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Text: Feedback Systems:  
An Introduction for Scientists and Engineers  
Author: Karl J. Astrom and Richard M. Murray

Text: [http://www.cds.caltech.edu/~murray/  
amwiki/index.php/Version\\_2.11b](http://www.cds.caltech.edu/~murray/amwiki/index.php/Version_2.11b)

Web: [http://www.ic.is.tohoku.ac.jp/~koichi/  
system\\_control/](http://www.ic.is.tohoku.ac.jp/~koichi/system_control/)

# Evaluation

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- Basically Exam.
- I consider reports.
- I consider class attendance.

# First Report

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- Tell me your school background (including experience on control engineering).
- Introduce your research topics.
- What you want to learn from this class.

- Linear time-invariant (LTI) systems
  - Expression, Definition, Behavior
- Phase-plane analysis
  - Vector field diagram
  - Examples (Real eigenvalues)
  - Diagonalization
  - MATLAB codes
  - Examples (Real eigenvalues)
  - Examples (Duplicate eigenvalues)
  - Examples (Complex eigenvalues)
- Nonlinear systems