

Control: The Hidden Technology

These days, control systems are everywhere:

- ▶ home comfort (Roomba, thermostats, smart homes, ...)
- ▶ communication networks (routing, congestion control, ...)
- ▶ automotive and aerospace industry (safety-critical systems, autopilots, cruise control, autonomous vehicles, ...)
- ▶ biology and medicine (cardiac assist devices, anesthesia delivery, systems biology ...)
- ▶ the arts (▶ [dynamic works of Raffaello D'Andrea](#))

... but the basic analysis and design techniques are still the same as in the early days:

- ▶ block diagrams (flow of information)
- ▶ Laplace transforms and transfer functions
- ▶ graphical techniques: root locus, Bode and Nyquist plots
- ▶ state-space methods (linear algebra)