

Mag. Remo Nitschke, PhD

CV

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Education

- 2018–2023 **Linguistics PhD Program**, *University of Arizona*
Major: Syntactic Theory, **Minor:** Computational Linguistics
Dissertation Topic: Syntax and Semantics of Degree Modification in German Adjectives,
Advisor: Heidi Harley
- 2019–2021 **Human Language Technology MS Program**, *University of Arizona*
Advisor: Mike Hammond
- 2012–2018 **Teacher Training Program, Magister**, *Karl-Franzens-Universität, Graz*, *Master Equivalent (5-year program)*

Academic Experience

Jobs

- 2024– **Postdoc**, *University of Zurich*, NCCR&ISLE
- 2023–2024 **Researcher**, *University of Zurich*, NCCR@LiRi
- 2021–2023 **Research Associate**, *University of Arizona*, ToMCAT, Theory of Mind-based Cognitive Architecture for Teams (DARPA Grant: ASIST)
Within the ToMCAT project I lead a team that maintains and expands an event extraction (EE) system for finding team communication events, among other text-based NLP capabilities.
- Spring 2021 **Research Associate**, *University of Arizona*, LIVES Project
Data restoration and support
- 2019–2020 **Research Assistant**, *University of Arizona*, *Linguistics*, Prof. Noam Chomsky
Aiding in data presentations and working on an independent research project
- 2018–2020 **Teaching Assistant**, *University of Arizona*, *Linguistics*
- 2015–2016 **Research Assistant**, *University of Graz*, *Section of Theoretical English Linguistics*, *English Dep.*
Data collection for a research project on Actuality Entailments

Teaching

- Fall 2020 **LING 300**. *Introduction to Syntax*. Standalone TA
- Spring 2020 **LING 150A**. *Languages in the World (Introduction to Languages and Linguistics)*. Section instructor/GTA
- Fall 2019 **LING/PHIL 211** *Language, Mind and Brain*. TA/instructional aide
- Spring 2019 **LING/ENG 322**. *The Structure and Meaning of Words (Introduction to Morphology and Morphosyntax)*. Standalone TA
- Fall 2018 **LING 150A**. *Languages in the World (Introduction to Languages and Linguistics)*. Section instructor/GTA

Peer Reviewed Publications

- published Nitschke, R. (2022). "On the Extended Projection of German Adjectives" In: Phoebos Panagiotidis and Moreno Mitrović (Eds.), *A⁰ – The Lexical Status of Adjectives* (LFAB 17), pages 219–256. John Benjamins. <https://benjamins.com/catalog/lfab.17.07nit>
- published Nitschke, R., Wang Y., Chen, C., Pyarelal, A. and Sharp, R. (2022). "Rule Based Event Extraction for Artificial Social Intelligence" In: *Proceedings of Pattern-based Approaches to NLP in the Age of Deep Learning*, pages 71–84. International Conference on Computational Linguistics.
- published Nitschke, R. (2021). "Restoring the sister: Reconstructing a lexicon from sister languages using neural machine translation" In: *Proceedings of the First Workshop on Natural Language Processing for Indigenous Languages of the Americas*, pages 122–130, Online. Association for Computational Linguistics

Unreviewed Proceedings and Manuscripts

- published Nitschke, R. (2023). Degree Modification, Monotonicity, and Measure Function Selection: Evidence from German. *Dissertation*
- published Nitschke, R. (2020). Using Genetic Data to Make Linguistic Arguments: Are clicks evidence of late externalization?. *U. Penn Working Papers in Linguistics*, 26(1).

Manuscripts in Preparation/Review

- in preparation Miyagawa, S., Nóbrega V., Nitschke, R., Tattersall I. (in prep). "How genetics can shed light on the emergence of language in evolution and modern human symbolic cognition" [working title]
- in preparation Almeida da Silva, A., Miyagawa, S., Nóbrega V., Nitschke, R., Valls Yoshida, F. (in prep). "Human Communities May Innovate Language Systems From Unstructured Input: Evidence from Emergent Sign Languages" [working title]

Conference Talks

- 2022 **Rule Based Event Extraction for Artificial Social Intelligence**, *Gyeongju, Republic of Korea*, PAN-DL at COLING 2022
- 2022 **Homesign And The Speed Of Externalization: What homesigners can tell us about the externalization of language capacity**, *Quebec, Canada*, Première Conférence Internationale sur la Biolinguistique de l'UQTR
- 2019 **Using Genetic Evidence to Make Linguistic Arguments: pitfalls and opportunities**, *UPenn, Philadelphia*, PLC 43
- 2019 **Viel Geliebt: German participial adjectives and degree words**, *University of Arizona, Tucson*, Arizona Linguistics Circle 13
- 2018 **On the Extended Projection of German Adjectives**, *Bled-Slovenia*, A0: The Adjective as a Lexical Category

