

## **Fault-tolerant locating-dominating sets in cubic graphs**

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Assume that  $G$  models a facility with a possible "intruder" (or a multiprocessor network with a possible malfunctioning processor). We consider placing (the minimum number of) detectors at vertices in  $G$  to precisely determine the location of the intruder. Various distinguishing set parameters have been defined based on the functionality of the detector. We characterize fault-tolerant detectors identified for the locating-dominating sets and determine the bounds on the minimum size of these sets for cubic graphs.

Keywords: Domination, Distinguishing sets, Fault-tolerant detectors, Locating-dominating sets, Cubic graphs