



CSUCI: Mechatronics Engineering

Jason Isaacs

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Introduction and Agenda

- Introduce the Mechatronics Engineering Faculty at CSUCI
- What is Mechatronics Engineering?
- Why Mechatronics Engineering?
- Current Curriculum
- Discussion
 - How can we work together to create a strong pipeline?

Mechatronics Engineering Faculty



Bahareh Abbasi



Vida Vakilian



Scott Feister



Jason Isaacs



Brian Rasnow

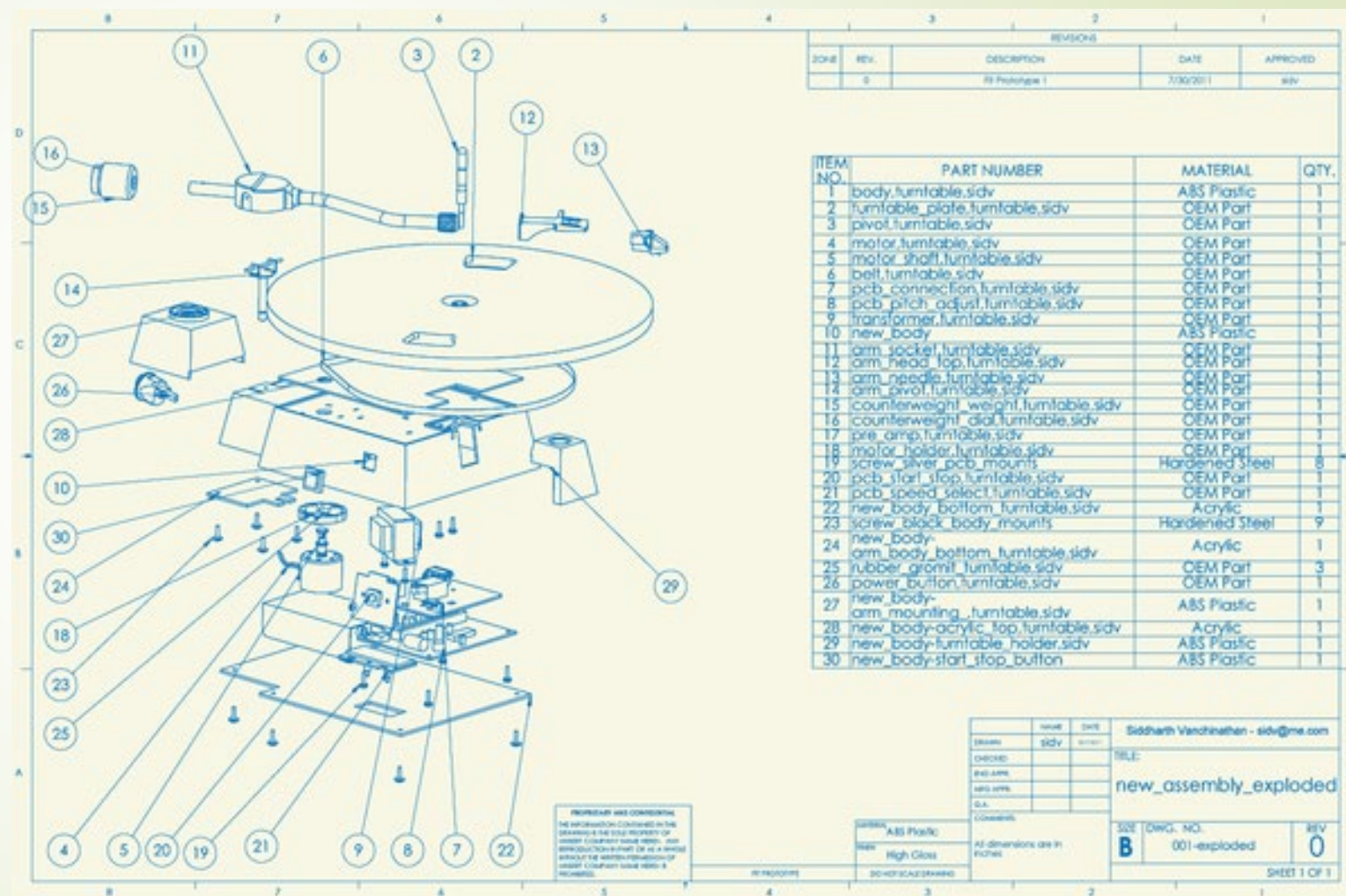


Scarlet Relle

