

**ECE C143A/C243A, Spring 2023**

Department of Electrical and Computer Engineering  
University of California, Los Angeles

**Homework #6**

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Due Friday, 09 Jun 2023, uploaded to Gradescope.

Covers material up to Kalman Filter II.

100 points total.

1. (20 points) Reaching data and neural data  
Please complete `hw6p1.ipynb`, which could be downloaded from BruinLearn.  
Please print the Jupyter Notebook and attach to your HW.
2. (30 points) Optimal linear estimator  
Please complete `hw6p2.ipynb`, which could be downloaded from BruinLearn.  
Please print the Jupyter Notebook and attach to your HW.
3. (15 points) Wiener filter  
Please complete `hw6p3.ipynb`, which could be downloaded from BruinLearn.  
Please print the Jupyter Notebook and attach to your HW.
4. (35 points) Kalman filter  
Please complete `hw6p4.ipynb`, which could be downloaded from BruinLearn.  
Please print the Jupyter Notebook and attach to your HW.