

Year: 2021

Vol.: 98

Fasc.: 1-2

**Title:** On the algorithmic complexity of some numeration-related problems

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In this paper, we give explicit upper bounds on the algorithmic complexity of some problems related to matrix-based numeration systems. We consider different types of deterministic algorithms, and compare their worst-case time and space complexity. We also analyze probabilistic algorithms, and examine the question whether they can serve as a reliable alternative.

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