Herbert Lange

DOCTOR OF PHILOSOPHY · COMPUTER SCIENCE

Munich, Germany

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University Degrees

University of Gothenburg *Gothenburg, Sweden*

PHD IN COMPUTER SCIENCE *March 2021*

Thesis: "Learning Language (with) Grammars: From Teaching Latin to Learning Domain-Specific Grammars"

University of Gothenburg *Gothenburg, Sweden*

LICENTIATE IN COMPUTER SCIENCE *November 2018*

Thesis: "Computer-Assisted Language Learning with Grammars. A Case Study on Latin Learning"

Ludwig-Maximilians-University *Munich, Germany*

MASTER'S IN COMPUTATIONAL LINGUISTICS *July 2014*

Thesis: "Implementierung einer Lateingrammatik im Grammatical Framework"

University Edudation

University of Gothenburg *Gothenburg, Sweden*

PHD STUDIES IN COMPUTER SCIENCE *August 2015 – Semptember 2020*

- Supervisor: Peter Ljunglöf
- Co-supervisor: Koen Claessen
- Internal examinor: Aarne Ranta

Trinity College Dublin *Dublin, Ireland*

ERASMUS STAY *Semptember 2010 – May 2011*

Ludwig-Maximilians-University *Munich, Germany*

MASTER'S IN COMPUTATIONAL LINGUISTICS *October 2008 – Semptember 2014*

- Supervisor: Hans Leiss

Job Experience

Leibniz-Institute for the German Language *Mannheim, Germany*

RESEARCHER *March 2022 – now*

Development of a long-term archiving system for linguistic research data

University of Hamburg *Hamburg, Germany*

RESEARCHER *June 2021 – November 2022*

Development of quality assurance solutions for audio-visual corpora

University of Gothenburg	*Gothenburg, Sweden*

RESEARCHER · *August 2015 – Semptember 2020*

PhD studies in computer science with research focus on computational linguistics

self-employed · *Munich, Germany*

SOFTWARE DEVELOPER AND SYSTEM ADMINISTRATOR · *April 2015 – May 2015*

Development of a monitoring solution ofr a segment of the university network at Ludwig-Maximilians-University, Munich

Glanos GmbH · *Munich, Germany*

SOFTWARE ENGINEER · *November 2014 – January 2015*

Java backend development handling XML/JSON data and manual data annotation and analysis for Named Entity Recognition

Institute for German Philology, Ludwig-Maximilians-University · *Munich, Germany*

STUDENT ASSISTANT · *November 2011 – December 2011*

Data annotation for online publication of the ” Deutschen Verfasserlexikons der Frühen Neuzeit”

IT-Zentrum der Sprach- und Literaturwissenschaften, Ludwig-Maximilians-University · *Munich, Germany*

STUDENT ASSISTANT · *February 2009 – October 2014*

System administration for a segment of the university network consisting of Linux/Mac/Windows servers and Windows/Mac clients

Publications

Herbert Lange and Jocelyn Aznar (2022): "RefCo and its Checker: Improving Language Documentation Corpora's Reusability Through a Semi-Automatic Review Process", Proceedings of the 13th Language Resources and Evaluation Conference (LREC), Marseille, France, European Language Resources Association, 2721–2729, `https://aclanthology.org/2022.lrec-1.291`, Published.

Herbert Lange and Peter Ljunglöf (2021): "Learning Domain-Specific Grammars From a Small Number of Examples", Natural Language Processing in Artificial Intelligence, Studies in Computational Intelligence (SCI) (939), 105-138, Springer International Publishing, Cham, Switzerland, `https://doi.org/10.1007/978-3-030-63787-3_4`, Published.

