LECTURE #3

Lecture #1: Data Quality- Errors compensation and processing

Evaluation of quality of data and compensation of errors

1) Introduction to errors and error analysis
2) Introduction to statistics and distributions of errors
3) Introduction to static and dynamic measurement error compensation
4) Filtering and Smoothing
5) Frequency domain analysis and identification of parameters – noise reduction

Next class will take place in Rm 140 Ketter Hall.

Topics covered:

Same as the subjects above

Note:
References linked in the text::

Sabnis and Harris: "Structural Modeling and Experimental Techniques" Sect 9.
Bechwith, Maragoni and Lienhard (1993), "Mechanical Measurements", Addison Wesley, (fifth edition), Section 3.
Peter Avitable, (2003), "Twenty years of Structural Dynamic Modification- A review", in Sound and Vibration, January, pp 14-27
Henderson, G and Piersol, A.G (2003) "Evaluating Vibration Environments Using the Shock Response Spectrum" in Sound and Vibration, April pp. 18 -36

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