CPS:Medium: Trusted CPS from Untrusted Components/CNS-1837472 - 10/1/2018

Bruce McMillin, Jonathan Kimball, Rui Bo, Jennifer Leopold, Missouri University of Science and Technology

Challenge:

- How to provide a functioning CPS without relying on assumptions of trust, but instead developing trust among components?

Solution:

- Exploit fundamental CPS properties in their defense by constructing security domains, mining and expressing general properties, and detecting attacks occurring through their common vulnerabilities.

- Ground Truth
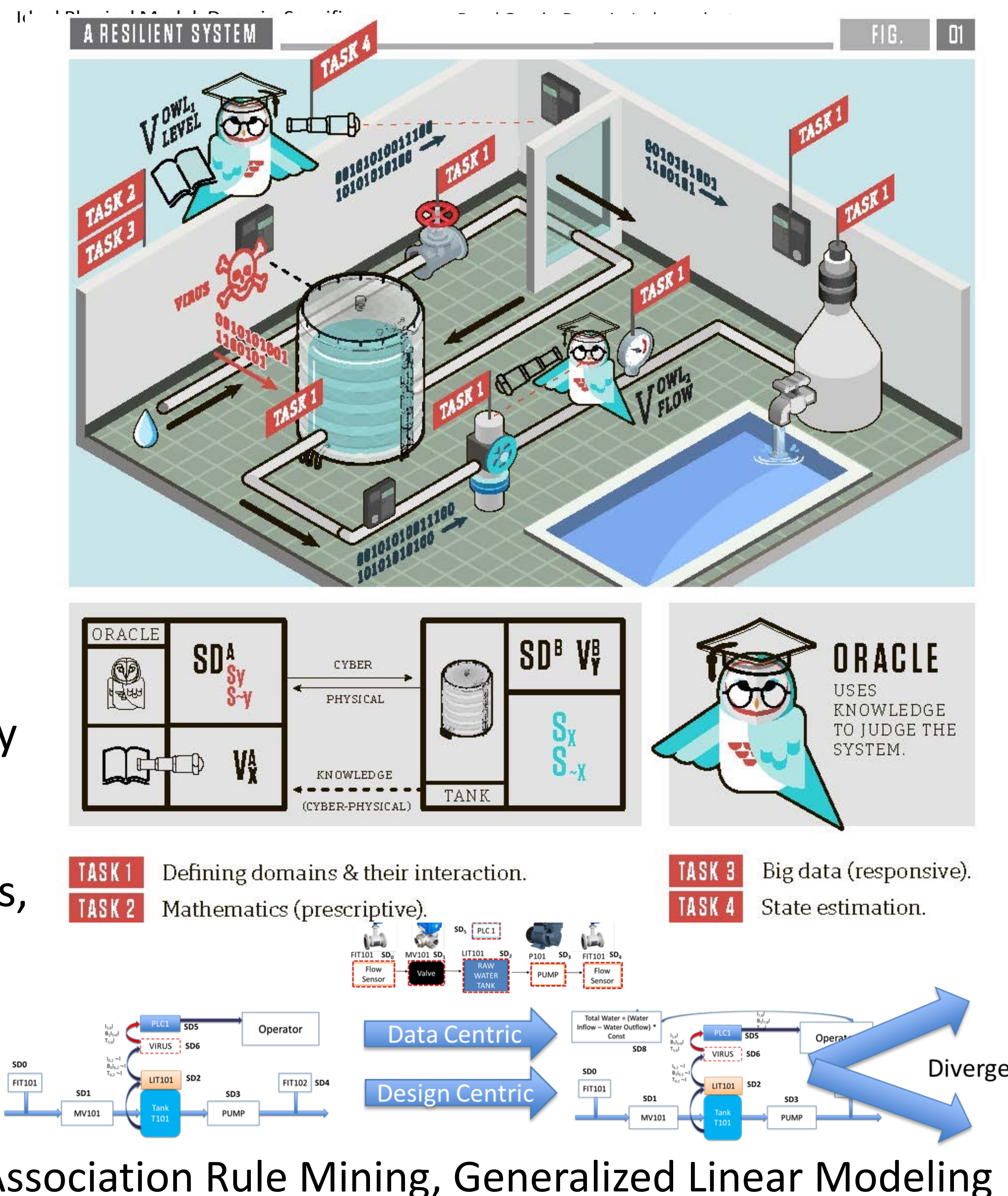
Scientific Impact:

- The key is to find fundamental properties that are common to all CPSs

   —Solve once, extend to all

Broader Impact:

- CPS are not widely deployed to their maximum potential.

   —Push the boundaries to improve societal impacts of autonomy and cybersecurity while increasing trust.

Association Rule Mining, Generalized Linear Modeling