Proceedings of the 9th Workshop on Natural Language Processing for Computer Assisted Language Learning (2020); David Alfter, Elena Volodina, Ildikó Pilán, Herbert Lange and Lars Borin (eds.), Linköping University Electronic Press, Linköping, Sweden, Linköping Electronic Conference Proceedings (175), 45 pages, `https://doi.org/10.3384/ecp20175`, Published. Herbert Lange (2020): "Learning Language (with) Grammars: From Teaching Latin to Learning Domain-Specific Grammars", PhD thesis, Department of Computer Science and Engineering, University of Gothenburg, Gothenburg, Sweden, `http://hdl.handle.net/2077/65453`, Published.

Herbert Lange and Peter Ljunglöf (2020): "Learning Domain-specific Grammars from a Small Number of Examples", Proceedings of the 12th International Conference on Agents and Artificial Intelligence - Volume 1: NLPinAI, Valetta, Malta, INSTICC. SciTePress, 422–430, `https://doi.org/10.5220/0009371304220430`, Published.

Proceedings of the 8th Workshop on Natural Language Processing for Computer Assisted Language Learning (2019); David Alfter, Elena Volodina, Lars Borin, Ildikó Pilán and Herbert Lange (eds.), Linköping University Electronic Press, Linköping, Sweden, NEALT Proceedings Series (39), 99 pages, Published. Herbert Lange (2021): "An Open-Source Computational Latin Grammar: Overview and Evaluation", Proceedings of the 20th International Colloquium on Latin Linguistics (ICLL 2019), Madrid, Spain, Ediciones Clásicas, 559-578, Published.

Herbert Lange and Peter Ljunglöf (2020): "Demonstrating the MUSTE Language Learning Environment", Proceedings of the 7th Workshop on NLP for Computer Assisted Language Learning (NLP4CALL 2018) at SLTC, 7th November 2018, Stockholm, Sweden, Linköping University Electronic Press, 41–46, `https://www.aclweb.org/anthology/W18-7105`, Published.

Herbert Lange (2018): "Computer-Assisted Language Learning with Grammars. A Case Study on Latin Learning", Licentiate thesis, Department of Computer Science and Engineering, University of Gothenburg, Gothenburg, Sweden, `https:`

//gup.ub.gu.se/file/207536, Published.

Herbert Lange and Peter Ljunglöf (2018): "Putting Control into Language Learning", Proceedings of the Sixth International Workshop on Controlled Natural Languages, Maynooth, Ireland, IOS Press, Frontiers in Artificial Intelligence and Applications (304), 61-70, `https://doi.org/10.3233/978-1-61499-904-1-61`, Published.

Herbert Lange and Peter Ljunglöf (2018): "MULLE: A Grammar-based Latin Language Learning Tool to Supplement the Classroom Setting", Proceedings of the 5th Workshop on Natural Language Processing Techniques for Educational Applications (NLPTEA '18) at ACL, Melbourne, Australia, Association for Computational Linguistics, 108-112, `https://doi.org/10.18653/v1/W18-3715`, `http://aclweb.org/anthology/W18-3715`, Published.

Herbert Lange (2017): "Implementation of a Latin Grammar in Grammatical Framework", Proceedings of the 2nd International Conference on Digital Access to Textual Cultural Heritage (DATeCH2017), Göttingen, Germany, Association for Computing Machinery, 97-102, `https://doi.org/10.1145/3078081.3078108`, Published.

Herbert Lange (2013): "Erstellen einer Grammatik für das Lateinische im "Grammatical Framework"", Master's thesis, Centrum für Informations- und Sprachverarbeitung, Ludwig-Maximilians-University, Munich, Germany, Published.

