Going Beyond Shallow Semantics (invited talk)

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Abstract

Shallow semantic analyzers, such as semantic role labeling and sense tagging, are increasing in accuracy and becoming commonplace. However, they only provide limited and local representations of local words and individual predicate-argument structures. This talk will address some of the current challenges in producing deeper, connected representations of eventualities. Available resources, such as VerbNet, FrameNet and TimeBank, that can assist in this process will also be discussed, as well as some of their limitations.

Speaker's Bio

Martha Palmer is a Full Professor at the University of Colorado with joint appointments in Linguistics and Computer Science and is an Institute of Cognitive Science Faculty Fellow. She recently won a Boulder Faculty Assembly 2010 Research Award. Beginning with her dissertation work at Edinburgh and her first job as a Research Scientist at Unisys, her research has been focused on trying to capture the meanings of words in representations that the computer can use to build up meanings of complex sentences and documents. These representations can in turn be used to improve the computer's ability to perform question answering, information retrieval, and machine translation. Current approaches rely on techniques for applying supervised machine learning algorithms, which use vast amounts of annotated training data. Therefore, she and her students, both at Colorado and previously at the University of Pennsylvania, are engaged in providing data with word sense tags and semantic role labels for English, Chinese, Arabic, and Hindi, funded by DARPA and NSF. They also use machine learning algorithms to develop automatic sense taggers and semantic role labelers, and to extract bilingual lexicons from parallel corpora. A more recent focus is the application of these methods to biomedical journal articles and clinical notes, funded by NIH. She is a co-editor for both the Journal of Natural Language Engineering and LiLT, Linguistic Issues in Language Technology. She is a past President of the Association for Computational Linguistics, past Chair of SIGLEX and SIGHAN, and is currently the Director of the 2011 Linguistics Institute to be held in Boulder, Colorado.

Proceedings of the ACL 2011 Workshop on Relational Models of Semantics (RELMS 2011), page 1,
Portland, Oregon, USA, June 23, 2011.