düsseldorf

Key Skills and Interests

Languages	German (native speaker), English (fluent, level C1)
Technical	Python (preferred language), Java, JavaScript (entry-level), Linux and bash, git
Data and language processing	scikit-learn, spacy, NLTK, pandas, numpy, MySQL
Research interests	Verb semantics; natural language and the syntax-semantics interface; corpus creation and language research using corpora; machine learning

Peer-reviewed Publications

Kurt Erbach, Benedict Kenyah-Damptey, Leda Berio, Daniel James, and Esther Seyffarth. A comparative corpus study of race and rasse. *Applied Corpus Linguistics*, 3(1):100044, 2023. ISSN 2666-7991. doi: https://doi.org/10.1016/j.acorp.2023.100044. URL `https://www.sciencedirect.com/science/article/pii/S2666799123000047`.

Ghattas Eid, Esther Seyffarth, and Ingo Plag. The Maaloula Aramaic Speech Corpus (MASC): From printed material to a lemmatized and time-aligned corpus. In *Proceedings of the Thirteenth International Conference on Language Resources and Evaluation (LREC 2022)*, Marseille, France, June 2022. European Language Resources Association (ELRA).

Esther Seyffarth, Younes Samih, Laura Kallmeyer, and Hassan Sajjad. Implicit representations of event properties within contextual language models: Searching for "causativity neurons". In *Proceedings of the 14th International Conference on Computational Semantics (IWCS)*, pages 110–120, Groningen, The Netherlands (online), June 2021. Association for Computational Linguistics. URL `https://www.aclweb.org/anthology/2021.iwcs-1.11`.

Esther Seyffarth and Laura Kallmeyer. Corpus-based identification of verbs participating in verb alternations using classification and manual annotation. In *Proceedings of the 28th International Conference on Computational Linguistics*, pages 4044–4055, Barcelona, Spain (Online), December 2020. International Committee on Computational Linguistics. URL `https://www.aclweb.org/anthology/2020.coling-main.357`.

Esther Seyffarth. Identifying participation of individual verbs or VerbNet classes in the causative alternation.

In *Proceedings of the Society for Computation in Linguistics (SCiL) 2019*, pages 146–155, 2019a. doi: 10.7275/efvz-jy59. URL https://www.aclweb.org/anthology/W19-0115.

Esther Seyffarth. Modeling the induced action alternation and the caused-motion construction with Tree Adjoining Grammar (TAG) and semantic frames. In *Proceedings of the IWCS 2019 Workshop on Computing Semantics with Types, Frames and Related Structures*, pages 19–27, Gothenburg, Sweden, June 2019b. Association for Computational Linguistics. doi: 10.18653/v1/W19-1003. URL https://www.aclweb.org/anthology/W19-1003.

Tatiana Bladier, Esther Seyffarth, Oliver Hellwig, and Wiebke Petersen. AET: Web-based adjective exploration tool for German. In *Proceedings of the Eleventh International Conference on Language Resources and Evaluation (LREC 2018)*, Miyazaki, Japan, May 2018. European Language Resources Association (ELRA). URL https://www.aclweb.org/anthology/L18-1343.

Esther Seyffarth. Verb alternations and their impact on frame induction. In *Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics: Student Research Workshop*, pages 17–24, New Orleans, Louisiana, USA, June 2018. Association for Computational Linguistics. doi: 10.18653/v1/N18-4003. URL https://www.aclweb.org/anthology/N18-4003.

Other

ACL Anthology	https://www.aclweb.org/anthology/people/e/esther-seyffarth/
Teaching statement	https://esther.seyffarth.one/assets/pdf/2021_classguidelines_seyffarth.pdf
GitHub profile	https://github.com/eseyffarth

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