

DelftX: OT.1x Observation theory: Estimating the Unknown

Help

Bookmarks

- 0. Getting Started
- 1. Introduction to Observation Theory

Warming up

- 1.1 What is the Problem?
- 1.2 Quality and Types of Errors part 1
- 1.2 Quality and Types of Errors part 2
- 1.3 Elements of the Estimation Problem

Assessment

Graded Assignment due Feb 8, 2017 17:30 IST

Q&A Forum

Feedback

2. Mathematical model

1. Introduction to Observation Theory > Assessment > Module 1 Assessment - Part 2 (MATLAB)

Module 1 Assessment - Part 2 (MATLAB)

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The following files are used in this problem and provided for you to use in MATLAB Online (or desktop), or other data analysis software of your choice.

A single ZIP file containing:

- the 3 vectors in a single MATLAB .mat file (A1_errors.mat),
- or, the 3 vectors (e_1.csv, e_2.csv, and e_3.csv), each in a separate CSV file.

If you would like to use non-MATLAB software, you may do so, but you will have to enter the results from that software at the location in the MATLAB code below and submit your answers for assessment.

LTI CONSUMER (EXTERNAL RESOURCE) (1.0 points possible)

- 3. Least Squares Estimation (LSE)
- 4. Best Linear Unbiased Estimation (BLUE)
- Pre-knowledgeMathematics
- MATLAB Learning Content

$$m3 =$$

$$c11 =$$

$$c22 =$$

$$c33 =$$

	c12 =		
	0.0366		•
4		•	

Blank Common Problem

3/3 points (graded)

Based on the results from the Matlab assignment 'Covariance matrix from calibration'

Which instrument has a constant systematic bias affecting all its measurement?

instrument 2

✓ Answer: instrument 2

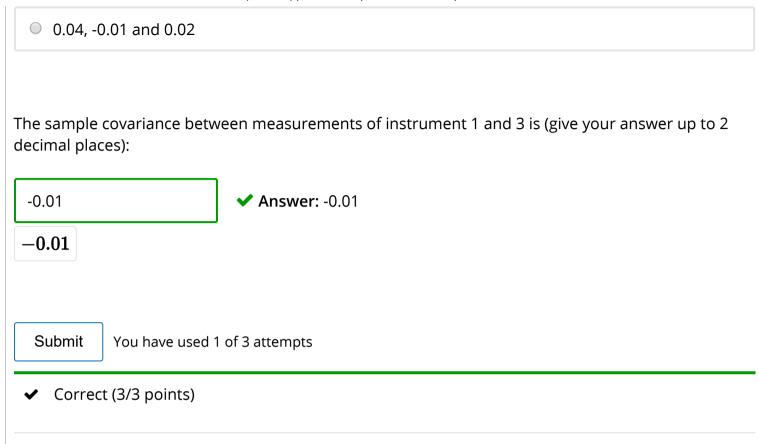
What is the size of this systematic bias (round your answer to whole seconds)?



The diagonal elements of the covariance matrix are:

1.4, 1.7 and 2.0

2, 3 and 4



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