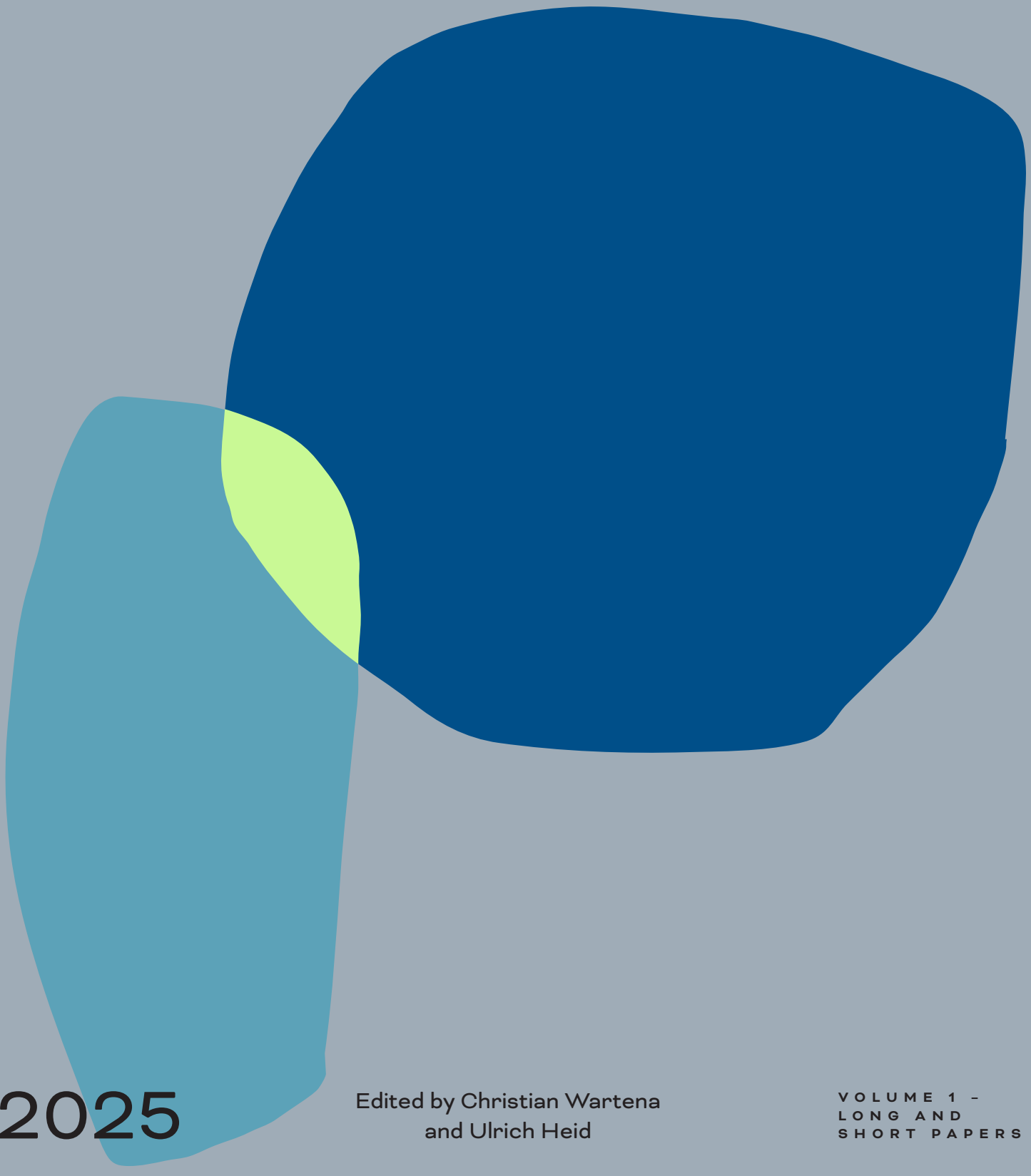
KONVENS

21st Conference on Natural Language Processing (KONVENS 2025)

Proceedings of the Conference
9. – 12. September 2025



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Edited by Christian Wartena
and Ulrich Heid

VOLUME 1 – LONG AND SHORT PAPERS

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KONVENS 2025 is hosted by the University of Hildesheim and chaired by Christian Wartena (DatalH Institute for Applied Data Science Hannover, Hochschule Hannover) and Ulrich Heid (Institut für Informationswissenschaft und Sprachtechnologie, Universität Hildesheim).

