

Quotient Graphs of Star Graph

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Abstract

Star Graph was proposed as an attractive alternative to hypercubes. For comparable number of vertices Star Graph has smaller diameter and genus. Big portion of current interconnection networks literature is dedicated to Star graphs. However Star graphs suffer from severe drawback, number of vertices is $n!$. Two alternatives have been proposed to address this issue, namely Arrangement Graphs and (n, k) -Star graphs. The purpose of this talk will be to show similarities and differences between two suggested alternative solutions, illustrate graph quotient and lifting approach, and to show how much Star structure is inherited in both Arrangement and (n, k) -Star graphs. Moreover these techniques carry over to other Cayley graphs.