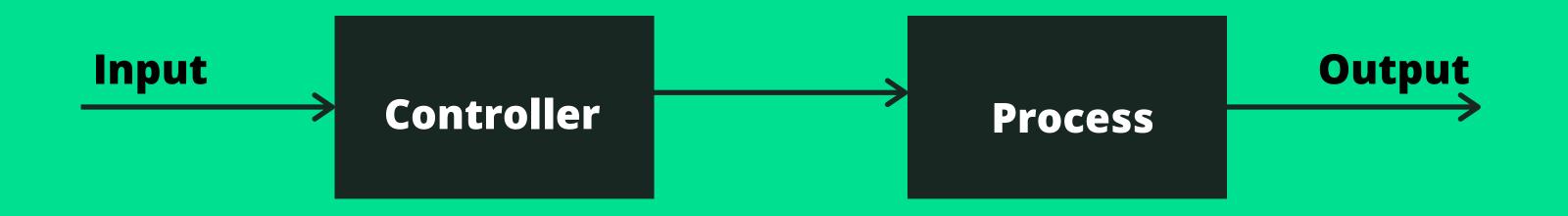
## CONTROL THEORY

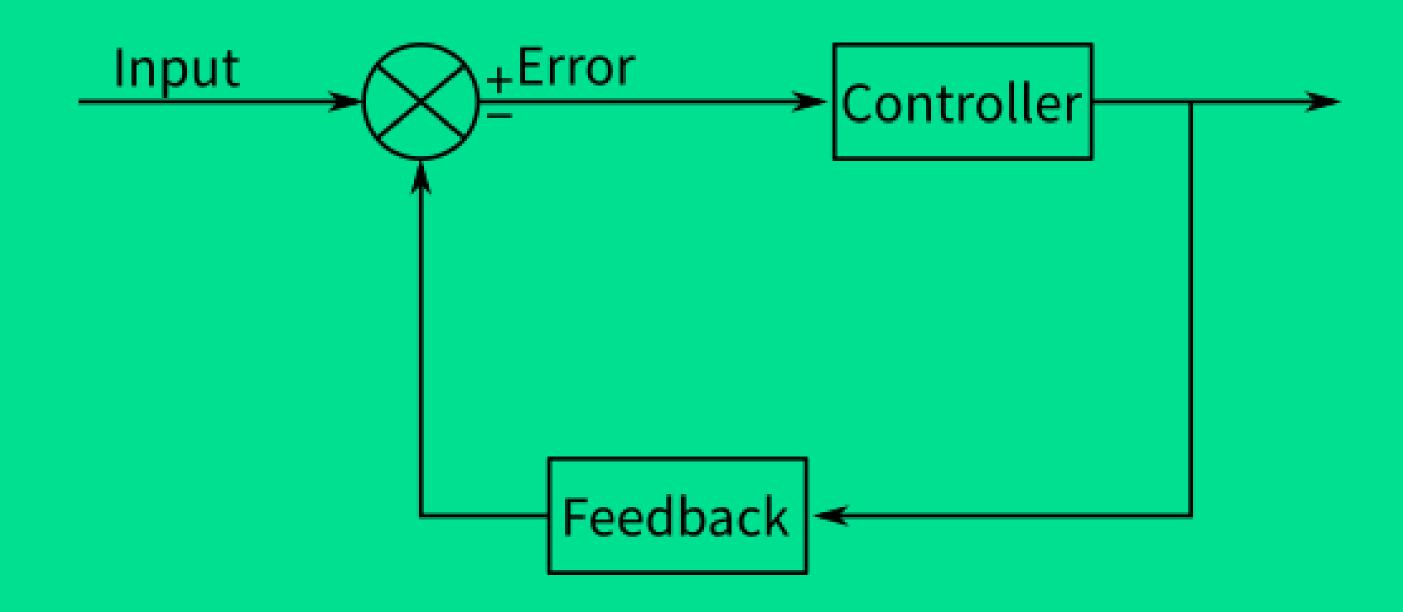
THE SCIENCE OF SHAPINGTHE OUTPUT OF PHYSICAL SYSTEMS



