ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zürich

*Institute for
Dynamic Systems and Control*

IDSC

*Institut für Dynamische Systeme
und Regelungstechnik*

151-0566-00   **Recursive Estimation** (Spring 2022)

Programming Exercise #1-2   Topic: Filtering

Issued: May 4, 2022   Due: **June 15, 2022**

Deliverables

Note: Your submission has to follow these instructions exactly. Submissions that do not conform will have points deducted.

Hand in a single zip-file, where the filename contains your name according to this template (note that there are no spaces in the filename):
`RE22_FirstnameSurname`.

The zip-file contains the `RE22_FirstnameSurname` folder (with the correct name as in the zip filename), that you find among the material provided. This folder contains two subfolders:

1. The subfolder `P1_EKF` contains only one file:

   - Your implementation of the EKF in the single file `Estimator.m`, which has the exact same function definition as in the provided template.

2. The subfolder `P2_ParticleFilter` contains only one file:

   - Your implementation of the PF in the single file `Estimator.m`, which has the exact same function definition as in the provided template.

Send your zip-file in a single email:

- Use this *exact* subject: `Programming Exercises Submission - Firstname Surname`

- Send the email to `recursiveestimation@ethz.ch`.

You will receive an automatic reply confirming receipt of the email. The teaching assistants will not look at the email before the deadline expires, and you are ultimately responsible that we correctly receive your solution in time. Late submissions will not be considered, nor will submissions where the attachment was forgotten. You may submit the solutions multiple times but please follow the deliverable requirements strictly. Only the last submission will be evaluated.

The correctness, efficiency and robustness of your method will be key for the evaluation. Specifically, we will evaluate the following requirements:

- Correctness of all the tasks;

- Weighted score of the computational time of the implemented methods for the different tasks;

- In the case of a draw after the previous point calculation, the submission received first will be rewarded with more points.