

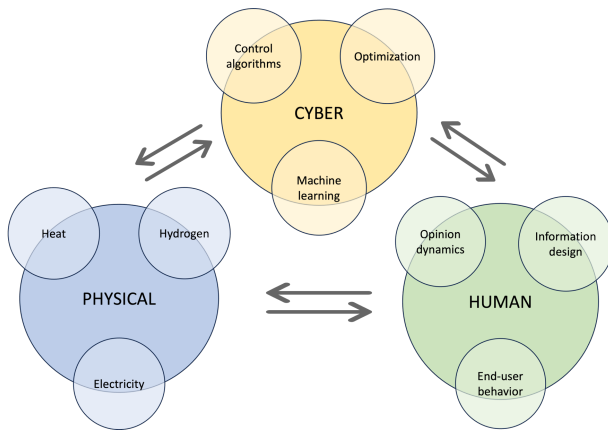
Optimization and Control of Energy Networks



Engineering and Technology Institute Groningen
University of Groningen
Presenter: Dr. Ashish Cherukuri



Overview



Research Methods

Output_regulation Bilevel_optimization
Port_Hamiltonian_modeling
Data_driven_control
Mixed_integer_optimization
Hierarchical_control Risk_averse_decisions
Passivity_based_control
Stochastic_optimization
Information_and_incentive_design
Model_order_reduction
Distributed_optimization

Projects

- Modeling and control of physical systems (heating/cooling networks, power networks)
- Opinion dynamics: Integration of social and behavioral aspects in energy networks
- Control and optimization problems in energy networks
- Consensus of physically interconnected multi-agent systems with application in energy networks
- Model order reduction for large networks
- Distributed optimal control applications to smart grids
- Optimization and coordination of local and national energy markets
- Fairness and sustainability in local energy markets
- Data-driven distributionally robust energy network design and operations
- Distributed and hierarchical optimization for electricity grid
- Learning-based incentive, information, and market design

People



Dr. Ashish Cherukuri
Assistant Professor
a.k.cherukuri@rug.nl



Dr. Michele Cucuzzella
Associate Professor
m.cucuzzella@rug.nl



Dr. Nima Monshizadeh
Associate Professor
n.monshizadeh@rug.nl



Dr. Jacquelin Scherpen
Professor
j.m.a.scherpen@rug.nl

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