



# Drones, Automation & Robotics Technology @ California State University, Monterey Bay

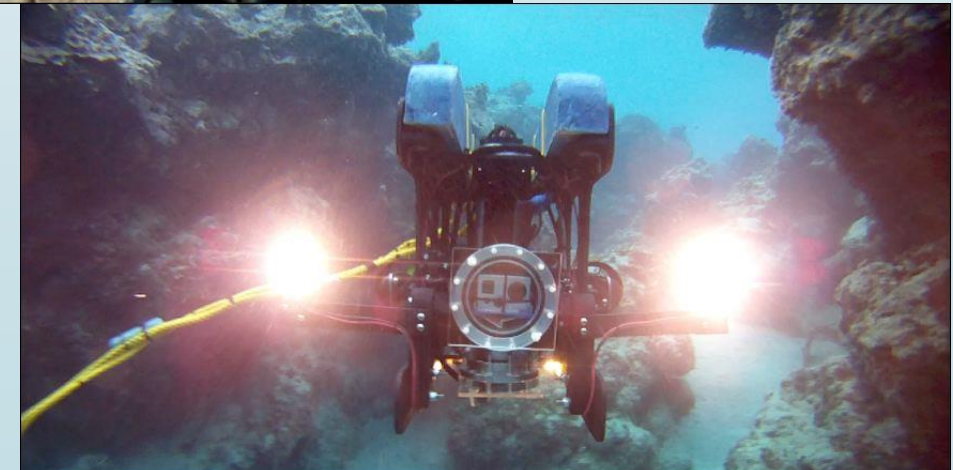
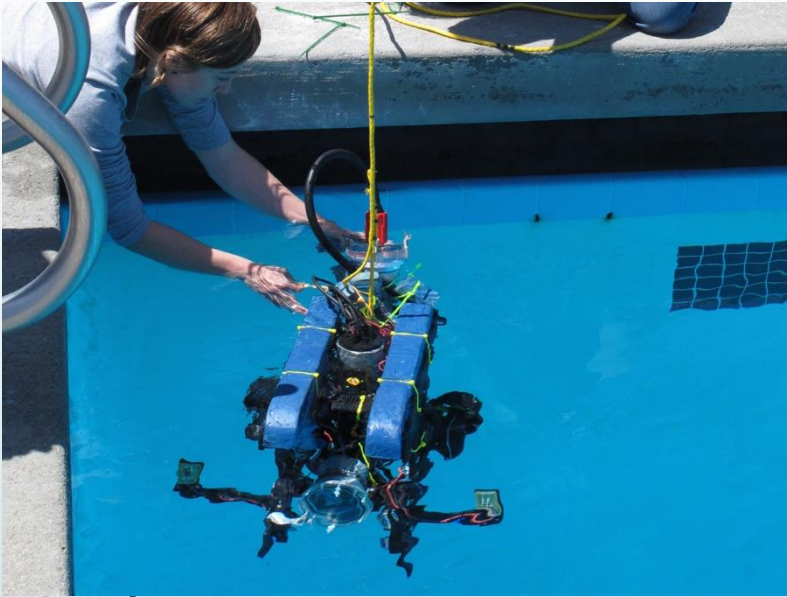
Andrew Lawson, Dean of the College of Science

