

**OPTIMAL LAYOUT OF EMBEDDING GENERALIZED
PETERSEN GRAPH $P(n, m)$ INTO CYCLE OF TRIANGLE**

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Abstract: Graph embedding is an important tool in parallel computation and interconnection networks. Interconnection network plays a major role in parallel processing and computation system. The embedding technique helps in demonstrating parallel computer and the interconnection network is given through guest graph where the challenge is to find out non-verlapping minimum wirelength. In this paper with Petersen graph as guest graph and cycle of triangle as host graph, we find the exact wirelength of embedding Petersen graph $P(n, m)$ into cycle of triangle.

Keywords and Phrases: Embedding, edge congestion, Petersen graph, cycle of triangle, wirelength.

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1. Introduction and Preliminaries

Graph embedding is an important tool in parallel computation or simulation of different interconnection networks. Using graph theory, parallel computer is modelled with vertices and edges denoting processes and communication between the processes respectively. Applications of graph embedding is rooted from VLSI designs, data structures and data representation, networks for parallel computer systems, biological models that deal with cloning and visual stimuli, parallel architecture and structural engineering and so on [9, 12].