

## Plan of the Lecture

- ▶ **Review:** state-space notions: canonical forms, controllability.
- ▶ **Today's topic:** controllability, stability, and pole-zero cancellations; effect of coordinate transformations; conversion of any controllable system to CCF.

*Goal:* explore the effect of pole-zero cancellations on internal stability; understand the effect of coordinate transformations on the properties of a given state-space model (transfer function; open-loop poles; controllability).

*Reading:* FPE, Chapter 7