Presentations

Herbert Lange (2022): "The Hith-Hikers Guide to Artificial Intelligence - BBC Basic Version", Updateringar - Update Computer Club Uppsala, Online, Talk: `https://wiki.dfupdate.se/projekt:updateringar`

Herbert Lange (2022): "Semi-automatic quality assurance for audiovisual corpus data", CLT Seminar. University of Gothenburg, Gothenburg, Sweden, Seminar Talk

Herbert Lange (2022): "Demonstrating an Automatic Gloss Checker for Annotated Corpora", Language Documentation and Archiving during the Decade of Indigenous LanguagesConference and training sessions, Berlin, Germany, Conference talk

Herbert Lange and Jocelyn Aznar (2022): "Training Session: Improving Corpus Quality in Language Documentation : Introduction to QUEST and the RefCo process", Language Documentation and Archiving during the Decade of Indigenous LanguagesConference and training sessions, Online, Conference talk

Herbert Lange and Jocelyn Aznar (2022): "RefCo and its Checker: Improving Language Documentation Corpora's Reusability Through a Semi-Automatic Review Process", Language Resoures and Evaluation Conference (LREC), Marseille, France, Conference talk

Herbert Lange (2022): "MULLE: A grammar-based language learning tool", Seminar on Language Technology for Education in the South African languages, Online, Seminar Talk

Herbert Lange (2020): "Type theory and meaning in linguistics", rC3 - remote Chaos Experience, Online, Talk: `https://media.ccc.de/v/rc3-232856-type_theory_and_meaning_in_linguistics`

Herbert Lange (2020): "A Type-Theoretic Approach to Generating Pictures and Descriptions", 8th Swedish Language Technology Conference, Gothenburg, Sweden, Conference talk

Herbert Lange (2020): "Learning Domain-specific Grammars from Examples", CLASP Seminar, University of Gothenburg, Gothenburg, Sweden, Seminar Talk

Herbert Lange (2020): "Learning Domain-specific Grammars from a Small Number of Examples", Special Session NLPinAI, 12th International Conference on Agents and Artificial Intelligence, Valetta, Malta, Conference talk

Herbert Lange (2020): "Using Dependent Types in GF", Functional Programming Winter Meeting, Chalmers University of Technology, Gothenburg, Sweden, Seminar Talk

Herbert Lange (2019): "Empirical Evaluation of a Computational Latin Grammar", 20th International Colloquium on Latin Linguistics, Las Palmas de Gran Canaria, Canary Islands, Conference talk

Herbert Lange (2019): "A short history of end-user programming", Update mini conference, Uppsala, Sweden, Talk

Herbert Lange (2019): "Computer-Assisted Language Learning for Latin", Latin Seminar, Uppsala University, Uppsala, Sweden, Seminar Talk

Herbert Lange (2019): "Restricting Grammars to Reduce Ambiguity", Functional Programming Seminar, Chalmers University of Technology, Gothenburg, Sweden, Seminar Talk

Herbert Lange (2019): "MULLE for Latin: Computer-Generated Translation Exercises for Latin", Workshop on Digital Approaches to Teaching Historical Languages, Berlin, Germany, Conference talk: `https://www.projekte.hu-berlin.`

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Herbert Lange and Peter Ljunglöf (2018): "Demonstrating the MUSTE Language Learning Environment", 7th Workshop on Natural Language Processing for Computer-Assisted Language Learning at the Swedish Language Technology Conference (SLTC), Stockholm, Sweden, Poster

Herbert Lange (2018): "MULLE: A grammar-based Latin language learning tool to supplement the classroom setting", 5th Workshop on Natural Language Processing Techniques for Educational Applications, Melbourne, Australia, Poster

Herbert Lange (2018): "Computational Linguistics vs. Natural Language Processing - A bit of a rant", Free Society Conference and Nordic Summit (FSCONS), Oslo, Norway, Lightning Talk: `https://youtu.be/Xrb3ULik1vc?t=3127`

Herbert Lange (2018): "Let's talk about Old Computer; Or: Why old computers are cool, why we should care, and stuff I discovered", Free Society Conference and Nordic Summit (FSCONS), Oslo, Norway, Lightning Talk: `https://youtu.be/_C5QUuU2vic?t=1386`

Herbert Lange (2017): "Implementation of a Latin Grammar in Grammatical Framework", 2nd International Conference on Digital Access to Textual Cultural Heritage, Göttingen, Germany, Conference talk

