

Fault-Tolerant Partition Resolvability of Cyclic Networks

Abstract

Graph invariants provide an amazing tool to analyze the abstract structures of networks. The interaction and interconnection between devices, sensors, and service providers have opened the door for an eruption of mobile over the web applications. Structure of web sites containing number of pages can be represented using graph, where web pages are considered to be the vertices, and an edge is a link between two pages. Figuring resolving partition of the graph is an intriguing inquest in graph theory as it has many applications such as sensor design, compound classification in chemistry, robotic navigation, and Internet network. The partition dimension is a graph parameter akin to the concept of metric dimension, and fault-tolerant partition dimension is an advancement in the line of research of partition dimension of the graph. In this paper, we compute fault-tolerant partition dimension of alternate triangular cycle, mirror graph, and tortoise graphs.

Authors:

Kamran Azhar, Sohail Zafar, Agha Kashif, and Michael Onyango Ojiema