

# Maria Ryskina

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## EDUCATION

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<b>Carnegie Mellon University</b> <i>Ph.D. student, Language and Information Technologies</i> Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick	Pittsburgh, PA 2016 – present
<b>Skolkovo Institute of Science and Technology</b> <i>M.Sc., Information Technology, with honors</i>	Moscow, Russia 2014 – 2016
<b>Moscow Institute of Physics and Technology</b> <i>M.Sc., Applied Mathematics and Physics, with honors</i> <i>B.Sc., Applied Mathematics and Physics, with honors</i>	Moscow, Russia 2014 – 2016 2010 – 2014

## RESEARCH

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<b>Carnegie Mellon University</b> <i>Graduate Research Assistant</i> <ul style="list-style-type: none"><li>· Doctoral research: learning computational models of non-standard orthographic, morphological, and lexical choices in written language, viewed both as user-specific idiosyncrasies and through the lens of large-scale language change.</li><li>· Advisors: Matthew R. Gormley, Eduard Hovy, Taylor Berg-Kirkpatrick</li></ul>	Pittsburgh, PA 2016 – present
<b>Massachusetts Institute of Technology</b> <i>Visiting Graduate Student, CSAIL Infolab</i> <ul style="list-style-type: none"><li>· Master's thesis: generating visual representations of text for entailment detection.</li><li>· Mentors: Boris Katz, Andrei Barbu</li></ul>	Cambridge, MA Sep 2015 – Jan 2016
<b>Moscow Institute of Physics and Technology &amp; Dorodnicyn Computing Centre of RAS</b> <i>Undergraduate Student, Intelligent Systems Subdept.</i> <ul style="list-style-type: none"><li>· Undergraduate thesis: regularizing topic models for improving stability and interpretability.</li><li>· Advisor: Konstantin Vorontsov</li></ul>	Moscow, Russia 2013 – 2014

## WORK EXPERIENCE

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<b>DiDi Labs</b> <a href="http://www.didi-labs.com">www.didi-labs.com</a> <i>Research Intern</i> <ul style="list-style-type: none"><li>· Reinforcement learning for training task-oriented dialog agents in a self-play setting.</li><li>· Probing integer embeddings learned from mathematical data for number-theoretic knowledge.</li><li>· Mentor: Kevin Knight</li></ul>	Remote May 2020 – Aug 2020
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- Evaluating topic search quality in the Russian State Library archives.

## AWARDS AND HONORS

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Diverse Intelligences Summer Institute Fellowship Templeton World Charity Foundation	2021
Skoltech Academic Excellence Award, Russia	2016
State Academic Scholarship for research achievements, Russia	2013 – 2014
Abramov-Frolov Scholarship for academic achievements, Russia	2010 – 2012

## PUBLICATIONS

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\* denotes equal contribution

### [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.

### [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.

## INVITED TALKS

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<b>Learning Computational Models of Non-Standard Language</b> MCQLL Lab Meeting, McGill University CLunch Seminar Series, University of Pennsylvania	Feb 2022
<b>Romanization with Friends: Deciphering Informally Romanized Text</b> NLP With Friends Seminar Series	Nov 2021
<b>Unsupervised Decipherment of Informal Romanization</b> NLPhD Speaker Series, Saarland University	Jun 2021
<b>Informal Romanization across Languages and Scripts</b> SIGTYP Lecture Series	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:**

- 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 Rolling Review (2021–2022), ACL (2021), EMNLP (2021), CoNLL (2020–2021); as secondary reviewer: EACL (2021), EMNLP (2018, 2020)
- Workshops: \*ACL SRW (2020–2021), NeurIPS HAMLETS (2020)

### **Volunteering:**

- Co-organizer for oSTEM/Queer in AI Graduate School Application Review and Fee Aid Programs, 2021
- 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