

NTU50235100

Introduction to the course of Measurement Systems

周元昉

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不是“做”實驗的課！

實驗是瞭解本課程的手段

本課程的目的：

- 學習量測的理論基礎與工具
- 建立設計實驗的初步能力

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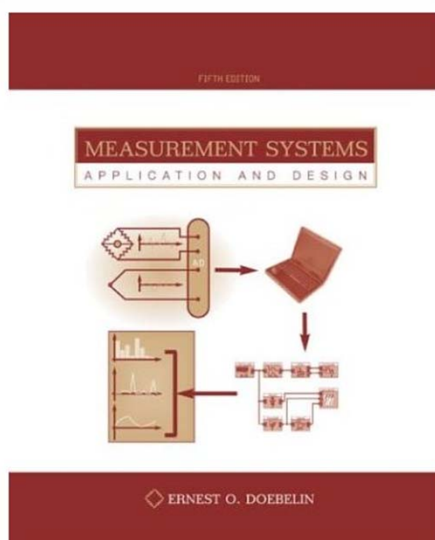
Course outline

- Part I General Concepts
- Part II Measuring Devices
- Part III Signal Conditioning and Data Processing

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教科書：Ernest O. Doebelin, **MEASUREMENT SYSTEMS – APPLICATION AND DESIGN**, 5th Ed., McGraw Hill, 2003.

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評分標準：期中考、期末考、實驗各佔1/3

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Importance

99/9/9 Google search results:

- 約有**11,400,000**項符合**Engineering Mathematics**的查詢結果
- 約有**8,880,000**項符合**Engineering Mechanics**的查詢結果
- 約有**8,970,000**項符合**Fluid Mechanics**的查詢結果
- 約有**7,290,000**項符合**Solid Mechanics**的查詢結果
- 約有**7,050,000**項符合**Thermal Dynamics**的查詢結果
- 約有**12,700,000**項符合**Measurement Systems**的查詢結果

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- 約有**26,200,000**項符合**Mechanical engineer**的查詢結果
- 約有**56,600,000**項符合**Electrical engineer**的查詢結果
- 約有**17,700,000**項符合**Civil engineer**的查詢結果
- 約有**15,800,000**項符合**Chemical engineer**的查詢結果
- 約有**48,000,000**項符合**Test engineer**的查詢結果

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Measurement in Mechanical System Developments

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Satellite acoustic test



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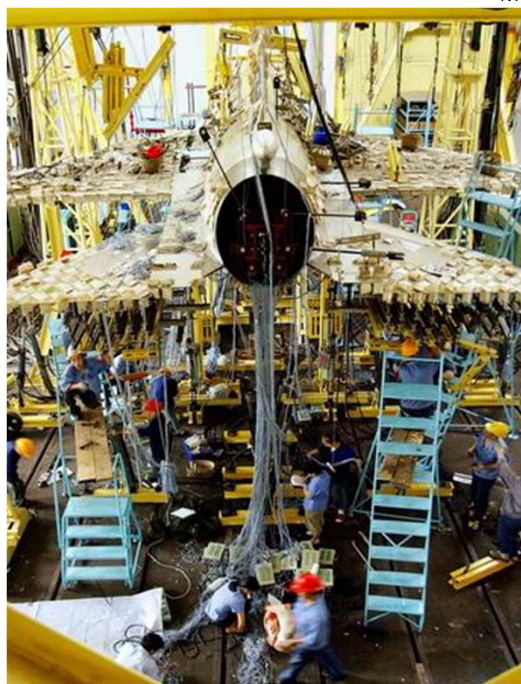
Satellite thermal-vacuum test