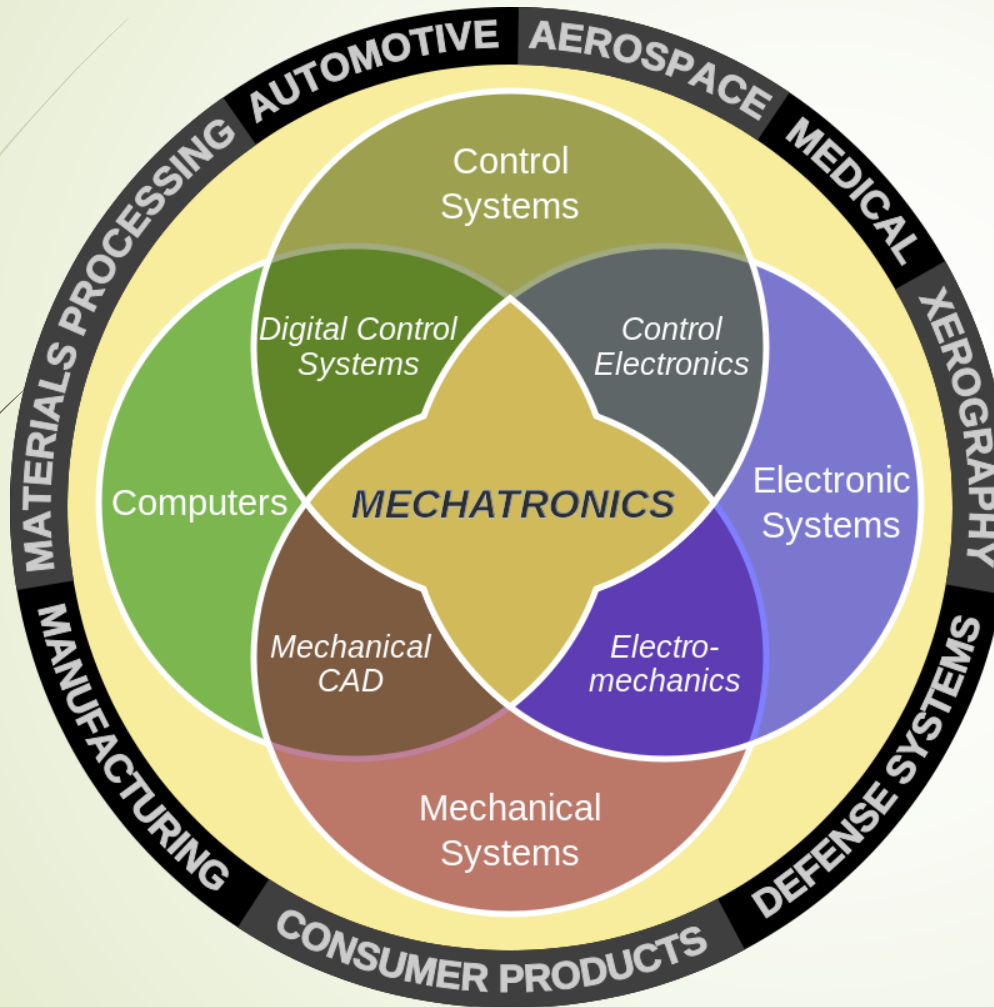


Kurt Zierhut

Classic Turntable: Mechatronic System



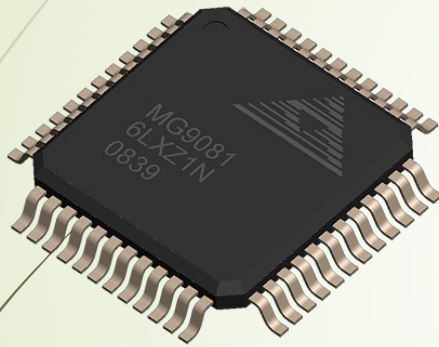
What is Mechatronics Engineering?



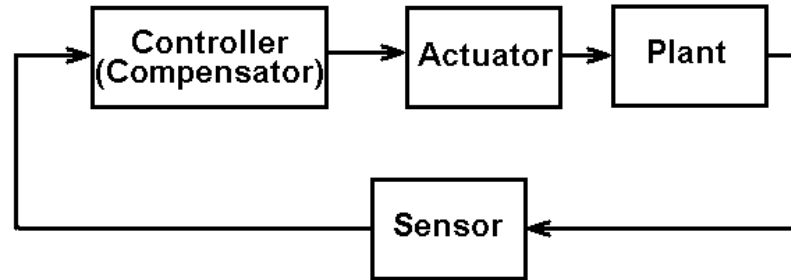
- Mechatronics is multidisciplinary systems engineering for the 21st century.
- Mechatronics integrates at the **beginning** of the conceptual design stage different technologies
 - Mechanical Systems
 - Electrical Systems
 - Control Systems
 - Computer Systems

[Kevin Craig: Hofstra University]

My experience as a mechatronics eng.



