

Ali Basirat  
Tenure Track Adjunkt  
Institut for Nordiske Studier og Sprogvidenskab  
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## Kort præsentation

Jeg er adjunkt i Natural Language Processing og Computational Linguistics ved Center for Sprogteknologi, Københavns Universitet. Min forskning fokuserer på datadrevne tilgange til sprogteknologi, især forklarlig naturlig sprogbehandling og morfosyntaktisk analyse.

Specifikt studerer jeg datadrevet syntaks, repræsentationslæring og ordindlejring (word embedding). Jeg har introduceret værktøjer og teknikker til bedre at kunne håndtere den typologiske mangfoldighed af sprog og forbedre effektiviteten af sprogbehandlingsværktøjer. Jeg har også udforsket universelle mønstre i grammatiske kønsopgaver på tværs af sprog. Derudover er jeg interesseret i at tolke store sprogmodelrepræsentationer og tilpasse dem til forskellige opgaver.

## Kvalifikationer

Pedagogy , Becoming a Teacher in Higher Education, Linköping University  
Dimissionsdato: 16 nov. 2022

Computational Linguistics, PhD, Uppsala University  
Dimissionsdato: 8 sep. 2018

## Ansættelse

**Tenure Track Adjunkt**  
Institut for Nordiske Studier og Sprogvidenskab  
Københavns Universitet  
København S, Danmark  
15 apr. 2023 → nu

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Københavns Universitet  
København S, Danmark  
15 apr. 2023 → 15 apr. 2023

## Postdoctoral Fellow

Department of Computer and Information Science (IDA), Linköping University  
Linköping, Sverige  
1 jan. 2021 → 15 apr. 2023

## Postdoctoral Researcher

Department of Linguistics and Philology, Uppsala University  
Sverige  
1 jan. 2019 → 31 dec. 2020

## Doctorand

Uppsala University  
Uppsala, Sverige  
1 jan. 2014 → 1 jan. 2018

## Publikationer

### **Efficient Structured Prediction with Transformer Encoders**

Basirat, Ali, 14 mar. 2024, I: The Northern European Journal of Language Technology (NEJLT). 10, 1

### **Digital Conceptual History and the Emergence of a Globalized Climate Imaginary**

Boyden, M., Basirat, Ali & Berglund, K., dec. 2022, I: Contributions to the History of Concepts. 17, 2, s. 95-122

### **Nucleus Composition in Transition-based Dependency Parsing**

Nivre, J., Basirat, Ali, Dürlich, L. & Moss, A., dec. 2022, I: Computational Linguistics. 48, 4, s. 849-886 38 s.

### **An empirical study on the contribution of formal and semantic features to the grammatical gender of nouns**

Basirat, Ali, Allasonnière-Tang, M. & Berdicevskis, A., 1 jan. 2021, I: Linguistics Vanguard. 7, 1, s. 2020-0048

### **Syntactic nuclei in dependency parsing - A multilingual exploration**

Basirat, Ali & Nivre, J., 2021, *EACL 2021 - 16th Conference of the European Chapter of the Association for Computational Linguistics, Proceedings of the Conference*. Association for Computational Linguistics (ACL), s. 1376-1387 12 s. (EACL 2021 - 16th Conference of the European Chapter of the Association for Computational Linguistics, Proceedings of the Conference).

### **Cross-lingual Word Embeddings beyond Zero-shot Machine Translation**

Chen, S. & Basirat, Ali, 3 nov. 2020.

### **An exploration of the encoding of grammatical gender in word embeddings**

Veeman, H. & Basirat, Ali, 5 aug. 2020.

### **Word embedding and neural network on grammatical gender -- A case study of Swedish**

Allasonnière-Tang, M. & Basirat, Ali, 28 jul. 2020.

### **Greedy Transition-Based Dependency Parsing with Discrete and Continuous Supertag Features**

Basirat, Ali & Nivre, J., 9 jul. 2020.

### **Real-valued syntactic word vectors**

Basirat, Ali & Nivre, J., 3 jul. 2020, I: Journal of Experimental and Theoretical Artificial Intelligence. 32, 4, s. 557-579 23 s.

### **Cross-lingual Embeddings Reveal Universal and Lineage-Specific Patterns in Grammatical Gender Assignment.**

Veeman, H., Allasonnière-Tang, M., Berdicevskis, A. & Basirat, Ali, 2020, s. 265-275.