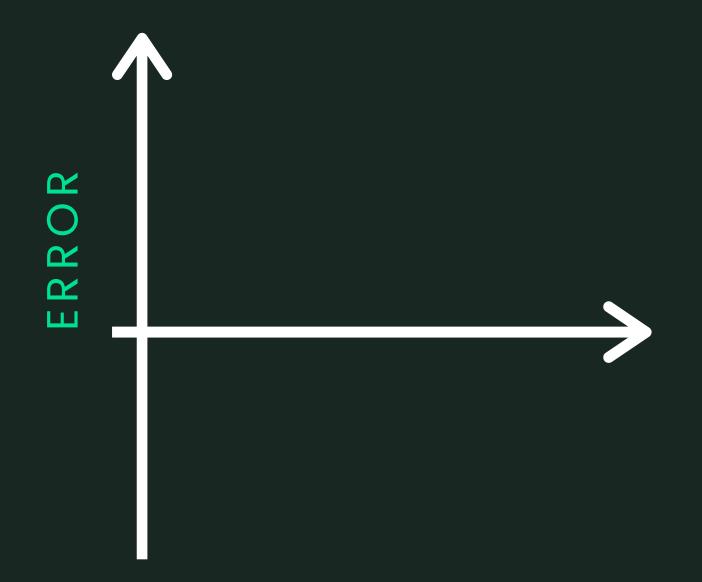
- Building Accurate Models
- Simulating Predictions
- Understanding Dynamic Interactions
- Filtering & Eliminating Noise
- Selecting appropriate hardware
- TESTING
- Understanding the System

# More than abstract mathematical concepts

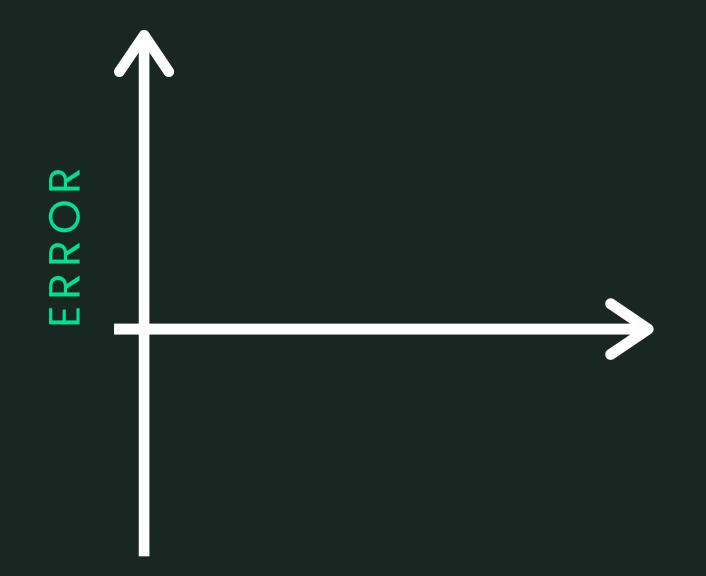




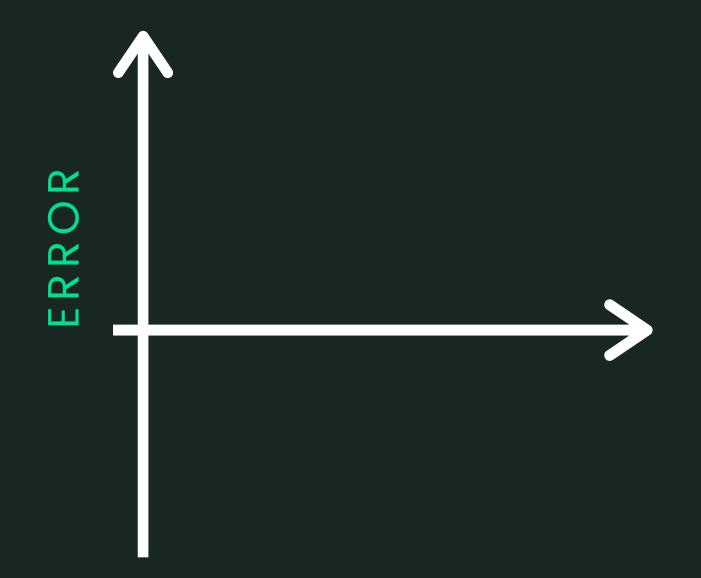
# Proportional Integral Set point Kp Controller Output Integral Derivative Ki Derivative Kd



### Proportional



### Integral



#### Derivative

#### Why PID

- EASY TO IMPLEMENT
- TUNING IS RELATIVELY EASIER
- COMPREHENSIBLE AND MODULAR