

# Maria Ryskina

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<https://ryskina.github.io>

## ACADEMIC POSITIONS

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**Massachusetts Institute of Technology**  
*Postdoctoral Associate, McGovern Institute for Brain Research*  
· Advisors: Evelina Fedorenko, Kyle Mahowald

Cambridge, MA  
2022 – present

## EDUCATION

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**Carnegie Mellon University**  
*Ph.D., Language and Information Technologies*  
· Dissertation: Learning Computational Models of Non-Standard Language.  
· Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick

Pittsburgh, PA  
2016 – 2022

**Massachusetts Institute of Technology**  
*Visiting Graduate Student, CSAIL Infolab*

Cambridge, MA  
Sep 2015 – Jan 2016

**Skolkovo Institute of Science and Technology**  
*M.Sc., Information Technology, with honors*

Moscow, Russia  
2014 – 2016

**Moscow Institute of Physics and Technology**  
*M.Sc., Applied Mathematics and Physics, with honors*  
*B.Sc., Applied Mathematics and Physics, with honors*

Moscow, Russia  
2014 – 2016  
2010 – 2014

## INDUSTRY EMPLOYMENT

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**DiDi Labs** [www.didiglobal.com/science/ailabs](http://www.didiglobal.com/science/ailabs)  
*Research Intern*

Los Angeles, CA / Remote  
May 2020 – Aug 2020

- Reinforcement learning for training task-oriented dialog agents in a self-play setting.
- Probing integer embeddings learned from mathematical data for number-theoretic knowledge.
- Mentor: Kevin Knight

**JSC Antiplagiat** [www.antiplagiat.ru](http://www.antiplagiat.ru)  
*Research Intern*

Moscow, Russia  
Jun 2015 – Aug 2015

- Evaluating topic modeling-based corpus search methods for plagiarism detection.

## AWARDS AND HONORS

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**Best Paper Award, ACM Conference on Fairness, Accountability, and Transparency**  
Awarded for “Queer In AI: A Case Study in Community-Led Participatory AI”

2023

**Diverse Intelligences Summer Institute Fellowship**

2021

Templeton World Charity Foundation

Skoltech Academic Excellence Award, Russia

2016

State Academic Scholarship, Russia

2013 – 2014

Foundation for the Development of Innovative Education Scholarship, Russia

2010 – 2012

## PUBLICATIONS

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\* denotes equal contribution

### CONFERENCE AND WORKSHOP PAPERS

#### [Queer In AI: A Case Study in Community-Led Participatory AI](#)

Organizers of Queer in AI, including M. Ryskina

*ACM Conference on Fairness, Accountability, and Transparency (FAccT)*, 2023.

#### [UniMorph 4.0: Universal Morphology](#)

K. Batsuren\*, O. Goldman\* *et al.*, including M. Ryskina

*Language Resources and Evaluation Conference (LREC)*, 2022.

#### [Learning Mathematical Properties of Integers](#)

M. Ryskina, K. Knight

*BlackboxNLP Workshop on Analyzing and Interpreting Neural Networks for NLP*, 2021.

#### [SIGMORPHON 2021 Shared Task on Morphological Reinflection: Generalization Across Languages](#)

T. Pimentel\*, M. Ryskina\* *et al.*

*SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*, 2021.

#### [Comparative Error Analysis in Neural and Finite-state Models for Unsupervised Character-level Transduction](#)

M. Ryskina, E. Hovy, T. Berg-Kirkpatrick, M. R. Gormley

*SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology*, 2021.

#### [NoiseQA: Challenge Set Evaluation for User-Centric Question Answering](#)

A. Ravichander, S. Dalmia, M. Ryskina, F. Metze, E. Hovy, A. W. Black

*Conference of the European Chapter of the Association for Computational Linguistics (EACL)*, 2021.

#### [Phonetic and Visual Priors for Decipherment of Informal Romanization](#)

M. Ryskina, M. R. Gormley, T. Berg-Kirkpatrick

*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2020.

#### [Where New Words Are Born: Distributional Semantic Analysis of Neologisms and Their Semantic Neighborhoods](#)

M. Ryskina, E. Rabinovich, T. Berg-Kirkpatrick, D. R. Mortensen, Y. Tsvetkov

*Annual Meeting of the Society for Computation in Linguistics (SCiL)*, 2020.

