
Lecture 5: LQR

MAE 345/549

Anirudha Majumdar

Princeton

Sept. 20, 2022



PRINCETON
UNIVERSITY

Mechanical and
Aerospace
Engineering

LQR on quadrotor



<https://www.youtube.com/watch?v=8OVsJNgNfa0>

LQR on airplane (prop-hang)



<https://www.youtube.com/watch?v=wBhS77cAJ0s>

LQR on humanoid

Full Dynamics LQR Control of a Humanoid Robot

Sean Mason, Ludovic Righetti, and Stefan Schaal



USCUniversity of
Southern California



MAX-PLANCK-GESELLSCHAFT

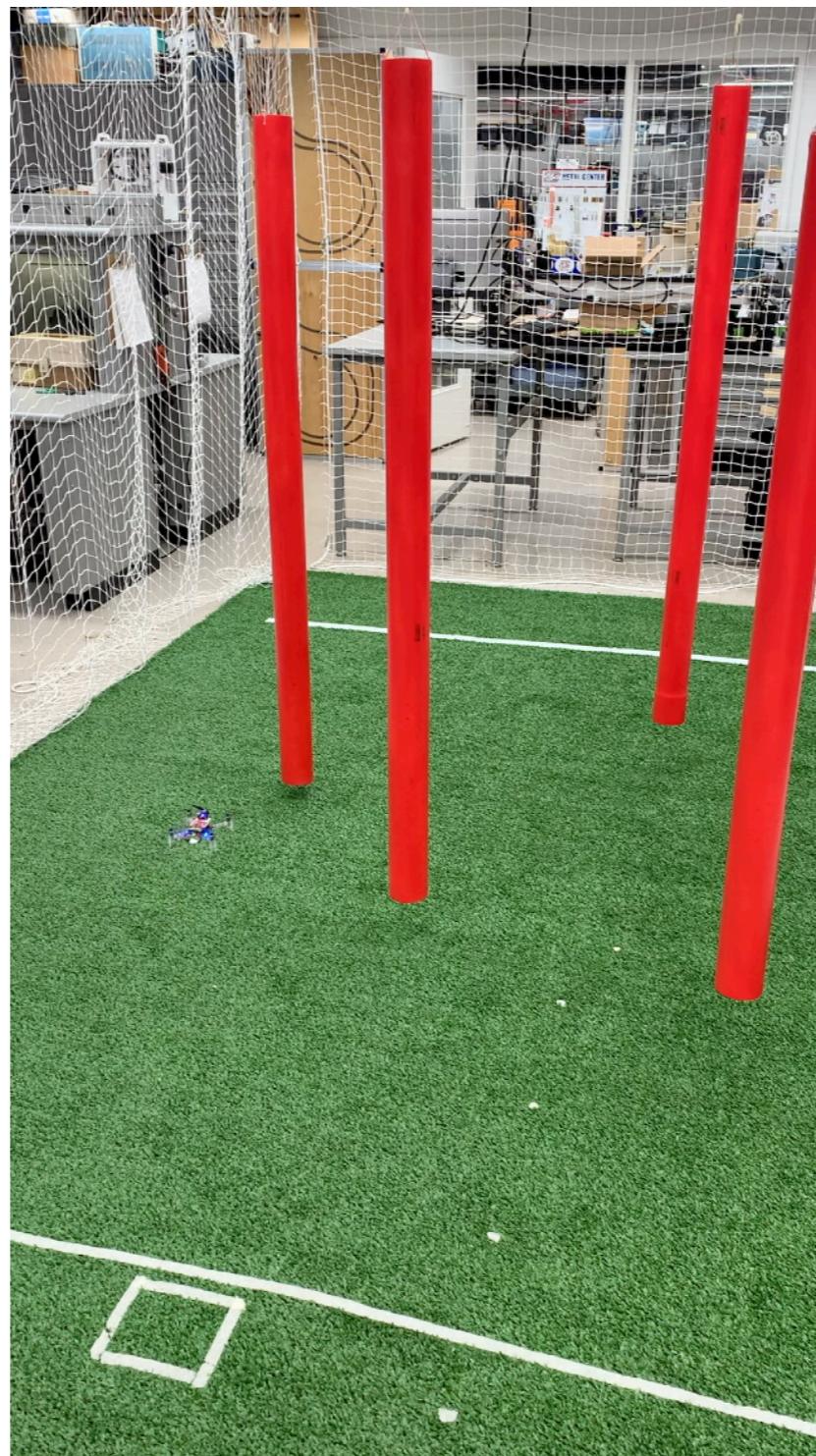
<https://www.youtube.com/watch?v=tnbR5gaWmGk>

