# Kristina Gulordava

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Postdoc Researcher, University Pompeu Fabra, Barcelona, Spain

Feb 2018 - present

ERC project: A distributional Model of Reference to Entities (PI: Gemma Boleda)

Research topics: multi-modal neural network models of language acquisition; fast mapping and unsupervised learning; computational syntax

## **EDUCATION**

PhD in Linguistics, University of Geneva, Switzerland

June 2018

Thesis: Word order variation and dependency length minimisation: A computational cross-linguistic approach (supervisor: Paola Merlo)

MSc in Informatics, University of Lugano, Switzerland

July 2010

Concentration in Intelligent Systems

Magna cum laude 8.94/10

Thesis: Empirical evaluation of credal classifiers (supervisor: Marco Zaffalon)

BSc in Applied Mathematics and Informatics

Sept 2008

State Polytechnical University of St. Petersburg, Russia

4.7/5

#### EXPERIENCE

Research

Research intern Sept 2017 – Dec 2017

Facebook AI Research, Paris, France (advisor: Marco Baroni)

Visiting student Sept 2016 – Feb 2017

ILCC, University of Edinburgh, UK (advisor: Frank Keller)

Visiting student Sept 2014 – Jan 2015

INRIA Alpage, University Paris Diderot 7, France (advisor: Benoit Crabbé)

Research assistant Oct 2012 – Sept 2013

University of Geneva, Department of Linguistics, Geneva, Switzerland

SNSF project: The Grammatical Basis of Language Frequencies (PI: Paola Merlo)

Research intern June 2011 – Sept 2011

Institute of Cognitive Sciences and Technology of CNR, Laboratory for Applied Ontology, Trento, Italy

Project: Using discourse relations to enrich FrameNet (advisor: Laure Vieu)

Research intern July 2010 – Sept 2010

Fondazione Bruno Kessler, Human Language Technologies Group, Trento, Italy Project: Improving word sense disambiguation for Italian (advisor: Claudio Giuliani)

TEACHING

Teaching assistant

Sept 2015 - Aug 2016

Programming and Algorithms (BA program), Department of Linguistics, University of Geneva

Teaching assistant Feb 2013 – Aug 2015

Empirical methods in language processing (MSc program), Department of Informatics, University of Geneva

Teaching assistant Feb 2009 – June 2009

Calculus I (BSc program), Faculty of Informatics, University of Lugano

SOFTWARE DEVELOPMENT

Java developer Feb 2008 – Sept 2008

SwiftTeams, St.Petersburg, Russia

Java developer intern June 2007 – Aug 2007

OpenWay Group Company, Russian IT department, St.Petersburg, Russia

#### Publications

#### Journals & Proceedings

How to represent a word and predict it, too: Improving tied architectures for language modelling. Accepted at EMNLP 2018 (short)

Kristina Gulordava, Laura Aina, Gemma Boleda

Computational Quantitative Syntax: The Case of Universal 18. Accepted for LSRL 47 upcoming volume Kristina Gulordava, Paola Merlo

Colorless Green Recurrent Networks Dream Hierarchically. NAACL 2018 pdf

Kristina Gulordava, Piotr Bojanowski, Edouard Grave, Tal Linzen, Marco Baroni

Multi-lingual Dependency Parsing Evaluation: a Large-scale Analysis of Word Order Properties using Artificial Data. TACL 2016 pdf

Kristina Gulordava, Paola Merlo

Discontinuous Verb Phrases in Parsing and Machine Translation of English and German. LREC 2016 pdf Sharid Loáiciga, Kristina Gulordava

Dependency length minimisation effects in short spans: a large-scale analysis of adjective placement in complex noun phrases. ACL 2015 (short) pdf

Kristina Gulordava, Paola Merlo, Benoit Crabbé

Structural and lexical factors in adjective placement in complex noun phrases across Romance languages. CONLL 2015 pdf