#### [OPERA: Operations-oriented Probabilistic Extraction, Reasoning, and Analysis \(2019\)](#)

E. Hovy *et al.*, including M. Ryskina

*Text Analysis Conference (TAC)*, 2019.

### **OPERA: Operations-oriented Probabilistic Extraction, Reasoning, and Analysis (2018)**

E. Hovy *et al.*, including M. Ryskina  
*Text Analysis Conference (TAC)*, 2018.

### **Automatic Compositor Attribution in the First Folio of Shakespeare**

M. Ryskina, H. Alpert-Abrams, D. Garrette, T. Berg-Kirkpatrick  
*Annual Meeting of the Association for Computational Linguistics (ACL)*, 2017.

## THESES

### **Learning Computational Models of Non-Standard Language**

M. Ryskina  
*Ph.D. dissertation*, Carnegie Mellon University, 2022.

## OTHER PUBLICATIONS

### **State-of-the-art generalisation research in NLP: a taxonomy and review**

D. Hupkes *et al.*, including M. Ryskina  
*Preprint*, 2022.

### **Two Approaches to Building Collaborative, Task-Oriented Dialog Agents through Self-Play**

A. Arkhangorodsky, S. Fang, V. Knight, A. Nagesh, M. Ryskina, K. Knight  
*Preprint*, 2021.

### **Number embedding application system**

K. Knight, M. Ryskina  
US Patent 11,460,982, 2022.

### **Self-play to improve task-oriented dialog systems and methods**

K. Knight, M. Ryskina, A. Arkhangorodsky, A. Nagesh, S. Fang  
US Patent Application 17/104,137, 2022.

### **Queer in AI**

Organizers of Queer in AI, including M. Ryskina  
*XRDS: Crossroads, The ACM Magazine for Students*, 28(4), 2022.

## INVITED TALKS

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### **Learning Computational Models of Non-Standard Language**

LCC Lab, University of Toronto  
EvLab, Massachusetts Institute of Technology  
CLunch Seminar Series, University of Pennsylvania  
MCQLL Lab, McGill University

Feb – Mar 2022

### **Romanization with Friends: Deciphering Informally Romanized Text**

NLP With Friends Seminar Series

Nov 2021

### **Unsupervised Decipherment of Informal Romanization**

NLPhD Speaker Series, Saarland University

Jun 2021

## TEACHING

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TA and Guest lecturer for CMU 11-711: Algorithms for NLP. Instructor: Yulia Tsvetkov.	Fall 2018
TA for CMU 11-711: Algorithms for NLP. Instructor: Taylor Berg-Kirkpatrick.	Fall 2017

## SERVICE

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### Organizing and professional service:

- Co-organizer for the Queer in AI workshop at NAACL 2022, ACL 2023
- Technical advisory group member for OpenITI Arabic-script OCR Catalyst Project, 2022
- Co-organizer for SIGMORPHON Shared Task 0: Generalization in Morphological Inflection Generation, 2021
- Co-host for SIGTYP Lecture Series, 2021

### Reviewing:

- Journals: Cognitive Science (2021), Review of General Psychology (2021)
- Conferences: ACL (2021, 2023), EACL (2023), ACL Rolling Review (2021–2022), EMNLP (2021–2022), CoNLL (2020–2021); as secondary reviewer: EACL (2021), EMNLP (2018, 2020)
- Workshops: SIGMORPHON (ACL 2023), CAWL (ACL 2023), Queer in AI (NAACL 2022), SRW (ACL 2020–2021, NAACL 2021, AACL 2020), HAMLETS (NeurIPS 2020)

### Volunteering and community service:

- Co-organizer for oSTEM/Queer in AI Graduate School Application Review and Fee Aid Programs, 2021–2023
- Student reviewer for CMU LTI Graduate Admissions, 2021
- Mentor for CMU SCS Graduate Application Support Program, 2020–2021
- Mentor for CMU LTI Peer Mentoring Program for new graduate students, 2021
- Mentor for CMU AI Mentoring Program for undergraduates from underrepresented groups, 2020