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Abstract



Prof. Dzhavdet Suleymanov

Kazan Federal University, Russia
dvdt.slt@gmail.com

Multilingual Software and Linguistic Resources for Language Interaction and Intelligent Knowledge Processing Systems

The report presents our regional experience in the development of software tools and linguistic resources for the creation of multilingual databases and intelligent systems for processing knowledge in natural language. In particular, a multipurpose Internet portal of Turkic languages is described, which is used as an international web platform that allows scientists to create electronic corpora in their languages, carry out comparative studies of languages. Besides, researchers can use these knowledge bases in education as well as a multilingual information and reference system for Turkic languages. The portal was created on the basis of the structural-parametric functional model of the Turkic morpheme. The software contains special linguistic databases, which describe language units of Turkic languages at different levels, namely morphological, syntactic, semantic ones.

This report also reveals some methods and semantic grammatical models that are used to create intelligent testing systems for the trainee's responses entered in an arbitrary form, which is especially important in connection with the global processes of active implementation of digital education.

Further, we present some approaches to solving another more relevant and promising task, namely, the problem of studying the potential of natural languages in the development of artificial intelligence technologies as well as creation of intelligent programming systems based on lexical and grammatical models of a natural language.

In conclusion, information is provided on the TurkLang Annual International Conference on Computer Processing of Turkic Languages with the participation of representatives of almost all major Turkic languages. This conference is an effective platform for scientists and specialists from different regions and countries to jointly solve problems of studying, preserving and using the Turkic languages in cyberspace.

Brief Bio :

Dzhavdet Suleymanov - Dr., Professor, the Academician of the Tatarstan's Academy of Sciences, Scientific Supervisor of Research Institute of Applied Semiotics of the Academy of Sciences of Republic of Tatarstan (Russian Federation), Chief of the Tatarstan department of Russian Association of Artificial Intelligence.

Research interests: Artificial Intelligence, Computational linguistics, Turkic languages, e-Education, Natural language processing systems.