Abstract

This paper presents the novel design of half adder and full adder using reduced number of QCA gates. This design utilizes the unique characteristics of QCA to design a half and a full adder. The basic component of QCA is a cell consisting of two electrons and four logically interacting quantum dots. Simulation indicates a fast, efficient and very attractive performance (i.e. complexity, area and delay).

References

A Novel Design of Half and Full Adder using Basic QCA Gates

928-930, August 1997.

A Novel Design of Half and Full Adder using Basic QCA Gates

207-225, (December, 2011).
- S. Basu, S. Bhattacharjee. "Implementation of Symmetric Functions

**Index Terms**

Computer Science

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**Keywords**

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