

Title: A self-stabilizing algorithm for edge monitoring problem

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Abstract. Self-monitoring is a simple and effective mechanism for the security of wireless sensor networks (WSNs), especially to cope against compromised nodes. A node v can monitor an edge e if both end-nodes of e are neighbors of v ; i.e., e together with v forms a triangle in the graph. Moreover, some edges need more than one monitor. Finding a set of monitoring nodes satisfying all monitoring constraints is called the edge-monitoring problem. The minimum edge-monitoring problem is long known to be NP-complete. In this paper, we present a novel self-stabilizing algorithm for computing a minimal edge-monitoring set. Correctness and termination are proven for the unfair distributed

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