Keynote Address: Syntactic and Semantic Structure in Web Search Queries
Dr Rosie Jones, Yahoo!

Abstract: Traditionally, information retrieval examines the search query in isolation: a query is used to retrieve documents, and the relevance of the documents returned is evaluated in relation to that query. The query itself is assumed to consist of a bag of words, without any grammatical structure. However, queries can also be shown to exhibit grammatical structure, often consisting of telegraphic noun-phrases. In addition, users typically conduct web and other types of searches in sessions, issuing a query, examining results, and then re-issuing a modified query to improve the results. We describe the properties of real web search sessions, and show that users conduct searches for both broad and finer grained tasks, which can be both interleaved and nested. Reformulations reflect many relationships, including synonymy, hypernymy and hyponomy. We show that user search reformulations can be mined to identify related terms, and that we can identify the boundaries between tasks with greater accuracy than previous methods.