HOCHSCHULE HANNOVER
UNIVERSITY OF APPLIED SCIENCES AND ARTS
Fakultät III Medien, Information und Design

Universität Hildesheim

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German Society for Computational Linguistics and Language Technology

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Preface

We are delighted to present the proceedings of the 21^{st} edition of KONVENS (Konferenz zur Verarbeitung natürlicher Sprache / Conference on Natural Language Processing), held in Hildesheim from September 9 to 12, 2025. The conference was jointly organized by the University of Applied Sciences and Arts Hannover and the University of Hildesheim. KONVENS is a conference series on computational linguistics established in 1992 and is held annually in Germany, Austria, and Switzerland under the auspices of the German Society for Computational Linguistics and Language Technology, the Special Interest Group on Computational Linguistics of the German Linguistic Society, the Austrian Society for Artificial Intelligence, and SwissText.

This year, the main conference received 65 submissions, each reviewed by at least three program committee members. In total, 38 papers were accepted, of which 31 are included in these proceedings and 7 were presented as non-archival contributions. The accepted papers cover a wide range of subjects, including research on and with Large Language Models (LLMs), the development of new resources, discourse and semantics, the detection of hate speech, translation and multilinguality, and methods and applications with a particular focus on the German language. All authors were asked to indicate whether they would prefer an oral or poster presentation. In most cases, the preferred presentation form was honoured. Therefore, the presentation format is not an indicator of the quality of the paper. Both long and short papers were presented in oral and poster sessions.

The main program was complemented by six workshops, three tutorials, the GSCL award ceremony, and three keynote talks, offering a broad platform for exchange and discussion within the community. The workshops also addressed a wide variety of topics. KONVENS hosted the workshop KlarText on German Text Simplification and Readability Assessment, the 5th edition of the workshop on Computational Linguistics for the Political and Social Sciences (CPSS) and the Workshop on NLP for Sustainability (NLP4Sustain) conbined with the GermEval Shared Task on Understanding Sustainability Reports (SustainEval). There were three more workshops offering GermEval shared tasks: LLMs4Subjects (LLM-based Automated Subject Tagging for a National Technical Library's Open-Access Catalog), Candy Speech and Harmful Content Detection. Further details of the workshops, as well as all accepted workshop papers, are presented in the second volume of these proceedings. We would like to thank the organizers of all workshops and shared tasks for their great cooperation.

We would like to thank all authors for their submissions and the members of the program committee for their careful reviews. Our gratitude also goes to the local organizers in Hannover and Hildesheim and to all supporters who contributed to making KONVENS 2025 possible.

Christian Wartena
Ulrich Heid

KONVENS 2025
Conference on Natural Language Processing

KONVENS (Konferenz zur Verarbeitung natürlicher Sprache) is an annual conference series on computational linguistics (biennial until 2018) that started in 1992 and that is organized under the auspices of the German Society for Computational Linguistics and Language Technology, the Special Interest Group on Computational Linguistics of the German Linguistic Society, the Austrian Society for Artificial Intelligence and SwissNLP.

The conference takes place in Hildesheim, Germany, from September 9th to 12th, 2025

Event Website: https://konvens-2025.hs-hannover.de
E-Mail: info.konvens2025@gscl.org

ACL Anthology

The Proceedings of the 21th Conference on Natural Language Processing (KONVENS 2025) as well as the individual papers can also be found on ACL Anthology.

https://aclanthology.org/events/konvens-2025

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Program

Tuesday, September 9, 2025

13:30 – 18:00 Klartext Workshop

13:30 – 15:30 GermEval Workshop: LLMs4Subj

13:30 – 18:00 Tutorials

- FlexiConc: Reading Concordances with Algorithms
- The 101 introduction explaining how to produce, publish, and use machine-readable scientific knowledge
- Fusing Vision and Language: A Tutorial on Vision-Language Models for Multimodal Content Analysis

Wednesday, September 10, 2025

9:00 – 12:30 CPSS Workshop

9:00 – 12:30 GermEval Workshops

- Sustaineval
- Harmful Content Detection
- Cabdy Speech

14:00 – 15:00 Keynote

Opening the Black Box of Language Models via Theory and Interpretability
Michael Hahn

14:00 – 15:00 Oral Session 1: Methods

1. Surprisal in Action: A Comparative Study of LDA and LSA for Keyword Extraction
   J. Nathanael Philipp, Max Kölbl, Michael Richter
2. Learn to pick the winner: Black-box ensembling for textual and visual question answering
   Yuxi Xia, Klim Zaporojets, Benjamin Roth
3. LRMs are not thinking straight: Unreliability of thinking trajectories
   Jhouben Cuesta-Ramirez, Samuel Beaussant, Mehdi Mounsif

