

MILOŠ STANOJEVIĆ

LECTURER (ASSISTANT PROFESSOR) AT UCL

SENIOR RESEARCH SCIENTIST AT GOOGLE DEEPMIND

RESEARCH INTERESTS

- Linguistics: Language Universals, Syntactic Formalisms and Incremental Parsing
- Learning: Neural Latent Variable Models and Probabilistic Inference over Structures
- Applications: Machine Translation, Sign Language Generation and LLMs in general

WORK EXPERIENCE

- Sep 2024 – now **Lecturer (~Assistant Professor) in Computational Linguistics**
University College London
Linguistics Department, London, UK
- Nov 2021 – now **Senior Research Scientist**
Google DeepMind
Language Team, London, UK
- Nov 2017 –
Oct 2021 **PostDoc / Research Associate**
University of Edinburgh
School of Informatics, Edinburgh, UK
- July 2017 –
Oct 2017 **Internship**
Nuance Communications (now part of Microsoft)
Natural Language and AI group, Sunnyvale, US

EDUCATION

- 2013 – 2017 **Ph.D. Natural Language Processing**
University of Amsterdam, Netherlands
- 2011 – 2013 **Mgr. Mathematical Linguistics**
Charles University in Prague, Czechia
- 2010 – 2011 **M.Sc. Human Language Science and Technology**
University of Malta, Malta
- 2006 – 2010 **B.Sc. Electrical Engineering**
University of Niš, Serbia
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- HSP 2025** [Generalizing active gap-filling](#)
Conference on Human Sentence Processing
Tim Hunter, **Miloš Stanojević**, Edward Stabler
- COLING 2025** [Extracting structure from an LLM - how to improve on surprisal-based models of Human Language Processing](#)
International Conference on Computational Linguistics
Daphne Wang, Mehrnoosh Sadrzadeh, **Miloš Stanojević**, Wing-Yee Chow, Richard Breheny
- EMNLP 2024** [Do LLMs learn a true syntactic universal?](#)
Empirical Methods in Natural Language Processing
John Hale and **Miloš Stanojević**
- ACL 2024** [Multipath parsing in the brain](#)
Annual Meeting of the Association for Computational Linguistics
Berta Franzluebbers, Donald Dunagan, **Miloš Stanojević**, Jan Buys, John Hale
- CMCL 2024** [How can large language models become more human?](#)
Workshop on Cognitive Modeling and Computational Linguistics
best paper award Daphne Wang, Mehrnoosh Sadrzadeh, **Miloš Stanojević**, Wing-Yee Chow, Richard Breheny
- EMNLP System Demo 2023** [SynJax: Structured Probability Distributions for JAX](#)
Empirical Methods in Natural Language Processing System Demonstration
Miloš Stanojević and Laurent Sartran
- Cognitive Science journal 2023** [Modeling structure-building in the brain with CCG parsing and large language models](#)
top cited *Cognitive Science — journal*
Cognitive Science paper in 2023 **Miloš Stanojević**, Jonathan Brennan, Donald Dunagan, Mark Steedman, John Hale
- Neurobiology of Language journal 2023** [Neural correlates of long-distance dependencies in Chinese and English](#)
Neurobiology of Language — journal
Donald Dunagan, **Miloš Stanojević**, Maximin Coavoux, Shulin Zhang, Shohini Bhattachali, Jixing Li, Jonathan Brennan, John Hale
- EMNLP 2022** [Unbiased and Efficient Sampling of Dependency Trees](#)
Conference on Empirical Methods in Natural Language Processing
Miloš Stanojević

- TACL
journal 2022** [Transformer Grammars: Augmenting Transformer Language Models with Syntactic Inductive Biases at Scale](#)
Transactions of the Association for Computational Linguistics — journal
Laurent Sartran, Samuel Barrett, Adhiguna Kuncoro,
Miloš Stanojević, Phil Blunsom, Chris Dyer
- Computational
Linguistics
journal 2021** [Formal Basis of a Language Universal](#)
Computational Linguistics — journal
Miloš Stanojević and Mark Steedman
- EMNLP 2021** [A Root of a Problem: Optimizing Single-Root Dependency Parsing](#)
Conference on Empirical Methods in Natural Language Processing
Miloš Stanojević and Shay B. Cohen
- IWCS 2021** [Computing All Quantifier Scopes with CCG](#)
International Conference on Computational Semantics
Miloš Stanojević and Mark Steedman
- CMCL 2021** [Modeling incremental language comprehension in the brain with Combinatory Categorical Grammar](#)
Workshop on Cognitive Modeling and Computational Linguistics
Miloš Stanojević, Shohini Bhattachali, Donald Dunagan, Luca Campanelli,
Mark Steedman, Jonathan Brennan, John Hale
- CASE 2021** [Modality and Negation in Event Extraction](#)
Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text
Sander Bijl de Vroe, Liane Guillou, **Miloš Stanojević**, Nick McKenna and
Mark Steedman
- ACL 2020** [Max-Margin Incremental CCG Parsing](#)
Annual Meeting of the Association for Computational Linguistics
Miloš Stanojević and Mark Steedman
- IWPT 2020** [Span-Based LCFRS-2 Parsing](#)
The 16th International Conference on Parsing Technologies
Miloš Stanojević and Mark Steedman
- CUNY 2020** [Predictive Processing of Coordination in CCG](#)
Conference on Human Sentence Processing
Miloš Stanojević, John Hale and Mark Steedman
- ACL 2019** [Wide-Coverage Neural A* Parsing for Minimalist Grammars](#)
Annual Meeting of the Association for Computational Linguistics
John Torr, **Miloš Stanojević**, Mark Steedman and Shay B. Cohen

