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Computational Rhetoric – Rhetorical Figures in Semantic Networks, Domain  
Ontologies and beyond

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Research related to rhetorical figures and their automatic processing for the Serbian language started with building the Ontology of Rhetorical Figures (Mladenović & Mitrović, 2013) which gives a formal description of 98 rhetorical figures and allows for their automatic processing. An overview of the way this ontology was built and evaluated will be given – OWL2 language was used for modelling in Protégé 4.2 tool, and SPARQL queries were used for validation. The ontology represents each rhetorical figure according to the way it is formed, the linguistic elements which participate in its formation, the part of text it affects etc. The goal of this ontological presentation was to differentiate between the figures in a way that would allow for their usage by a machine (i.e. computer program) or a human trying to annotate a corpus of literary texts.

Lexico-semantic network WordNet (Fellbaum, 1998) has recently been enhanced with new semantic relations specificOf/specifiedBy between Noun and Adjective synsets, based on the Simile rhetorical figure (Mladenović, et al., 2016) – an outline of this research will be given in the poster presentation (an automatic method of extracting relevant Adjective-Noun constructs related to the Simile rhetorical figure via crowdsourcing was developed).

Automatic detection of irony in Twitter is the newest attempt in using computational methods for rhetorical language research. A corpus of tweets in Serbian was collected using specific rules and high precision of automatic recognition of ironic expressions in those tweets was achieved using a specific set of features in the process of machine learning, i.e. a classification task (Mladenović, et al., 2016).

## References

- Fellbaum, C., 1998. *WordNet: An Electronic Lexical Database*. Cambridge: MIT Press.
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Mladenović, M. & Mitrović, J., 2013. *Ontology of Rhetorical Figures for Serbian*. s.l., Springer-Verlag Berlin Heidelberg, pp. 383-393.