Thursday, September 11, 2025

9:00 – 12:30 CPSS Workshop

9:00 – 10:00 Oral Session 2: Applications

1. Adaption and Evaluation of Generative Large Language Models for German Medical Information Extraction
   Sören Spiegel, Seid Muhie Yimam, Philipp Breitfeld, Frank Ückert
2. ZEFYS2025: A German Historical Newspaper Dataset for Named Entity Recognition and Entity Linking
   Sophie Schneider, Ulrike Förstel, Kai Labusch, Jörg Lehmann, Clemens Neudecker
3. Generating Search-Engine-Optimized Headlines for Sports News
   Frank Zalkow, Benedikt Schäfer, Thomas Moissl, Jonas Bücherl, Kerstin Markl, Sebastian Bothe, Francois Duchateau, Julia Dollase, Patric Kabus, Daniel Steinigen, Oliver Schmitt, Fabian Küch

10:30 – 11:30 Poster Session 1

1. German Aspect-based Sentiment Analysis in the Wild: B2B Dataset Creation and Cross-Domain Evaluation
   Jakob Fehle, Niklas Donhauser, Udo Kruschwitz, Nils Constantin Hellwig, Christian Wolff
2. Vague, Incomplete, Subjective, and Uncertain Information in Art Provenance
   Fabio Mariani
3. Automatic Creation of Marginalia
   Aaron Lang, Robin Jegan, Andreas Henrich
4. Localization of English Affective Narrative Generation to German
   Johannes Schäfer, Sabine Weber, Roman Klinger
5. Multimodal Docker Unified UIMA Interface: New Horizons for Distributed Microservice-Oriented Processing of Corpora using UIMA
   Daniel Bundan, Giuseppe Abrami, Alexander Mehler
6. Systematic Review of Linguistic Characteristics in Profiling and Automated Detection of Autistic Speech
   Charlotte Bellinghausen, Andreas Riedel
7. More than the Sum of Their Words: Generating and Contrasting Large Linguistic
   Hanna Schmück
8. Towards a Cross-Dialectal Dictionary for Low German (Low Saxon)
   Christian Chiarcos, Janine Siewert, Tabea Gröger, Christian Fäth
9. Rapid Text Segmentation: Crowd-sourcing Lay Intuition about Text Structure in the Browser
   Florian Frenken
10. Applying an Information-theoretic Approach for Automatic Identification of German Multi-word Expressions
    Sergei Bagdasarov, Elke Teich

11:30 – 12:30 Oral Session 3: New Resources

1. Predicting Functional Content Zones in German Source-Dependent Argumentative Essays: Experiments on a Novel Dataset
   Xiaoyu Bai, Manfred Stede
2. SocCor: A Multimodal-based Multilingual Soccer Corpus for Text Data Analytics
   Paul Löhr, Jannik Strötgen
3. A Survey of Idiom Datasets for Psycholinguistic and Computational Research
   Michael Flor, Xinyi Liu, Anna Feldman

12:30 – 13:30 Public Lecture

Smarte Technologie, bessere Bildung? KI in der Hochschule
Torsten Zesch

13:30 – 14:30 Keynote 2

What does it take to raise a BabyLM?
Sina Zarrieß

14:30 – 15:30 Oral Session 4: Discourse and Semantics

1. Function Words as Stable Features for German Opinion Articles Classification
   Amelie Schmidt-Colberg, Simon Burkard, Anne Grohnert, Michael John
2. LLM-based Classification of Grounding Acts in German
   Milena Belosevic, Hendrik Buschmeier
3. Efficient and Effective Coreference Resolution for German
   Fynn Petersen-Frey, Hans Ole Hatzel, Chris Biemann

16:00 – 17:00 BA/MA Award Presentations

1. Ranking for Abstract Screening in Systematic Literature Reviews using Large Language Models
   Christian Jaumann
2. Investigating Language Models for Classical Philology – Aspects of Morphology, Syntax, and Knowledge from a Multilingual Perspective
   Frederick Riemenschneider

Friday, September 12, 2025

9:00 – 10:00 Keynote 3

Dear XAI Community, We Need to Talk! Fundamental Misconceptions in Current XAI Research
Timo Freiesleben

