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## LETITIA PARCALABESCU



[youtube.com/aicoffeebreak](https://youtube.com/aicoffeebreak)



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Department of Computational Linguistics  
Heidelberg University  
Im Neuenheimer Feld 325  
69120 Heidelberg

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### INTERESTS

Multimodal Learning, Vision and  
Language, Interpretability

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### LANGUAGES

German, English, Romanian: fluent  
and native  
French: conversant

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### MORE LANGUAGES

Main: Python, JavaScript, LaTeX  
Experience in: MATLAB, R, C++,  
SQL, etc.

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## EDUCATION

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### PHD IN NLP

July 2019 – July 2024, Heidelberg University

Thesis: “*Measuring the Contributions of Vision and Text Modalities in Multimodal Transformers*” focusing on benchmarking, interpretability and explainability of multimodal models (grade: *summa cum laude*).

Published 12 papers in leading AI/ML conferences and workshops.

### QUALIFYING STUDIES FOR RESEARCH IN NLP

January 2019 – June 2019

Department of Computational Linguistics (ICL), Heidelberg University

### MASTER’S IN PHYSICS

October 2017 – November 2018, Heidelberg University

Thesis: *Segmenting Drone acquired Data for Structure from Motion Reconstruction*

### BACHELOR’S IN APPLIED COMPUTER SCIENCE

October 2015 – September 2017, Heidelberg University

Thesis: *Active Learning in Cell Tracking*

### BACHELOR’S IN PHYSICS

October 2013 – September 2016, Heidelberg University

Thesis: *Evaluation and Improvement of the Cell Tracking Pipeline*

### DAAD SCHOLARSHIP HOLDER

September 2013 – September 2016

DAAD Vollstipendium für Absolventen Deutscher Auslandsschulen

### HIGHSCHOOL GRADUATION

July 2013, Liceul Teoretic „Johannes Honterus“, Brasov, Romania

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## ACTIVITIES

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### SCIENCE COMMUNICATION ON MY YOUTUBE CHANNEL:

AI COFFEE BREAK WITH LETITIA [youtube.com/aicoffeebreak](https://youtube.com/aicoffeebreak)

### COST ACTION

Participating in the [Multi3Generation](https://www.cost.eu/) COST Action – as a substitute MC member for the first two years, then as participant

## REVIEWING

Monthly \*ACL Rolling Review (ARR), EAACL, EMNLP, NAACL, ACL, CVPR, ACMMM, EurNLP

Workshops: MULA, RepL4NLP, LIMO

ACL2021 (*Outstanding Reviewer*)

## INVITED TALKS (selection)

Invited talk at [Datafest Yerevan Conference](#) (2024)  
Podcast Interview [Deep Learning with Letitia Parcalabescu - Weaviate Podcast #96!](#) (2024)  
[Panelist and keynote speaker](#) at the VOICES festival in Florence, Italy (2024)  
Invited talk at [Aleph Alpha](#) – AI startup in Heidelberg (2024)  
[Invited talk](#) at [cogsys-group](#), CLASP, Gothenburg, Sweden (2024)  
[Invited talk](#) at heidelberg.ai at the DKFZ (2023)  
Invited to talk (in German) about AI for a general audience at [ARD MixTalk](#) (2023)  
Podcast (in German) about AI for the [Handelsblatt](#) (2023)  
Keynote at the LIMO 2023 Workshop [About Vision and Language \(VL\) models](#)  
[Invited talk](#) about own work at the ICDM 2022 Workshop [Foundation Models in Vision and Language](#)  
Panelist on the “Popularization in ML Research” panel at the [ML in PL](#) conference (2022)  
Guest of the [EAVI Conversations 2021](#) “AI for good” (2021)  
Guest on the [Transformative Ideas Podcast](#)  
Guest on the [MLST YouTube channel and podcast](#)  
“Why Multi-Modality is the Future of Machine Learning” at the [ML Engineered Podcast](#)  
Invited talk about own work “Multimodal Learning: Integrating Vision and Language” at [StuTS 2020](#)

## HONORS

### DAAD VOLLSTIPENDIUM FÜR ABSOLVENTEN DEUTSCHER AUSLANDSCHULEN

Full scholarship to study the subject of my choice in Germany after graduating high school in Romania

### YOUNG RESEARCHER AT THE HEIDELBERG LAUREATE FORUM 2022

Recipient of the ABBE GRANT promoted by the Carl-Zeiss Stiftung

## TEACHING

(own courses [organized independently](#) including lectures, exercises, exam / practical project)

### METHODS FOR LEARNING WITHOUT ANNOTATED DATA

Master Level Course (in English), every Summer Term since 2020 – today with very good reviews.

### DESIGNING EXPERIMENTS FOR MACHINE LEARNING

Bachelor Level Course (in German), every Winter Term since 2021 – today with very good reviews.

