**System overview for MPC**

Variables:

* Occupants:
* CO2 concentration:
* Fan flow:
* Fan power consumption:
* Damper flow:

Parameters:

* CO2 generation per person:
* Air infiltration:
* Room volume:
* (Timestep: )
* Damper nominal flow:
* Outdoor CO2 concentration:
* Fan constants:
* Fan nominal flow:
* Fan nominal power:
* CO2 threshold:
* Objective weights:

Time varying parameters:

* Electricity price:

Input:

* Damper positions:

Equations:

Spaces:

Dampers:

Fans flow:

Partial load:

Fan power:

Constraints:

Objective: