"Computational Models of Natural Language Pragmatics"

Current natural language processing (NLP) systems are, almost without exception, still able to deal only with restricted, simplified, language. While researchers in natural language are now beginning to produce systems with real-world utility, NLP systems are still challenged by basic problems associated with analyzing syntax and determining semantic content. A major component of language, the pragmatics of human communication, remains understudied and under-represented in current computational systems. But, in the real world, the pragmatics of natural language---complex nuances of language involving exact choices of words, syntactic arrangement, and discourse structure---carry a good deal of the meaning of a text or utterance. If NLP systems are to be truly effective in everyday use, they must be able to handle much more of these complexities of real-world language.

In this talk, I will describe three stages of problems that we have addressed involving aspects of pragmatics in natural language systems: preserving style in machine translation, generating finely tailored documents, and classifying the rhetorical purpose of citations in scientific writing. Through this progression, various views of natural language pragmatics will be highlighted, together with the research issues raised in Computational Linguistics and Artificial Intelligence.