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A method for characterizing tractable subsets of qualitative fuzzy temporal algebrae. (English) [Zbl 1168.68575](#)

Bloch, Isabelle (ed.) et al., Fuzzy logic and applications. 6th international workshop, WILF 2005, Crema, Italy, September 15–17, 2005. Revised selected papers. Berlin: Springer (ISBN 978-3-540-32529-1/pbk). Lecture Notes in Computer Science 3849. Lecture Notes in Artificial Intelligence, 71-80 (2006).

Summary: Allen's interval algebra allows one to formulate problems that are, in the general case, intractable; for this reason several tractable sub-algebras have been proposed. In this paper the attention is focused on the fuzzy counterparts of those sub-algebras and a different method to identify their relations is shown: rules for identifying fuzzy tractable relations starting from the knowledge of the classic tractable relations. Enumeration is used to verify the rules and quantify expressiveness, and algebraic considerations adopted to bind the enumeration itself.

For the entire collection see [\[Zbl 1165.68002\]](#).

MSC:

[68T30](#) Knowledge representation

[68T37](#) Reasoning under uncertainty in the context of artificial intelligence

Keywords:

[Fuzzy Sets](#); [Possibility Theory](#); [Representation of Vague and Imprecise Knowledge](#)

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