- FG 2019** [On the Computational Complexity of Head Movement and Affix Hopping](#)
Conference on Formal Grammar
Miloš Stanojević
- NAACL 2019** [CCG Parsing Algorithm with Incremental Tree Rotation](#)
Conference of the North American Chapter of the Association for Computational Linguistics
Miloš Stanojević and Mark Steedman
- CMCL 2019** [The active-filler strategy in a move-eager left-corner Minimalist Grammar parser](#)
Workshop on Cognitive Modeling and Computational Linguistics
Tim Hunter, **Miloš Stanojević** and Edward Stabler
- CogACLL 2018** [A Sound and Complete Left-Corner Parsing for Minimalist Grammars](#)
Workshop on Cognitive Aspects of Computational Language Learning and Processing
Miloš Stanojević and Edward Stabler
- PROPOR 2018** [SICK-BR: a Portuguese corpus for inference](#)
International Conference on Computational Processing of the Portuguese Language
Livy Real, Ana Rodrigues, Andressa Vieira e Silva, Beatriz Albiero, Bruna Thalenberg, Bruno Guide, Cindy Silva, Guilherme de Oliveira Lima, Igor CS Câmara, **Miloš Stanojević**, Rodrigo Souza, Valeria de Paiva
- PhD Thesis 2017** [Permutation Forests for Modeling Word Order in Machine Translation](#)
University of Amsterdam 2017
Miloš Stanojević
- EMNLP 2017** [Neural Discontinuous Constituency Parsing](#)
Conference on Empirical Methods in Natural Language Processing
Miloš Stanojević and Raquel G. Alhama
- ACL 2017
short paper** [Alternative Objective Functions for Training MT Evaluation Metrics](#)
Annual Meeting of the Association for Computational Linguistics
Miloš Stanojević and Khalil Sima'an
- LACL 2016** [Minimalist Grammar Transition-Based Parsing](#)
Logical Aspects of Computational Linguistics
Miloš Stanojević
- COLING 2016** [Hierarchical Permutation Complexity for Word Order Evaluation](#)
International Conference on Computational Linguistics
Miloš Stanojević and Khalil Sima'an

- COLING 2016** [Universal Reordering via Linguistic Typology](#)
International Conference on Computational Linguistics
Joachim Daiber, **Miloš Stanojević** and Khalil Sima'an
- WMT 2016** [Examining the Relationship between Preordering and Word Order Freedom in Machine Translation](#)
Conference on Machine Translation
Joachim Daiber, **Miloš Stanojević**, Wilker Aziz and Khalil Sima'an
- WMT 2016** [Results of the WMT16 Metrics Shared Task](#)
Conference on Machine Translation
Ondřej Bojar, Yvette Graham, Amir Kamran and **Miloš Stanojević**
- WMT 2016** [Results of the WMT16 Tuning Shared Task](#)
Conference on Machine Translation
Bushra Jawaid, Amir Kamran, **Miloš Stanojević** and Ondřej Bojar
- EMNLP 2015** [Reordering Grammar Induction](#)
Conference on Empirical Methods in Natural Language Processing
Miloš Stanojević and Khalil Sima'an
- PBML 2015** [Evaluating MT systems with BEER](#)
The Prague Bulletin of Mathematical Linguistics
Miloš Stanojević and Khalil Sima'an
- WMT 2015** [BEER 1.1: ILLC UvA submission to metrics and tuning task](#)
Workshop on Machine Translation
Miloš Stanojević and Khalil Sima'an
- WMT 2015** [Results of the WMT15 Metrics Shared Task](#)
Workshop on Machine Translation
Miloš Stanojević, Amir Kamran, Philipp Koehn and Ondřej Bojar
- WMT 2015** [Results of the WMT15 Tuning Shared Task](#)
Workshop on Machine Translation
Miloš Stanojević, Amir Kamran and Ondřej Bojar
- SSST 2014** [Evaluating Word Order Recursively over Permutation-Forests](#)
Workshop on Syntax, Semantics and Structure in Statistical Translation
Miloš Stanojević and Khalil Sima'an
- WMT 2014** [BEER: BETter Evaluation as Ranking](#)
Workshop on Machine Translation
Miloš Stanojević and Khalil Sima'an

EMNLP 2014 [Fitting Sentence Level Translation Evaluation with Many Dense Features](#)
short paper

