



CPS: Medium: Dynamic Pricing for Optimal Design of Sustainable Transportation Systems (1931980, 2019)

Emily Grubert (PI), Sam Coogan (Co-PI), Omar Asensio (Co-PI), Georgia Institute of Technology

Challenge:

•Electric vehicle (EV)
charging has behaviorinfluenced cost,
infrastructure, and
environmental implications

Solution:

- Dynamic pricing based on behavior, infrastructure, and environmental impacts
- •Emphasis on behavior and multi-infrastructure interactions (e.g., parking and charging)

Predicted Availability Issues

> 90% quantiles (A Great Deal)
70-90% quantiles (A Moderate Amount)
45-69% quantiles (Rarely)

No Reviews
Not in Metro/Micropolitan Areas (Non-core)

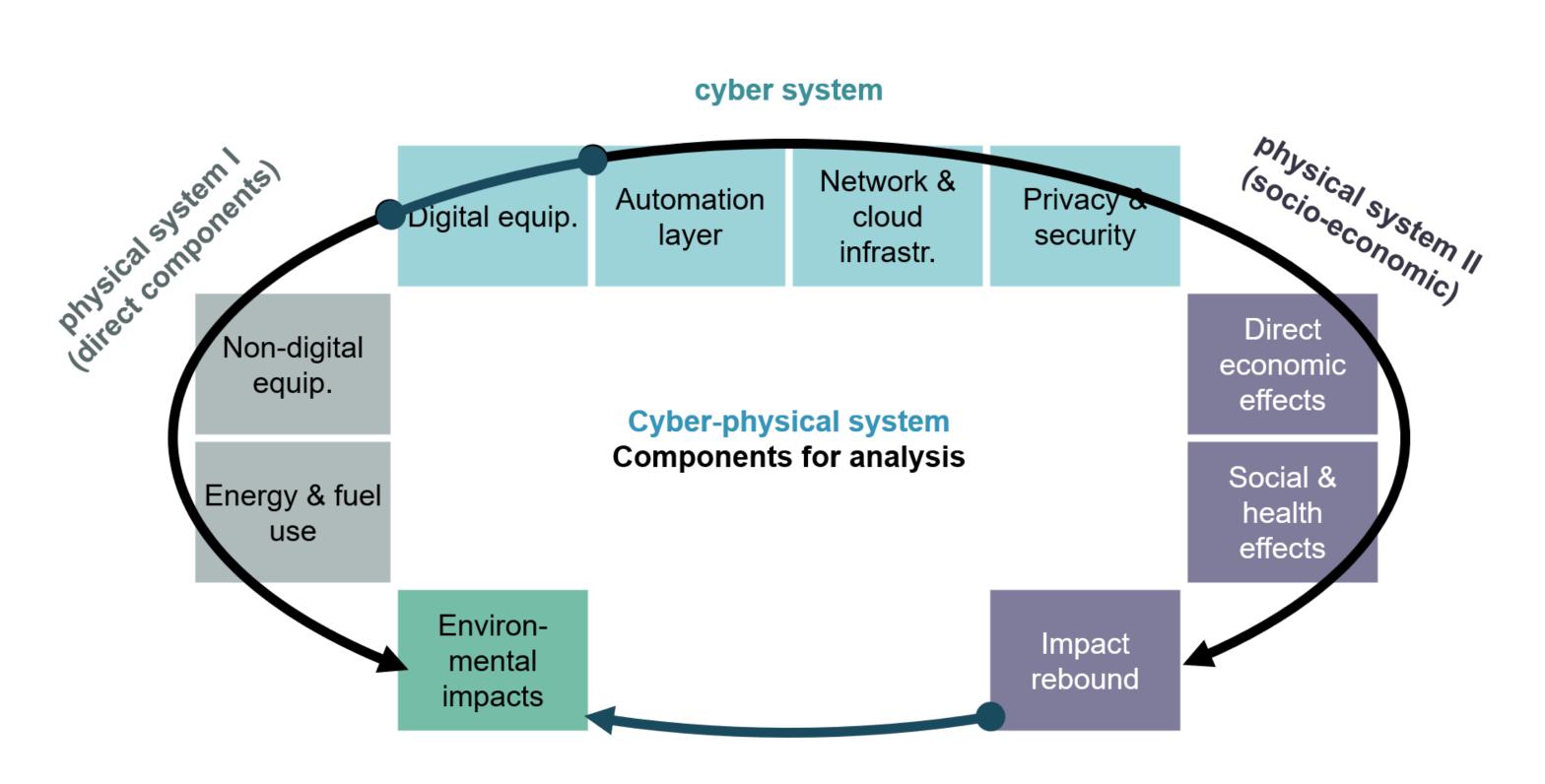
West

Midwest

Northeast

South

Ha, Marchetto, Dharur, and Asensio, (2021)



Mulrow, Gali, Grubert (in prep)

Scientific Impact:

•Understanding behavior + interactions with performance indicators can inform optimal human-in-the-loop system design

Broader Impact:

- •EVs can reduce climate and air pollution impacts with lower operational costs
- Project includes computational curriculum development

Project 1931980
Georgia Institute of Technology

PI: Emily Grubert, gruberte@gatech.edu