NGI EXPLORERS

CHALLENGE #27
CUE-CYBER-02

Cyber-Security Challenges in Network Control and Optimization Architectures

Meet the expectations of this US Node through the technology challenge described below

GOALS

The goal is to study and explore security vulnerabilities in control systems and optimization algorithms deployed over networks. Understanding these security vulnerabilities is fundamental for the safe deployment of several high-performance optimization and control algorithms recently developed in academia and industry. Potential solutions (systems or algorithms) to these vulnerabilities will also be studied and numerically tested via extensive simulation experiments.

DETAILS

The main objective of this Challenge is to understand the emerging security issues that emerge in some of the state-of-the-art control and optimization algorithms recently proposed in the literature. Discovery effective adversarial and disruptive signals would help to design more secure algorithms to be deployed in critical infrastructure with automation technologies.

SKILLS REQUIRED

Solid mathematical background, and knowledge/ experience on cyber-security.

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