

Game Theory based Intrusion Detection System (IDS) for Cyber Physical System – DST



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Theme : CPSs like healthcare systems, smart grids, unmanned aircraft systems etc., become more integrated and ubiquitous in the modern world, the need for securing these vital systems become indispensable. Due to various vulnerabilities present in the CPS, an attacker can launch attack and cause catastrophic damage to the CPS network or set up a distributed attack.

Objectives: Propose a Game Theory (GT) based Intrusion Detection System (IDS) framework for Cyber Physical System (CPS)

Prevent congestion and enhance the overall throughput of the CPS through reduction of intrusion detection related traffic.

Minimize the overall false positive alarms generated by the CPS IDS

Build a laboratory level CPS testbed

Deliverables: (a) a CPS test-bed showing the experimental results

(b) publications in journals or conferences

(c) Manpower training

Societal impact : securing various cyber-physical system applications from possible attacks and threats from outsiders using game theory based IDS.

current status : The literature survey is done. The framework is presently under design.