# Early ROV Use: Seafloor Mapping Lab, ~2000 (Dr. Rikk Kvitek)



<http://seafloor.otterlabs.org/index.html>

# Ecosystem Electronics Lab (EEL) – 2012 (Dr. Steve Moore)



➔ <https://csumb.edu/eel>



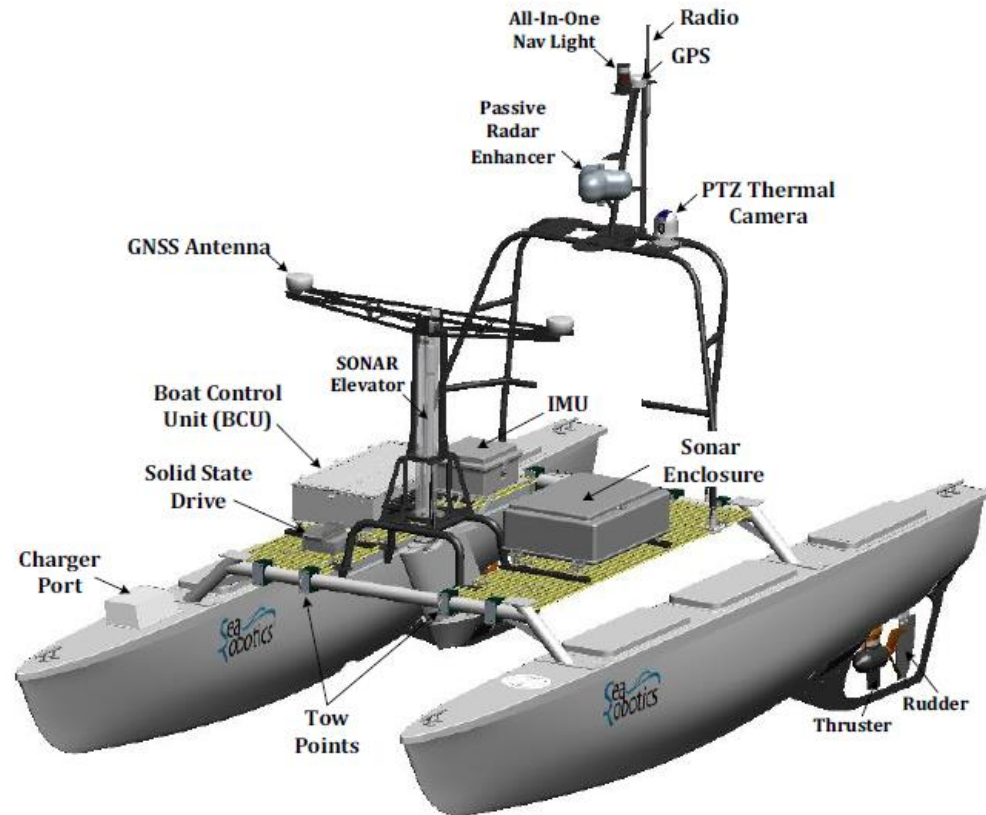
# Early UAS – SFML eBee RTK, 2014



<http://seafloor.otterlabs.org/index.html>



# USV – SFML Sea Robotics “albatross”, 2015-16



<http://seafloor.otterlabs.org/index.html>

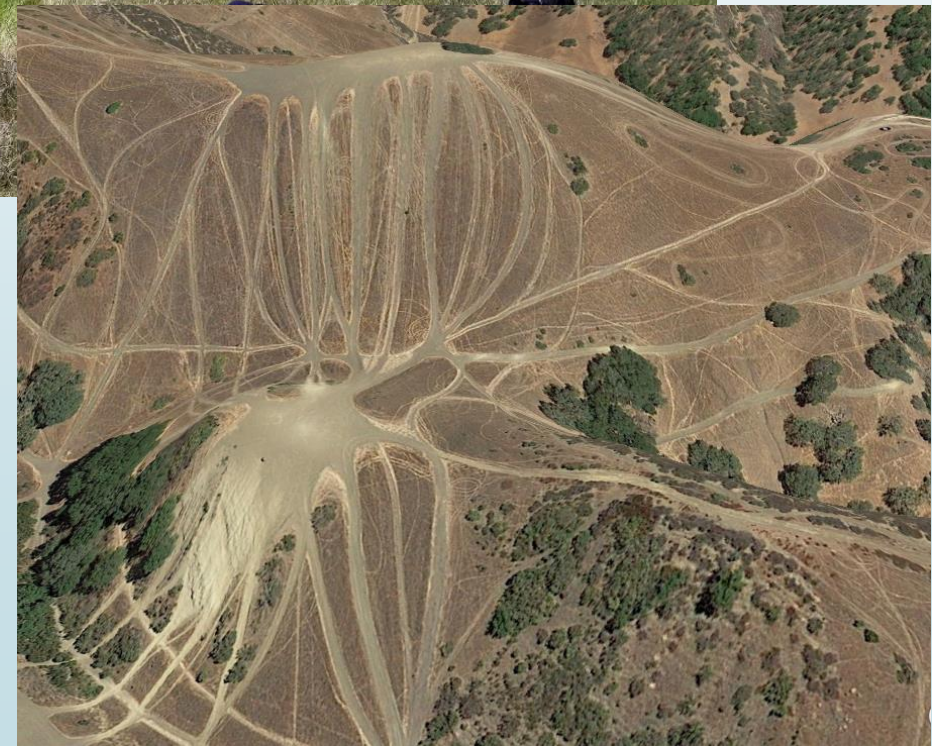


# Watershed geology lab (Dr. Doug Smith)





# Trail Erosion @ Hollister Hills SVRA





# Coastal Erosion La Selva Beach





# Marine Landscape Ecology Lab (MLEL)

(Dr. Corey Garza)