Conference on Empirical Methods in Natural Language Processing
Miloš Stanojević and Khalil Sima'an

WMT 2012 [Selecting data for English-to-Czech machine translation](#)

Workshop on Machine Translation
Aleš Tamchyna, Petra Galuščáková, Amir Kamran, **Miloš Stanojević**,
Ondřej Bojar

CONTRIBUTIONS TO THE RESEARCH COMMUNITY

Reviewing for conferences:	ACL, NAACL, EMNLP, EACL, CoNLL, AACL
Reviewing for journals:	<ul style="list-style-type: none">- TACL journal (Impact Factor 6.9)- Computational Linguistics journal (Impact Factor 5.3)- Journal of Language Modeling (Impact Factor not available)- Natural Language Processing (NLP) (Impact Factor 1.9)- Language Resources and Evaluation (LREC) (Impact Factor 1.8)
Organizing shared tasks:	Workshop on Machine Translation - Metrics task in 2015 and 2016 Workshop on Machine Translation - Tuning task in 2015 and 2016

SUPERVISION AND MENTORSHIP

2025 <i>UCL supervision</i>	6 MA students in Computational Linguistics specialization 1 BA student in General Linguistics
2025 <i>UCL mentorship</i>	Maximilian Moser now PhD student at CEHP, UCL
2024 <i>Google DeepMind internship mentor</i>	Matthias Lindemann now PhD student at University of Edinburgh Compressing Syntax into LLMs
2023 <i>Google DeepMind scholar mentor</i>	Catherine Nana Nyaah Essuman now MSc student at University of Cape Town Part of Google DeepMind's scholars programme.
2022 <i>Google DeepMind scholar mentor</i>	Mukhtar Mohamed now intern at Google DeepMind Part of Google DeepMind's scholars programme.

2021 <i>University of Edinburgh</i> <i>MSc thesis</i> <i>main supervisor</i>	Seth Aycock now PhD student at University of Amsterdam <u>Target-side CCG Supertag Prediction Improves Machine Translation</u>
2019 <i>University of Edinburgh</i> <i>BSc project</i> <i>main supervisor</i>	Chiehmin Wei now software engineer at Roblox Zero-Shot and Universal Parsing with Multilingual Contextualized Embeddings
2018 – 2019 <i>University of Edinburgh</i> <i>PhD thesis</i> <i>co-supervisor</i>	John Torr now RS at Apple Research, Cambridge <u>Wide-Coverage Statistical Parsing with Minimalist Grammars</u>

TEACHING

2025/2026 UCL	Lectures on Parsing within PLIN0034 Introduction to Computational Linguistics
2024/2025 UCL	Lectures on Parsing within PLIN0034 Introduction to Computational Linguistics
2024/2025 UCL	Present linguistics students with career opportunities in the industry UCL LingSoc Careers Event
2012/2013 <i>University of Amsterdam</i>	Statistical Structure in NLP
2013/2014 <i>University of Amsterdam</i>	Elements of Language Processing
2014/2015 <i>University of Amsterdam</i>	short course on Monte Carlo Inference for PCFG
2015/2016 <i>University of Amsterdam</i>	Natural Language Processing 2
2016/2017 <i>University of Amsterdam</i>	Natural Language Processing 2

INVITED TALKS

<i>Stony Brook University</i> <i>New York, USA, 2025</i>	Incremental Sentence Processing of Right-Adjunction
<i>ILFC Seminar – CNRS,</i> <i>Paris, France, 2025</i>	Linguistic Universals in Grammars and Language Models

<i>Johns Hopkins University</i> Baltimore, USA, 2024	Syntactic Universals in Grammars and LLMs
<i>University of Amsterdam</i> Netherlands, 2023	Syntactic Structures and Large Language Models
<i>University of Cambridge</i> Cambridge, UK, 2023	The role of syntax in the world of large language models
<i>UCL</i> London, UK, 2023	What is the relation of Syntactic Parsing, Language Universals, Brain Activity and Large Language Models?
<i>ETH Zürich</i> Zürich, Switzerland, 2022	Testing Syntactic Theory on all Marr's Levels of Analysis
<i>Mathematics of Language</i> Montpellier, France, 2021	CCG Combinators in Brain Activity and Linguistic Universals
<i>DeepMind</i> London, UK, 2021	Integrating Deep Learning with Deep Syntax
<i>Nuance NL & AI lab</i> Sunnyvale, USA, 2017	Learning Reordering Grammars
<i>Rich Parsing Workshop</i> Amsterdam, 2016	Minimalist Grammar Transition-Based Parsing
<i>MT Marathon</i> Prague, Czechia, 2015	Discriminative Training for Statistical Machine Translation

SCHOLARSHIPS

2010 – 2012	Erasmus Mundus scholarship
2004 – 2010	Scholarship from the Ministry of Science and Technological Development of Serbia awarded for taking part in international mathematical competitions
2002 – 2004	Scholarship from the Ministry of Education of Serbia awarded for taking part in international mathematical competition