Kristina Gulordava, Paola Merlo

Diachronic Trends in Word Order Freedom and Dependency Length in Dependency-Annotated Corpora of Latin and Ancient Greek. International Conference on Dependency Linguistics 2015 pdf Kristina Gulordava, Paola Merlo

A distributional similarity approach to the detection of semantic change in the Google Books Ngram corpus. Proceedings of the GEMS 2011 Workshop pdf

Kristina Gulordava, Marco Baroni

### PEER-REVIEWED ABSTRACTS

Incremental Generative Model of Sentence Linearization and Word Order Variation. CMCL Workshop at EACL 2017

Kristina Gulordava, Frank Keller

Lexico-semantic factors in the variation of adjective placement in complex noun phrases in Italian. DSALT Workshop 2016

Kristina Gulordava

 $A\ large\text{-}scale\ corpus\text{-}based\ study\ of\ NP\text{-}internal\ word\ order\ variation\ for\ several\ languages.}\ 8\text{th\ Days\ of\ Swiss\ Linguistics\ }2014$ 

Kristina Gulordava, Paola Merlo

# Talks & Presentations

URLing research seminar, University Pompeu Fabra Computational models of word order variation and dependency length minimisation effects	May 2017	
ProbModels group seminar, University of Edinburgh Incremental Generative Model of Sentence Linearization and Word Order Variation	Jan 2017	
ProbModels group seminar, University of Edinburgh Oct 2016 Quantifying and analysing word order variability and dependency length for multi-lingual parsing evaluation		
LangLunch, University of Edinburgh Variation of adjective placement in complex noun phrases in Italian	Oct 2016	
Linguistic Department seminar, University of Geneva Nov 2015 Quantitative analysis of Dependency Length Minimisation effects based on multilingual treebanks		
Research seminar UFR de Linguistique, University Paris Diderot 7 Quantitative patterns of NP-internal word order variation: a cross-linguistic corpus-based ap	Jan 2015 proach	
FBK research center (Human Language Technologies group), Trento, Italy Credal classifiers and their empirical evaluation	Sept 2010	

## Grants and Awards

Swiss National Science Foundation Doc. Mobility grant	2016
Labex EFL (Paris, France) Mobility grant	2014
Swiss National Science Foundation grant to participate in the LSA Summer Institute	2013
Department of Linguistics scholarship for outstanding students, University of Geneva	2011, 2012
'Universita a colori' fellowship for international graduate students, University of Trento	2010
Fellowship for outstanding Master students, University of Lugano	2008
2nd diploma, City Olympiad in Physics, St-Petersburg	2002
3rd diploma, City Olympiad in Mathematics, St-Petersburg	2001

## TECHNICAL SKILLS

Programming languages:

• Python, R (current); Java, C (previous experience)

Data analysis and Machine Learning including:

• Neural Networks (PyTorch), Mixed-Effect statistical models (R)

Natural Language Processing techniques, tools and resources:

- Dependency treebanks (Universal Dependencies) and dependency parsing
- Stanford CoreNLP, Moses

## LANGUAGES

Russian (native), English, Italian, French (fluent), Spanish (passive)

# Additional experience

CUSO Schools in Statistics, Les Diablerets, Switzerland	Feb 2015, Sept 2015	
Instructional Skills Workshop, University of Geneva, Switzerland	Sept 2014	
CRUS Winter Schools in Language and Cognition, Macolin, Switzerland	Dec 2013, Dec 2015	
LSA Summer Institute, University of Michigan, Ann Arbor (MI), USA	June 2013 – July 2013	
Postgraduate Certificate in Linguistics, University of Geneva, Switzerland	Sept 2011 – Oct 2012	
Master in Human Language Technologies, University of Trento, Italy	Sept 2010 – July 2011	
PDMI Computer Science Club, Mathematical Institute of Russian Academy of Science, St. Petersburg, Russia  Sept 2007 – July 2008		