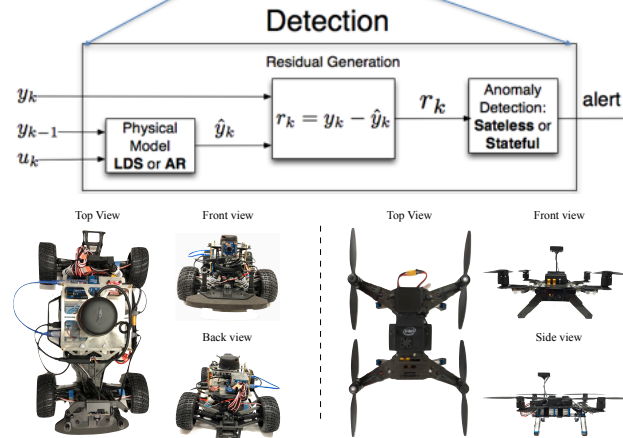
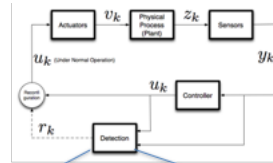


CAREER: Practical Control Engineering Principles to Improve the Security and Privacy of Cyber-Physical Systems

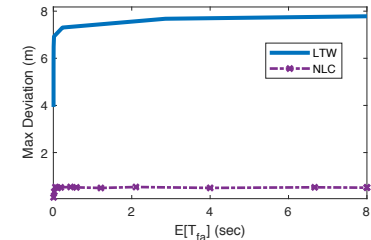
Challenge:

- Unconsummated union of control theory and cyber security for protecting CPS: control theory develops security solution in a parallel world to cybersecurity solutions



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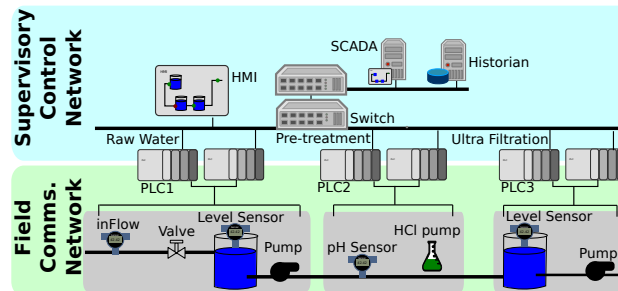
- Our solutions outperform purely control-theoretic proposals or purely-cyber security proposals.



Solution:

- Bring practical tools from control theory (e.g., system identification) with cyber-security tools (DPI and SOC integration)
- Publications in CCS 16, USENIX Security 2019, 2020, NDSS 2020,...

Security Montiors for ICS, Power Grids, Autonomous Vehicles



Broader Impact:

- Security and Privacy in CPS and IoT is a growing concern,
- Working closely with industry for transition (and data acquisition; e.g., we have data from power system operator),
- High-school programs for CPS security and Privacy

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