The Search Duel: 
A Response to a Strong Ranker

Peter Izsak

Advisor: Prof. Oren Kurland

How can a search engine with a relatively weak relevance ranking function compete with a search engine that has a much stronger (i.e., more effective) function? This dual challenge, which to the best of our knowledge has not been addressed in previous work, entails an interesting bi-modal utility function for the weak search engine. That is, the goal is to produce in response to a query a document result list whose effectiveness (in terms of relevance) does not fall much behind that of the strong search engine; and, which is quite different than that of the strong search engine. We present a per-query algorithmic approach that leverages on fundamental information retrieval principles such as pseudo-feedback-based relevance modeling. We demonstrate the merits of our approach using TREC data.