

# Control of Large Scale Cyberphysical Systems

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## About Me

### Profile

- **Postdoctoral Research Associate (June 2014 – current)**  
Department of Electrical and Computer Engineering  
Texas A&M University, Advisor: P.R. Kumar
- **Ph.D. in Aerospace Engineering (Aug. 2008 – May 2014)**  
Texas A&M University, Advisor: Raktim Bhattacharya  
Dissertation: Probabilistic Methods for Model Validation

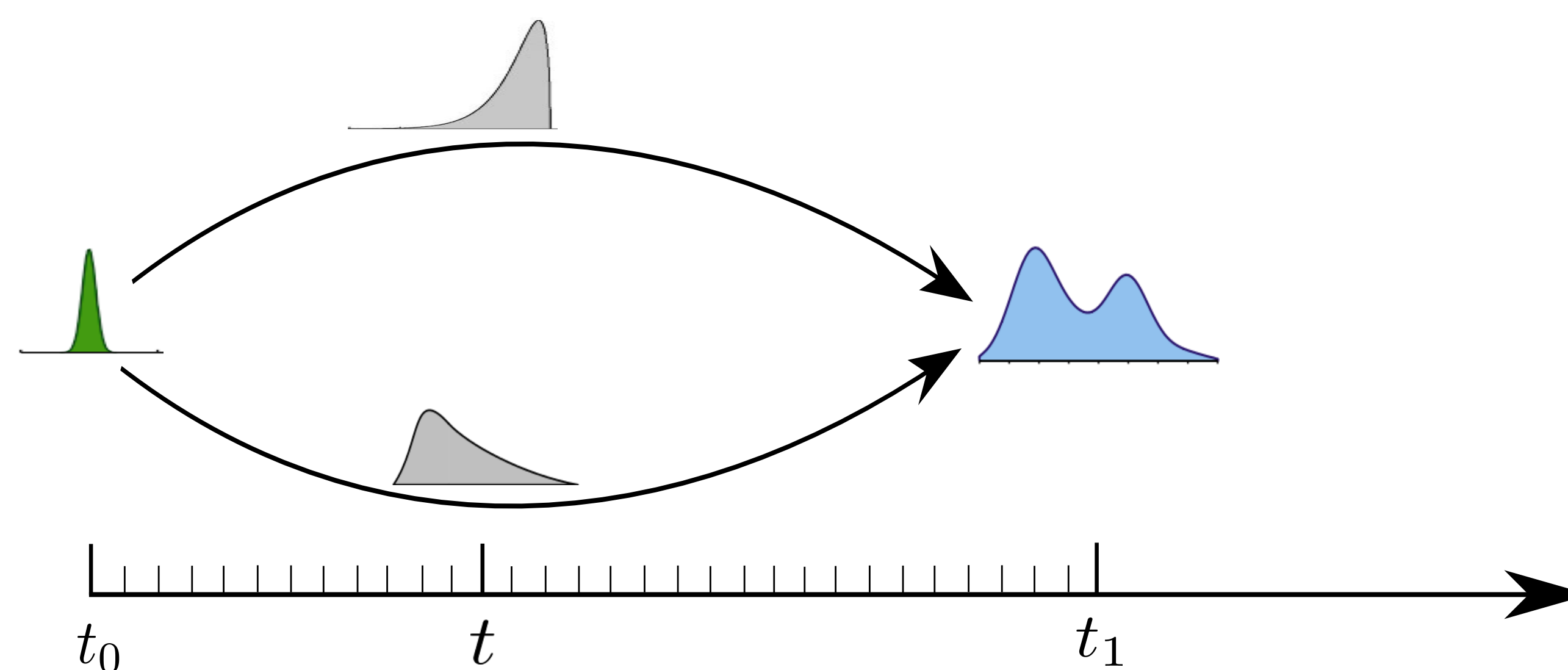
### Application Focus

- Unmanned Aerial Systems (UAS) Traffic Management
- Control of Thermal Inertial Loads for Demand Response
- Control of A Swarm (for robotics, imaging, planetary landing)

