

Invited Talk

Relational Concept Analysis: a synthesis and open questions

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Abstract

Relational Concept Analysis (RCA) builds conceptual structures on sets of objects connected by sets of links, following an underlying entity-relationship diagram. These conceptual structures (concept lattice families) are composed of several concept lattices (one for each object set one wants to focus on) connected by relational attributes of various strengths. Concept lattice families can be read to extract interconnected relevant object groups and classifications as well as to derive implication rules. The RCA algorithm uses classical concept lattice building algorithms and a relational scaling step. In this talk, we recall the main principles of RCA and we elaborate on several issues (some of which are totally open) including querying relational data with RCA, looking at specific relational schemes, convergence of RCA when disturbing the classical algorithmic schema, and understanding the growth process of concepts.

