

Report on the content of the dissertation

Дунин-Барковский Виталий Львович

(name of the committee member)

Candidate's full name: Le The Anh

Dissertation title: "Deep Neural Network Models for Sequence Labeling and Coreference Tasks"

Specialty: 05.13.01 - System analysis, control theory, and information processing (information and technical systems)

Scientific degree for which the dissertation is submitted: Candidate of technical sciences

Date of the defense: 18.11.2020

The evaluation of the dissertation in accordance with the Regulations on the award of scientific degrees of candidates and doctors of sciences at MIPT (hereinafter referred to as Regulations):

1. Relevance of the dissertation topic:

Le The Anh's dissertation focuses on addressing two Natural Language Processing (NLP) tasks including Sequence Labeling and Coreference Resolution. In the field of Machine Learning, Sequence Labeling is a kind of pattern recognition task involving the assignment of a label to each element in a given sequence. In NLP, many tasks can be considered as sequence labeling tasks. Typical tasks include Part of Speech (POS), Chunking, Word Segmentation, as well as Named Entity Recognition (NER). Before the advent of Deep Learning, traditional approaches were based on hand-crafted features which are costly and time-consuming, and inflexible. Recently, thanks to the advancement of deep neural network models, hand-crafted features are no longer needed. The model performance is, therefore, accelerated to a completely high level. In the dissertation, the author solves Sequence Labeling task by combining deep neural networks to generate good semantic and syntactic word vector representation.