ASIC Design



Control Systems Design

```

void ProcessIO(void)          //Main Program Loop
{
    static unsigned char state, fred = 0;
    static int counter = 0;
    int myInt;

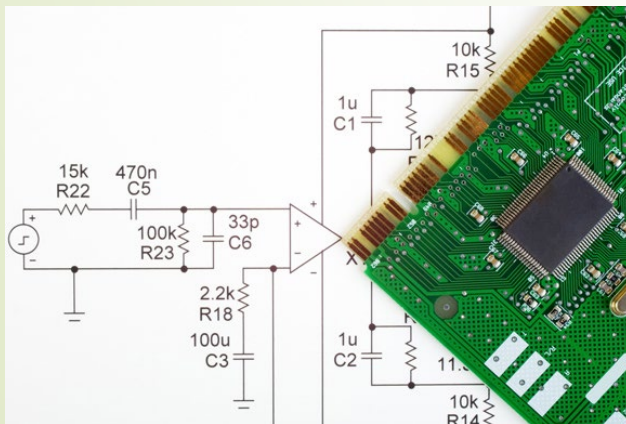
    unsigned float myfloat;
    unsigned char temp;

    if((usb_device_state < CONFIGURED_STATE)|| (UCONbits.SUSPND

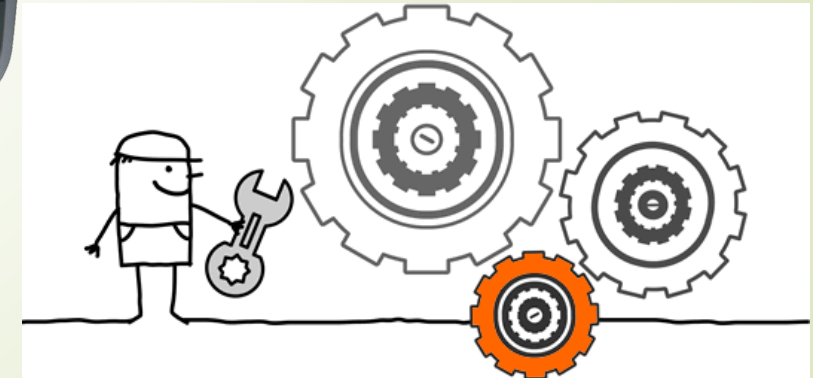
    readUSB();
    counter++;
    rCompass();

    if ((counter % (int)250) == 0)
    {
        GRN = !GRN;
        RED = 0;
    }
  
```

Firmware Design



Electronics Design



Mechanical Design

Why Mechatronics Engineering?

- Jobs are available and high paying.
- Mechatronics technologies are driving economy.
 - Self Driving Cars
 - Unmanned Aerial Vehicles
 - Industrial and Agricultural Automation



Curriculum Info

- <https://compsci.csuci.edu/degrees/bsme/bs-me-courses.htm>


Discussion


- How can we work together to create a strong pipeline?



Questions?

<https://compsci.csuci.edu/degrees/bsme/>


 Channel Islands / COMPUTER SCIENCE PROGRAM

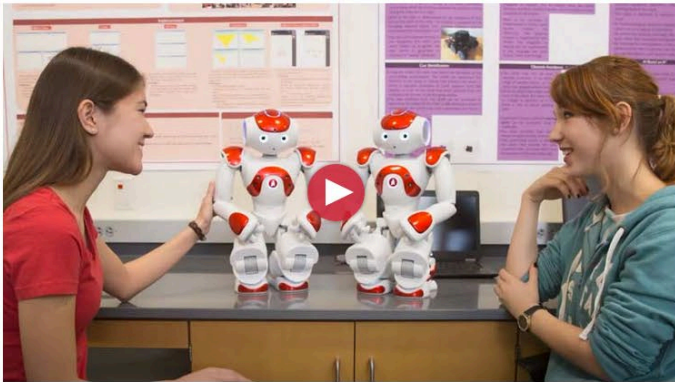
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Welcome to Mechatronics Engineering at CSU Channel Islands!

Mechatronics Engineering is a fast-growing area of Engineering that is interdisciplinary in nature, as it combines aspects of Mechanics, Control Theory, Computer Science, and Electronics, in order to improve and optimize the design and functionality of systems, as well as making them more economical and reliable. [Learn More »](#)

Prospective Students

Current Students

Labs and Facilities

Faculty