

# Diachronic Word Embeddings in Search of Semantic Change: a Review

Alexey Artemov<sup>1,2</sup> and Sergey Aksenov<sup>3</sup>

<sup>1</sup> National Research University — Higher School of Economics

<sup>2</sup> Yandex LLC

<sup>3</sup> Moscow Institute of Physics and Technology

**Abstract.** Understanding how words change their meanings would allow the construction of language and cultural evolution models and real-world applications such as event detection, summarization, and detection of misinformation. As the interest for discovering semantic shifts in word meaning persists, distributed representations of words emerge as a tool for change detection, extraction, and visualization. In this talk, we review some of the recent applications of word embedding models in semantic change detection problems. We show that word embedding models form a solid foundation for change detection, isolation, and characterization in word semantics, as well as a promising direction for further research.

**Keywords:** word embeddings, semantic changes, diachronic corpora