

# Autonomic Management of HPC Systems

## The Problem:

Not always enough jobs  $\implies$  **Idle HPC Resources** = Loss of Power = ☹️

## A solution:

submit **small, low priority** tasks to fill the holes (bag-of-tasks apps.)

## But ...

too many jobs might **damage performance** (e.g., I/O, network)

## The Goal:

Collect idle resources but **ensure QoS** for premium users

$\hookrightarrow$  Using **Control Theory** to dyn regulate nb of jobs to submit + 