► <https://csumb.edu/mlel>



# Autonomous Drones for Coastal Habitat Mapping

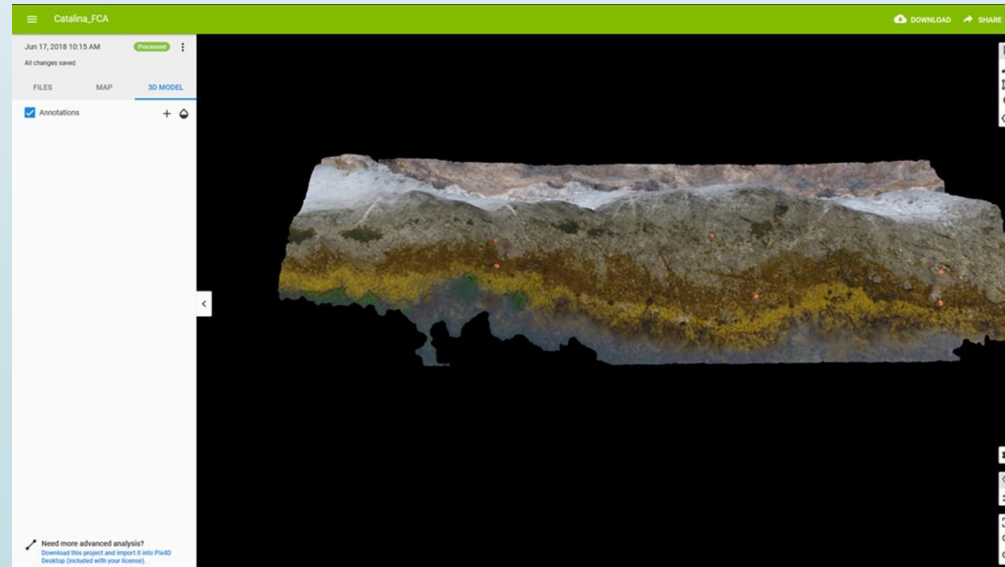


DJI Phantom 4 Pro V2.0



DJI Matrice 600 Pro

Digital Orthophoto  
Mosaics & DEMs  
@ 2.5 to 0.3 cm  
resolution



senseFly eBee



# NASA AMES Cooperative Research in Earth Science and Technology


(Dr. Susan Alexander, Dr. Robert Dahlgren, & Forrest Melton)



Military surplus RQ-14 DragonEye UAVs dismantled for parts and reassembled into new "FrankenEye" aircraft.

