Collective disambiguation in entity linking based on topic coherence in semantic graphs

**Titulo**  Collective disambiguation in entity linking based on topic coherence in semantic graphs

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**Abstract**  Entity Linking (EL) consists of determining the entities that best represent the mentions in a document. Mentions can be very ambiguous and can refer to different entities in different contexts. In this paper, we present ABACO, a semantic annotation system for Entity Linking (EL) which addresses name ambiguity assuming that the entity that annotates a mention should be coherent with the main topics of the document. ABACO extracts a sub-graph from a knowledge base which interconnects all the candidate entities to annotate each mention in the document. Candidate entities are scored according to their degree of centrality in the knowledge graph and their textual similarity with the topics of the document, and worst candidates are pruned from the sub-graph. The approach has been validated with 13 datasets and compared with other 11 annotation systems using the GERBIL platform. Results show that ABACO outperforms the other systems for medium/large documents.

**Palavras chave**  Entity linking Semantic annotation Topic coherence Named entity disambiguation