### DEEP LEARNING COURSE FOR BIOLOGISTS

at the HBIGS graduate school Heidelberg every term since 2023

### PROGRAMMING EXAM

Summer Term 2020, Winter Term 20/21

### RESOURCE COURSE

Bachelor Level Course (in German) Summer Term 2020, Winter Term 20/21

### INTEGRATING VISION AND LANGUAGE: ACHIEVEMENTS AND CHALLENGES IN MULTIMODAL MACHINE LEARNING

Master Level Seminar, Winter Term 19/20

## SUPERVISION

Co-supervision of theses with Prof. Anette Frank:  
Master Theses: Phillip Wiesenbach, Julia Suter  
Bachelor Theses: Lillita Muradjan

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## EMPLOYMENT

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### CO-FOUNDER EXPLANATION MARK

August 2021 – today  
Science Communication  
Parcalabescu u. Trost GbR

### ACADEMIC EMPLOYEE

January 2019 – August 2024  
Department of Computational Linguistics (ICL)  
Heidelberg University

### RESEARCH ASSISTANT AT COS

Nov 2017 – March 2018, Aug 2018 – Nov 2018  
Web Programming at the Centrum for Organismal Studies (COS) Heidelberg University  
[weade.cos.uni-heidelberg.de](http://weade.cos.uni-heidelberg.de)

### TUTOR ALGORITHMS AND DATA STRUCTURES COURSE

April 2017 – September 2017  
Algorithms and Data Structures course at Heidelberg University

### TUTOR PYTHON COURSE

April 2016 – May 2016  
Heidelberg University

### RESEARCH ASSISTANT AT HCI

October 2015 – January 2016  
Research and software programming for *ilastik* ([ilastik.org/](http://ilastik.org/)) at the Heidelberg Collaboratory for Image Processing (HCI), Heidelberg University

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## PUBLICATIONS

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 See Google Scholar Profile: <https://scholar.google.de/citations?user=EeIGHM0AAAAJ&hl=en>

*Do Vision & Language Decoders use Images and Text equally? How Self-consistent are their Explanations?*  
**Parcalabescu**, L. and Frank, A., 2023., arXiv preprint arXiv:2404.18624

*On Measuring Faithfulness or Self-Consistency of Natural Language Explanations.*

**Parcalabescu**, L. and Frank, A., 2023.,  
Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (ACL 2024)

*ViLMA: A Zero-Shot Benchmark for Linguistic and Temporal Grounding in Video-Language Models*, Kesen, I., Pedrotti, A., Dogan, M., Cafagna, M., Acikgoz, E.C., **Parcalabescu**, L., Calixto, I., Frank, A., Gatt, A., Erdem, A. and Erdem, E., 2023.

The Twelfth International Conference on Learning Representations (ICLR)

*MM-SHAP: A Performance-agnostic Metric for Measuring Multimodal Contributions in Vision and Language Models & Tasks*,

**Parcalabescu**, L. and Frank, A., ACL 2023,

In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), pages 4032–4059, Toronto, Canada. Association for Computational Linguistics.

*VALSE: A Task-Independent Benchmark for Vision and Language Models Centered on Linguistic Phenomena*, **Parcalabescu**, L., Cafagna, M., Muradjan, L., Frank, A., Calixto, I. and Gatt, A., ACL 2022

In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), pages 8253–8280, Dublin, Ireland. Association for Computational Linguistics.

*Neural natural language generation: A survey on multilinguality, multimodality, controllability and learning*, Erdem, E., Kuyu, M., Yagcioglu, S., Frank, A., **Parcalabescu**, L., Plank, B., Babii, A., Turuta, O., Erdem, A., Calixto, I. and Lloret, E.

Journal of Artificial Intelligence Research 73, 1131-1207, 2022

*MAGMA -- Multimodal Augmentation of Generative Models through Adapter-based Finetuning*,

Eichenberg, C., Black, S., Weinbach, S., **Parcalabescu**, L. and Frank, A.,

In Findings of the Association for Computational Linguistics: EMNLP 2022, pages 2416–2428, Abu Dhabi, United Arab Emirates. Association for Computational Linguistics.

*Seeing past words: Testing the cross-modal capabilities of pretrained V&L models on counting tasks*,

**Parcalabescu**, L., Gatt, A., Frank, A. and Calixto, I.,

Proceedings of the Workshop Beyond Language: Multimodal Semantic Representations (MMSR'21), Groningen, The Netherlands, 2021

*What is Multimodality?*,

**Parcalabescu**, L., Trost, N., Frank, A.,

Proceedings of the Workshop Beyond Language: Multimodal Semantic Representations (MMSR'21), Groningen, The Netherlands, 2021

*Grounding Plural Phrases: Countering Evaluation Biases by Individuation*,

Suter, J., **Parcalabescu**, L., Frank, A.,

Proceedings of the Second Workshop on Advances in Language and Vision Research, 2021

*Exploring Phrase Grounding Without Training: Contextualisation and Extension to Text-Based Image Retrieval*,

**Parcalabescu**, L. and Frank, A.,

Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops, 2020

*AMR Evaluation Metrics from Principles*,

Opitz, J., **Parcalabescu**, L. and Frank, A.,

Transactions of the Association for Computational Linguistics, MIT Press, 2020

*WEADE: a workflow for enrichment analysis and data exploration*,

Trost, N., Rempel, E., Ermakova, O., Tamirisa, S., **Parcalabescu**, L., Boutros, M., Lohmann, J.U. and Lohmann, I., *PloS one* 13, no. 9 (2018): e0204016.