

Paris Session 2022



AI based Security Mechanism to False Data Injection Attack -A Case study of Northern Region of Indian Grid

D2 - INFORMATION SYSTEMS AND TELECOMMUNICATION
PS2 - CYBERSECURITY TECHNIQUES, TECHNOLOGIES AND
APPLICATIONS FOR SECURING CRITICAL UTILITY ASSETS

Question 2.7:

What is the proper approach to implementation of cyber security
management technologies and procedures in the operational
environment?

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Answer

- Majority of the attacks are taken place from source/ man in the middle. In order to avoid that attacks just adding a bit parity / encryption to the measurement vector can either get data or zero/ null data but not any false data be reported.
- Classifying the zero/ null vector with respect to outage is done by existing methods like (KCL check @ every bus) or state estimation techniques.
- Further, if one or more measurement vector went corrupt (reported null values), then AI based method helps and results better estimation value than any others due to its capacity of understanding non linear relationship between multiple measurement vectors.