

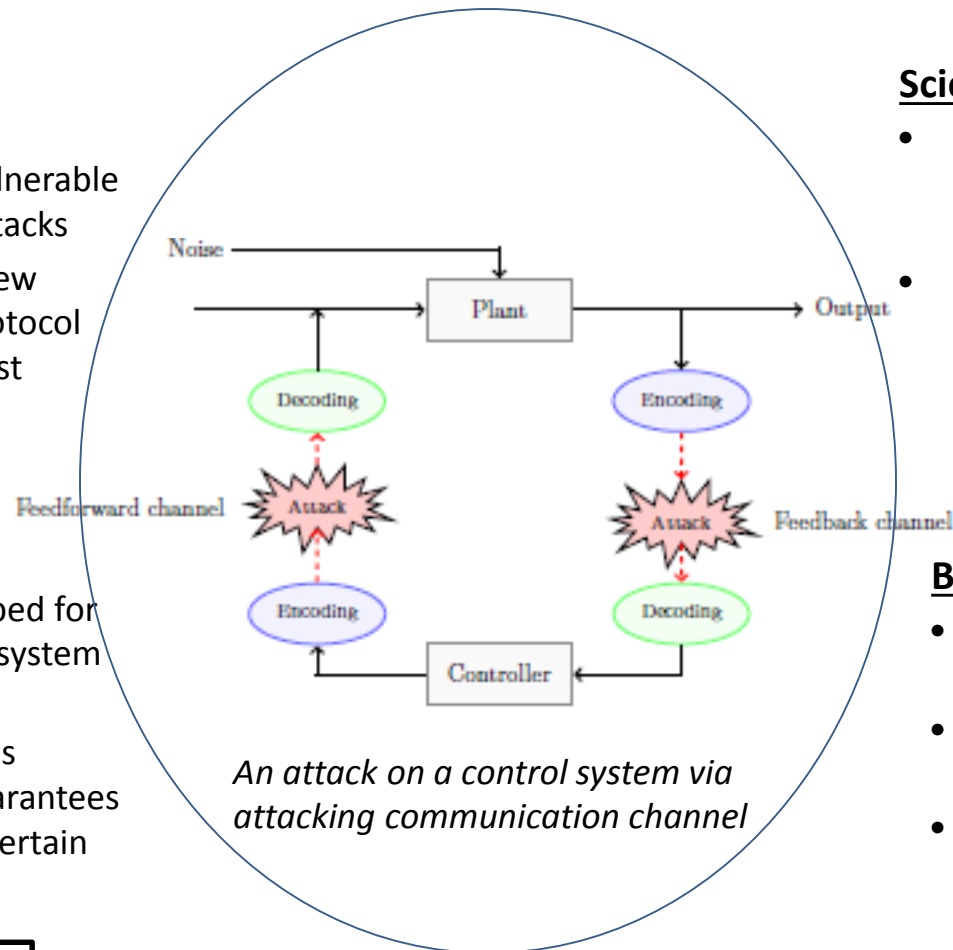
Securing Smart Cyberphysical Systems against Man-in-the-Middle Attacks

Challenge:

- Control systems vulnerable to remote cyber attacks
- Need to design a new communication protocol for immunity against attacks

Solution:

- Algorithms developed for optimizing control system performance
- Encryption schemes developed that guarantees immunity against certain class of attacks



Scientific Impact:

- Develops low-delay cryptographic methods for control systems
- Understand how the encryption and control algorithms can be designed in tandem

Broader Impact:

- Secures robotic factories, automobiles, smart grid.
- Collaboration plan with vehicle manufacturers
- Trains 6 undergraduate researchers and 2 PhD students