





# Ekaterina Artemova

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## Academic Positions

### Postdoctoral Researcher

2019-present

*HSE University, Moscow, Russia*

**Topics:** Natural Language Processing

- Analysing and interpreting neural networks
- Benchmarking in NLP
- Natural language understanding
- NLP for social sciences

### Senior Lecturer

2016-present

*HSE University, Moscow, Russia*

**Courses:** Deep Learning for NLP

## Education

### PhD in Mathematical Models, Numerical Methods and Integrated Software

Nov, 2016

*Institute of Systems Analysis Russian Academy of Sciences, Moscow, Russia*

**Topic:** Character-level language models for morphologically-rich languages

**Advisor:** Prof., Dr. Boris Mirkin

### BSc & MSc in Computer Science

2006-2012

*HSE University, Moscow, Russia*

## Funding

### Cross-lingual Knowledge Base Construction and Maintenance

2019-2022

*Russian Scientific Fund Grant, PI: Dr. Natalia Loukachevitch*

**Role:** lead a team of MSc and PhD students to develop information extraction models

### Next-generation computational linguistics platform for the Russian language digital recording

2019-2022

*Russian Ministry of Education and Science, PI's: Dr. Andrey Sobolevsky, Dr. Anastasia Bonch-Osmolovskaya*

**Role:** lead a team of MSc and PhD students to create novel datasets in Russian

### Industrial fellowship

2020-2022

*Huawei Noah's Ark Lab*

**Role:** develop models for dialogue systems

## Selected Peer-Reviewed Publications

- [1] L. Kushnareva, D. Cherniavskii, V. Mikhailov, **Artemova, E.**, S. Barannikov, A. Bernstein, I. Piontkovskaya, D. Piontkovski, and E. Burnaev, "Artificial Text Detection via Examining the Topology of Attention Maps", in Proceedings of the 2021 Conference on Empirical Methods in Natural Language Processing (2021), pp. 635–649.
- [2] A. Podolskiy, D. Lipin, A. Bout, **Artemova, E.**, and I. Piontkovskaya, "Revisiting Mahalanobis Distance for Transformer-Based Out-of-Domain Detection", in Proceedings of the AAAI Conference on Artificial Intelligence, Vol. 35, 15 (2021), pp. 13675–13682.
- [3] A. Shelmanov, D. Puzyrev, L. Kupriyanova, D. Belyakov, D. Larionov, N. Khromov, O. Kozlova, **Artemova, E.**, D. V. Dylov, and A. Panchenko, "Active Learning for Sequence Tagging with Deep Pre-trained Models and Bayesian Uncertainty Estimates", in Proceedings of the 16<sup>th</sup> Conference of the European Chapter of the Association for Computational Linguistics (2021), pp. 1698–1712.
- [4] P. Burnyshev, V. Malykh, A. Bout, **Artemova, E.**, and I. Piontkovskaya, "Single example can improve zero-shot data generation", in Proceedings of the 14<sup>th</sup> International Conference on Natural Language Generation (2021), pp. 201–211.

