

# Weekly Report

## Battery Management Systems

Week: 03/03/2014 to 07/03/2014

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### WORK DONE

- Reading supplementary bibliography about Kalman filters and his application to linear systems and nonlinear systems.
- Matlab simulation of a linear Kalman filter. Results analysis.

### DIFFICULTIES

- I felt difficulty in the program development because didn't know some Matlab functions. These difficulties were solved easily using the help command of the program itself or using searches on internet.

### MEETINGS WITH ADIVOR AND FUTURE WORK

- Analysis of the results from the application of the linear Kalman filter.
- Once the behavior of the batteries is nonlinear. We need to use a different Kalman filter approach. It being agreed that in this case I will use the Extended Kalman Filter (EKF). The system will be linearized in each point before applying the filter.
- Definition of work for the following week: develop an EKF for a proposed system and analyze its behavior.