**TITLE**

On the complexity of computing difference terms and operations

**KEYWORDS**

idempotent equational class, difference term, Malcev condition, computational complexity

**ABSTRACT**

At BLAST 2017 we presented a positive answer to the following practical question: given a finite idempotent algebra A, can we efficiently decide whether the variety V(A) has a difference term? In this talk we present a further practical result related to this problem. Specifically, we discuss the complexity of constructing a difference term d for V(A) and show that, although d may have exponential length, nonetheless there is a polynomial-time algorithm that takes as input any algebra B in V(A) and produces the operation table for d interpreted in B.

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