► <https://csumb.edu/nasa/agriculture-health-and-marine-applied-science>

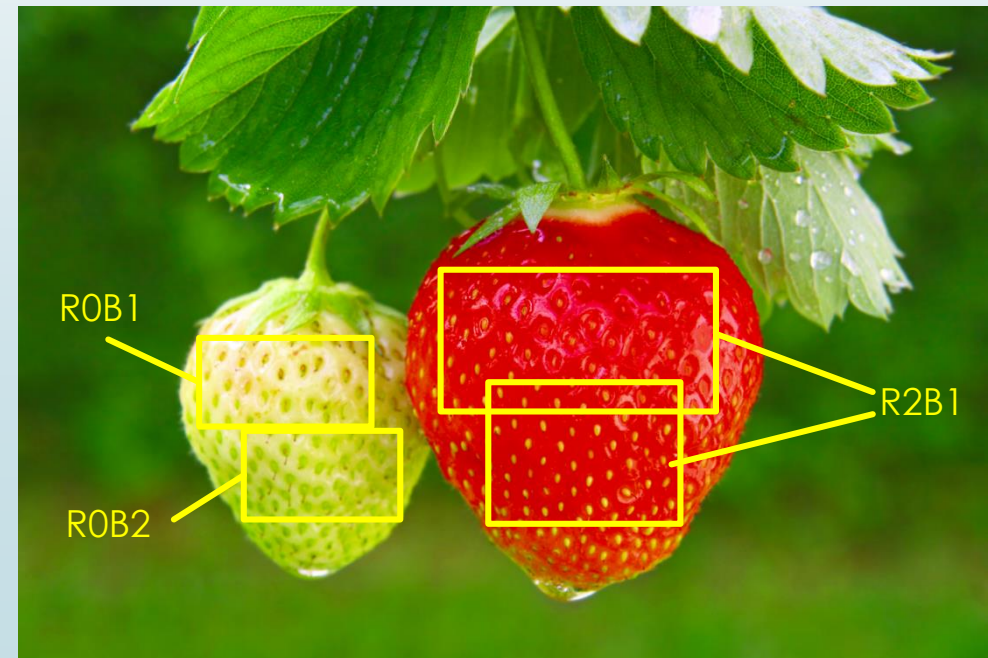




# The Future of Drones, Robotics and Automation @CSUMB



# A confluence of events

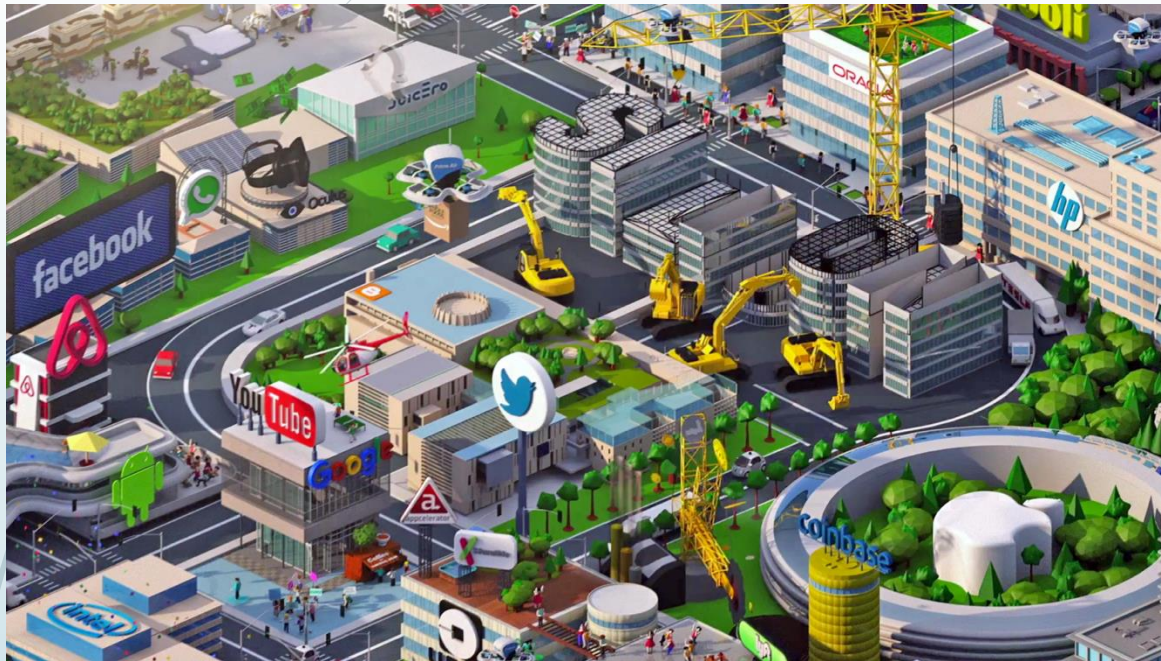








# Geographic Strengths

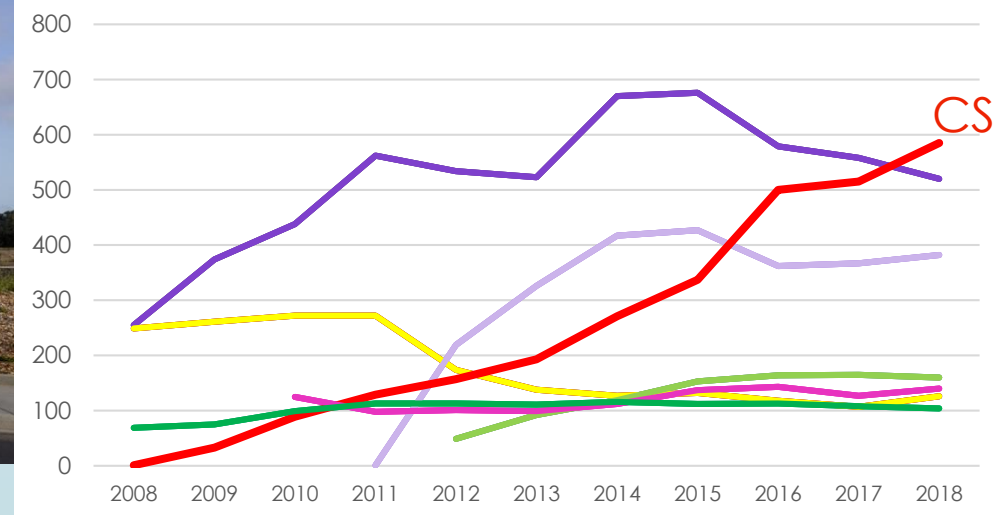




# Building on Strengths



**Computer Science Program –  
our fastest growing and  
one of largest majors  
- existing software  