Lab logistics

Andlinger - ACEE 012



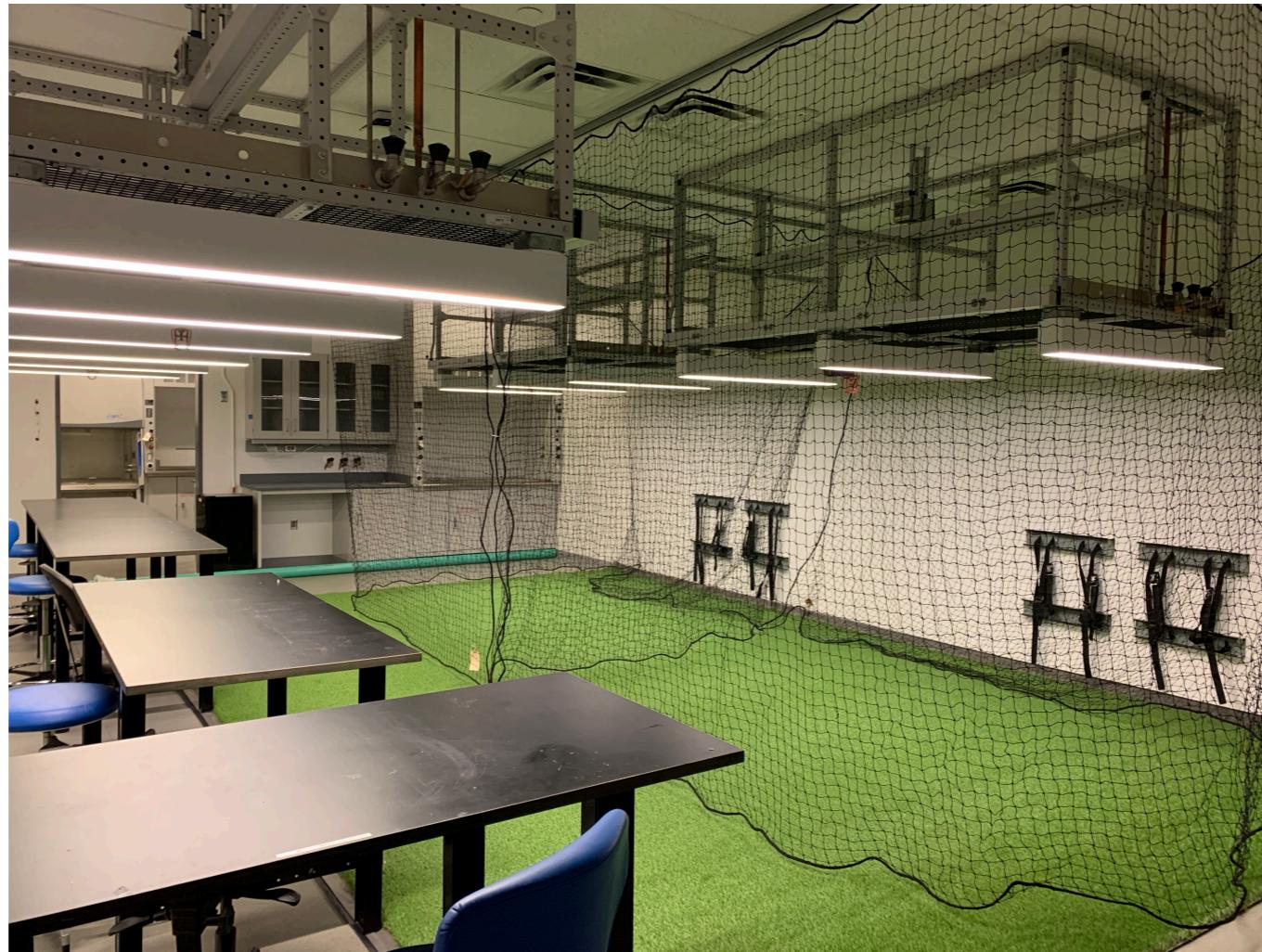
EQuad - GI05



Lab safety and logistics

- Labs can be used anytime (weekdays/weekends) **until IAM**
- Everyone who has completed online safety training should have access to both spaces (**please update your TigerCard at a hotspot**)
- Occupancy guidelines:
 - 4 teams at once in G105 (there are four desks for our course)
 - ~5/6 teams at once in ACEE 012
 - Take turns testing hardware / debugging
 - This organic model works better than sign-up sheet

Lab safety and logistics



- Please wear **safety glasses** at all times!
- Stand **outside netted area** when drone is operating