MEC 450/550: Mechatronics

(Fall 2023)

Amin Fakhari, Ph.D.

Department of Mechanical Engineering
Stony Brook University

Amin Fakhari, Fall 2023

Ch1: Introduction to Mechatronics

Amin Fakhari, Fall 2023



Introduction to Mechatronics



Mechatronics

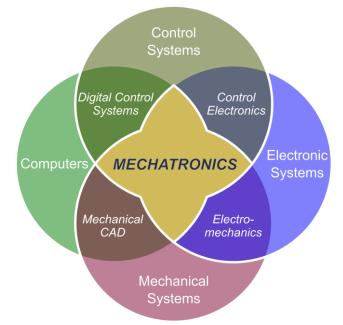
The word **Mechatronics** was invented by a Japanese engineer in 1969, as a combination of 'mecha' from mechanics/mechanisms and 'tronics' from electronics.

Mechatronics is an interdisciplinary, integrated, and concurrent approach to engineering design which integrates the traditional boundaries of mechanical engineering, electrical engineering, computer engineering/science, and control engineering in the design and manufacture of products and processes.



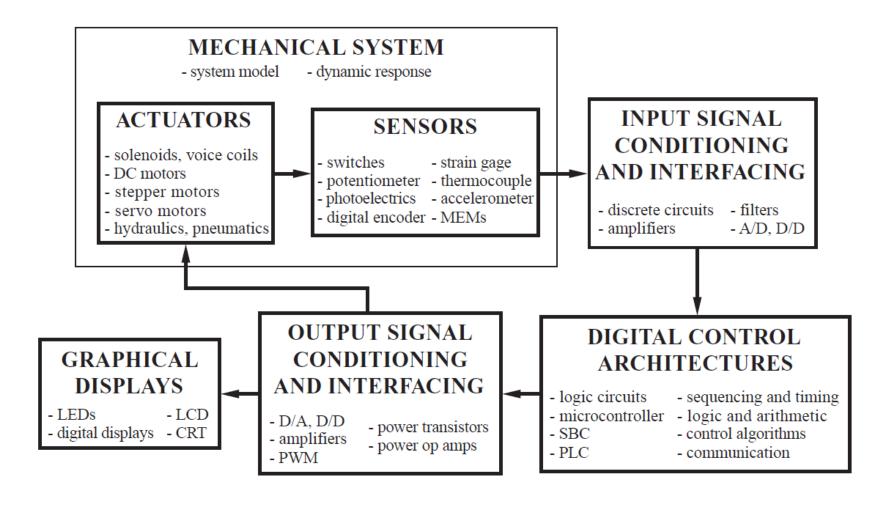






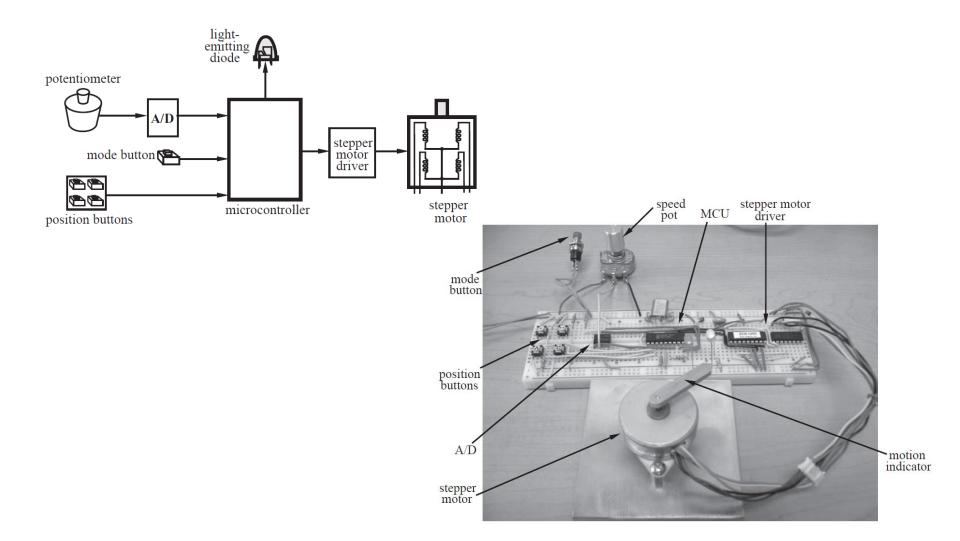


Mechatronic System Components





Example: Stepper Motor Position & Speed Controller





Example: DC Motor Position & Speed Controller

