

Peer Review

Review of: "An Approximated QUBO Formulation for Solving Practical SAT Problems"

Zewen Zhang¹

1. Independent researcher

The authors present an approximate formulation of SAT problems in QUBO form, which is fundamental to the optimization community. The experiments, presented through a series of tables, effectively demonstrate the strong performance of their algorithm. While the proposed method itself is not particularly surprising, the impressive performance of the new formulation makes this paper a valuable contribution. Additionally, the paper is concise and clearly written.

One aspect that could enhance the paper is a theoretical, or at least intuitive, explanation for the observed strong performance. Adding some discussion on this in the conclusion section would be beneficial.

Lastly, as a minor observation, many quantum hardware platforms implement 2-qubit entangling gates. A novel QUBO formulation might be of interest to researchers working in hybrid quantum computing.

Declarations

Potential competing interests: No potential competing interests to declare.