### **Shifted Randomized Singular Value Decomposition**

Basirat, Ali, 26 nov. 2019.

### **Linguistic information in word embeddings**

Basirat, Ali & Tang, M., 2019, *Agents and Artificial Intelligence - 10th International Conference, ICAART 2018, Revised Selected Papers*. van den Herik, J. & Rocha, A. P. (red.). Cham: Springer Verlag, s. 492-513 22 s. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Bind 11352 LNAI).

### **Lexical and morpho-syntactic features in word embeddings a case study of nouns in Swedish**

Basirat, Ali & Tang, M., 2018, *ICAART 2018 - Proceedings of the 10th International Conference on Agents and Artificial Intelligence*. Rocha, A. P. & van den Herik, J. (red.). SCITEPRESS (Science and Technology Publications, Lda.), s. 663-674 12 s. (ICAART 2018 - Proceedings of the 10th International Conference on Agents and Artificial Intelligence, Bind 2).

### **Principal Word Vectors**

Basirat, Ali, 2018, Uppsala Universitet Acta Universitatis Upsaliensis. 159 s.

### **A bootstrapping method for development of Treebank**

Zarei, F., Basirat, Ali, Faili, H. & Mirain, M., 2 jan. 2017, I: Journal of Experimental and Theoretical Artificial Intelligence. 29, 1, s. 19-42 24 s.

### **From raw text to universal dependencies – Look, no tags!**

de Lhoneux, M., Shao, Y., Basirat, Ali, Kiperwasser, E., Stymne, S., Goldberg, Y. & Nivre, J., 2017, *Rediger CoNLL 2017 - SIGNLL Conference on Computational Natural Language Learning, Proceedings of the CoNLL 2017 Shared Task: Multilingual Parsing from Raw Text to Universal Dependencies*. Association for Computational Linguistics (ACL), s. 207-217 11 s.

### **Real-valued Syntactic Word Vectors (RSV) for Greedy Neural Dependency Parsing**

Basirat, Ali & Nivre, J., 2017, I: NoDaLiDa 2017 - 21st Nordic Conference of Computational Linguistics, Proceedings of the Conference. s. 20-28 9 s.

### **A statistical model for grammar mapping**

Basirat, Ali, Faili, H. & Nivre, J., 1 mar. 2016, I: Natural Language Engineering. 22, 2, s. 215-255 41 s.

### **Bridge the gap between statistical and hand-crafted grammars**

Basirat, Ali & Faili, H., aug. 2013, I: Computer Speech and Language. 27, 5, s. 1085-1104 20 s.

### **Automatic Enhancement of LTAG Treebank.**

Zarei, F., Basirat, Ali, Faili, H. & Mirian, M. S., 2013, s. 733-739.

### **Automatic enhancement of LTAG Treebanks**

Zarei, F., Basirat, Ali, Faili, H. & Mirian, M. S., 2013, I: International Conference Recent Advances in Natural Language Processing, RANLP. s. 733-739 7 s.

### **An Unsupervised Approach for Linking Automatically Extracted and Manually Crafted LTAGs**

Faili, H. & Basirat, Ali, 2011, *An Unsupervised Approach for Linking Automatically Extracted and Manually Crafted LTAGs*. Springer, Bind 6608. (Lecture Notes in Computer Science, Bind 6608).

### **An unsupervised approach for linking automatically extracted and manually crafted LTAGs**

Faili, H. & Basirat, Ali, 2011, *Computational Linguistics and Intelligent Text Processing - 12th International Conference, CICLing 2011, Proceedings*. PART 1 udg. s. 68-81 14 s. (Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics); Nr. PART 1, Bind 6608 LNCS).

### **Constructing linguistically motivated structures from statistical grammars**

Basirat, Ali & Faili, H., 2011, I: International Conference Recent Advances in Natural Language Processing, RANLP. s. 63-69 7 s.

### **Augmenting the automated extracted tree adjoining grammars by semantic representation**

Faili, H. & Basirat, Ali, 2010, *Proceedings of the 6th International Conference on Natural Language Processing and Knowledge Engineering, NLP-KE, 2010*. 5587766. (Proceedings of the 6th International Conference on Natural Language Processing and Knowledge Engineering, NLP-KE 2010).

## **Aktiviteter**

### **Association for Computational Linguistics (Ekstern organisation)**

Basirat, Ali (Medlem)  
2021

### **Nordic Language Processing Laborator (NLPL) (Ekstern organisation)**

Basirat, Ali (Medlem)

