研究室名	上出研究室　学会発表

発表時期	2020年2月
学会名	The 12th International Conference on Agents and Artificial Intelligence (ICAART 2020)
演題名	An extended description logic for inconsistency-tolerant ontological reasoning with sequential information
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内容	Description logics are a family of logic-based knowledge representation formalisms. Inconsistency-tolerant description logics, which are extensions of standard description logics, have been studied to cope with inconsistencies that frequently occur in an open world. In this study, an extended inconsistency-tolerant description logic with a sequence modal operator is introduced. The logic proposed is intended to appropriately handle inconsistency-tolerant ontological reasoning with sequential information (i.e., information expressed as sequences, such as time, action, and event sequences). A theorem for embedding the proposed logic into a fragment of the logic is proved. The logic is shown to be decidable by using the proposed embedding theorem. These results demonstrate that using the embedding theorem enables the reuse of previously developed methods and algorithms for the standard description logic for the effective handling of inconsistent ontologies with sequential information described by the proposed logic.

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