

# Summary

## Feedback control:

- ▶ reduces steady-state error to disturbances
- ▶ reduces steady-state sensitivity to model uncertainty (parameter variations)
- ▶ improves time response

**Word of caution:** high-gain feedback only works well for 1st-order systems; for higher-order systems, it will typically cause underdamping and instability.

Thus, we need a more sophisticated design than just static gain. We will take this up in the next lecture with *Proportional-Integral-Derivative (PID)* control.