Posters

- 2022 **Lessons Learned from a Secondary Analysis Using Natural Language Processing and Machine Learning from a Lifestyle Intervention**, *Baltimore, MD*, 43rd Annual Meeting & Scientific Sessions of the Society of Behavioral Medicine, (as non-presenting co-author)
- 2021 **"Restoring the sister: Reconstructing a lexicon from sister languages using neural machine translation"**, *Online*, AmericasNLP at NAACL-HLT

Invited Talks

- 2023 **Degree Modification, Monotonicity, and Measure Function Selection: Evidence from German**, *University of Manchester*, Semantics Lab
- 2021 **Neural Machine Translation Approaches for Vocabulary Reconstruction Tasks**, *NUI Galway, Ireland*, Cardamon Seminar Series

Publications as Editor

- Chief Editor Nitschke, Remo, Jennifer Medina, Gabriela De la Cruz-Sánchez, John W.W. Powell, Luis A. Irizarry-Figueroa, George-Michael Pescaru, Florian Hafner (eds.). (2022). *Coyote Papers 24: Proceedings of the Arizona Linguistics Circle 15*.
- Chief Editor Nitschke, Remo, Damian Y. Romero Diaz, Gabriela De La Cruz Sánchez, John W. W. Powell, Kristina Mihajlović, Luis A. Irizarry-Figueroa, George-Michael Pescaru, Florian Hafner (eds.). (2021). *Coyote Papers 23: Proceedings of the Arizona Linguistics Circle 14*
- Chief Editor Nitschke, Remo, Damian Y. Romero Diaz, Gabriela De La Cruz Sánchez, John W. W. Powell (eds.). (2020). *Coyote Papers 22: Proceedings of the Arizona Linguistics Circle 13*

Supervision

- 2023-2024 Co-supervision of a MS thesis (predicting songbird vocalizations from neural activations)
- 2022-2023 Supervision of two graduate Research Assistants within ToMCAT
- 2022 Supervision of one undergraduate Research Assistant within ToMCAT

Service

- 2022-2023 **Coyote Papers, Editorial Board**
- 2019-2022 **Abstract Reviews for Arizona Linguistics Circle (annual conference)**
- 2022 **Reviewer for GPSC travel grants**
- 2019-2022 **Coyote Papers, Editor in Chief**
- 2022 **Volunteer for ALC16**
- 2019-2021 **Mentoring for incoming graduate students**
- 2021 **Volunteer for ALC15**
- 2020 **LING Department Graduate Student Faculty Representative**
- 2020 **Volunteer for ALC14**
- 2019 **Organization committee for ALC13**
- 2019 **Volunteer for SAIL**

Industry Experience

- Summer 2022 **Research Intern**, *Educational Testing Services*, ETS AI Labs, Integrating SHAP functionality into RSMTOOL: AI Explainability.
- I integrated SHAP functionality into RSMTOOL (RSMT). RSMT is used by ETS to evaluate machine learning models and assess them for fairness. I added components to the library that allow automatic generation of an explainability report for models generated using ETS' internal sci-kit learn wrapper, SKLL.

Programming

- Languages Python (proficient), Scala (beginner), C++ (beginner)
- Libraries pytorch, transformers, beautiful soup, pony ORM, matplotlib, sklearn, shap, pandas, numpy, transformers, gsutil, openNMT-py, *among others*

Adjacent Skills

Version Control	Version control with git and Github.
SQLite	Experience with SQLite databases through pony-ORM (Python).
LaTeX	Usage as a text editor, to compile slides, present data, and write templates

Languages

- German, Proficient, Native
- English, Proficient
- French, Basics
- Spanish, Basics

Current Research Projects

Language Evolution	Emergent Sign Language: CENA , <i>Collaboration with: Anderson Almeida da Silva (Universidade Federal do Delta do Parnaíba), Shigeru Miyagawa (MIT and University of São Paulo), and Vitor Nóbrega (University of São Paulo)</i> , CENA is an emergent sign language in Piauí, Brasil, that arose out of a homesign system some 70 years ago (Almeida da Silva & Nevins 2020). We are working on a joint research project to show that (i) humans do not need an external model of language, but can instead devise one of their own (an argument already made by Goldin-Meadow and colleagues in their work on homesign, see for example Brentari & Goldin-Meadow 2017), and (ii) that a homesign system can quickly progress into a full-fledged sign language if there is a community that uses it. While similar arguments have been made on the case of Nicaraguan Sign Language, we argue that CENA is different because it was not subject to any outside influences during its genesis due to the fact that it arose in a remote village with no access to other sign languages or sign language educators.
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