

Electric Drives

- Two main approaches/philosophies
 - Theoretical approach
 - Machines
 - Control
 - Applied approach
 - Large machines
- Put problems and material in context of applications, particularly with regards to renewable energy
 - Wind Turbines
 - Electric vehicles
 - Car window

Electric Drives

- Should “practical” (mechatronics) material be covered, or focus on theory?
 - Stepper motors
 - Brushless DC, six-step switching
- Application notes (e.g., Analog Devices)
- dSPACE lab or “home made”?
- Use of electrical analogs for mechanical simulation? (Pspice vs. Matlab/Simulink)
- If practical drives included, will students get trained for that particular make?

Electric Drives

- Special attention to PM machines and their issues?
- Advanced drives really ties in machines, control, and power electronics.
- Must, must, must drive home space vectors and dq.
- Controls: quick and dirty or theoretically focused?