

# Discovering and Ranking Web Services with BASIL: A Personalized Approach with Biased Focus

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## ABSTRACT

In this paper we present a personalized web service discovery and ranking technique for discovering and ranking relevant data-intensive web services. Our first prototype – called BASIL – supports a *personalized* view of data-intensive web services through source-biased focus. BASIL provides service discovery and ranking through source-biased probing and source-biased relevance metrics. Concretely, the BASIL approach has three unique features: (1) It is able to determine in very few interactions whether a target service is relevant to the given source service by probing the target with very precise probes; (2) It can evaluate and rank the relevant services discovered based on a set of source-biased relevance metrics; and (3) It can identify interesting types of relationships for each source service with respect to other discovered services, which can be used as value-added metadata for each service. We also introduce a performance optimization technique called source-biased probing with focal terms to further improve the effectiveness of the basic source-biased service discovery algorithm. The paper concludes with a set of initial experiments showing the effectiveness of the BASIL system.