Herbert Lange (2017): "A Latin Language Learning Application", Latin Seminar, University of Gothenburg, Gothenburg, Sweden, Seminar Talk

Herbert Lange (2017): "From Word-based text editing to language learning", Dublin Computational Linguistics Research Seminar, Trinity College Dublin, Dublin, Ireland, Seminar Talk

Herbert Lange (2017): "From Word-based text editing to language learning", Postgraduate Seminar in Computer Science, National University of Ireland, Maynooth, Ireland, Seminar Talk

Herbert Lange (2017): "MUSTE - Behind the scenes", REMU Research Seminar, University of Gothenburg, Gothenburg, Sweden, Seminar Talk

Herbert Lange (2016): "Implementation of a Latin Grammar in Grammatical Framework", 6th Swedish Language Technology Conference (SLTC), Umeå, Sweden, Poster

Herbert Lange (2016): "SHRDLU - Ein Programm das natürliche Sprache versteht", Vintage Computing Festival Berlin (VCFB), Berlin, Germany, Talk: `https://media.ccc.de/v/vcfb2016_-_52_-_en_-_medientheater_-_201610031530_-_shrdlu_-_herbert_lange`

Herbert Lange (2015): "Vintage Computing", Free Society Conference and Nordic Summit (FSCONS), Gothenburg, Sweden, Lightning Talk: `https://youtu.be/8mSVMY74sOY?t=660`

Herbert Lange (2013): "Grammatical Framework", Mehrvorträgewagen, muCCC Munich Hackerspace, Munich, Germany, Talk

Teaching Experience

Introduction to concurrent programming *Teaching Assistant*
CHALMERS UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF GOTHENBURG
Spring 2019

Artificial Intelligence *Teaching Assistant*
CHALMERS UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF GOTHENBURG
Spring 2018, Spring 2019

Computational Synax *Teaching Assistant*
UNIVERSITY OF GOTHENBURG
Spring 2017, Spring 2018, Spring 2019, Spring 2020

Tutorial: GF for Python programmers *Tutor*
GRAMMATICAL FRAMEWORK SUMMER SCHOOL, RĪGA, LATVIA
August 2017

Functional Programming *Teaching Assistant*
CHALMERS UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF GOTHENBURG
Autumn 2016, Autumn 2017, Autumn 2018, Autumn 2019

Databases *Teaching Assistant*

CHALMERS UNIVERSITY OF TECHNOLOGY AND UNIVERSITY OF GOTHENBURG

Autumn 2015, Spring 2016, Autumn 2016, Spring 2017, Autumn 2017, Autumn 2018

Tutorial: Introduction to Grammatical Framework *Tutor*

TACOS, GERMAN STUDENT CONFERENCE FOR COMPUTATIONAL LINGUISTICS), MUNICH, GERMANY

May 2015

Seminar: Scientific writing in LaTeX *Tutor*

IT-ZENTRUM DER SPRACH- UND LITERATURWISSENSCHAFTEN, LUDWIG-MAXIMILIANS-UNIVERSITY

February 2014

Logic and model-theoretic Semantics *Teaching Assistant*

CENTRE FOR INFORMATION AND LANGUAGE PROCESSING, LUDWIG-MAXIMILIANS-UNIVERSITY
MUNICH

Summer 2012

Corpus and Unix tools *Teaching Assistant*

CENTRE FOR INFORMATION AND LANGUAGE PROCESSING, LUDWIG-MAXIMILIANS-UNIVERSITY
MUNICH

Summer 2011

Grants

2015	**Grammatical Framework Summer School, Gozo, Malta**, Travel grant, Centre for Language Technology, University of Gothenburg
2013	**Grammatical Framework Summer School, Frauenchiemsee, Germany**, Travel grant, Volkswagenstiftung
2010	**Trinity College, Dublin, Ireland**, Erasmus grant, European Union

