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## Hamiltonian paths and cycles in Fibonacci cubes

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**ABSTRACT.** The Fibonacci cube is an interconnection topology inspired by the Fibonacci numbers and is a type of incomplete hypercube. Even if the Fibonacci cube is not symmetric and has a relatively sparse interconnectivity, it has attractive topological properties. One of these properties is that the Fibonacci cube allow the simulation of other network topologies. Any Fibonacci cube contain a Hamiltonian path, but no Fibonacci cube with an odd number of nodes contain a Hamiltonian cycle. In this paper, we show that the Fibonacci cubes with an even number of nodes, except the one with two nodes, contain a Hamiltonian cycle.

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