10:30 – 11:30 Poster Session 2

1. Hit or Be Hit: Tests of (Pre)Compositional Abilities in Vision and Language Models
   Mădălina Zgreabăn, Albert Gatt, Pablo Mosteiro
2. Hybrid Feature-Embedding Models for Robust AI Text Detection
   Kasper Thomas Gartside Knudsen, Christian Hardmeier
3. Advancing German Language Modelling - Transparent Models and Comprehensive Benchmarks
   Jan Pfister, Julia Wunderle, Anton Ehrmanntraut, Fotis Jannidis, Andreas Hotho
4. Using LLMs for experimental stimulus pretests in linguistics. Evidence from semantic associations between words and social gender
   Christian Lang, Franziska Kretzschmar, Sandra Hansen
5. Developmentally plausible pretraining, now also auf Deutsch: a BabyLM Dataset for German
   Bastian Bunzeck, Daniel Duran, Sina Zarrieß
6. PETapter: Leveraging PET-style classification heads for modular few-shot parameter-efficient fine-tuning
   Jonas Rieger, Mattes Ruckdeschel, Gregor Wiedemann
7. Large Language Model Data Generation for Enhanced Intent Recognition in German Speech
   Theresa Pekarek Rosin, Burak Can Kaplan, Stefan Wermter
8. Detecting Sexism and Its Severity in German Online Comments: Modeling Annotation Subjectivity with BERT and mBERT
   Melanie Woodrow, Margot Mieskes

11:30 – 12:30 Oral Session 5: Hate Speech

1. FASCIST-O-METER: Classifier for Neo-fascist Discourse Online
   Rudy Alexandro Garrido Veliz, Martin Semmann, Chris Biemann, Seid Muhie Yimam
2. Conditioning Large Language Models on Legal Systems? Detecting Punishable Hate Speech
   Florian Ludwig, Frederike Zufall, Torsten Zesch
3. HICC: A Dataset for German Hate Speech in Conversational Context
   Lars Schmid, Pius von Däniken, Patrick Giedemann, Don Tuggener, Judith Bühler, Maria Kamenowski, Katja Girschick, Dirk Baier, Mark Cieliebak

11:30 – 12:30 Oral Session 6: Translation and Multilinguality

1. Evaluating the Feasibility of Using ChatGPT for Cross-cultural Survey Translation
   Danielly Sorato, Diana Zavala-Rojas
2. Information Divergence in Translation and Interpreting: Findings from Same-Source Texts
   Maria Kunilovskaya, Sharid Loáiciga, Ekaterina Lapshinova-Koltunski
3. SEAS: Sentence Extraction and Alignment from Subtitles
   Josh Stephenson, Libby Barak

Keynote Speakers

Opening the Black Box of Language Models via Theory and Interpretability

Michael Hahn
Saarland University

Abstract Recent progress in LLMs has rapidly outpaced our ability to understand their inner workings. This talk describes our work aiming towards such understanding. First, we mechanistically reverse-engineer transformers' solutions to tasks such as arithmetic and in-context learning. Second, we develop rigorous results describing the abilities (and limitations) of transformers and other architectures in performing reasoning. We show that this can help us understand abilities and limitations of LLMs on practically-relevant tasks, and even point to possible improvements. I will close with directions for future research.

Bio Michael Hahn is a Tenure-Track Professor (W2) at Saarland Informatics Campus at Saarland University, where he directs the Language, Computation, and Cognition Lab (LaCoCo). He is affiliated with the Departments of Language Science and Technology and Computer Science. Michael Hahn received his PhD from Stanford University in 2022, advised by Judith Degen and Dan Jurafsky.

What does it take to raise a BabyLM?

Sina Zarrieß
Bielefeld University

Abstract The current landscape of CL research is dominated by language models that are too large to be designed and built from scratch by most researchers. This radically limits the possibilities for scientific experimentation and thus our understanding of how these models work. In this talk, I will argue for research on small language models, trained from scratch, on orders of magnitude less data than LLMs. I will present evidence that basic linguistic abilities emerge in small language models in a very similar way to much larger models. I will also show how experimenting with modelling choices in small language models can help us understand the limitations of LLMs.

Bio Sina Zarrieß is a professor for Computational Linguistics at Bielefeld University. Previously, she held a junior professorship for Digital Humanities, Language Technology and Machine Learning at the University of Jena. She obtained her PhD at the Institute for Natural Language Processing at Stuttgart University and spent her post-doc at the University of Bielefeld as a member of the Excellence Cluster for Cognitive Interaction Technology. Her research focuses on computational models of language use in text and dialogue, with applications in natural language generation, dialogue systems, language & vision.

