

EE361. Feedback Control Systems

Lectures on “Control Engineering for Environment & Sustainability”

Spring 2015. Abubakr Muhammad

Lecture #4. Robotics & Control in Agriculture (Part 1)

Pakistan’s Agriculture Profile

1. What is the central importance of agriculture in Pakistan’s economy?
2. What were the elements of the Green revolution?
3. What is meant by the Gene revolution?
4. How did Pakistan respond to the Green revolution?
5. How did Pakistan respond to the Gene revolution?
6. What are the main reasons for low agricultural productivity in Pakistan?

Precision Agriculture Technologies

7. What is the main philosophy of Precision Ag?
8. What are the key technologies under the Precision Ag approach towards Agriculture?
9. How does GPS enabled auto-steering help conserve inputs?
10. Why does one need variable-rate inputs in the field?
11. How does satellite imagery help predict yields in a field?
12. Why is it necessary to stabilize the tractor platform for variable-rate application?
13. How are control specifications provided for stabilized boom tip movement?