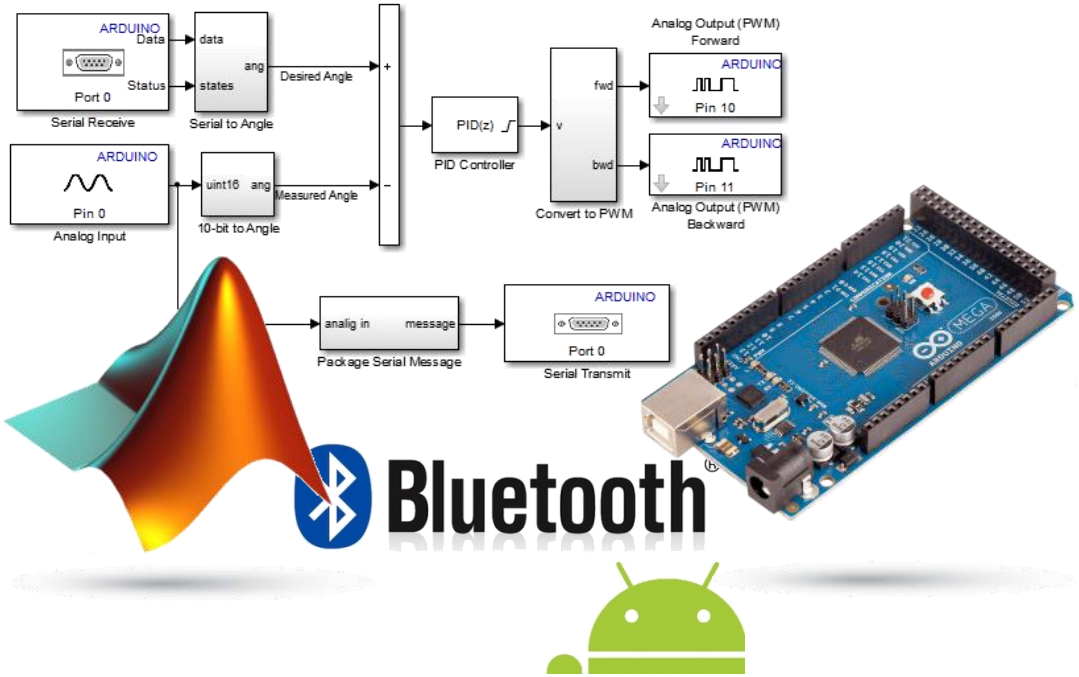
Embedded System Design

» Hochschule Esslingen
» M. Anuschefar



- Teil 1
  - Theorievorstellung
    - Arduino-Hardware, Arduino-IDE
    - MATLAB/Simulink, Arduino Support for Target Hardware
  - Arduino-IDE Installation
  - Praktische Übungen (Code-Based)
    - I/O: Blink LED, Lauflicht, Ampel
    - Wetterstation
      - Sensorik (ADC)
      - USB (Serial)
      - Display (Serial)
      - Bluetooth (Serial)
    - Thermostat
      - Temperatursensor (ADC)
      - DC-Fan (PWM)

- Teil 2
  - Matlab/Simulink Installation/Vorbereitungen
  - Praktische Übungen (Model-Based)
    - I/O: Blink LED, Lauflicht, Ampel
    - Wetterstation
      - Sensorik (ADC)
      - USB (Serial)
      - Display (Serial)
      - Bluetooth (Serial)
    - Thermostat
      - Temperatursensor (ADC)
      - DC-Fan (PWM)
    - Optional:
      - MATLAB/GUI
      - MIT-Appinventor
        Android-App Entwicklung (Block-Based)

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