Dear XAI Community, We Need to Talk! Fundamental Misconceptions in Current XAI Research

Timo Freiesleben
University of Tübingen

Abstract Despite progress in the field, significant parts of current XAI research are still not on solid conceptual, ethical, or methodological grounds. Unfortunately, these unfounded parts are not on the decline but continue to grow. Many explanation techniques are still proposed without clarifying their purpose. Instead, they are advertised with ever more fancy-looking heatmaps or only seemingly relevant benchmarks. Moreover, explanation techniques are motivated with questionable goals, such as building trust, or rely on strong assumptions about the 'concepts' that deep learning algorithms learn. In this talk, I will highlight and discuss these and other misconceptions in current XAI research. Moreover, I will suggest steps to make XAI a more substantive area of research.

Bio Timo Freiesleben is a postdoctoral fellow at the Cluster of Excellence Machine Learning for Science at the University of Tübingen. His research explores how concepts from the philosophy of science — such as explanation, representation, and robustness — can inform and enhance both theoretical and practical aspects of machine learning. His work focuses particularly on how machine learning can contribute to generating new scientific insights. Prior to his position in Tübingen, he completed his PhD at the Munich Center for Mathematical Philosophy at LMU Munich, where he investigated the question of what explainable artificial intelligence actually explains.

Public Lecture

Smarte Technologie, bessere Bildung? KI in der Hochschule

Torsten Zesch
University of Tübingen

Abstract Der Vortrag beleuchtet die vielversprechenden Möglichkeiten und kritischen Herausforderungen beim Einsatz von KI-Technologien in der Lehre. Von personalisierten Lernplattformen über automatisierte Bewertungssysteme bis hin zu intelligenten Tutoren: KI verspricht individuellere Betreuung, effizientere Prozesse und neue Lernwege. Doch was bedeutet das für die Rolle der Lehrenden? Verbessern sich wirklich die Lernergebnisse? Und welche technischen Fragen stellen sich beim Umgang mit Daten und Algorithmen im Bildungsbereich? Anhand konkreter Beispiele aus dem Reallabor der FernUniversität in Hagen diskutieren wir Chancen und Risiken des digitalen Wandels an Hochschulen. Dabei wird deutlich: Technologie allein macht noch keine bessere Bildung – entscheidend ist, wie wir sie gestalten und einsetzen. Ein Ausblick auf mögliche Zukunftsszenarien rundet den Vortrag ab und lädt zur kritischen Reflexion über die Bildung von morgen ein.

Bio Torsten Zesch is a full professor of Computational Linguistics at CATALPA (Center of Advanced Technology for Assisted Learning and Predictive Analytics), FernUniversität in Hagen, Germany. He holds a doctoral degree in computer science from Technische Universität Darmstadt and was the president of the German Society for Computational Linguistics and Language Technology (GSCL) from 2017 to 2023. His main research interests are in educational natural language processing, in particular the ways in which teaching and learning processes can be supported by language technology. For this purpose, he develops methods for the automatic analysis of textual and multimodal language data, with a focus on robust and explainable models.

Contents

Translation and Multilinguality

Methods and Applications for German and English

VOLUME 1 – LONG AND SHORT PAPERS

KONVENS (Konferenz zur Verarbeitung natürlicher Sprache, Conference on Natural Language Processing) is an annual conference series on computational linguistics first held in 1992. Originally biennial until 2018, the conference is organized under the auspices of the German Society for Computational Linguistics and Language Technology, the Special Interest Group on Computational Linguistics of the German Linguistic Society, the Austrian Society for Artificial Intelligence, and SwissNLP. The 21st edition of KONVENS took place in Hildesheim, Germany, from September 9 – 12, 2025, and was jointly organized by the University of Hildesheim and the University of Applied Sciences and Arts Hannover.

This year's conference centered on artificial intelligence and large language models (LLMs), reflecting the scientific community's efforts to better understand and optimize the properties of LLMs. These topics were addressed in three plenary lectures, a lecture session on methodological issues, and a poster session on LLMs, as well as in sessions on other topics such as methods based on LLMs, discourse and semantics, multilinguality and translation, new language resources, applications of language technology beyond linguistics, and the identification of hate speech on social media.

The proceedings are published in two volumes. The first volume contains all the peer-reviewed papers from the main conference, and the second volume contains the papers from the six workshops and shared tasks organised as part of the conference.

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