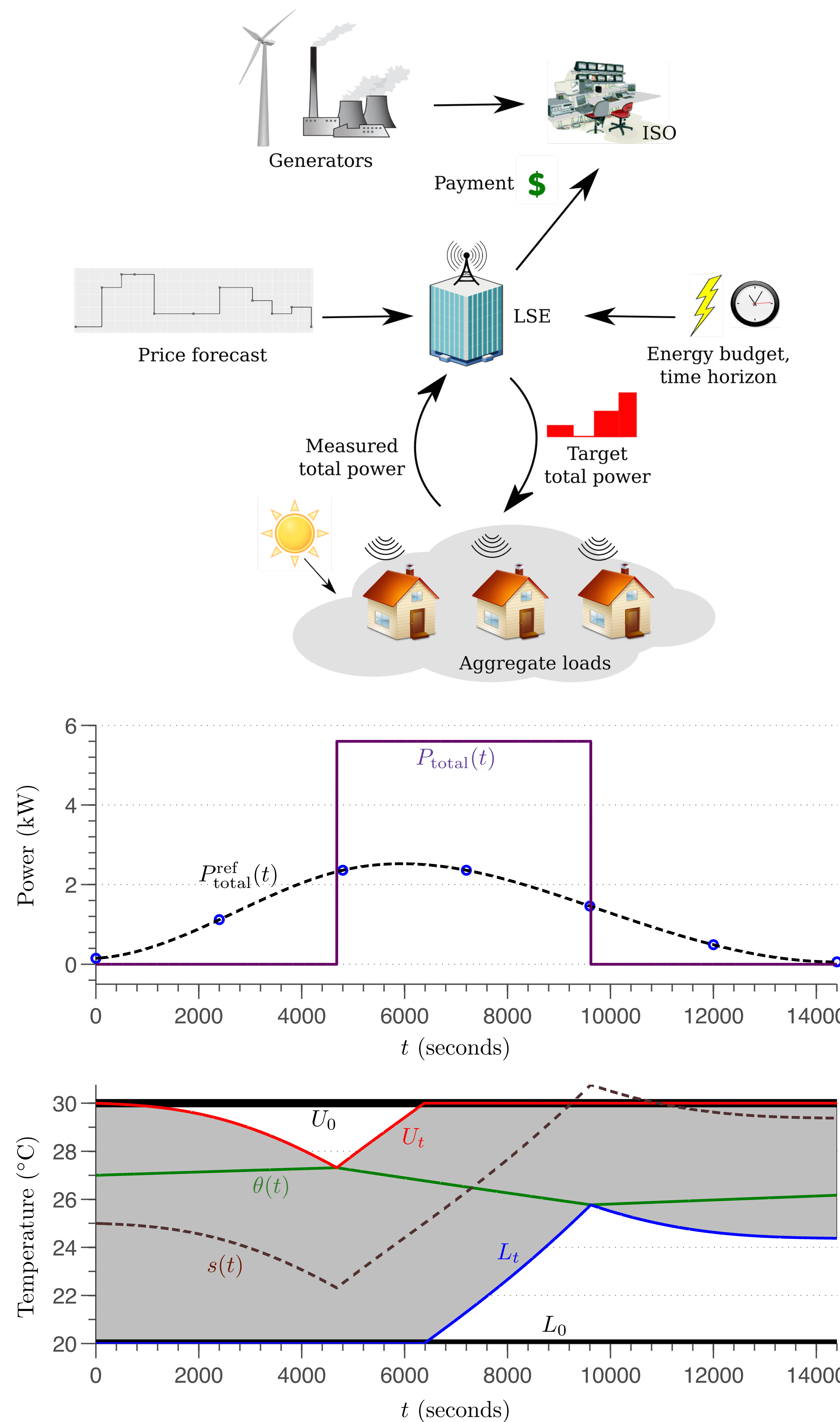
### Theory Focus

- Dynamics and Control of Stochastic Systems
- Uncertainty Propagation and Nonlinear Estimation
- Density Control

## Density Control



## Control of Thermal Inertial Loads



## UAS Traffic Management

Class G airspace extends up to 1200 ft AGL

500 ft AGL

200 ft AGL

Requires: Automated V2V separation management

Yield manned traffic

Avoid obstacles (buildings, geofencing)