- [5] N. Loukachevitch, **Artemova, E.**, T. Batura, P. Braslavski, I. Denisov, V. Ivanov, S. Manandhar, A. Pugachev, and E. Tutubalina, “NEREL: A Russian Dataset with Nested Named Entities, Relations and Events”, in Proceedings of the International Conference on Recent Advances in Natural Language Processing (RANLP 2021) (2021), pp. 876–885.
- [6] E. Taktasheva, V. Mikhailov, and **Artemova, E.**, “Shaking Syntactic Trees on the Sesame Street: Multilingual Probing with Controllable Perturbations”, in Proceedings of the 1<sup>st</sup> Workshop on Multilingual Representation Learning (2021), pp. 191–210.
- [7] V. Malykh, K. Chernis, **Artemova, E.**, and I. Piontkovskaya, “SumTitles: a Summarization Dataset with Low Extractiveness”, in Proceedings of the 28<sup>th</sup> International Conference on Computational Linguistics (2020), pp. 5718–5730.
- [8] V. Logacheva, D. Teslenko, A. Shelmanov, S. Remus, D. Ustalov, A. Kutuzov, **Artemova, E.**, C. Biemann, S. P. Ponzetto, and A. Panchenko, “Word Sense Disambiguation for 158 Languages using Word Embeddings Only”, English, in Proceedings of the 12<sup>th</sup> Language Resources and Evaluation Conference (2020), pp. 5943–5952.
- [9] T. Shavrina, A. Fenogenova, E. Anton, D. Shevelev, **Artemova, E.**, V. Malykh, V. Mikhailov, M. Tikhonova, A. Chertok, and A. Evlampiev, “RussianSuperGLUE: A Russian Language Understanding Evaluation Benchmark”, in Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP) (2020), pp. 4717–4726.
- [10] V. Mikhailov, E. Taktasheva, E. Sigdel, and **Artemova, E.**, “RuSentEval: Linguistic Source, Encoder Force!”, in Proceedings of the 8<sup>th</sup> Workshop on Balto-Slavic Natural Language Processing (2021), pp. 43–65.
- [11] V. Mikhailov, O. Serikov, and **Artemova, E.**, “Morph Call: Probing Morphosyntactic Content of Multilingual Transformers”, in Proceedings of the Third Workshop on Computational Typology and Multilingual NLP (2021), pp. 97–121.
- [12] **Chernyak, E.**, “An Approach to the Problem of Annotation of Research Publications”, in Proceedings of the Eighth ACM International Conference on Web Search and Data Mining (2015), pp. 429–434.

## Teaching Experience

### Deep Learning for Natural Language Processing

2016-present

*HSE University, Moscow, Russia*

**Courses** for undergraduate students in CS and computational linguistics

### MSc and BSc students supervisor

2016-present

*HSE University, Moscow, Russia*

#### Selected topics:

- Adversarial attacks on cross-lingual NLU models
- Hallucination detection in machine translation models
- Neural accent detection in Russian
- Binary question-answering dataset collection

### MOOC Deep learning for Natural Language Processing

2021

*OpenEdu.ru* ( [\[link\]](#) )

## Community Service

**Reviewer:** ACL, EMNLP, EACL, NAACL, RANLP, LREC

since 2020

**Workshop organizer:** The First Workshop on Efficient Benchmarking in NLP [[nlp-power.github.io](https://nlp-power.github.io)]

ACL 2022

#### Shared tasks organizer:

Dialogue, 2020-2022

1. Artificial Text Detection
2. Sentence Simplification Evaluation
3. Relation Extraction for Business

 RuATD

 RSSE

 RuReBUS

## Employment

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<b>Research Engineer</b> <i>Sber, Moscow, Russia</i> <b>Tasks:</b> built models for named entity recognition and topic modelling	<b>2018-2019</b>
<b>Research Intern</b> <i>Philips Lab, Moscow, Russia</i> <b>Tasks:</b> built models for information extraction from EHR	<b>2017-2018</b>
<b>Research Intern</b> <i>TU Darmstadt, Germany, Supervisor: Nils Reimers</i> <b>Tasks:</b> built models for few-shot event extraction	<b>2016</b>







## References

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- Dr. Pavel Braslavskii, PBraslavski@hse.ru, *HSE University, Moscow, Russia*
- Dr. Prof. Alexander Panchenko, A.Panchenko@skoltech.ru, *Skoltech, Moscow, Russia*
- Dr. Prof. Preslav Nakov, preslav.nakov@gmail.com, *Qatar Computing Research Institute (QCRI), HBKU*

## Personal Information

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-  **Languages:**  Russian (native),  English (fluent),  German (fluent),  Hebrew (basic)
-  **Hobbies:** swimming, biking, watching movies, reading, visiting museums