Supplement:

1. Scalar case (3.14)
   1. If the noise is very small, i.e.,

* The MV is only dependent of the measurement
  1. If the noise is very large, i.e.,
* The MV is only dependent of the state regardless of the measurement

1. Batch process / recursive process

Example: a random process as

Find the average of

* 1. Batch Process
  2. Recursive process

Define

Then

* 1. Merits for recursive way
* The memory size is lower than the batch type
* The result can be acquired at every step, which is more informative.

1. (3.20) example

We have three measurements of =(1,-1,3). Find the .

* 1. batch Process

1. Algorithm

Where

1. With the first
2. two measurements
3. Three measurements
   1. Recursive M.V. estimator

1) Algorithm

k=1,

k=2

2) With the first measurement

3) With the second measurement

3) dsa

Sda