Peer Review

2022	**11th Workshop on Natural Language Processing for Computer-Assisted Language Learning**,
2021	**10th Workshop on Natural Language Processing for Computer-Assisted Language Learning**,
2021	**7th International Workshop on Controlled Natural Languages**,
2021	**8th Swedish Language Technology Conference post-proceedings**,
2020	**9th Workshop on Natural Language Processing for Computer-Assisted Language Learning**,
2019	**8th Workshop on Natural Language Processing for Computer-Assisted Language Learning**,
2018	**5th Workshop on Natural Language Processing Techniques for Educational Applications**,

Conference Involvement

2020	**9th Workshop on Natural Language Processing for Computer-Assisted Language Learning**, Co-Organizer	*Gothenburg, Sweden*
2019	**8th Workshop on Natural Language Processing for Computer-Assisted Language Learning**, Co-Organizer	*Turku, Finland*
2017	**European Summerschool in Logic, Language and Information Student Session**, Co-Chair Logic and Computation	*Toulouse, France*

Other Involvement

2018 – 2020	**Graduate Students' Council, University of Gothenburg**,
2016 – 2020	**PhD Council, Department for Computer Science and Engineering, Chalmers University of Technology and University of Gothenburg**,
2012 – 2013	**Student Council, Centre for Information and Language Processing, Ludwig-Maximilians-University Munich**,

Skills

Five levels: Basic knowledge (1), Basic experience (2), Professional experience (3), Expert (4), Guru (5)

PROGRAMMING LANGUAGE

Agda, Basic knowledge
Basic, Basic experience
C/C++, Basic experience
Coq, Basic knowledge
Erlang, Basic knowledge
Grammatical Framework, Expert
Haskell, Expert
HTML/CSS, Professional Experience
Java, Professional Experience
JavaScript, Professional Experience
LISP, Basic experience
Pascal, Basic experience
Perl, Basic experience
Prolog, Basic experience
Python, Professional Experience
Ruby, Basic knowledge
SML, Basic experience

OPERATING SYSTEMS

Atari TOS, Basic knowledge
Gentoo Linux, Expert
BeOS/Haiku, Basic knowledge
FreeBSD/NetBSD, Basic experience
IRIX, Basic experience
MacOS Classic, Basic experience
MacOS X, Basic experience
MS-DOS, Basic experience
OpenVMS, Basic knowledge
OS/2, Basic knowledge
RISC OS, Basic knowledge
Windows, Professional Experience

OTHER IT SKILLS

Constraint Programming, Basic experience
Formal languages, Professional Experience
GNU make, Basic experience
Icinga/Nagios, Basic experience
LaTeX, Professional Experience
Machine Learning, Basic knowledge
MS Office, Professional Experience
Parser combinators, Professional Experience
Property-based Testing, Professional Experience
Software-defined Radio, Basic experience
Databases, Professional Experience
Version control systems, Professional Experience

LANGUAGE

English, Expert
Esperanto, Basic experience
French, Basic knowledge
German, Expert
Irish, Basic knowledge
Italian, Basic knowledge
Latin, Basic experience
Medieval German, Basic knowledge
Spanish, Basic knowledge
Swedisch, Professional Experience

COMPUTATIONAL LINGUISTICS

Controlled Natural Languages, Expert
Discourse Representation Theory, Basic experience
Formal syntax, Expert
Lexikal semantics, Basic experience
Montague grammars, Professional Experience
Resource grammar development, Guru
Universal Dependencies, Basic experience
Typ-theoretic semantics, Basic experience

RESEARCH AND GENERIC SKILLS

Data analysis, Professional Experience
Experimental design in social sciences, Basic experience
Independent work, Expert
Problem solving, Expert
Project management, Professional Experience
Public presentation, Professional Experience
Research, Expert
Research ethics, Professional Experience
Scientific writing, Expert
Teaching, Professional Experience
Team work, Professional Experience