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Title: Prime factorization by interval-valued computing

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Interval-valued computing is a new theoretical computing paradigm. Hard problems, e.g. satisfiability of quantified Boolean formulae, can be solved in an efficient way deploying the massive parallelism of this paradigm. In this paper, we consider the prime factorization problem. We show an interval-valued algorithm that computes a proper divisor of the input number (or 1 in case the input is a prime). This interval-valued algorithm works in polynomial number of steps within this paradigm.

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