Baskin Engineering UC SANTA CRUZ

Robotics & Control: Degree Programs

- **Robotics Engineering**
  - **Graduate Minor in Robotics and Control**
    - AM, CSE, and ECE (lead)
  - **Undergraduate Major in Robotics Engineering**
    - Approved Spring 2011
    - Honors variant of the B.S. in CE
    - UCSC is the fourth US institution to offer a degree in Robotics Engineering
    - First two graduated 2013, numbers increasing
    - **Numbers increasing since introduction**

- **Robotics is Multidisciplinary**
  - **Teaching**
    - Unique curriculum mixes theory and application
  - **Research**
    - Multidisciplinary & Interdisciplinary

ECE


Gabriel Elkaim
Autonomous Systems


Patrick Mantey
Control and CPS


Dejan Milutinović
Robotics and Control


Ricardo Sanfelice
Hybrid Control


Mircea Teodorescu
Biomechanics


Michael Wehner
Soft Robotics


Renwick Curry
Control and optimization

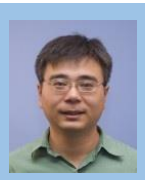

Donald Wiberg
Control Theory

CSE


Roberto Manduchi
Computer Vision


John Mussachio
Network Control

AM


Qi Gong
Nonlinear Control


Abishek Halder
Control and Optimization

Robotics Engineering Overview

Baskin Engineering
UC SANTA CRUZ

- Only Robotics Engineering degree in the UC System
- One of only handful of Robotics Engineering degrees available in US/World
- Grew out of the CE Honors Track
- Intense, High Workload
  - Shares many classes with the EE curriculum
  - Multidisciplinary from the outset
- Skills: Digital Hardware, Sensors, Programming and Control for Robotics and other computer-controlled systems interacting with the physical world

Cyber-Physical Systems Research Center

Mission: Promote and conduct collaborative research activities on **Cyber-Physical Systems** that are

Baskin Engineering UC SANTA CRUZ

Usable

Autonomous

Secure

Multiple projects with various organizations:

CITRIS AND THE BANATAO INSTITUTE

Ford

AIR FORCE OFFICE OF SCIENTIFIC RESEARCH UNITED STATES AIR FORCE

HITACHI

NXP

DARPA

More information: https://cps.ucsc.edu/

Robotics and Control Lab.

Prof. Dejan Milutinović
Electrical and Computer Engineering
Web page: https://www.soe.ucsc.edu/people/dejan

Link to the video via the school's webpage

(YouTube link)