

Lab 3
Latest news
(and errata corrige)!

Good news!

- I realized I designed the system too well, so with longer periods the simulation lasts too long...
 - Less exploration to do!
 - Period is fixed to 120s
- **First analysis is unchanged**
- Then you have to **determine the best scheduling**
 - Allows **longer lifetime** of the system
 - Compare:
 - Different scheduling
 - All sensors in parallel
 - Sequential activation of the sensor
 - Any impact on the evolution battery?
 - Choose (motivating) the best schedule



Second analysis of the Lab (new):

- What the analysis should contain:
 - What schedule orders have been explored
 - What lifetime has been achieved with each configuration
 - Document simulation with useful plots, e.g., of SOC
 - Which configuration is considered better and why
 - With value of maximum achieved lifetime

Things to bear in mind:

- Efficiency is a number between 0 and 1 for all converters
 - $0 = 0\%$, $1 = 100\%$
- When digitizing, some axis have the milli-prefix (e.g., mA = milli Ampere) – fix the digitization to the correct scale!
 - In the simulation, $1 = 1\text{A}$, 1V ,...
- Don't remember to set battery capacity

Battery model

- You may realize that the battery SOC goes over 1 (i.e., higher than 100%)
 - Not feasible!
 - Check the fix in the latest Simulink project loaded

