

NIKOLAI ILINYKH

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EDUCATION

Master of Science in Cognitive Science


University of Osnabrück

 Oct 2015 – Oct 2017  Osnabrück, Germany

- Majors: Computational Linguistics and Artificial Intelligence
- Thesis Topic: “Interaction in Dialogue: The Formal Representation of Scalar Conversational Implicatures”
Description: theoretical modelling of scalar conversational implicatures through TTR-based (Type Theory with Records) conversation-oriented semantics theory (KoS)
Supervisors: [Dr. Eleni Gregoromichelaki](#), [Prof. Dr. Kai-Uwe Kühnberger](#)
- Examination Score: Excellent

Bachelor in Linguistics with honours

Perm State University

 Sep 2011 – July 2015  Perm, Russia

- Specialization: Theoretical and Applied linguistics
- Thesis Topic: “Automatic summarization with the use of semantic network WordNet”
Description: use of lexical relations between words (e.g., synonymy, hyponymy) from large-scale semantic databases (e.g., WordNet) to identify salient information in the text and construct its summary
- CGPA: 4.97/5.00

Exchange Semester

Leiden University

 Feb 2015 – July 2015  Leiden, the Netherlands

- Theoretical courses on the language history with the focus on relations between culture and language.

TECHNICAL SKILLS

- **Programming Languages** : Python, Bash (Unix Shell)
- **Tools / Frameworks** : PyTorch, Tensorflow, NLP libraries (e.g., NLTK, Gensim), Transformer-Oriented Frameworks (e.g., Hugging Face), Image Processing Techniques (e.g., image feature extractors), Flask (Python), Data Analysis Tools (e.g., pandas, SciPy)
- **Familiarity** : HTML, CSS

PROJECTS

- Member of the organising committee for bi-lingual (English, Russian) and bi-directional (generation and parsing) generation challenge, [WebNLG Challenge 2020](#)
- Timeline: March 2020 - Dec 2020

CURRENT POSITION

PhD in Computational Linguistics

University of Gothenburg

 Feb 2020 – present  Gothenburg, Sweden

- Supervisor: [Prof. Dr. Simon Dobnik](#)
- **General Research Interests**: multi-modal information fusion, embodied agents, explainable NLP (BERTology), language-and-vision (image captioning, VQA, visual dialogue)
- **Topics of research**: interpretable and cognitively motivated large-scale multi-modal transformers, embodied question answering, image description generation, human evaluation techniques

PUBLICATIONS

- N. Ilinykh, and S. Dobnik. 2021. [How Vision Affects Language: Comparing Masked Self-Attention in Uni-Modal and Multi-Modal Transformer](#). In Proceedings of the 1st Workshop on Multimodal Semantic Representations (MMSR), pages 45–55, Groningen, the Netherlands (Virtual) / IWCS 2021. Association for Computational Linguistics.
- T. Castro Ferreira, C. Gardent, N. Ilinykh, C. Lee, S. Mille, D. Moussallem, and A. Shimorina. 2020. [The 2020 Bilingual, Bi-Directional WebNLG+ Shared Task Overview and Evaluation Results](#)(WebNLG+ 2020). In Proceedings of the 3rd International Workshop on Natural Language Generation from the Semantic Web (WebNLG+), pages 55–76, Dublin, Ireland (Virtual) / INLG 2021. Association for Computational Linguistics.
- N. Ilinykh, and S. Dobnik. 2020. [When an Image Tells a Story: The Role of Visual and Semantic Information for Generating Paragraph Descriptions](#). In Proceedings of the 13th International Conference on Natural Language Generation, pages 338-348, Dublin, Ireland (Virtual). Association for Computational Linguistics.
- N. Ilinykh, S. Zarriß, and D. Schlangen. 2019. [Tell Me More: A Dataset of Visual Scene Description Sequences](#). In Proceedings of the 12th International Conference on Natural Language Generation, pages 152–157, Tokyo, Japan. Association for Computational Linguistics.
- N. Ilinykh, S. Zarriß, and D. Schlangen. 2019. [Meet Up! A Corpus of Joint Activity Dialogues in a Visual Environment](#). In Proceedings of the 23rd Workshop on the Semantics and Pragmatics of Dialogue (semDial / LondonLogue), London, September 2019.
- N. Ilinykh, S. Zarriß, and D. Schlangen. 2018. [The task matters: Comparing image captioning and task-based dialogical image description](#). In Proceedings of the 11th International Conference on Natural Language Generation, pages 397–402, Tilburg University, The Netherlands. Association for Computational Linguistics. Presented as a poster at INLG 2018.
- D. Schlangen, T. Diekmann, N. Ilinykh, S. Zarriß. 2018. [slurk - A Lightweight Interaction Server for Dialogue Experiments and Data Collection](#). In Short Paper Proceedings of the 22nd Workshop on the Semantics and Pragmatics of Dialogue (AuxDial / SemDial 2018). Presented as a poster at SemDial 2018.
- D. Schlangen, N. Ilinykh, S. Zarriß. 2018. [MeetUp! A Task For Modelling Visual Dialogue](#). In Short Paper Proceedings of the 22nd Workshop on the Semantics and Pragmatics of Dialogue (AixDial / SemDial 2018). Presented as a poster at SemDial 2018.
- D. Schlangen, N. Ilinykh, S. Zarriß. 2018. [Visual Dialogue Needs Symmetry, Goals, and Dynamics: The Example of the MeetUp Task](#). In Proceedings of the 1st Workshop on Shortcomings in Vision and Language (SiVL) at ECCV 2018. Presented as a poster at SiVL 2018.

LANGUAGES

- Russian (native)
- English (fluent)
- German (intermediate)

TEACHING EXPERIENCE

- ◇ **University of Bielefeld, Germany:**
 - *Projektseminar (Project Seminar)*
WS (Winter Semester) 2017/18, WS 2018/19
Course Description: practical application of tools and methods used in computational linguistics for NLP data analysis (e.g., Zipf's law, Pointwise Mutual Information).
 - *Einführung in die Programmierung: Python (Introduction to Programming: Python)*
WS 2018/19
Course Description: basics of programming in Python for students of Faculty of Linguistics and Literature
 - *Natural language processing: Introduction to text analysis*
SS (Summer Semester) 2019
Course Description: basics of NLP for text processing (e.g., parsing, tagging), named entity recognition and coreference resolution

- ◇ **University of Gothenburg, Sweden:**
 - *LT2318 H20 Artificial Intelligence: Cognitive Systems*
WS 2020
Course Description: building artificial systems with a focus on language-and-vision (multi-modal) grounding, situated dialogue systems, generation and interpretation of image descriptions, computational models of spatial cognition
 - *LT2213 V20 Computational Semantics*
SS 2021
Course Description: practical and theoretical foundations of learning task-oriented meaning representations of words, sentences and conversations with first-order logic, word distributions, language models and large-scale transformer models

WORK EXPERIENCE

Research Assistant

Bielefeld University

📅 Oct 2017 – Jan 2020

📍 Bielefeld, Germany

- Supervisor: [Prof. Dr. David Schlangen](#)
- General area of research: dialogue discourse and grounding in multi-modal conversation, image captioning, dialogue data collection

Student Assistant

Institute of Cognitive Science, University of Osnabrück

📅 Nov 2016

📍 Osnabrück, Germany

- Linear-mixed modelling of the linguistic experiment on the use of 'wenn' and 'falls' among the native speakers of German