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Airframe static test



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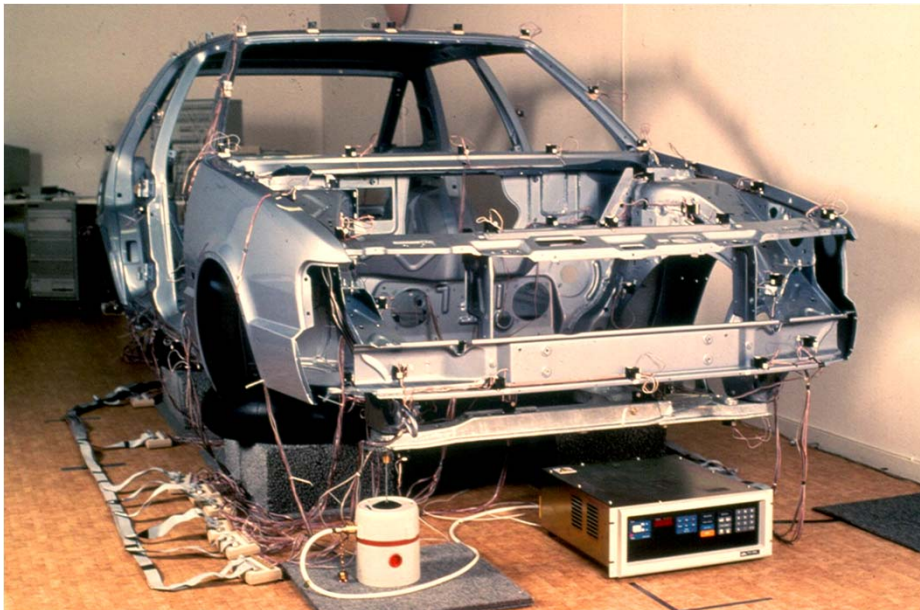
Gas turbine engine thrust test



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Passenger car modal test



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Car noise test



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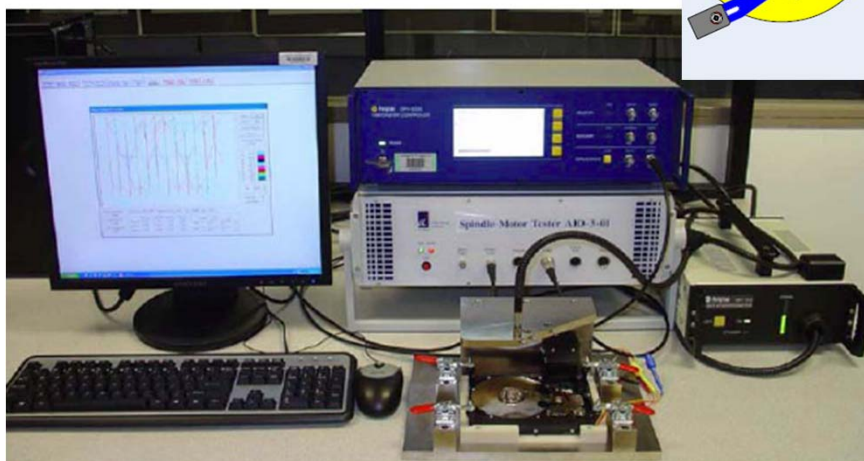
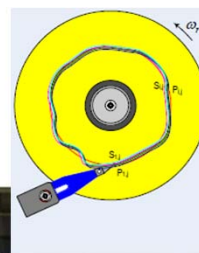
Wind Tunnel Testing



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Runout Measurement for HDD



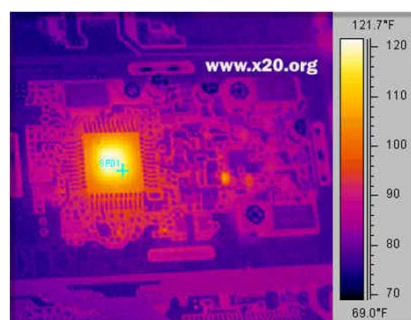
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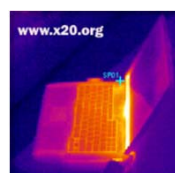
Thermal images



The burning notebook computer
The New York Times, July 10, 2006.



Thermal image of a circuit board



Thermal image of a notebook computer

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