engineering concentration**





# Why Now?



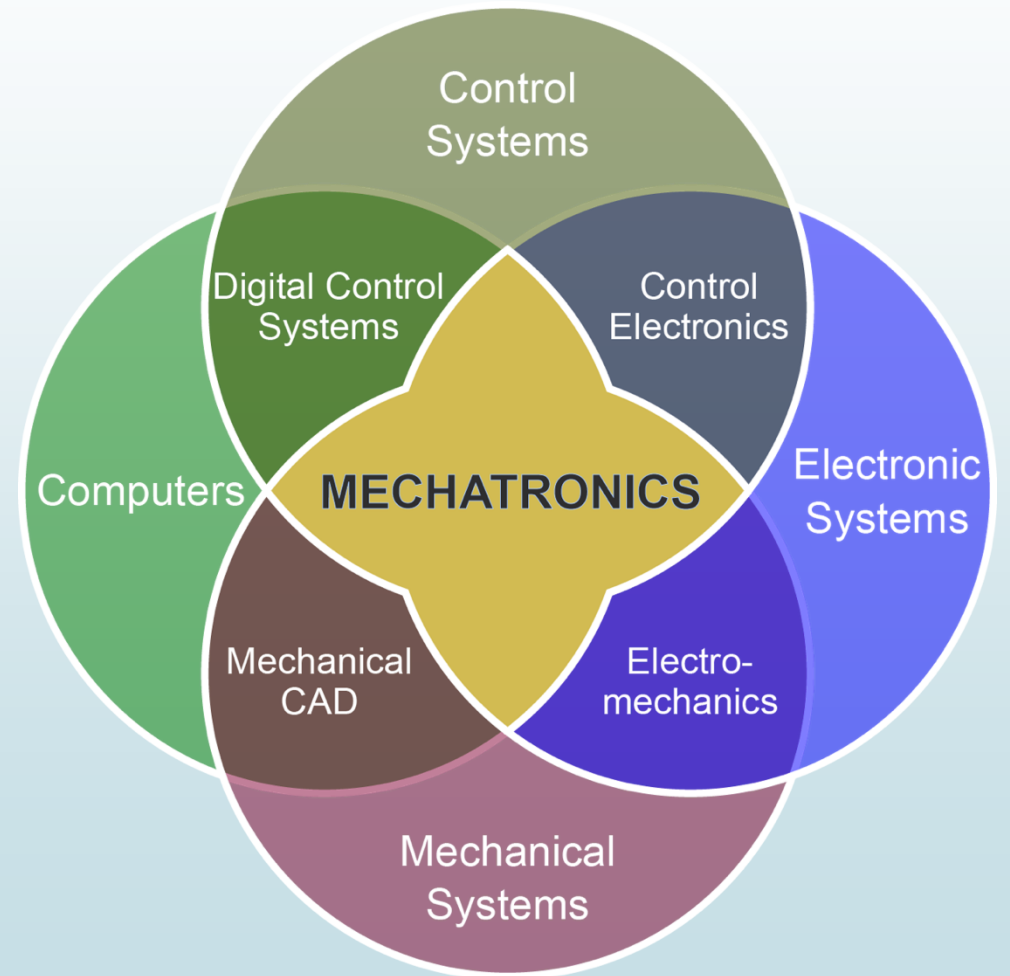
- Currently planning for a new building – opportunity to create specialized spaces





# Mechatronics Engineering

**Mechatronics is a system of technologies which integrates mechanical and electrical systems through control systems and information technology.**  
**Mechatronics is another way of saying “intelligent mechanical systems.”**





# Mechatronics Engineering – Launch Fall 2022

