

## **Fuzzy logic as a basis for reusing task-based specifications**

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### **Abstract**

In this paper, we propose an approach to reusing requirements specification, called task-based specifications in conceptual graphs (TBCG). In TBCG, task-based specification methodology is used to serve as the mechanism to structure the knowledge captured in conceptual models, and conceptual graphs are adopted as the formalism to express requirements specification. TBCG provides several mechanisms to facilitate the reuse of formal specifications: a contextual retrieval mechanism to support context-sensitive specifications retrieval and incremental context acquisition, a graph matching mechanism to compute the similarity between two graphs based on the semantic match and fuzzy logic, and a paraphraser to serve as an explanation mechanism for the retrieval specifications.